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OCAPI Reference

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Revision History

Date	Revision	Comment
July 2024	01	Initial release for software version 2.0.0
September 2024	02	<ul style="list-style-type: none">• Corrected API info for all topics in Proxied Node Storage Out-of-Band (page 400)<ul style="list-style-type: none">◦ Added /Storage/Devices/{id}/InformationStructure/ (page 487), /Storage/Devices/{id}/Accounts/ (page 490), and /Storage/Devices/{id}/Accounts/{id} (page 494)• Corrected API info for all topics in Proxied Node Storage In-Band (page 272)

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Overview

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1.1 OCAPI Overview

The purpose of the Open Composable Application Programming Interface (OCAPI) is to provide data center provisioning capabilities across all Western Digital and non-Western Digital device technologies using a “normalized” API. The goal of the OCAPI is to configure and manage storage devices via the “control path”, while the “data path” delivers data to and from the consuming host systems.

1.2 Industry Standards

The topics in this section describe some of the industry standard modeling and protocols used in the OCAPI.

1.2.1 Common Information Model

The OCAPI follows the industry standard conventions from the Common Information Model (CIM) provided by the Distributed Management Task Force body (dmf.org). The resource naming conventions and resource attributes follow the CIM model for managed elements. The OCAPI simplifies the CIM model by “flattening” or “compressing” in the following ways.

Collections

Collections are rolled into the Resources as a “plural” of the resource type:

- GET /Volumes returns the list of Volume Resources
- GET /Volumes/{id} returns the specific Volume instance

Services

Services are rolled into the Resources themselves. For example, CIM requires an element called a StorageService to provide creating a new volume. The OCAPI collapses this notion into the resource itself, so that creating a new volume only requires telling the “resource type” (volumes in this case) to create a new volume. Any other manipulation of an existing resource is done directly to the resource. Some examples:

- POST /Volumes (params) creates a new Volume Resource
- PUT /Volumes/{id}?params modifies an existing Volume Resource
- DELETE /Volumes/{id} deletes an existing Volume Resource

Associations

Associations are provided “inherently” with Resource. This means retrieving a particular Resource may also give “navigation links” to other associated resources. This eliminates the need to traverse Association Classes in the CIM Model by providing readily available URLs to Collections and Instances of other resources that are related to this Resource.

Some examples:

- Media contains links to Storage Pools
- Storage Pools contain links to Media that makes up the Pool; contains links to Volumes exported by the Pool

- Volumes contain links to Storage Pools that make up the Volume; contains the links to Storage Endpoints exposing the Volume
- Storage Endpoints contain links to attached Volumes; contains links to Paths to remote/consuming Hosts
- Paths contain links to Storage Endpoints; contains links to Host Endpoints

1.2.2 JSON Data Format Model

The OCAPI uses the standard Javascript Object Notation (JSON) to describe the managed CIM-based elements and their CIM and/or Vendor-Unique-based attributes. The API responses are in a well-formed JSON format as well as request body entries to create or modify a resource. The JSON data format intrinsically determines the data type simply by indicating the "value" within a pair of double-quotations for string types and non-quoted numerical values for number types. No other format descriptions are needed to keep the API as simple as possible.

1.2.3 Protocols

The OCAPI follows strict interpretation of the Representational State Transfer (REST) architectural style put forth by the IETF and the Hypertext Transport Protocol (HTTP) specifications. This requires all API "actions or verbs" be rendered only with HTTP Methods that work directly with the resources.

This API supports the HTTP methods of GET, POST, PUT, DELETE, HEAD, and OPTIONS. This dictates that all Uniform Resource Identifiers (URIs) must be formed as "nouns" or "resources" upon which the methods are applied. No actions or verbs shall be rendered in the URI patterns or within the JSON request body.

1.2.4 HTTP Conditionals and CORS

The OCAPI uses HTTP Conditionals to provide concurrency capabilities among multiple web clients. This "optimistic concurrency" uses the "ETag Header" (entity tag) to provide a resource hash value (32 hexadecimal characters) of the current state of the resource. This ETag value can be used to lower the network traffic when used with HTTP GET requests, and is also used to properly modify or delete a specific resource such that concurrency among web clients is established. The next two subsections describe the API support for GET and PUT/DELETE usage of conditionals.

HTTP GET Conditional

A web client may use the ETag value returned from a GET response to use in the next GET request to the same resource. However, it is not a requirement. And not all resources provide ETags. This is usually the case for resources that change on their own often (e.g., the System Clock, Performance, or other time-based or automatically changing resources). If the web client chooses to use an ETag for a GET request, the "If-None-Match" conditional is used. The web client will understand from the "304 Not Modified" response that the resource or list of resources has not changed since the last time it retrieved the information.

Using Conditional GET significantly reduces network traffic by eliminating unneeded transfer of data if it has not changed over time. This works well with web clients that need to "poll" for status frequently. This means that GET responses are either fully verbose or fully silent if the web client uses the ETag with "If-None-Match" conditional request header.

HTTP PUT & DELETE Conditional

Another form of HTTP conditional allows web clients to take advantage of the HTTP Conditional PUT and DELETE processes. This includes an ETag returned in most GET Request response headers. When used with the HTTP PUT or DELETE method, the web client can determine if the resource has changed since the last GET response before a PUT (modify) or DELETE is requested. This is called “optimistic concurrency”. It is the opposite of implementing explicit locking mechanisms to handle multiple web clients (“pessimistic concurrency”).

The web client will receive an ETag as part of the GET response header which can be used to pass the “If-Match” conditional to the web service to determine if the resource has changed just before the PUT or DELETE Request.

If the “If-Match” conditional is not sent along with the PUT or DELETE request, the API will return a “428 Precondition Required” to prompt the web client to use the API’s HTTP conditional capabilities. This prevents accidental or rogue changes and deletions and makes sure there is an orderly process when two or more web clients work on the same resource at or near the same time.

HTTP Cross-Origin Resource Sharing (CORS)

The OCAPI supports Cross-Origin Resource Sharing (CORS) operations. This is typically needed for web clients that connect to one particular web service which then tells the web client to connect to a different web service, usually in the executing Javascript, for example. The connection focus goes from “same-origin” or “same authority” to a “cross-origin” or different authority. Web clients that support this capability are required to send an OPTIONS method to the remote web service location (cross-origin) with the “Origin” header filled in with the local web service IP address or hostname with the scheme prefix (http or https) to determine if the remote web server will allow a connection from the web client while the focus is still on the local web server. If the remote web service disallows the connection, the OPTIONS response will return a “preflight connection failure” back to the web client indicating no further communication is allowed. If the remote web server allows the connection, it will return headers in the OPTIONS response to indicate what kind of connection, methods, etc., are allowed to the remote web server. The web client can then execute the original HTTP method to the remote web server to complete the transaction. Most modern web browsers support CORS.

1.2.5 HTTPS/SSL/TLS Connections

The OCAPI provides the user the ability to upload their own self-generated SSL/TLS Certificate and Key Pairs.

The OCAPI does provide its own self-signed Certificate and Key Pair, which is just enough to allow a browser to ask the user to proceed with the self-signed but unsecure connection. The user will need to do the following in order to successfully create secure connections between the browser and devices:

1. Create a user-generated Root Authority Certificate and Private Key pair
 - There are several SSL generators available (e.g. OpenSSL)
2. Create a user-generated Leaf Certificate and Key Pair signed by the Root CA Key (from the previous step)
 - The Leaf (or Device) Certificate/Key Pair must have the IP and/or DNS name as part of the Certificate that is within the user’s network environment
3. Upload the Leaf Certificate and Key Pair to the Device via the OCAPI – see POST Files/TLSCertandKey in [/Compute/Devices/{id}/Files/{id}/](#) (page 84)

- The successful upload will automatically restart the API service for the HTTPS listener to use the new Certificate

1.3 Resource Oriented Architecture

The OCAPI implements "Resource-Oriented Architecture" (ROA) which dictates the API to have the following attributes:

- Addressability - Resources have explicit URIs for direct addressing
- Stateless - Resources do not require previous or next state processing; all operations are atomic
- Linkability - Resources can be reached via "Self" links from other associated Resources; provides navigation among related Resources
- Uniform Interface - Resources respond to supported HTTP Methods

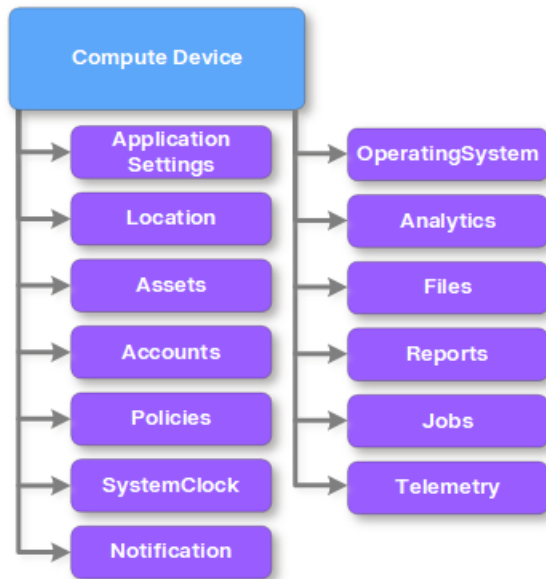
1.4 Modeling Device Resources

The OCAPI architecture requires the control path management scheme to be "resource-oriented". Any device and its components are all considered resources. For example, a device is a resource as well as its power supply. The management of the device and the power supply have separate resource addressing so that a management client can manage any component resource directly. There are physical resources, logical resources, and virtual resources. The physical resources typically already exist and cannot be created or deleted. However, logical and virtual resources can be created, modified, and deleted. The RMDC Control Node is located on a Compute Device with modeling includes logical/virtual resources.

Logical & Virtual Resources Model

The logical and virtual resources model include those resources that are logical or virtual in nature. These include Accounts, SystemClock, and Files. These are modeled in [Figure 1: Logical & Virtual Resources Model \(page 6\)](#).

Figure 1: Logical & Virtual Resources Model



1.5 curl

Curl is a free, open-source command line tool and library for transferring data using various network protocols. It can be used to access the OCAPI to request resource information, modify attributes, and create or delete resources using HTTP methods. Example curl commands are provided throughout this API reference; the following are the most commonly used commands and options. For more information on curl usage and syntax, visit <https://curl.haxx.se/>.

Commonly Used Command Options

- `-i` Requests HTTP response headers to be included in the output
- `-u user:password` Specifies the user name and password for server authentication
- `-X method` Specifies a custom request method to use when communicating with the HTTP server. Options are GET, POST, PUT, DELETE, HEAD, and OPTIONS
- `-H header` Specifies an extra header to include in the request, such as Content-Type, If-Match, etc.
- `-d data` Specifies the body data for a POST or PUT request
- `-F fieldname=@filename` Specifies a file to upload by emulating the submission of a filled-in form
- `-k` Allows for HTTPS requests

GET

A GET request is the first step in interacting with a resource. The GET curl command provides authentication credentials and the URL of the resource:

```
curl -i -u authentication -X GET resourceURL
```

The response header will include an ETag, which is used in subsequent PUT or DELETE requests to modify or delete the resource.

PUT

A PUT request modifies the resource. The PUT curl command provides authentication credentials, headers (such as Content-Type and If-Match), request body data, and the URL of the resource:

```
curl -i -u authentication -H header -X PUT -d 'data' resourceURL
```

The If-Match conditional in the PUT command requires the ETag from the GET response header in order to modify the resource.

POST

A POST request to a collection creates a resource within that collection. The POST curl command provides authentication credentials, headers (such as Content-Type), request body data, and the URL of the resource:

```
curl -i -u authentication -H header -X POST -d 'data' resourceURL
```

DELETE

A DELETE request deletes a resource. The DELETE curl command provides authentication credentials, headers (such as If-Match), and the URL of the resource:

```
curl -i -u authentication -H header -X DELETE resourceURL
```

The If-Match conditional in the DELETE command requires the ETag from the GET response header in order to delete the resource.



Discovery

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2.1 Discovery Overview

The OCAPI uses a generic doorbell type of URI that queries a particular host and port to determine what kind of device or component is available as a resource. There is also a mechanism to have an OCAPI-based Device do a discovery of all other participating OCAPI-based Devices to generate a dynamic system list of Devices that can be managed through a single OCAPI-based Device as a single-point-of-management.

- **/Query/** - Returns a Summary of the Collection of Devices at this location (IP Address) - see [/Query/ \(page 11\)](#)
- **/System/Query/** - Returns all the "Summary Query" responses from all discovered Collection of Devices across the network - see [/System/Query/ \(page 25\)](#)

2.2 REST-Based API

This API is based on the true REST architectural style, meaning that all actions/verbs will be handled exclusively by the existing HTTP Methods (GET, POST, PUT, DELETE, HEAD, OPTIONS) along with all URI patterns containing only fully qualified collections of resources and resource instantiations (nouns only, no action verbs permitted in the URI).

URI Patterns

Uniform Resource Identifiers (URI) are built with the following pattern:

- *scheme, host, domain, resources, resourceID*

For example:

- `http://ip:port/domain/resources/resourceID[/resource/resourceID]...`

Where:

- *scheme* can be http or https
- *domain* can be "storage", "compute", "network", or "system"
- *resources* can be "devices", "volumes", "hosts", "switches", "servers", etc.
- *resourceID* can be an index, GUID, UUID, or any type of identifier for the instance of a resource that is unique to at least the local device

The following is a real world example of a particular storage resource:

- `http://localhost:8080/Storage/Devices/12345`

All entries are plural-based so that a URI without an ending GUID or other resource identifier would return the collection or list of a particular element. For example, `http://ip:port/Storage/Devices/12345/volumes` would return a list of volumes instead of a particular one.

URI representations of physical components and devices must include the fully qualified URI path.

Physical Components:

`http://ip:port/Storage/Devices/id/Adapters/id` is the address of a specific adapter in a specific storage device.

Logical/Virtual Components:

`http://ip:port/Storage/Devices/id/Volumes/id` is the address to a specific volume.

Resource URIs

There are several “management domains” that can be used to describe and manipulate devices. For converged or composed systems, these domains are “compute”, “network”, and “storage”. These typically describe management at the device or component level. The “system” domain entry is used to aggregate the 3 other domains into an all-encompassing management layer to help describe the usage and connectivity of the devices and components as a physical or virtual system. The system-level management typically allows aggregation lists of all participating devices and also any user-defined groupings of the devices and components that make up the system or sub-systems.

The base URI format is as follows:

- /Query – Doorbell URI
- /Storage/Devices – Storage-based device collection URI
- /System/Query – System-based device query aggregation URI
 - Contains all the discovered Query responses for all participating Device within the System

2.3 /Query/

The /Query/ resource (Doorbell) returns the device type and perhaps its higher level system membership and/or any other device(s) managed by this device via proxy, if any.

HTTP Methods: GET HEAD OPTIONS

Table 2: Resource Attributes

Attribute	Data Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
SystemQuery	String	Mandatory	No	Free-Form URI Format with IP plus "/System/Query"	Link to ask this Device to discover other devices
InformationStructure.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Link to use to display or modify the InformationStructure
InformationStructure.Name	String	Mandatory	No	Free-Form 64 Chars	The API name
InformationStructure.HttpPort	Number	Mandatory	Yes	80, or 1024 - 65535 range	Port number for HTTP listener; default = 80
InformationStructure.HttpsPort	Number	Mandatory	Yes	443, or 1024 - 65535 range	Port number for HTTPS listener; default = 443
InformationStructure.ID	String	Mandatory	No	Free-Form 256 Chars	The query identifier represents the main device ID
InformationStructure.AuthenticationType.ID	Number	Mandatory	Yes	0 = Basic; 1 = Digest	The current authentication type ID
InformationStructure.AuthenticationType.Name	String	Mandatory	No	Basic or Digest	The current authentication type Name
InformationStructure.StructureDescription	String	Mandatory	No	Free-Form 256 Chars	The API Schema Description
InformationStructure.OwningOrganization	String	Mandatory	No	Free-Form 64 Chars	The API Schema Owner
InformationStructure.Status	String	Mandatory	No	Free-Form 64 Chars	The API Schema Version Release Status

Attribute	Data Type	Mandatory or Optional	User Configurable	Possible Values	Description
InformationStructure.URI	String	Mandatory	No	Free-Form URI Format	The API Schema URI starting point
InformationStructure.Version	String	Mandatory	No	Major.Minor.Release Format	The API Schema Version Number
InformationStructure.ClientFilter	String	Optional	Yes	Default: All Clients if empty; REGEX of IP Address ranges with " " delimiter	Creates a "white list filter" of allowed Clients based on REGEX pattern of IP Addresses. Multiple entries with " " delimiter.
InformationStructure.MaximumThreads	Number	Optional	Yes	Default: 5	Throttles the total number of web client connections. Returns a 429 Too Many Requests if maximum number reached. Try again.
Devices.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Devices.Members	String Array	Optional	No	One or more / Devices bodies	Collection of Device Summaries

GET /Query/

GET /Query/ returns the query information along with the "links" for further management navigation into this Device.

Example GET curl Command

```
curl http://10.20.30.40/Query/
```



Note: User authentication is not required, since the GET /Query/ is the "doorbell" to initiate first contact with the Device. The JSON response includes URI links to go further into the Device, which will require user authentication.

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Query/",
  "SystemQuery": "http://10.20.30.40/System/Query/",
  "SystemGroups": "http://10.20.30.40/System/Groups/",
  "SystemJobs": "http://10.20.30.40/System/Jobs/",
  "InformationStructure": {
    "Self": "http://10.20.30.40/Query/InformationStructure/",
    "AuthenticationType": {
      "ID": 0,
      "Name": "Basic"
    }
  }
}
```

```

    },
    "HTTPPort": 80,
    "HTTPSPort": 443,
    "LogLevel": "info",
    "MaximumThreads": 50,
    "Name": "Open Composable API",
    "OwningOrganization": "Copyright 2020-2022 Western Digital Corporation or its
affiliates. All rights reserved.",
    "Status": "Preliminary Proof-of-Concept",
    "StructureDescription": "REST-based API for Device Management. Use HTTP OPTIONS
with header {\"Documentation\": \"Schema\"} to get resource schema information based
on URI. Use HTTP OPTIONS with header {\"Documentation\": \"Info\"} to get general
information based on URI. ",
    "URI": "/Query/",
    "TimeoutMultiplier": 1,
    "Discovery": {
      "DiscoveryCycleTime": 60,
      "DiscoveryTimeout": 5,
      "QueryTimeout": 20,
      "Threads": 128,
      "Netmasks": []
    },
    },
    "Orchestration": {
      "Enabled": false
    },
    },
    "Version": "RMDC-1.4.4-224",
    "LDAPSettings": {}
  },
  "Devices": {
    "Self": "http://10.20.30.40/Devices/",
    "Members": [
      {
        "Self": "http://10.20.30.40/Compute/Devices/4C4C4544-004E-5410-8035-
B5C04F374733/",
        "SystemType": {
          "ID": 1,
          "Name": "Compute"
        },
        "Name": "5NT57G3",
        "ID": "4C4C4544-004E-5410-8035-B5C04F374733",
        "OperatingSystem": {
          "Self": "http://10.20.30.40/Compute/Devices/4C4C4544-004E-5410-8035-
B5C04F374733/OperatingSystem/",
          "Name": "Resource Manager Data Center",
          "OSType": {
            "ID": 18,
            "Name": "Winnt"
          },
          "Version": "0.4.224"
        },
        "SerialNumber": "0000",
        "Model": "Resource Manager Data Center",
        "Manufacturer": "WDC",
        "Capabilities": {
          "Members": [
            {
              "ID": 9,
              "Name": "Access Server",

```


Table 4: HEAD Response Codes

Response Code	Name	Description
200	OK	OK with no response body + Header "Server: OpenFlex API" to help determine that the IP address response to the doorbell request
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

OPTIONS /Query/

The OPTIONS /Query/ returns the allowable HTTP Methods list for this resource.

Table 5: OPTIONS Request Headers

Request Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	Etag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 6: OPTIONS Response Codes

Response Code	Name	Description
200	OK	OK with no response body + Header "Server: OpenFlex API" to help determine that the IP address response to the doorbell request
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

2.4 /Query/InformationStructure/

The /Query/InformationStructure/ resource provides detailed information about the API.

HTTP Methods: GET PUT HEAD OPTIONS

Table 7: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
SystemQuery	String	Mandatory	No	Free-Form URI Format with IP plus "/System/Query"	Link to ask this Device to discover other devices
InformationStructure.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Link to use to display or modify the InformationStructure
InformationStructure.Name	String	Mandatory	No	Free-Form 64 Chars	The API name
InformationStructure.HTTPPort	Number	Mandatory	Yes	80, or 1024 - 65535 range	Port number for HTTP listener; default = 80
InformationStructure.HTTPSPort	Number	Mandatory	Yes	443, or 1024 - 65535 range	Port number for HTTPS listener; default = 443
InformationStructure.ID	String	Mandatory	No	Free-Form 256 Chars	The query identifier represents the main device ID
InformationStructure.AuthenticationType.ID	Number	Mandatory	Yes	0 = Basic; 1 = Digest	The current authentication type ID
InformationStructure.AuthenticationType.Name	String	Mandatory	No	Basic or Digest	The current authentication type Name
InformationStructure.StructureDescription	String	Mandatory	No	Free-Form 256 Chars	The API Schema Description
InformationStructure.OwningOrganization	String	Mandatory	No	Free-Form 64 Chars	The API Schema Owner
InformationStructure.Status	String	Mandatory	No	Free-Form 64 Chars	The API Schema Version Release Status

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
InformationStructure.URI	String	Mandatory	No	Free-Form URI Format	The API Schema URI starting point
InformationStructure.Version	String	Mandatory	No	Major.Minor.Release Format	The API Schema Version Number
InformationStructure.ClientFilter	String	Optional	Yes	Default: All Clients if empty; REGEX of IP Address ranges with " " delimiter	Creates a "white list filter" of allowed Clients based on REGEX pattern of IP Addresses. Multiple entries with " " delimiter.
InformationStructure.MaximumThreads	Number	Optional	Yes	Default: 5	Throttles the total number of web client connections. Returns a 429 Too Many Requests if maximum number reached. Try again.
RestartAPI	Boolean	WriteOnly	Yes	true	Directs the device to restart the API service
LogLevel	String	Optional	Yes	"debug" "info" "warn" "error"	The log level setting for writing into /var/log/vstore.log
TimeoutMultiplier	Number	Optional	Yes	1 - n	The timeout multiplier value to increase the API timeout values
Discovery.DiscoveryCycleTime	Number	Optional	Yes		
Discovery.DiscoveryTimeout	Number	Optional	Yes	1 to n; default = 5	The time in seconds to wait for HEAD / Query responses from remote devices during background GET /System/Query scans
Discovery.QueryTimeout	Number	Optional	Yes	1 to n; default = 20	The time in seconds to wait for GET / Query responses from remote devices during background GET /System/Query scans

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Discovery.Threads	Number	Optional	Yes	1 to n; default = 128	The number of concurrent HEAD or GET /Query requests at once
Discovery.Netmasks[].Netmask	String	Optional	Yes	IPv4 IP Address format with CIDR Netmask value. nnn.nnn.nnn.nnn/mm where: nnn = 0 to 255 (IPv4 Address octet value) mm = 0 to 32 (CIDR subnet mask value)	The IPv4 IP Address/ CIDR netmask range for a given scan entry in the Netmasks[] Object Array. Default entry if the Netmasks[] object array is empty = "this RMDC server's IP Address and subnet"
Discovery.Netmasks[].Enabled	Boolean	Optional	Yes	true false	Indicates if the Netmask value is enabled for the scan range list of Netmasks
Discovery.DiscoveryInvFrequency	Number	Optional	Yes	2 to 10 minutes	Background Discovery interval in minutes
Discovery.DiscoveryFullInvMultiple	Number	Optional	Yes	1 to n multiplier to DiscoveryInvFrequency Minimum allowed is 10 minutes	Background Discovery interval multiplier value
Discovery.PolicyESReadInvFrequency	Number	Optional	Yes	1 to n minutes	Background Policy DB interval update check
Discovery.PolicyESReadFullInvFrequency	Number	Optional	Yes	1 to n minutes	Background Policy DB interval for Full data update check
Orchestration.Enabled	Boolean	Optional	No	true false	Indicates if the overall Orchestration capability is "Enabled" if all the subsequent "applications" are successfully installed and available

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Orchestration. ApplicationsInstalled. Ansible	Boolean	Optional	No	true false	Indicates if the "Ansible" application is enabled by being successfully installed and available
Orchestration. ApplicationsInstalled. Python3	Boolean	Optional	No	true false	Indicates if the "Python3" application is enabled by being successfully installed and available
Orchestration. ApplicationsInstalled. WDCModuleInfo	Boolean	Optional	No	true false	Indicates if the "WDCModuleInfo" for the Ansible application is enabled by being successfully installed and available
Orchestration. ApplicationsInstalled. WDCModuleCommand	Boolean	Optional	No	true false	Indicates if the "WDCModuleCommand" for the Ansible application is enabled by being successfully installed and available
Orchestration. ApplicationsInstalled. Nslookup	Boolean	Optional	No	true false	Indicates if the "nslookup" application is enabled by being successfully installed and available
Version	String	Optional	No	maj.min.patch-build format	The current OCAPI version running on this system
LDAPSettings	Object	Optional	Yes		Remote Account LDAP/AD settings

GET /Query/InformationStructure/

GET /Query/InformationStructure/ retrieves the Information Structure information.

Table 8: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization.

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header.

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Query/InformationStructure/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Query/InformationStructure/",
  "AuthenticationType": {
    "ID": 0,
    "Name": "Basic"
  },
  "HTTPPort": 80,
  "HTTPSPort": 443,
  "LogLevel": "debug",
  "MaximumThreads": 50,
  "Name": "Open Composable API",
  "OwningOrganization": "Copyright 2020-2023 Western Digital Corporation or its affiliates. All rights reserved.",
  "Status": "Released",
  "StructureDescription": "REST-based API for Device Management. Use HTTP OPTIONS with header {\"Documentation\": \"Schema\"} to get resource schema information based on URI. Use HTTP OPTIONS with header {\"Documentation\": \"Info\"} to get general information based on URI. ",
  "URI": "/Query/",
  "TimeoutMultiplier": 1,
  "Discovery": {
    "DiscoveryCycleTime": 60,
    "DiscoveryTimeout": 5,
    "QueryTimeout": 20,
    "Threads": 128,
    "Netmasks": [
      {
        "Netmask": "10.202.239.0/24",
        "Enabled": true
      },
      {
        "Netmask": "10.203.111.0/22",
        "Enabled": true
      },
      {
        "Netmask": "10.206.137.0/24",
        "Enabled": true
      },
      {
        "Netmask": "10.206.136.0/24",
        "Enabled": true
      },
      {
        "Netmask": "10.206.111.0/22",
```

```

        "Enabled": true
    },
    {
        "Netmask": "10.202.237.0/24",
        "Enabled": true
    }
],
"DiscoveryInvFrequency": 5,
"DiscoveryFullInvMultiple": 2,
"PolicyESReadInvFrequency": 10,
"PolicyESReadFullInvFrequency": 60
},
"Orchestration": {
    "Enabled": true,
    "ApplicationsInstalled": {
        "Ansible": true,
        "Python3": true,
        "WDCModuleInfo": true,
        "WDCModuleCommand": true,
        "Nslookup": true
    }
},
"Version": "1.5.8-103",
"LDAPSettings": {}
}

```

Table 9: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Support resource information in the response body
304	Not Modified	If-None-Match Etag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
403	Forbidden	ClientFilter is preventing access and resource is not allowed to retrieved
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy, client should try again later

PUT /Query/InformationStructure/

PUT /Query/InformationStructure/ modifies an attribute of the Information Structure.

Table 10: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization.

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header.

Example PUT curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Query/InformationStructure/
--data '{
  "LogLevel": "info"
}'
```



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

Example PUT Request Body

```
{
  "HTTPPort": number,
  "HTTPSPort": number,
  "AuthenticationType": {
    "ID" : 0 | 1 | 2
  },
  "ClientFilter" : REGEX,
  "MaximumThreads": number,
  "RestartAPI": true,
  "LogLevel": "debug"|"info"|"warn"|"error",
  "TimeoutMultiplier": 1 - n (default: 1),
  "Discovery": {
    "DiscoveryCycleTime": 60,
    "DiscoveryTimeout": 5,
    "QueryTimeout": 20,
    "Threads": 128,
    "Netmasks": [
      {
        "Netmask": "10.202.239.0/24",
        "Enabled": true
      }, {
        "Netmask": "10.203.111.0/22",
        "Enabled": true
      }
    ],
    "DiscoveryInvFrequency": 5,
    "DiscoveryFullInvMultiple": 2,
    "PolicyESReadInvFrequency": 10,
    "PolicyESReadFullInvFrequency": 60
  }
}
```


Table 11: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Volume information in the response body + ETag Header
301	Moved Permanently	URI Address has moved to a new location if the Port Number(s) are changed; provides new URI in "Location" header in the response
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
412	Precondition Failed	Indicates the "If-Match" Etag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an Etag value in the Request Header
429	Too Many Requests	Indicates API service is Busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Query/InformationStructure/

HEAD /Query/InformationStructure/ pings the Information Structure resource.

Table 12: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body + Header "Server: OpenFlex API" to help determine that the IP address response to the doorbell request
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Query/InformationStructure/

OPTIONS /Query/InformationStructure/ returns the allowable HTTP Methods list for this resource.

Table 13: OPTIONS Request Headers

Header	Mandatory or Optional	Description
None	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain tex

Header	Mandatory or Optional	Description
Documentation	Optional	Schema - Returns the schema information in formatted JSON text as plain text
If-None-Match	Optional	Etag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 14: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match Etag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

2.5 /System/Query/

The /System/Query/ resource returns the dynamically-discovered list of device Query Doorbell responses in a single response body, to provide a single-point-of-management entry point.

HTTP Methods: GET HEAD OPTIONS

Table 15: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Members	String Array	Optional	No	One or more discovered / Query bodies	Collection of discovered / Query doorbell resources

GET /System/Query/

GET /System/Query/ returns the information of the System Query resource.

Table 16: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 17: GET Query Parameters

Parameter	Description
Netmask = {ip_address/cidr}	The IP address and CIDR code range for the sweep/scan process. Default sweep is system IP Address subnet (current IP subnet 10.20.30.xx, CIDR = 24). Note: CIDR determines "ip mask" range to scan; 0 - 32, smaller the number, the wider the scan range.
DiscoveryTimeout = {1-n}	The timeout value in seconds for the discovery process. Default = 5 seconds. 3 or more recommended.
QueryTimeout = {1-n}	The timeout value in seconds for the query process. Default = 20 seconds. 8 or more recommended.
Threads = {1-n}	The number of parallel /Query doorbell requests based on the number of IP Address/CIDR to send to the network (multi-threaded unicast). Default = 128. 1024 or less recommended.

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/System/Query/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/System/Query/",
  "Members": [
    {
      "Self": "http://10.20.30.40/Query/",
      "SystemQuery": "http://10.20.30.40/System/Query/",
      "InformationStructure": {
        "Self": "http://10.20.30.40:80/Query/InformationStructure/",
        "AuthenticationType": {
          "ID": 0,
          "Name": "Basic"
        },
        "Name": "OpenFlex API",
        "HTTPPort": 80,
        "HTTPSPort": 443,
        "ID": "0123456789",
        "StructureDescription": "REST-based API for Device or System Management.
Use HTTP OPTIONS to get resource schema information based on URI.",
        "OwningOrganization": "WDC",
        "Status": "Preliminary",
        "URI": "/Query/",
        "Version": "0.9.11"
      },
      "Devices": {
        "Self": "http://10.20.30.40/Devices/",
        "Members": [
          {
            "Self": "http://10.20.30.40/Storage/Devices/0123456789/",
            "SystemType": {
              "ID": 2,
              "Name": "Storage"
            },
            "Name": "opnflx-6789",
            "ID": "blade_uuid_0123456789",
            "OperatingSystem": {
              "Self": "http://10.20.30.40/Storage/Devicess/0123456789/
OperatingSystem/",
              "Name": "Vendor Firmware",
              "OSType": {
                "ID": 0,
                "Name": "Unknown"
              },
              "Version": "blade-FW-Rev0"
            },
            "SerialNumber": "blade-SN-0123456789",
            "Model": "blade-MN-0123456789",
            "Manufacturer": "WDC",
            "Capabilities": {
              "Members": [
                {
                  "ID": 3,
                  "Name": "Storage",
                  "CapabilityDescription": "This device is a storage
provider."
                },
                {
                  "ID": 15,
```


Example GET curl Command Across Disparate Subnets



Note: This example scans 10.20.30.0 thru 10.20.30.255 (1 subnet) and 10.202.236.0 thru 10.202.239.255 (4 subnets). The user can also enter a Netmask that does not include the Device doing the GET /System/Query/. In that case, the response will not include that Device, but all other discovered Devices in the scan.

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/System/Query/?
Netmask=10.20.30.40/24&Netmask=10.202.236.0/22
```

Table 18: GET Response Codes

Response Code	Name	Definition
200	OK	OK & System Query resource information in the response body
304	Not Modified	If-None-Match Etag value matched, therefore no Response Body will be returned. Note: for /System/Query, the order of devices coming back may be different, so it is rare to get a 304.
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /System/Query/

HEAD /System/Query/ pings the System Query resource.

Table 19: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	

Table 20: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /System/Query/

OPTIONS /System/Query/ returns the allowable HTTP Methods list for this resource.

Table 21: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	Etag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 22: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match Etag value matched, therefore no Response Body will be returned. Note: for /System/Query, the order of devices coming back may be different, so it is rare to get a 304.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later



Central Server Service

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3.1 System Level Resources

The OCAPI incorporates "system-level" resources to provide multiple "device resource" activities and operations such as FW Update, Reboot, etc. This requires the concept of "grouping device resource" into a new virtual resource called "System Groups" to allow the system to apply certain operations across multiple device resources at the same time. The System Jobs resource describes the current and completed "Jobs" that were enacted on a System Group.

- **/System/Groups/** - Returns the collection of System Groups - see [/System/Groups/ \(page 32\)](#)
- **/System/Jobs/** - Returns the collection of System Jobs - see [/System/Jobs/ \(page 43\)](#)

3.1.1 /System/Groups/

The Collection-level methods and attributes of /System/Groups/ return information about the System Groups collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 23: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /System/Groups/{id}/ (page 36) for Instance Attribute details

GET /System/Groups/

GET /System/Groups/ returns the Collection of System Groups.

Table 24: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/System/Groups/
```

Table 25: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of System Groups + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /System/Groups/

Table 26: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

POST /System/Groups/ creates a new system group.

Example POST Request Body

```
{
  "Name": "name",
  "Description": "description",
  "Resources": [
    {
      "Self": "uri1"
    },
    {
      "Self": "uriN"
    }
  ]
}
```

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/System/Groups/
--data '{
  "Name": "Data102 Group",
  "Description": "Data102 Group for Bulk FW Update"
  "Resources": [
    {
      "Self": "https://10.20.30.40/Storage/Devices/0123456789/?
IPAddress=10.20.30.50"
    },
    {
      "Self": "https://10.20.30.40/Storage/Devices/012345678912/?
IPAddress=10.20.30.51"
    },
    {
      "Self": "https://10.20.30.40/Storage/Devices/012345678933/?
IPAddress=10.20.30.52"
    }
  ],
}'
```

Table 27: POST Response Codes

Response Code	Name	Definition
201	Created	Created & System Group information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /System/Groups/

HEAD /System/Groups/ pings the System Groups Collection.

Table 28: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 29: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /System/Groups/

OPTIONS /System/Groups/ returns the allowable HTTP Methods list for this resource.

Table 30: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 31: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.1.2 /System/Groups/{id}/

The Device-level methods and attributes of /System/Groups/{id}/ return information about a specific System Group and enable management operations.

HTTP Methods:

GET

PUT

DELETE

HEAD

OPTIONS

Table 32: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The Identifier this particular System Group
Name	String	Mandatory	Yes	Free-Form 64 Characters	Name of the Group
Description	String	Optional	Yes	Free-Form 256 Characters	Description of the Group
CreateDate	Datetime	Mandatory	No	"23-Feb-2022 09:35:47"	Creation datetime auto-generated upon POST /System/Groups
LastModified	Datetime	Mandatory	No	"23-Feb-2022 09:35:47"	LastModified datetime auto-generated upon POST /System/Groups or PUT /System/Groups/{id}
MixedResourceTypes	Boolean	Mandatory	No	true false	Indicates if there are members of the group that have differing "Model" and/or "OOB Interface" types
Resources[x].Self	URI String	Mandatory	Yes	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Resources[x].IPAddress	String	Mandatory	No	Free-Form 128 Characters	IP Address that is provided from the Self URI repeated here (auto-generated)

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Resources[x]. Hostname	String	Optional	Yes	Free-Form 128 Characters	Hostname based on the DNS lookup of the IP Address provided in the Self URI (auto-generated) or sent by web client as an option

GET /System/Groups/{id}/

GET /System/Groups/{id}/ returns information regarding a specific System Group based on the {id} in the URI address string.

Table 33: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/System/Groups/087d9191-9cd0-7107-b24a-0afd619ef10f
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/System/Groups/087d9191-9cd0-7107-b24a-0afd619ef10f/",
  "ID": "087d9191-9cd0-7107-b24a-0afd619ef10f",
  "Name": "Data102 Group",
  "Description": "",
  "CreateDate": "20-Jul-2022 22:55:42",
  "LastModified": "20-Jul-2022 22:55:42",
  "MixedResourceTypes": false,
  "Resources": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/THCLS00220EA0045-A/?
IPAddress=10.202.239.228",
      "IPAddress": "10.202.239.228",
      "Hostname": "oobm-00-0c-ca-07-0a-e3.hgst.com."
    },
    {
      "Self": "http://10.20.30.40/Storage/Devices/USCSJ04217EA0004/?
IPAddress=10.202.239.176",
      "IPAddress": "10.202.239.176",
      "Hostname": "oobm-00-0c-ca-04-00-28.hgst.com."
    }
  ]
}
```

```

    {
      "Self": "http://10.20.30.40/Storage/Devices/USWSJ01119EZ002C/?
IPAddress=10.202.239.246",
      "IPAddress": "10.202.239.246",
      "Hostname": "oobm-00-0c-ca-08-1d-e8.hgst.com."
    }
  ]
}

```

Table 34: GET Response Codes

Response Code	Name	Definition
200	OK	OK & System Group information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /System/Groups/{id}/

PUT /System/Groups/{id}/ modifies an attribute or executes an operation for this Group.

Table 35: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Optional	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```

curl
  -i
  -u admin:admin
  -H 'If-Match: 3677651d2011428f32120a029b015e81'
  -H 'Content-Type: application/json'
  -X PUT http://10.20.30.40/System/Groups/
  --data '{
    "Resources": [
      {

```



```

        "Self": "https://10.20.30.40/Storage/Devices/0123456789/?
IPAddress=10.20.30.50"
      },
      {
        "Self": "https://10.20.30.40/Storage/Devices/012345678912/?
IPAddress=10.20.30.51"
      },
      {
        "Self": "https://10.20.30.40/Storage/Devices/012345678933/?
IPAddress=10.20.30.52"
      },
      {
        "Self": "https://10.20.30.40/Storage/Devices/012345678933/?
IPAddress=10.20.30.53"
      }
    ],
    "Description": "Updated Data102 Group for Bulk FW Update"
  },
}
```

Example PUT Request Body

```

{
  "Name": "name",
  "Description": "description",
  "Resources": [
    {
      "Self": "uril",
    },
    {
      "Self": "uriN",
    }
  ],
}
```

Table 36: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /System/Groups/{id}/

DELETE /System/Groups/{id}/ deletes this System Group.

Table 37: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/System/Groups/12345
```

Table 38: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /System/Groups/{id}/

HEAD /System/Groups/{id}/ pings this System Group.

Table 39: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 40: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /System/Groups/{id}/

OPTIONS /System/Groups/{id}/ returns the allowable HTTP Methods list for this resource.

Table 41: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 42: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.1.2.1 Bulk Operations for a Resource Group

The following are example curl commands to perform bulk operations on a resource group.

Bulk Firmware Update

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -X POST http://10.20.30.40/System/Groups/0123456/OperatingSystem/
  --data '{
    "FirmwareFile": "http://location/of/file"
  }'
```

Bulk Reboot

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -X POST http://10.20.30.40/System/Groups/0123456/Reboot/
  --data '{
    "Reboot": true
  }'
```

Bulk Power State Change

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -X POST http://10.20.30.40/System/Groups/0123456/PowerState/
  --data '{
    "ID": 4
  }'
```



Note: ID=2 is "PowerOn", ID=4 is "Sleep".

Bulk Locate LED Toggle

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -X POST http://10.20.30.40/System/Groups/0123456/IndicatorLED/
  --data '{
    "ID": 2
  }'
```



Note: ID=2 is "Lit", ID=4 is "Off".

3.1.3 /System/Jobs/

The Collection-level methods and attributes of /System/Jobs/ return information about the System Jobs collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 43: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /System/Jobs/{id}/ (page 46) for Instance Attribute details

GET /System/Jobs/

GET /System/Jobs/ returns the Collection of System Jobs.

Table 44: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/System/Jobs/
```

Table 45: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of System Jobs + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /System/Jobs/

HEAD /System/Jobs/ pings the System Jobs collection.

Table 46: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 47: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /System/Jobs/

OPTIONS /System/Jobs/ returns the allowable HTTP Methods list for this resource.

Table 48: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 49: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.1.4 /System/Jobs/{id}/

The Device-level methods and attributes of /System/Jobs/{id}/ return information about a specific System Job and enable management operations.

HTTP Methods:

GET

DELETE

HEAD

OPTIONS

Table 50: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 64 Chars UUID Format	The Identifier this particular System Job. This ID is based on the prefix "GroupOperation" with a suffix of UNIX Epoch Time for uniqueness
StartTime	String	Mandatory	No	23-Feb-2022 09:35:47	The job start timestamp
ElapsedTime	String	Mandatory	No	23-Feb-2022 09:46:04	The job elapsed timestamp; updates during process; displays "end time" when job completed
Owner	URI String	Mandatory	No	Free-Form URI Format 256 Chars	The System Group URI used for this System Job
PercentComplete	Number	Mandatory	No	0 - 100	The percent complete status of the System Job

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service" "Inoperative" "Write Protected" "Reboot Needed" "Activate Needed" "Activate with reboot needed" "Activate invalidated by reboot"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16 65537 - 65542	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65537 - 65541	The current health value map of this Resource. There can be 1 or more ID entries.

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Details[]	String Array	Mandatory	No	Free-Form Array entry. If no entry, then "None"	<p>The current Health Details of the Resource. For System Jobs, the following Details may be rendered:</p> <ul style="list-style-type: none"> • 1st entry describes Operation Type • 2nd to Nth entry describes each of the System Group entries status/progress

GET /System/Jobs/{id}/

GET /System/Jobs/{id}/ returns information regarding a specific System Job based on the {id} in the URI address string.

Table 51: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/System/Jobs/GroupOperation1812345
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/System/Jobs/GroupOperation1812345",
  "ID": "GroupOperation1812345",
  "StartTime": "23-Feb-2022 09:35:47",
  "ElapsedTime": "23-Feb-2022 09:46:04",
  "Owner": "http://10.20.30.40/System/Groups/12345",
  "PercentComplete": 100,
  "Status": {
    "State": {
      "ID": 8,
      "Name": "Completed"
    }
  }
}
```

```

    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ],
    "Details": [
      "OPERATION: System Group OS Update: http://fileserver/users/bob/
bundle4_0_13.tar.gz",
      "SUCCESS: Resource:oobm-00-0c-ca-08-1d-e8, Message:Action was successful,
StatusCode:0",
      "SUCCESS: Resource:oobm-00-0c-ca-07-09-20, Message:Action was successful,
StatusCode:0",
      "SUCCESS: Resource:oobm-00-0c-ca-07-09-02, Message:Action was successful,
StatusCode:0"
    ]
  }
}

```

Table 52: GET Response Codes

Response Code	Name	Definition
200	OK	OK & System Job information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /System/Jobs/{id}/

DELETE /System/Jobs/{id}/ deletes this System Job.

Table 53: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/System/Jobs/GroupOperation1812345
```



Note: System Jobs cannot be deleted when in-progress (Percent Complete is less than 100%).



Note: System Jobs are automatically created with unique IDs when a System Group is used in a Group Operation (e.g. FW Update, Reboot, Power State, or Locate LED).

Table 54: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /System/Jobs/{id}/

HEAD /System/Jobs/{id}/ pings this System Job.

Table 55: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 56: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /System/Jobs/{id}/

OPTIONS /System/Jobs/{id}/ returns the allowable HTTP Methods list for this resource.

Table 57: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 58: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.2 Physical Devices

The OCAPI's physical resource model includes the overall Compute Proxy Device. The topics in this section provide information for accessing and managing the features of these physical resources.

3.2.1 /Compute/Devices/

The Collection-level methods and attributes of /Compute/Devices/ return information about the Devices collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 59: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Compute/Devices/{id}/ (page 55) for Instance Attribute details

GET /Compute/Devices/

GET /Compute/Devices/ returns the Collection of Devices.

Table 60: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/
```

Table 61: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Devices + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/

HEAD /Compute/Devices/ pings the Devices collection.

Table 62: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 63: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/

OPTIONS /Compute/Devices/ returns the allowable HTTP Methods list for this resource.

Table 64: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 65: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.2.2 /Compute/Devices/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/ return information about a specific Device and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 66: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
SystemType.Name	String	Mandatory	No	"Compute"	The domain type string indicating the type of Device Resource
SystemType.ID	Number	Mandatory	No	1	The domain type number indicating the type of Device Resource
Name	String	Mandatory	Yes	Free-Form 256 Chars	The user-defined Friendly Name for this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
OperatingSystem.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Operating System Resource
OperatingSystem.Name	String	Mandatory	No	Free-Form URI	Resource Manager Data Center Edition Application Name
OperatingSystem.OSType.Name	String	Mandatory	No	"Winnt" "Linux"	Resource Manager Data Center Edition running on this OS Type string value
OperatingSystem.OSType.ID	Number	Mandatory	No	18 36	Resource Manager Data Center Edition running on this OS Type number value
OperatingSystem.Version	String	Mandatory	No	Free-Form URI	Resource Manager Data Center Edition Application Version

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Model	String	Mandatory	No	"Resource Manager Data Center"	Resource Manager Data Center Edition application model
Manufacturer	String	Mandatory	No	"WDC"	Resource Manager Data Center Edition manufacturer
Capabilities.Members[].Name	String	Mandatory	No	"Access Server" "Management"	The capabilities information value(s) regarding the Resource
Capabilities.Members[].ID	Number	Mandatory	No	9 14	The capabilities information value map(s) regarding the Resource
Capabilities.Members[].CapabilitiesDescription	String	Mandatory	No	Free-form characters	Entry describing the capability
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status. Health[]. ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536 - 65538	The current health value map of this Resource. There can be 1 or more ID entries
Status. Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
IPAddresses. Members[]. IPAddress	String Array	Mandatory	Yes	IPv4 or IPv6 pattern	The IP Address list for this Resource
InformationStructure. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Information Structure Resource
ApplicationSettings. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Application Settings Resource
Location. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Location Resource
Accounts. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Accounts Resource
Files. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Files Resource
Jobs. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Jobs Resource
SystemClock. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the System Clock Resource
Assets. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Assets Resource Collection
Notifications. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Notifications Resource
Policies. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Policies Resource

GET /Compute/Devices/{id}/

GET /Compute/Devices/{id}/ returns information regarding a specific Device based on the {id} in the URI address string.

Table 67: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/",
  "SystemType": {
    "ID": 1,
    "Name": "Compute"
  },
  "Name": "rmdc-server",
  "ID": "0123456789",
  "OperatingSystem": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/",
    "Name": "Resource Manager Data Center",
    "OSType": {
      "ID": 36,
      "Name": "Linux"
    },
    "Version": "1.0.0"
  },
  "Model": "Resource Manager Data Center",
  "Manufacturer": "WDC",
  "Capabilities": {
    "Members": [
      {
        "ID": 9,
        "Name": "Access Server",
        "CapabilityDescription": "This device is a server providing access to
resources directly attached or in a network."
      },
      {
        "ID": 14,
        "Name": "Management",
        "CapabilityDescription": "This device provides software system
management capabilities."
      }
    ]
  }
}
```

```

    },
    "Status": {
      "State": {
        "ID": 16,
        "Name": "In service"
      },
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
      "Details": [
        "None"
      ]
    },
    "IPAddresses": {
      "Members": [
        {
          "IPAddress": "10.20.30.40"
        },
        {
          "IPAddress": "192.168.0.6"
        }
      ]
    },
    "InformationStructure": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/InformationStructure/"
    },
    "ApplicationSettings": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/ApplicationSettings/"
    },
    "Location": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/"
    },
    "Accounts": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Accounts/"
    },
    "Files": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/"
    },
    "Jobs": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Jobs/"
    },
    "SystemClock": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/SystemClock/"
    },
    "Assets": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Assets/"
    },
    "Notifications": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Notifications/"
    },
    "Policies": {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Policies/"
    }
  }
}

```

Table 68: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/

HEAD /Compute/Devices/{id}/ pings this Storage Device.

Table 69: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 70: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/

OPTIONS /Compute/Devices/{id}/ returns the allowable HTTP Methods list for this resource.



Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

Table 71: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json

Header	Mandatory or Optional	Description
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 72: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3 Logical Devices

The OCAPI's logical and virtual resources model include those resources that are logical or virtual in nature. The topics in this section provide information for accessing and managing the features of these logical and virtual resources.

3.3.1 /Compute/Devices/{id}/Accounts/

The Collection-level methods and attributes of /Compute/Devices/{id}/Accounts/ return information about the Accounts collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 73: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Accounts/{id}/ (page 66) for Instance Attribute details

GET /Compute/Devices/{id}/Accounts/

GET /Compute/Devices/{id}/Accounts/ returns the Collection of Accounts.

Table 74: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/ComputeDevices/0123456789/Accounts/
```


Table 75: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Accounts + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Accounts/

POST /Compute/Devices/{id}/Accounts/ creates a new Account.

Table 76: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/Compute/Devices/01234567890/Accounts/
--data '{
  "UserID": "new_username",
  "BasicAuthentication": {
    "UserPassword": "password"
  },
  "Role": {
    "ID": 0
  }
}'
```

Example POST Request Body

```
{
  "UserID": "user_id",
  "BasicAuthentication": {
    "UserPassword": "password"
  },
  "DigestAuthentication": {
    "UserPassword": "password"
  },
  "JWTAuthentication": {
    "UserPassword": "password"
  },
  "Role": {
    "ID": 0 | 1
  }
}
```

Table 77: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Account information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Accounts/

HEAD /Compute/Devices/{id}/Accounts/ pings the Accounts collection.

Table 78: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 79: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Accounts/

OPTIONS /Compute/Devices/{id}/Accounts/ returns the allowable HTTP Methods list for this resource.

Table 80: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 81: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.2 /Compute/Devices/{id}/Accounts/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Accounts/{id}/ return information about a specific Account and enable management operations.

HTTP Methods:

GET

PUT

DELETE

HEAD

OPTIONS

Table 82: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 64 Chars Valid characters include: "a-z A-Z 0-9 - _"	The Identifier this particular Account
BasicAuthentication. UserPassword SHA1Checksum	String	Mandatory	No	Free-Form 128 Characters	The basic authentication checksum
BasicAuthentication. UserPassword	String	Optional	Yes	Free-Form 128 Characters	The user password used to create the checksum (not shown in the GET response)
DigestAuthentication. UserPassword MD5Checksum	String	Mandatory	No	Free-Form 128 Characters	The digest authentication checksum
DigestAuthentication. UserPassword	String	Optional	Yes	Free-Form 128 Characters	The user password used to create the checksum (not shown in the GET response)
DigestAuthentication. Realm	String	Optional	No	Free-Form 128 Characters	The digest authentication realm
Role. Name	String	Mandatory	No	"Admin"	The Role type string for this Account
Role. ID	Number	Mandatory	No	0	The Role type value for this Account
UserID	String	Mandatory	Yes	Free-Form 64 Chars	The user identifier for this Account

GET /Compute/Devices/{id}/Accounts/{id}/

GET /Compute/Devices/{id}/Accounts/{id}/ returns information regarding a specific Account based on the {id} in the URI address string.

Table 83: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Accounts/admin
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Accounts/admin/",
  "ID": "admin",
  "BasicAuthentication": {
    "UserPasswordSHA1Checksum": "{SHA}0DPiKuNIrrVmD8IUCuw1hQxNqZc="
  },
  "DigestAuthentication": {
    "UserPasswordMD5Checksum": "97ebad852d0dabfd6b71ae26fff61fa3",
    "Realm": "Western Digital Corporation"
  },
  "JWTAuthentication": {
    "UserPasswordMD5Checksum": "b80648545a30e0999892b517127c0e17"
  },
  "Role": {
    "ID": 0,
    "Name": "Admin"
  },
  "UserID": "admin"
}
```

Table 84: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Accounts/{id}/

PUT /Compute/Devices/{id}/Accounts/{id}/ modifies an attribute or executes an operation for this Account.

Table 85: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Accounts/test
--data '{
  "UserID": "test",
  "BasicAuthentication": {
    "UserPassword": "new_password"
  },
  "Role": {
    "ID": 1
  }
}'
```

Example PUT Request Body

```
{
  "UserId": "userId",
  "BasicAuthentication": {
    "UserPassword": "new_password"
  },
  "DigestAuthentication": {
    "UserPassword": "new_password"
  },
  "JWTAuthentication": {
    "UserPassword": "new_password"
  },
  "Role": {
    "ID": 0 | 1
  }
}
```

Table 86: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Accounts/{id}/

DELETE /Compute/Devices/{id}/Accounts/{id}/ deletes this account.

Table 87: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Accounts/test
```



Note: The last remaining "Admin" role account cannot be deleted to prevent loss of communication with the Device.

Table 88: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	In the case of only one account, that last one cannot be deleted
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is Busy, client should try again later

HEAD /Compute/Devices/{id}/Accounts/{id}/

HEAD /Compute/Devices/{id}/Accounts/{id}/ pings this Storage Account.

Table 89: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 90: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Accounts/{id}/

OPTIONS /Compute/Devices/{id}/Accounts/{id}/ returns the allowable HTTP Methods list for this resource.

Table 91: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 92: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.3 /Compute/Devices/{id}/OperatingSystem/

The methods and attributes of /Compute/Devices/{id}/OperatingSystem/ return information about the Operating System (Application) and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 93: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware name
OSType.Name	String	Mandatory	No	"Winnt" "Linux"	The Operating System Type value
OSType.ID	Number	Mandatory	No	18 36	The Operating System Type value map
Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Application Version

GET /Compute/Devices/{id}/OperatingSystem/

GET /Compute/Devices/{id}/OperatingSystem/ returns the information of the Operating System resource.

Table 94: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/",
  "Name": "Resource Manager Data Center",
  "OSType": {
    "ID": 36,
    "Name": "Linux"
  },
  "Version": "1.0.0"
}
```

Table 95: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Operating System resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/OperatingSystem/

HEAD /Compute/Devices/{id}/OperatingSystem/ pings the Operating System resource.

Table 96: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 97: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/OperatingSystem/

OPTIONS /Compute/Devices/{id}/OperatingSystem/ returns the allowable HTTP Methods list for this resource.

Table 98: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 99: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.4 /Compute/Devices/{id}/ApplicationSettings/

The methods and attributes of /Compute/Devices/{id}/ApplicationSettings/ return information about the Application Settings and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 100: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Country	String	Optional	Yes	Free-Form 64 Chars	The Country name where this Device is located
Territory	String	Optional	Yes	Free-Form 64 Chars	The Territory name where this Device is located
State	String	Optional	Yes	Free-Form 64 Chars	The State name where this Device is located
City	String	Optional	Yes	Free-Form 64 Chars	The City name where this Device is located
Address1	String	Optional	Yes	Free-Form 64 Chars	The first Address information where this Device is located
Address2	String	Optional	Yes	Free-Form 64 Chars	The second Address information where this Device is located as needed
Address3	String	Optional	Yes	Free-Form 64 Chars	The third Address information where this Device is located as needed
PostalCode	String	Optional	Yes	Free-Form 32 Chars	The Postal or Zip Code name where this Device is located
SiteName	String	Optional	Yes	Free-Form 32 Chars	The friendly Site Name
Building	String	Optional	Yes	Free-Form 32 Chars	The Building name or number where this Device is located

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Room	String	Optional	Yes	Free-Form 32 Chars	The Room name or number in the Building where this Device is located
Pod	String	Optional	Yes	Free-Form 32 Chars	The Pod name or number in the Room this Device is located as needed
Row	String	Optional	Yes	Free-Form 32 Chars	The Row name or number in the Room or Pod this Device is located
Rack	String	Optional	Yes	Free-Form 32 Chars	The Rack name or number in the Row this Device is located
Shelf	String	Optional	Yes	Free-Form 32 Chars	The Shelf name or number of the Rack this Device is located
Device	String	Optional	Yes	Free-Form 32 Chars	The Device name or number of the Rack this Device is located
Item	String	Optional	Yes	Free-Form 32 Chars	The Item name indicating the Shelf units or dimension for this Device
GPSCoords	String	Optional	Yes	Decimal Latitude, Decimal Longitude Format	The GPS coordinates of the location of this Device
OtherLocationInfo	String	Optional	Yes	Free-Form 64 Chars	A place-holder for other location information

GET /Compute/Devices/{id}/ApplicationSettings/

GET /Compute/Devices/{id}/ApplicationSettings/ returns the Application Settings information.

Table 101: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/ApplicationSettings/
```

Example GET Resonse Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/ApplicationSettings/",
  "Name": "Resource Manager Data Center",
  "Version": "1.0.0",
  "ClusterSettings": {
    "Nodes": [
      {
        "IPAddress": "localhost",
        "Username": "elastic",
        "Password": "password"
      }
    ]
  }
}
```

Table 102: GET Response Codes

Response Code	Name	Definition
200	OK	OK & ApplicationSettings information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/ApplicationSettings/

PUT /Compute/Devices/{id}/ApplicationSettings/ modifies an attribute of the Application Settings.

Table 103: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/ApplicationSettings/
--data '{
  "ClusterSettings": {
    "Nodes": [
      {
        "IPAddress": "10.20.30.40",
        "Username": "name",
        "Password": "password"
      }
    ]
  }
}'
```

Example PUT Request Body

```
{
  "ClusterSettings": {
    "Nodes": [
      {
        "IPAddress": "computer1",
        "Username": "elastic",
        "Password": "password"
      },
      {
        "IPAddress": "computer2",
        "Username": "elastic",
        "Password": "password"
      },
      {
        "IPAddress": "computer3",
        "Username": "elastic",
        "Password": "password"
      }
    ]
  }
}
```

Example PUT Response Body

```
{
  "Self": "http://10.202.237.60:80/Compute/Devices/0d1e357286a94bd083c1e3b89e7b7bd0/
ApplicationSettings/",
}
```



```

    "Name": "Resource Manager Data Center",
    "Version": "1.0.0",
    "ClusterSettings": {
      "Nodes": [
        {
          "IPAddress": "computer1",
          "Username": "elastic",
          "Password": "password"
        },
        {
          "IPAddress": "computer2",
          "Username": "elastic",
          "Password": "password"
        },
        {
          "IPAddress": "computer3",
          "Username": "elastic",
          "Password": "password"
        }
      ]
    }
  }
}

```

Table 104: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & ApplicationSettings information in the response body
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	Resource could not execute the request

HEAD /Compute/Devices/{id}/ApplicationSettings/

HEAD /Compute/Devices/{id}/ApplicationSettings/ pings the Application Settings.

Table 105: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 106: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/ApplicationSettings/

OPTIONS /Compute/Devices/{id}/ApplicationSettings/ returns the allowable HTTP Methods list for this resource.

Table 107: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 108: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.5 /Compute/Devices/{id}/Files/

The Collection-level methods and attributes of /Compute/Devices/{id}/Files/ return information about the Files collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 109: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Files/{id}/ (page 84) for Instance Attribute details

GET /Compute/Devices/{id}/Files/

GET /Compute/Devices/{id}/Files/ returns the Collection of Files.

Table 110: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Files/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/",
  "Members": [
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/auditlog/",
      "ID": "auditlog",
      "Description": "Audit log"
    }
  ]
}
```

```

    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/notices/",
      "ID": "notices",
      "Description": "Notices"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/eula/",
      "ID": "eula",
      "Description": "EULA"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/telemetry/",
      "ID": "telemetry",
      "Description": "Telemetry"
    }
  ],
  "TLSCertAndKey": {},
  "LDAPCert": {}
}

```

Table 111: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Files + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Files/

HEAD /Compute/Devices/{id}/Files/ pings this Files collection.

Table 112: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 113: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Files/

OPTIONS /Compute/Devices/{id}/Files/ returns the allowable HTTP Methods list for this resource.

Table 114: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 115: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.6 /Compute/Devices/{id}/Files/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Files/{id}/ return information about a specific File and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 116: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier
Name	String	Mandatory	No	Free-Form 256 Chars	The name of the file

GET /Compute/Devices/{id}/Files/{id}/

GET /Compute/Devices/{id}/Files/{id}/ returns information regarding a specific File based on the {id} in the URI address string.

Table 117: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command – Audit Log

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Files/auditlog
```

Example GET Response Body – Audit Log

```
index:000001|
addr:[10.88.94.81:52974]|
type:Response|
statuscode:204|
user:admin|
path:/Compute/Devices/000af7957e01/Jobs/GroupOperation15798/
```

Table 118: Available Files

File Type	Description
auditlog	Returns the current audit log entries as text to the requestor (content-type: text/plain)
notices	Returns the 3rd Party open-source software entries and their licensing used in this application
eula	Returns the End-User License Agreement documentation
telemetry	Returns a downloaded compressed bundle file called "telemetry_Compute_{id}_{timestamp}.tgz" to the requestor containing instantaneous GET of all the device info
cert_pem (204 No Content or 200 OK)	If the User uploaded a custom Cert/Key pair, returns the current SSL certificate entry as text to the requestor (content-type: text/plain)
key_pem (405 Method Not Allowed)	If the User uploaded a custom Cert/Key pair, SSL key GET not allowed for security of the key (403 Forbidden response)

Table 119: GET Response Codes

Response Code	Name	Definition
200	OK	OK & File information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Files/{id}/

POST /Compute/Devices/{id}/Files/{id}/ updates the specific file.

Table 120: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
Content-Type: multipart/form-data	Mandatory	The FW image file is of content type "multipart/form-data"

Example POST curl Command – Adding an SSL Certificate & Key

```
curl
-i
-u admin:admin
-X POST http://10.20.30.40/Compute/Devices/0123456789/Files/TLSCertAndKey/
-H "Content-Type: multipart/form-data"
-F "cert.pem=@cert.pem"
-F "key.pem=@key.pem"
```

Example POST Request Body – Adding an SSL Certificate & Key

```
Content-Disposition: form-data; cert.pem="{file_name}"
{file body}
Content-Disposition: form-data; key.pem="{file_name}"
{file body}
```



Note: Both Certificate and Key files MUST be sent together in the same POST request.



Note: Once the Certificate and Key files are uploaded, the API will restart for the certificate/key to take effect. See PUT [/Query/InformationStructure/ \(page 16\)](#) {"RestartAPI" : true}.



Note: The Certificate and Key files cannot be validated, therefore the user must make sure the files are valid before uploading. If they are invalid, the result is the HTTPS service will not operate.

Example POST curl Command – Adding an LDAP Client SSL Certificate

```
curl
-i
-u admin:admin
-X POST http://10.20.30.40/Compute/Devices/0123456789/Files/LDAPCert/
-H "Content-Type: multipart/form-data"
-F "cert.pem=@ldapcert.pem"
```

Example POST Request Body – Adding an LDAP Client SSL Certificate

```
Content-Disposition: form-data; ldapcert.pem="{file_name}"
{file body}
```



Note: The Certificate file cannot be validated, therefore the user must make sure the files are valid before uploading. If they are invalid, the result is the LDAP service will not operate properly.

Table 121: POST Response Codes

Response Code	Name	Definition
201	Created	Created & File information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Files/{id}/

HEAD /Compute/Devices/{id}/Files/{id}/ pings a specific Compute File.

Table 122: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 123: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Files/{id}/

OPTIONS /Compute/Devices/{id}/Files/{id}/ returns the allowable HTTP Methods list for this resource.

Table 124: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 125: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
204	No Content	No Content & "Allow" list of methods in the response header. Some files will return 204 No Content indicating that there is no entity body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.7 /Compute/Devices/{id}/Location/

The methods and attributes of /Compute/Devices/{id}/Location/ return information about the resource Location and enable management operations.

HTTP Methods:

GET

PUT

DELETE

HEAD

OPTIONS

Table 126: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Country	String	Optional	Yes	Free-Form 64 Chars	The Country name where this Device is located
Territory	String	Optional	Yes	Free-Form 64 Chars	The Territory name where this Device is located
State	String	Optional	Yes	Free-Form 64 Chars	The State name where this Device is located
City	String	Optional	Yes	Free-Form 64 Chars	The City name where this Device is located
Address1	String	Optional	Yes	Free-Form 64 Chars	The first Address information where this Device is located
Address2	String	Optional	Yes	Free-Form 64 Chars	The second Address information where this Device is located as needed
Address3	String	Optional	Yes	Free-Form 64 Chars	The third Address information where this Device is located as needed
PostalCode	String	Optional	Yes	Free-Form 32 Chars	The Postal or Zip Code name where this Device is located
SiteName	String	Optional	Yes	Free-Form 32 Chars	The friendly Site Name
Building	String	Optional	Yes	Free-Form 32 Chars	The Building name or number where this Device is located

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Room	String	Optional	Yes	Free-Form 32 Chars	The Room name or number in the Building where this Device is located
Pod	String	Optional	Yes	Free-Form 32 Chars	The Pod name or number in the Room this Device is located as needed
Row	String	Optional	Yes	Free-Form 32 Chars	The Row name or number in the Room or Pod this Device is located
Rack	String	Optional	Yes	Free-Form 32 Chars	The Rack name or number in the Row this Device is located
Shelf	String	Optional	Yes	Free-Form 32 Chars	The Shelf name or number of the Rack this Device is located
Device	String	Optional	Yes	Free-Form 32 Chars	The Device name or number of the Rack this Device is located
Item	String	Optional	Yes	Free-Form 32 Chars	The Item name indicating the Shelf units or dimension for this Device
GPSCoords	String	Optional	Yes	Decimal Latitude, Decimal Longitude Format	The GPS coordinates of the location of this Device
OtherLocationInfo	String	Optional	Yes	Free-Form 64 Chars	A place-holder for other location information

GET /Compute/Devices/{id}/Location/

GET /Compute/Devices/{id}/Location/ returns the Location information.

Table 127: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Location/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/",
  "Country": "USA",
  "Territory": "",
  "State": "Colorado",
  "City": "Colorado Springs",
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "",
  "PostalCode": "80921",
  "SiteName": "WD COS DataCenter 1",
  "Building": "9950",
  "Room": "159",
  "Pod": "p2",
  "Rack": "r02",
  "Shelf": "30",
  "Device": "5",
  "Item": "Rack Units",
  "GPSCoords": "38.9838684,-104.8040493",
  "OtherLocationInfo": "This is other info"
}
```

Table 128: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Location information + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Location/

PUT /Compute/Devices/{id}/Location/ modifies an attribute of the Location.

Table 129: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Location/
--data '{
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "North",
  "Building": "9950",
  "City": "Colorado Springs",
  "Country": "USA",
  "Device": "255",
  "GPSCoords": "38.9838643,-104.806244",
  "Item": "Rack Units",
  "OtherLocationInfo": "More Info",
  "Pod": "2",
  "PostalCode": "80921",
  "Rack": "2",
  "Room": "159",
  "Row": "2",
  "Shelf": "24",
  "SiteName": "WDC COS DataCenter",
  "State": "Colorado",
  "Territory": "El Paso"
}'
```

Example PUT Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/"
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "North",
  "Building": "9950",
  "City": "Colorado Springs",
  "Country": "USA",
  "Device": "255",
  "GPSCoords": "38.9838643,-104.806244",
  "Item": "Rack Units",
  "OtherLocationInfo": "More Info",
```

```

"Pod": "2",
"PostalCode": "80921",
"Rack": "2",
"Room": "159",
"Row": "2",
"Shelf": "24",
"SiteName": "WDC COS DataCenter",
"State": "Colorado",
"Territory": "El Paso"
}
    
```

Table 130: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Location information with no response body
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	Resource could not execute the request

DELETE /Compute/Devices/{id}/Location/

DELETE /Compute/Devices/{id}/Location/ deletes Location information.

Table 131: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```

curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Location/
    
```

Table 132: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Compute/Devices/{id}/Location/

HEAD /Compute/Devices/{id}/Location/ pings the Location resource.

Table 133: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 134: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Location/

OPTIONS /Compute/Devices/{id}/Location/ returns the allowable HTTP Methods list for this resource.

Table 135: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text

Header	Mandatory or Optional	Description
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 136: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.8 /Compute/Devices/{id}/SystemClock/

The methods and attributes of /Compute/Devices/{id}/SystemClock/ return information about the System Clock and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 137: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Uptime.Duration	String	Mandatory	No		The current uptime value in ISO 8601 format
Uptime.Days	Number	Mandatory	No	0 - n	The current uptime Days since boot
Uptime.Hours	Number	Mandatory	No	0 - 23	The current uptime Hours since boot
Uptime.Minutes	Number	Mandatory	No	0 - 59	The current uptime Minutes since boot
Uptime.Seconds	Number	Mandatory	No	0 - 59	The current uptime Seconds since boot

GET /Compute/Devices/{id}/SystemClock/

GET /Compute/Devices/{id}/SystemClock/ returns the System Clock information.

Table 138: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/SystemClock/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/SystemClock/",
  "Date": "17-Aug-2022",
  "Time": "12:34:13",
  "TimeZone": "(UTC-6.00) MDT",
  "TimeZoneSetting": "MDT",
  "DST": "Enabled",
  "Uptime": {
    "Duration": "P82DT1H26M51S",
    "Days": 82,
    "Hours": 1,
    "Minutes": 26,
    "Seconds": 51
  }
}
```

Table 139: GET Response Codes

Response Code	Name	Definition
200	OK	OK & System Clock information + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned. Note: Due to the time changing every second, catching a 304 response will be very rare
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/SystemClock/

HEAD /Compute/Devices/{id}/SystemClock/ pings the System Clock resource.

Table 140: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 141: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/SystemClock/

OPTIONS /Compute/Devices/{id}/SystemClock/ returns the allowable HTTP Methods list for this resource.

Table 142: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 143: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.9 /Compute/Devices/{id}/Jobs/

The Collection-level methods and attributes of /Compute/Devices/{id}/Jobs/ return information about the Jobs collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 144: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Jobs/{id}/ (page 102) for Instance Attribute details

GET /Compute/Devices/{id}/Jobs/

GET /Compute/Devices/{id}/Jobs/ returns the Collection of Jobs.

Table 145: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Jobs/
```

Table 146: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Jobs + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Jobs/

HEAD /Compute/Devices/{id}/Jobs/ pings the Jobs collection.

Table 147: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 148: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Jobs/

OPTIONS /Compute/Devices/{id}/Jobs/ returns the allowable HTTP Methods list for this resource.

Table 149: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 150: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.10 /Compute/Devices/{id}/Jobs/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Jobs/{id}/ return information about a specific Job and enable management operations.

HTTP Methods:

- GET
- DELETE
- HEAD
- OPTIONS

Table 151: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	"FactoryReset"	The Name of this particular Job
Status. State. Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service" "Inoperative" "Write Protected" "Reboot Needed" "Activate Needed" "Activate with reboot needed" "Activate invalidated by reboot"	The current state value of this Resource
Status. State. ID	Number	Mandatory	No	0-16 65537-65542	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
PercentComplete	Number	Mandatory	No	0-100	The percent complete status of the Job

GET /Compute/Devices/{id}/Jobs/{id}/

GET /Compute/Devices/{id}/Jobs/{id}/ returns information regarding a specific Job based on the {id} in the URI address string.

Table 152: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Jobs/FactoryReset_0123456789/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Jobs/FactoryReset_0123456789/",
  "ID": "FactoryReset_0123456789",
  "StartTime": "02-Oct-2023 16:49:07",
  "ElapsedTime": "02-Oct-2023 16:49:22",
  "Owner": "http://10.20.30.40/Compute/Devices/0123456789/",
```

```

    "PercentComplete": 100,
    "Status": {
      "State": {
        "ID": 8,
        "Name": "Completed"
      },
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ]
    }
  }
}

```

Table 153: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Job information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Jobs/{id}/

DELETE /Compute/Devices/{id}/Jobs/{id}/ deletes a specific Job.



Note: **NOTE:** When deleting firmware-related jobs, the recommended order is to delete FirmwareUpdate before FirmwareActivate.



Note: Jobs cannot be deleted when in-progress (i.e. when PercentComplete is less than 100%).

Table 154: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/Storage/Devices/0123456789/Jobs/
  FactoryReset_0123456789
```

Table 155: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	If job is still in progress
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Jobs/{id}/

HEAD /Compute/Devices/{id}/Jobs/{id}/ pings this specific Job.

Table 156: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 157: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Jobs/{id}/

OPTIONS /Compute/Devices/{id}/Jobs/{id}/ returns the allowable HTTP Methods list for this resource.

Table 158: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 159: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.11 /Compute/Devices/{id}/Assets/

The Collection-level methods and attributes of /Compute/Devices/{id}/Assets/ return information about the Asset(s) collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 160: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Assets/{id}/ (page 110) for Instance Attribute details

GET /Compute/Devices/{id}/Assets/

GET /Compute/Devices/{id}/Assets/ returns the Collection of Assets.

Table 161: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Assets/
```

Table 162: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Assets + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Assets/

HEAD /Compute/Devices/{id}/Assets/ pings the Assets Collection.

Table 163: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 164: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Assets/

OPTIONS /Compute/Devices/{id}/Assets/ returns the allowable HTTP Methods list for this resource.

Table 165: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 166: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.12 /Compute/Devices/{id}/Assets/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Assets/{id}/ return information about a specific Asset and enable management operations.

HTTP Methods:

GET

PUT

HEAD

OPTIONS

Table 167: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The Identifier this particular Asset
Name	String	Mandatory	No	Free-Form 256 Chars	The name of the Asset. Must be unique to this Asset Collection
Description	String	Optional	No	Free-Form 256 Characters	The description of this Asset
Type.ID	Number	Mandatory	No		
Type.Name	String	Mandatory	No		
Accounts	Object Array	Optional	Yes	BasicAuthentication: {"UserPassword": "<password>"}, {"UserID": "<username>"}	Provides a username and password pair to tell Resource Manager Data Center Edition how to connect to a remote/proxied Device (typically the Redfish-based Devices)
SubType.ID	Number	Mandatory	No		
SubType.Name	String	Mandatory	No		
AssetInformation	Object	Mandatory	No	Device GET Full information	Contains one or more discovered Devices' GET /Full information

GET /Compute/Devices/{id}/Assets/{id}/

GET /Compute/Devices/{id}/Assets/{id}/ returns information regarding a specific Asset based on the {id} in the URI address string.

Table 168: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Assets/5000ccab0410a180/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Assets/5000ccab0410a180/",
  "ID": "5000ccab0410a180",
  "Name": "5000ccab0410a180",
  "Accounts": [
    {
      "BasicAuthentication": {
        "UserPassword": " ***** "
      },
      "UserID": "admin"
    }
  ],
  "Description": "Full Device Asset Information",
  "Type": {
    "ID": 2,
    "Name": "Storage"
  },
  "SubType": {
    "ID": 1,
    "Name": "Enclosure"
  },
  "AssetInformation": {
    "Accounts": {...},
    "Adapters": {...},
    "Capabilities": {...},
    "ChassisPackageType": {...},
    "Connectors": {...},
    "Controllers": {...},
    "DurableName": "5000CCAB0410A180",
    "Expanders": {...},
    "Fans": {...},
    "Files": {...},
    "Format": {...},
    "Hostname": "oobm-00-0c-ca-08-39-3c",
```

```

    "ID": "5000ccab0410a180",
    "IPAddresses": {...},
    "IndicatorLED": {...},
    "InformationStructure": {...},
    "Jobs": {...},
    "Location": {...},
    "Manufacturer": "HGST",
    "Media": {...},
    "Model": "H4102-J",
    "Name": "5000ccab0410a180",
    "OperatingSystem": {...},
    "Ports": {...},
    "PowerState": {...},
    "Sanitize": {...},
    "Self": "http://10.20.30.40:80/Storage/Devices/5000ccab0410a180/?
IPAddress=10.20.30.40",
    "Sensors": {...},
    "SerialNumber": "THCLS00220EA0059",
    "SlotNumber": 2,
    "Status": {...},
    "SystemType": {...},
    "TotalCapacity": 150012470231040,
    "ZoneSets": {...},
  }
}

```

Table 169: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Asset information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Assets/{id}/

PUT /Compute/Devices/{id}/Assets/{id}/ modifies an attribute or executes an operation for this Asset.

Table 170: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Assets/123456
--data '{
  "Accounts": [
    {
      "BasicAuthentication": {
        "UserID": "name",
        "UserPassword": "password"
      }
    }
  ]
}'
```

Example PUT Request Body

```
{
  "Accounts": [
    {
      "BasicAuthentication": {
        "UserPassword": "password"
      },
      "UserID": "username"
    }
  ]
}
```

Table 171: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Asset information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Assets/{id}/

HEAD /Compute/Devices/{id}/Assets/{id}/ pings this Asset.

Table 172: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 173: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Assets/{id}/

OPTIONS /Compute/Devices/{id}/Assets/{id}/ returns the allowable HTTP Methods list for this resource.

Table 174: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 175: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource

Response Code	Name	Definition
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.13 /Compute/Devices/{id}/Policies/

The Collection-level methods and attributes of /Compute/Devices/{id}/Policies/ return information about the Policies collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 176: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Policies/{id}/ (page 121) for Instance Attribute details

GET /Compute/Devices/{id}/Policies/

GET /Compute/Devices/{id}/Policies/ returns the Collection of Policies.

Table 177: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Policies/
```

Table 178: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Policies + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Policies/

POST /Compute/Devices/{id}/Policies/ creates a new Policy.

Table 179: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/Compute/Devices/01234567890/Policies/
--data '{
  "Name": "Policy 1",
  "Description": "This is a Policy",
  "Enabled": true,
  "Rules": [
    {
      "Name": "Rule1",
      "Log": "Triggered Check Health not OK on Device ID 0123456789",
      "Description": "Check Health not OK on Device ID 0123456789",
      "Salience": 1,
      "Conditions": [
        {
          "Member": "Health_ID",
          "Operator": "!=",
          "ValueInt": 5,
          "IsEnd": false
        },
        {
          "Member": "ID",
          "Operator": "==",
          "ValueString": "0123456789",
          "IsEnd": true
        }
      ],
      "ActionMethods": [
        {
          "Name": "SendMail"
        }
      ],
      "ConditionsOperator": [
```

```

        "}}"
    ]
}
],
}'

```

Example POST Request Body

```

{
  "Name": "Policy3",
  "Description": "Policy to track inventory",
  "Enabled": true|false,
  "Rules": [
    {
      "Name": "CheckHealth",
      "Description": "Check the Health values",
      "Saliency": 0 - 100,
      "Conditions": [
        {
          "Member": "Health_ID",
          "Operator": "!=",
          "ValueInt": 5,
          "ValueString": "",
          "ValueBool": true|false,
          "IsEnd": true|false
        }
      ],
      "ConditionsOperator": [
        "=="
      ],
      "ActionMethods": [
        {
          "Name": "SendMail",
        }
      ],
      "Log": "CheckHealth is performed"
    }
  ]
}

```

Table 180: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Account information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Policies/

HEAD /Compute/Devices/{id}/Policies/ pings this Policies Collection.

Table 181: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 182: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Policies/

OPTIONS /Compute/Devices/{id}/Policies/ returns the allowable HTTP Methods list for this resource.

Table 183: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 184: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.14 /Compute/Devices/{id}/Policies/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Policies/{id}/ return information about a specific Policy and enable management operations.

HTTP Methods:

GET
PUT
DELETE
HEAD
OPTIONS

Table 185: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The identifier for this particular Policy
Name	String	Mandatory	Yes	The name of the Policy. Must be unique to this Policy Collection	The user-defined Friendly Name for this Resource
Description	String	Optional	Yes	Free-Form 256 Characters	The description of this Policy
CreateDate	String	Mandatory	No	datetime	Displays when this Policy was created
LastModified	String	Mandatory	No	datetime	Displays when this Policy was last modified
Type. ID	Number	Mandatory	No	0 1	Type of Policy: User-Defined = 0 System-Defined=1 Default = 0. Only "User-Defined" will be returned when Users create new Policies.
Type. Name	String	Mandatory	No	"User-Defined" "System-Defined"	Type of Policy: User-Defined = 0 System-Defined=1 Default = 0. Only "User-Defined" will be returned when Users create new Policies.

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Enabled	Boolean	Mandatory	Yes	true false	Indicates or Sets the Policy as enabled or disabled
Rules[].Name	String	Mandatory	Yes	Free-Form 256 Characters	The name of this Rule.#Must be unique to this collection of Rules
Rules[].Description	String	Mandatory	Yes	Free-Form 256 Characters	Description for this Rule
Rules[].Salience	Number	Mandatory	Yes	0 - 100	Salience determines how focused this rule is to be considered
Rules[].Conditions[].Member	String	Mandatory	Yes	Free-Form 256 Characters	Condition Member name or alias
Rules[].Conditions[].Operator	String	Mandatory	Yes	"==" "!=" ">=" "<=" ">" "<"	Operator type for the Condition of this Rule
Rules[].Conditions[].ValueInt	Number	Mandatory or Optional	Yes	-n to n	Indicates an "integer" value to test against Note: At least one Rules[].Conditions is required
Rules[].Conditions[].ValueString	String	Mandatory or Optional	Yes	Free-Form 256 Characters	Indicates a "string" value to test against Note: At least one Rules[].Conditions is required
Rules[].Conditions[].ValueBool	Boolean	Mandatory or Optional	Yes	true false	Indicates a "boolean" value to test against Note: At least one Rules[].Conditions is required
Rules[].Conditions[].IsEnd	Boolean	Mandatory or Optional	Yes	true false	Indicates if there are more Conditions after this one
Rules[].ConditionsOperator	String	Mandatory	Yes	"&&" " "	Indicates the overall type of operator for this Rule between each Rule Conditions Member entry

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Rules[]. ActionsMethods[]. Name	String Array	Mandatory	Yes	"SendMail" "SendTrap"	Name of the Action; can be one or the other or both as separate "Name" entries
Rules[]. Log	String	Optional	Yes	Free-Form 256 Characters	Log information for this Rule
Notifications	String	Mandatory	No	Free-Form URI pattern	Link to any Notifications associations. This link is automatically generated

GET /Compute/Devices/{id}/Policies/{id}/

GET /Compute/Devices/{id}/Policies/{id}/ returns information regarding a specific Policy based on the {id} in the URI address string.

Table 186: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/
Policies/9285b6f7-42b6-2a53-9c2e-37767e1b7300
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/
Policies/9285b6f7-42b6-2a53-9c2e-37767e1b7300/",
  "ID": "9285b6f7-42b6-2a53-9c2e-37767e1b7300",
  "Name": "Policy3",
  "Description": "Policy to track inventory",
  "CreateDate": "12-Feb-2023 22:23:33",
  "LastModified": "17-Feb-2023 06:43:56",
  "Enabled": true,
  "Priority": 0,
  "TimePeriod": "202302120T222333/THISANDFUTURE",
  "Type": {
    "ID": 0,
```

```

    "Name": "User-Defined"
  },
  "DecisionStrategy": {
    "ID": 0,
    "Name": "Unknown"
  },
  "Rules": [
    {
      "Name": "CheckHealth",
      "Description": "Check the Health values",
      "Salience": 10,
      "Conditions": [
        {
          "Member": "Health_ID",
          "Operator": "!=",
          "ValueInt": 5,
          "IsEnd": false
        },
        {
          "Member": "Health_Name",
          "Operator": "!=",
          "ValueString": "OK",
          "IsEnd": true
        }
      ],
      "ConditionsOperator": [
        "&&"
      ],
      "ActionMethods": [
        {
          "Name": "SendMail"
        }
      ],
      "Log": "CheckHealth is performed"
    },
    {
      "Name": "CheckMedia",
      "Description": "Description dummy rule2",
      "Salience": 99,
      "Conditions": [
        {
          "Member": "PowerState_Name",
          "Operator": "==",
          "ValueString": "Off",
          "IsEnd": false
        },
        {
          "Member": "IndicatorLED_Name",
          "Operator": "==",
          "ValueString": "On",
          "IsEnd": true
        }
      ],
      "ConditionsOperator": [
        "||"
      ],
      "ActionMethods": [
        {
          "Name": "SendTrap"
        }
      ]
    }
  ]
}

```

```

    },
    "Log": "CheckMedia is performed"
  }
],
"Notifications": "http://10.20.30.40/Compute/Devices/0123456789/Notifications/?
Policies=9285b6f7-42b6-2a53-9c2e-37767e1b7300"
}

```

Table 187: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Policy information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Policies/{id}/

PUT /Compute/Devices/{id}/Policies/{id}/ modifies an attribute or executes an operation for this Policy.

Table 188: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```

curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Policies/123456
--data '{
  "Name": "Policy 123",
  "Description": "Add new rule to this is a Policy",
  "Enabled": true,

```

```

"Rules": [
  {
    "Name": "Rule1",
    "Description": "Check Health not OK on Device ID 0123456789",
    "Salience": 1,
    "Conditions": [
      {
        "Member": "Health_ID",
        "Operator": "!=",
        "ValueInt": 5,
        "IsEnd": false
      },
      {
        "Member": "ID",
        "Operator": "==",
        "ValueString": "0123456789",
        "IsEnd": true
      }
    ],
    "ConditionsOperator": [
      "&&"
    ],
    "ActionMethods": [
      {
        "Name": "SendMail"
      }
    ],
    "Log": "Triggered Check Health not OK on Device ID 0123456789"
  },
  {
    "Name": "Rule2",
    "Description": "Check Sensor Temperature",
    "Salience": 1,
    "Conditions": [
      {
        "Member": "Type",
        "Operator": "==",
        "ValueString": "Sensor",
        "IsEnd": false
      },
      {
        "Member": "SensorType_ID",
        "Operator": "==",
        "ValueInt": 2,
        "IsEnd": false
      },
      {
        "Member": "CurrentReading",
        "Operator": ">",
        "ValueInt": 60,
        "IsEnd": true
      }
    ],
    "ActionMethods": [
      {
        "Name": "SendTrap"
      }
    ],
    "Log": "Triggered Check Sensor Temperature above 60 C",
  }
]

```



```

        "ConditionsOperator": [
            "&&",
            "&&"
        ]
    }
]
}'

```

Example PUT Request Body

```

{
  "Name": "Policy_newname",
  "Description": "Policy to track inventory",
  "Enabled": true|false,
  "Rules": [
    {
      "Name": "CheckHealth",
      "Description": "Check the Health values",
      "Salience": 0 - 100,
      "Conditions": [
        {
          "Member": "Health_ID",
          "Operator": "!=",
          "ValueInt": 5,
          "IsEnd": true|false
        }
      ],
      "ConditionsOperator": [
        "=="
      ],
      "ActionMethods": [
        {
          "Name": "SendMail"
        }
      ],
      "Log": "CheckHealth is performed"
    }
  ]
}

```

Table 189: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Policy information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Policies/{id}/

DELETE /Compute/Devices/{id}/Policies/{id}/ deletes a specific Policy.

Table 190: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Policies/123456
```

Table 191: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	If job is still in progress
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Policies/{id}/

HEAD /Compute/Devices/{id}/Policies/{id}/ pings this Policy.

Table 192: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 193: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Policies/{id}/

OPTIONS /Compute/Devices/{id}/Policies/{id}/ returns the allowable HTTP Methods list for this resource.

Table 194: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 195: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.15 /Compute/Devices/{id}/Notifications/

The Collection-level methods and attributes of /Compute/Devices/{id}/Notifications/ return information about the Notifications collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 196: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Notifications/{id}/ (page 135) for Instance Attribute details

GET /Compute/Devices/{id}/Notifications/

GET /Compute/Devices/{id}/Notifications/ returns the Collection of Notifications.

Table 197: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Notifications/
```

Table 198: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Notifications + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Notifications/

POST /Compute/Devices/{id}/Notifications/ creates a new Notification.

Table 199: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/Compute/Devices/01234567890/Notifications/
--data '{
  "Name": "Notification1",
  "Type": {
    "ID": 1,
    "Name": "SMTPAlert"
  },
  "Description": "This is an email notification",
  "SMTPSettings": {
    "Server": "mail-server.com",
    "Subject": "This is a Notification",
    "Port": 25,
    "Username": "admin",
    "Password": "password",
    "From": "This Device"
  },
  "Distributions": [
    {
      "Name": "Admin",
      "Recipients": [
        "admin@test.com"
      ]
    }
  ]
}'
```

Example POST Request Body – SMTPAlert

```
{
  "Name": "notification_name",
  "Description": "description",
```

```

    "Type": {
      "ID": 1
    },
    "SMTPSettings": {
      "Server": "email_server",
      "Subject": "email_subjectline",
      "Port": 25,
      "Username": "user",
      "Password": "password",
      "From": "From this Device"
    },
    "Distributions" : [
      {
        "Name": "Admin" | "Operator",
        "Recipients": [
          {
            "recip1",
            "recip2",
            ...
            "recipN"
          }
        ]
      }
    ]
  },
}

```

Example POST Request Body – SNMP Trap

```

{
  "Name": "notification_name"
  "Description": "description",
  "Type": {
    "ID": 2
  },
  "SNMPSettings": {
    "TargetIP": "10.20.30.40",
    "TargetPort": 162,
    "Version": "Version1 | Version2c | Version3",
    "Community": "public"(,)
    (Selecting Version3 additional below)
    "UserName": "user",
    "EngineID": 1234,
    "AuthenticationProtocol": "SHA",
    "AuthenticationPassphrase": "password",
    "PrivacyProtocol": "DES",
    "PrivacyPassphrase": "password"
  }
}

```

Table 200: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Notification information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Notifications/

HEAD /Compute/Devices/{id}/Notifications/ pings the Notifications collection.

Table 201: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 202: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Notifications/

OPTIONS /Compute/Devices/{id}/Notifications/ returns the allowable HTTP Methods list for this resource.

Table 203: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 204: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.16 /Compute/Devices/{id}/Notifications/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Notifications/{id}/ return information about a specific Notification and enable management operations.

HTTP Methods:

GET

PUT

DELETE

HEAD

OPTIONS

Table 205: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The Identifier for this particular Notification
Name	String	Mandatory	Yes	Free-Form 256 Chars	The name of the Notification. Must be unique to this Notifications Collection
Description	String	Optional	Yes	Free-Form 256 Characters	The description of this Notification
CreateDate	String	Mandatory	No	datetime	Displays when the Notification was created
LastModified	String	Mandatory	No	datetime	Displays when the Notification was last modified
Type. ID	Number	Mandatory	Yes	1 2	Type of Notification: SMTPAlert = 1 SNMPTrap = 2
Type. Name	String	Mandatory	No	"SMTPAlert" "SNMPTrap"	Type of Notification SMTPAlert = 1 SNMPTrap = 2

Table 206: SMTP Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
SMTPSettings.Server	String	Mandatory	Yes	Free-Form 256 Characters of an IP Address or Hostname	Indicates the current Email Target Server IP Address or Hostname location. Use if Type is SMTPAlert
SMTPSettings.Subject	String	Optional	Yes	Free-Form 256 Characters	The "subject line" for any outgoing email alerts or reports
SMTPSettings.Port	Number	Optional	Yes	Integer value; Default = 25	This is the target email server SMTP Port Number where 25 is the IANA default
SMTPSettings.Username	String	Mandatory	Yes	Username string value	This is the Username entry for the target email server
SMTPSettings.Password	String	Mandatory	Yes	Password format (displays "*****")	This is the Password entry for the target email server
SMTPSettings.From	String	Optional	Yes	Free-Form 64 Characters	This is the "From" entry for the email to be sent
Distributions[].Name	String Array	Mandatory	Yes	"Admin" "Operator"	The name of this Distribution List. #There are two choices, either "Admin" or "Operator" distribution list names
Distributions[].Recipients[]	String Array	Mandatory	Yes	Email Format entries	The Recipients array for this "Name". Format is either IP Addresses, Email Address, or Hostnames depending on the Type

Table 207: SNMP Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
SNMPSettings.TargetIP	String	Mandatory	Yes	IPv4 Formatted entry or Hostname formatted entry	This is the target or destination server IP Address or Hostname to send the trap
SNMPSettings.TargetPort	Number	Mandatory	Yes	Integer Port number; Default is IANA Port 162	This is the target or destination server Port Number to send the trap
SNMPSettings.Version	String	Mandatory	Yes	Version1, Version2c, Version3	This is the SNMP Version to send the trap. Version 3 requires more attribute entries
SNMPSettings.Community	String	Mandatory	Yes	"public" (default)	This is the "Community" for the SNMP Trap information

Table 208: Additional SNMP Resource Attributes (Version 3)

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
SNMPSettings.UserName	String	Mandatory	Yes	Username value	Username for the secure SNMP v3 entry
SNMPSettings.EngineID	Number	Mandatory	Yes	Integer number	Engine identifier located at the target or destination SNMP Listener server
SNMPSettings.Authentication Protocol	String	Mandatory	Yes	"SHA" (default)	Authentication protocol type for the SNMP v3 transfer
SNMPSettings.Authentication Passphrase	String	Mandatory	Yes	Password format (displays "*****")	Authentication passphrase for the SNMP v3 transfer
SNMPSettings.PrivacyProtocol	String	Mandatory	Yes	"DES" (default)	Privacy protocol type for the SNMP v3 transfer

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
SNMPSettings.PrivacyPassphrase	String	Mandatory	Yes	Password format (displays "*****")	Privacy passphrase for the SNMP v3 transfer

GET /Compute/Devices/{id}/Notifications/{id}/

GET /Compute/Devices/{id}/Notifications/{id}/ returns information regarding a specific Notification based on the {id} in the URI address string.

Table 209: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Notifications/6202d750
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Notifications/6202d750/",
  "ID": "6202d750-fe5c-dff5-68ec-d8cc7fc9fb79",
  "Name": "Email Alert 1",
  "Description": "Test",
  "CreateDate": "07-Sep-2023 12:49:08",
  "LastModified": "07-Sep-2023 19:09:56",
  "Type": {
    "ID": 1,
    "Name": "SMTPAlert"
  },
  "SMTPSettings": {
    "Server": "mail@server.com",
    "Subject": "This is an Email Alert",
    "Port": 25,
    "Username": "admin",
    "Password": "*****",
    "From": "Device 12345"
  },
  "SNMPSettings": {},
  "Distributions": [
    {
      "Name": "Admin",
      "Recipients": [
        "bill@wdc.com"
      ]
    }
  ]
}
```

```

    ]
  },
  {
    "Name": "Operator",
    "Recipients": [
      "ted@wd.com"
    ]
  }
]
}

```

Table 210: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Notification information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Notifications/{id}/

PUT /Compute/Devices/{id}/Notifications/{id}/ modifies an attribute or executes an operation for this Notification.

Table 211: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Notifications/123456
--data '{
  "Description": "This is an email notification with updated distribution list",
  "Distributions": [
    {
      "Name": "Admin",
      "Recipients": [
        "another@test.com",
        "admin@test.com"
      ]
    }
  ]
}'
```

Example PUT Request Body – SMTPAlert

```
{
  "Name": "notification_name"
  "Description": "description",
  "SMTPSettings": {
    "Server": "email_server",
    "Subject": "email_subjectline",
    "Port": 25,
    "Username": "user",
    "Password": "password",
    "From": "From this Device"
  }
  "Distributions" : [
    {
      "Name": "Admin" | "Operator",
      "Recipients": [
        {
          "recip1",
          "recip2",
          ...
          "recipN"
        }
      ]
    }
  ]
}
```

Example PUT Request Body – SNMPTrap

```
{
  "Name": "notification_name"
  "Description": "description",
  "SNMPSettings": {
```

```

"TargetIP": "10.20.30.40",
"TargetPort": 162,
"Version": "Version1 | Version2c | Version3",
"Community": "public"(,)
(Selecting Version3 additional below)
"UserName": "user",
"EngineID": 1234,
"AuthenticationProtocol": "SHA",
"AuthenticationPassphrase": "password",
"PrivacyProtocol": "DES",
"PrivacyPassphrase": "password"
}

```

Table 212: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Notification information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Notifications/{id}/

DELETE /Compute/Devices/{id}/Notifications/{id}/ deletes a specific Notification.

Table 213: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/Compute/Devices/0123456789/Notifications/123456
```

Table 214: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	In the case of only one notification, that last one cannot be deleted
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Notifications/{id}/

HEAD /Compute/Devices/{id}/Notifications/{id}/ pings this Notification.

Table 215: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 216: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Notifications/{id}/

OPTIONS /Compute/Devices/{id}/Notifications/{id}/ returns the allowable HTTP Methods list for this resource.

Table 217: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 218: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.17 /Compute/Devices/{id}/Analytics/

The Collection-level methods and attributes of /Compute/Devices/{id}/Analytics/ return information about the Analytics collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 219: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Analytics/{id}/ (page 148) for Instance Attribute details

GET /Compute/Devices/{id}/Analytics/

GET /Compute/Devices/{id}/Analytics/ returns the collection of Analytics.



Note: This will not return the "AnalyticInformation" but only the collection of Analytics and their attributes, unless the query parameter is sent. The query parameter ?Analytics=true will add the "AnalyticInformation" objects to all the Analytics Instances in the Collection.

Table 220: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Analytics/
```

Table 221: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Analytics + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Analytics/

POST /Compute/Devices/{id}/Analytics/ creates a new Analytic.

Table 222: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-X POST http://10.20.30.40/Compute/Devices/0123456789/Analytics/
--data '{
  "Name": "Enclosure 5000ccab04105300 Controller B Health Status",
  "Description": "Show Enclosure 5000ccab04105300 Controller B Health status of
the Device over 10 Days",
  "AnalyticAttributes": {
    "TargetEnclosureID": "5000ccab04105300",
    "TargetComponent": "Controllers",
    "TargetComponentID": "IOModuleBFRU",
    "TargetAttribute": "Health",
    "StartTimestamp": "2023-11-20T12:00:00Z",
    "EndTimestamp": "2023-11-29T12:00:00Z"
  }
}'
```

Example POST Request Body

```
{
  "Name": "name",
  "Description": "description",
  "AnalyticAttributes": {
    "TargetEnclosureID": "5000ccab04105300",
    "TargetComponent": "Controllers",
    "TargetComponentID": "IOModuleBFRU",
    "TargetAttribute": "Health",
    "StartTimestamp": "2023-11-20T12:00:00Z",
```

```

    "EndTimeStamp": "2023-11-29T12:00:00Z"
  }
}

```

Table 223: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Analytic information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Analytics/

HEAD /Compute/Devices/{id}/Analytics/ pings the Analytics collection.

Table 224: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 225: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Analytics/

OPTIONS /Compute/Devices/{id}/Analytics/ returns the allowable HTTP Methods list for this resource.

Table 226: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json

Header	Mandatory or Optional	Description
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 227: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.18 /Compute/Devices/{id}/Analytics/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Analytics/{id}/ return information about a specific Analytic and enable management operations.

HTTP Methods:

GET
PUT
DELETE
HEAD
OPTIONS

Table 228: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The Identifier for this particular Analytic
Name	String	Mandatory	Yes	Free-Form 256 Chars	The name of the Analytic. Must be unique to this Analytics Collection
Description	String	Optional	Yes	Free-Form 256 Characters	The description of this Analytic
CreateDate	String	Mandatory	No	datetime	Displays when the Analytic was created
LastModified	String	Mandatory	No	datetime	Displays when the Analytic was last modified
Type. ID	Number	Mandatory	Yes	1 - 4	Type of Analytic (see Type.Name): 1=Descriptive 2=Diagnostic 3=Predictive 4=Prescriptive
Type. Name	String	Mandatory	No	"Descriptive Data Analytics" "Diagnostic Data Analytics" "Predictive Data Analytics" "Prescriptive Data Analytics"	Descriptive=Trending Diagnostic=Anomaly detection Predictive=Correlation of anomalies and trending to predict future issues Prescriptive=Provides solutions based on predictions

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
AnalyticAttributes.TargetEnclosureID	String	Mandatory	Yes	UUID or other string format	Apply Analytic to this Device based on its ID
AnalyticAttributes.TargetComponent	String	Mandatory	Yes	"Enclosure" "Connectors" "Controllers" "Expanders" "Fans" "Media" "Ports" "PowerSupplies" "Sensors" "CoolingDevices"	Apply Analytic to this Device's supported Component Type
AnalyticAttributes.TargetComponentID	String	Mandatory	Yes	UUID or other string format	Apply Analytic to this Device's Component ID
AnalyticAttributes.TargetAttribute	String	Mandatory	Yes	"Health" "Capacity" "CurrentReading" "CurrentSpeed" "Speed"	Supported Attribute type to focus Analytic data
AnalyticAttributes.StartTimestamp	String	Optional	Yes	datetime	Starting time for the range of data for this Analytic
AnalyticAttributes.EndTimestamp	String	Optional	Yes	datetime	End time for the range of data for this Analytic
AnalyticInformation[]	String Array	Mandatory	No	ID Name Status (Health and State) Timestamp Speed (b/s) Capacity (Bytes) CurrentReading (Temp, Volts, Current, RPM) CurrentSpeed (b/s)	Analytic Data array containing Target attribute information across the time range

GET /Compute/Devices/{id}/Analytics/{id}/

GET /Compute/Devices/{id}/Analytics/{id}/ returns information regarding a specific Analytic based on the {id} in the URI address string.



Note: This will trigger returning the actual "AnalyticInformation" data from the Persistent Storage based on the AnalyticAttributes.

Table 229: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Analytics/884c4e20/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Analytics/884c4e20/",
  "ID": "884c4e20",
  "Name": "Health Check 5000ccab04110780 PS A",
  "Description": "Check the health of PS A on 5000ccab04110780",
  "CreateDate": "18-Jan-2024 14:00:33 UTC",
  "LastModified": "18-Jan-2024 14:00:33 UTC",
  "Type": {
    "ID": 1,
    "Name": "Descriptive Data Analytics"
  },
  "AnalyticAttributes": {
    "TargetEnclosureID": "5000ccab04110780",
    "TargetComponent": "PowerSupplies",
    "TargetComponentID": "PowerSupplyAFRU",
    "TargetAttribute": "Health",
    "StartTimestamp": "2023-12-19T07:00:33.608013532-07:00",
    "EndTimestamp": "2023-12-19T13:00:33.608013532-07:00"
  },
  "AnalyticInformation": [
    {
      "ID": "PowerSupplyAFRU",
      "Name": "PSU A",
      "Status": {
        "Health": [
          {
            "ID": 5,
            "Name": "OK"
          }
        ]
      },
      "State": {
        "ID": 16,
        "Name": "In service"
      }
    },
    {
      "Timestamp": "2023-12-19T07:51:59.618315942-07:00"
    }
  ],
  "ID": "PowerSupplyAFRU",
```



```

    "Name": "PSU A",
    "Status": {
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
      "State": {
        "ID": 16,
        "Name": "In service"
      }
    },
    "Timestamp": "2023-12-19T09:30:01.218909477-07:00"
  },
  {
    "ID": "PowerSupplyAFRU",
    "Name": "PSU A",
    "Status": {
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
      "State": {
        "ID": 16,
        "Name": "In service"
      }
    },
    "Timestamp": "2023-12-19T10:11:57.343891158-07:00"
  },
  {
    "ID": "PowerSupplyAFRU",
    "Name": "PSU A",
    "Status": {
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
      "State": {
        "ID": 16,
        "Name": "In service"
      }
    },
    "Timestamp": "2023-12-19T10:50:38.002312545-07:00"
  },
  {
    "ID": "PowerSupplyAFRU",
    "Name": "PSU A",
    "Status": {
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
    },
  },

```

```

        "State": {
            "ID": 16,
            "Name": "In service"
        }
    },
    "Timestamp": "2023-12-19T12:07:19.03363914-07:00"
},
{
    "ID": "PowerSupplyAFRU",
    "Name": "PSU A",
    "Status": {
        "Health": [
            {
                "ID": 5,
                "Name": "OK"
            }
        ],
        "State": {
            "ID": 16,
            "Name": "In service"
        }
    },
    "Timestamp": "2023-12-19T12:14:02.243513553-07:00"
}
]
}

```

Table 230: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Analytic information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Analytics/{id}/

PUT /Compute/Devices/{id}/Analytics/{id}/ modifies an attribute or executes an operation for this Analytic.

Table 231: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Analytics/
--data '{
  "Name": "DEVICE 5000ccab04105300 Controller B Health Status",
  "Description": "Show DEVICE 5000ccab04105300 Controller B Health status of the
Device over 10 Days"
}'
```

Example PUT Request Body

```
{
  "Name": "new_name",
  "Description": "new_description",
  "AnalyticAttributes": {
    "TargetEnclosureID": "5000ccab04105301",
    "TargetComponent": "PowerSupplies",
    "TargetComponentID": "PS A",
    "TargetAttribute": "Health",
    "StartTimestamp": "2023-11-20T12:00:00Z",
    "EndTimestamp": "2024-01-19T12:00:00Z"
  }
}
```

Table 232: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Analytic information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Analytics/{id}/

DELETE /Compute/Devices/{id}/Analytics/{id}/ deletes a specific Analytic.

Table 233: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Analytics/123456
```

Table 234: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	In the case of only one notification, that last one cannot be deleted
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Analytics/{id}/

HEAD /Compute/Devices/{id}/Analytics/{id}/ pings a specific Analytic.

Table 235: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 236: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Analytics/{id}/

OPTIONS /Compute/Devices/{id}/Analytics/{id}/ returns the allowable HTTP Methods list for this resource.

Table 237: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 238: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.19 /Compute/Devices/{id}/Reports/

The Collection-level methods and attributes of /Compute/Devices/{id}/Reports/ return information about the Reports collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 239: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Analytics/{id}/ (page 148) for Instance Attribute details

GET /Compute/Devices/{id}/Reports/

GET /Compute/Devices/{id}/Reports/ returns the collection of Reports.



Note: This will not return the "ReportInformation" but only the collection of Reports and their attributes unless the Query Parameter is sent.

Table 240: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Reports/
```

Table 241: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Analytics + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Reports/

POST /Compute/Devices/{id}/Reports/ creates a new Report.

Table 242: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-X POST http://10.20.30.40/Compute/Devices/0123456789/Analytics/
--data '{
  "Name": "DEVICE 5000ccab04105300 Controller B Health Status",
  "Description": "Show DEVICE 5000ccab04105300 Controller B Health status of the
  Device over 10 Days"
}'
'{"Name":"Report1","Description":"Included Analytics: Analytics1,
Analytics2","ReportAttributes":
  {"Capability":{"ID":2},"Type":{"ID":1}},"Resources":
[{"Self":"http://10.20.30.40/Compute/Devices/0123456789/Analytics/8382835b7f22/"},
  {"Self":"http://10.20.30.40/Compute/Devices/0123456789/
Analytics/72badd62eaca/"}],
  "StartTimestamp":"2024-05-08T02:44:57Z","EndTimestamp":"2024-04-08T02:44:57Z"}'
-X POST http://10.20.30.40/Compute/Devices/0123456789/Reports/
```

Example POST Request Body

```
{
  "Name": "name",
  "Description": "description",
  "ReportAttributes": {
    "Type": {"ID": 1|2},
    "Capability": {"ID": 1|2},
  }
}
```



```
"StartTimestamp": "2023-11-20T12:00:00Z",
"EndTimestamp": "2023-11-29T12:00:00Z",

"Resources" : [ {"Self":"analytic_uri1"}, {"Self":"analytic_uri2"}, ...]
}
```

Table 243: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Analytic information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Reports/

HEAD /Compute/Devices/{id}/Reports/ pings the Reports collection.

Table 244: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 245: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Reports/

OPTIONS /Compute/Devices/{id}/Reports/ returns the allowable HTTP Methods list for this resource.

Table 246: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json

Header	Mandatory or Optional	Description
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 247: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.20 /Compute/Devices/{id}/Reports/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Reports/{id}/ return information about a specific Report and enable management operations.

HTTP Methods:

GET

PUT

DELETE

HEAD

OPTIONS

Table 248: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	UUID Format	The Identifier for this particular Report
Name	String	Mandatory	Yes	Free-Form 64 Chars	The name of the Report. Must be unique to this Reports Collection
Description	String	Optional	Yes	Free-Form 512 Characters	The description of this Report
CreateDate	String	Mandatory	No	datetime	Displays when the Report was created
LastModified	String	Mandatory	No	datetime	Displays when the Report was last modified
ReportAttributes.Type.ID	Number	Mandatory	Yes	1 2	Type of Report
ReportAttributes.Type.Name	String	Mandatory	No	"JSON" "CSV"	JSON Formatted Data CSV Formatted Data (within the JSON response wrapper)
ReportAttributes.Capability.ID	Number	Mandatory	Yes	1 2	Capability ID representing the kind of Report where Dynamic is a sliding timestamp window and the Snapshot is a fixed and saved timestamp range. Use this attribute to create or modify the Report Capability

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
ReportAttributes.Capability.Name	String	Mandatory	No	"Dynamic" "Snapshot"	Capability Name representing the kind of Report where Dynamic is a sliding timestamp window and the Snapshot is a fixed and saved timestamp range
StartTimestamp	String	Optional	Yes	datetime	Starting time for the range of data for this Report
EndTimestamp	String	Optional	Yes	datetime	Ending time for the range of data for this Report
Resources	String Array	Mandatory	Yes	Analytic Self Entries	Array of one or more Analytic entries for the Report
Associations	String Array	Mandatory	No	Reports ID Analytics ID(s)	Shows association between the Report and any Analytic(s) that it might be used in
Analytic.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Analytic Resource(s) regarding this Report
ReportInformation[]	String Array	Optional (Collection) Mandatory (Instance)	No	Analytic Data Entries	Report Data array containing Analytics Data information across the time range

GET /Compute/Devices/{id}/Reports/{id}/

GET /Compute/Devices/{id}/Reports/{id}/ returns information regarding a specific Analytic based on the {id} in the URI address string.



Note: This will trigger returning the actual "ReportInformation" data from the Persistent Storage based on the ReportAttributes.

Table 249: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Reports/123456/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Reports/89de5ac92d93/",
  "ID": "89de5ac92d93",
  "Name": "Report1",
  "Description": "Included Analytics - Analytics2, Analytics3",
  "CreateDate": "08-May-2024 02:56:06 UTC",
  "LastModified": "08-May-2024 02:56:06 UTC",
  "ReportAttributes": {
    "Type": {
      "ID": 1,
      "Name": "JSON"
    },
    "Capability": {
      "ID": 1,
      "Name": "Dynamic"
    },
    "StartTimestamp": "2024-04-07T21:12:45.995834841-06:00",
    "EndTimestamp": "2024-05-07T21:12:45.995834841-06:00"
  },
  "Resources": [
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Analytics/8382835b7f22/"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Analytics/72badd62eaca/"
    }
  ],
  "Associations": {
    "Analytics": [
      "8382835b7f22",
      "72badd62eaca"
    ],
    "Reports": [
      "89de5ac92d93"
    ]
  }
},
```

```

"Analytics": "http://10.20.30.40/Compute/Devices/0123456789/Analytics/?
Reports=89de5ac92d93",
  "ReportInformation": [
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/
Reports/89de5ac92d93/Analytics/8382835b7f22/",
      "ID": "8382835b7f22",
      "Name": "Analytics2",
      "Description": "Server4: Processors: CPU1: Load Percentage",
      "CreateDate": "08-May-2024 02:26:50 UTC",
      "LastModified": "08-May-2024 02:26:50 UTC",
      "Type": {
        "ID": 1,
        "Name": "Descriptive Data Analytics"
      },
      "Associations": {
        "Analytics": [
          "60e12334-f111-a460-2925-8382835b7f22"
        ],
        "Reports": [
          "e6c691f1-378e-738d-350c-a3e340b25534",
          "6b692fa0-14f9-75a3-6cf7-89de5ac92d93"
        ]
      },
      "Reports": "http://10.20.30.40/Compute/Devices/0123456789/
Reports/89de5ac92d93/Reports/?Analytics=8382835b7f22",
      "AnalyticAttributes": {
        "TargetEnclosureID": "3537972c02794b8d968e6bcb22262286",
        "TargetComponent": "Processors",
        "TargetComponentID": "CPU1",
        "TargetAttribute": "LoadPercentage",
        "StartTimestamp": "2024-04-07T21:12:45.995834841-06:00",
        "EndTimestamp": "2024-05-07T21:12:45.995834841-06:00"
      },
      "AnalyticInformation": [
        {
          "Architecture": "x86_64",
          "Cores": 10,
          "ID": "CPU1",
          "LoadPercentage": 0,
          "LogicalProcessors": 20,
          "Name": "CPU1",
          "ProcessorID": "BFEBFBFF000306F2",
          "Timestamp": "2024-04-11T14:04:56.768616776Z"
        },
        {
          "Architecture": "x86_64",
          "Cores": 10,
          "ID": "CPU1",
          "LoadPercentage": 10.16,
          "LogicalProcessors": 20,
          "Name": "CPU1",
          "ProcessorID": "BFEBFBFF000306F2",
          "Timestamp": "2024-04-11T14:21:04.850948626Z"
        }
      ]
    },
    {

```

```

"Self": "http://10.20.30.40/Compute/Devices/0123456789/
Reports/89de5ac92d93/Analytics/72badd62eaca/",
  "ID": "72badd62eaca",
  "Name": "Analytics3",
  "Description": "Server5: Processors: CPU1: Load Percentage",
  "CreateDate": "08-May-2024 02:28:25 UTC",
  "LastModified": "08-May-2024 02:28:25 UTC",
  "Type": {
    "ID": 1,
    "Name": "Descriptive Data Analytics"
  },
  "Associations": {
    "Analytics": [
      "72badd62eaca"
    ],
    "Reports": [
      "a3e340b25534",
      "89de5ac92d93"
    ]
  },
  "Reports": "http://10.20.30.40/Compute/Devices/0123456789/
Reports/89de5ac92d93/Reports/?Analytics=72badd62eaca",
  "AnalyticAttributes": {
    "TargetEnclosureID": "1ace035696544fe38b1149ccd18d3ca1",
    "TargetComponent": "Processors",
    "TargetComponentID": "CPU1",
    "TargetAttribute": "LoadPercentage",
    "StartTimestamp": "2024-04-07T21:12:45.995834841-06:00",
    "EndTimestamp": "2024-05-07T21:12:45.995834841-06:00"
  },
  "AnalyticInformation": [
    {
      "Architecture": "x86_64",
      "Cores": 10,
      "ID": "CPU1",
      "LoadPercentage": 0.1,
      "LogicalProcessors": 20,
      "Name": "CPU1",
      "ProcessorID": "BFEBFBFF000306F2",
      "Timestamp": "2024-04-11T14:04:08.156343903Z"
    },
    {
      "Architecture": "x86_64",
      "Cores": 10,
      "ID": "CPU1",
      "LoadPercentage": 0.03,
      "LogicalProcessors": 20,
      "Name": "CPU1",
      "ProcessorID": "BFEBFBFF000306F2",
      "Timestamp": "2024-04-11T14:19:01.700714765Z"
    },
    {
      "Architecture": "x86_64",
      "Cores": 10,
      "ID": "CPU1",
      "LoadPercentage": 0.1,
      "LogicalProcessors": 20,
      "Name": "CPU1",
      "ProcessorID": "BFEBFBFF000306F2",

```

```

    "Timestamp": "2024-04-11T14:30:38.5508993Z"
  }
]
}

```

Table 250: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Analytic information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Reports/{id}/

PUT /Compute/Devices/{id}/Reports/{id}/ modifies an attribute or executes an operation for this Report.

Table 251: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```

curl
-i
-u admin:admin
'{"Name": "new_name": "new_description"}'
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Reports/123456

```


Example PUT Request Body

```
{
  "Name": "name",
  "Description": "description",
  "ReportAttributes": {
    "Type": {"ID": 1|2},
    "Capability": {"ID": 1|2},
  }
  "StartTimestamp": "2023-11-20T12:00:00Z",
  "EndTimestamp": "2023-11-29T12:00:00Z",

  "Resources" : [ {"Self":"analytic_uri1"}, {"Self":"analytic_uri2"}, ...]
```

Table 252: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Analytic information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Reports/{id}/

DELETE /Compute/Devices/{id}/Reports/{id}/ deletes a specific Report.

Table 253: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/Compute/Devices/0123456789/Reports/123456
```

Table 254: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	In the case of only one notification, that last one cannot be deleted
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Reports/{id}/

HEAD /Compute/Devices/{id}/Reports/{id}/ pings a specific Report.

Table 255: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 256: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Reports/{id}/

OPTIONS /Compute/Devices/{id}/Reports/{id}/ returns the allowable HTTP Methods list for this resource.

Table 257: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 258: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

3.3.21 /Compute/Devices/{id}/Telemetry/

The methods and attributes of /Compute/Devices/{id}/Telemetry/ return information about the Telemetry resource and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 259: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
LastAccessed	String	Mandatory	No	datetime based on UTC	The UTC time of the request
Members[]	String Array	Mandatory	No	Member Entry	This is the instantaneous, fully expanded metadata from this Device

GET /Compute/Devices/{id}/Telemetry/

GET /Compute/Devices/{id}/Telemetry/ returns the information of the Telemetry resource.

Table 260: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Telemetry/
```

Example GET Response Body

```
{
  "Self": "http://10.41.100.60:80/Compute/Devices/
A0A9CB7F-7D63-4075-8826-48E0ADF3F2C0/Telemetry/",
  "LastAccessed": "05-Oct-2023 18:47:33 UTC",
  "Members": [
    {
      "Self": "http://10.41.100.60:80/Compute/Devices/
A0A9CB7F-7D63-4075-8826-48E0ADF3F2C0/",
      "SystemType": {...},
      "Name": "WDAP-LGWPTOMIDK",
      "ID": "A0A9CB7F-7D63-4075-8826-48E0ADF3F2C0",
      "OperatingSystem": {...},
      "Model": "Resource Manager Data Center",
      "Manufacturer": "WDC",
      "Capabilities": {...},
      "Status": {...},
      "IPAddresses": {...},
      "InformationStructure": {...},
      "ApplicationSettings": {...},
      "Location": {...},
      "Accounts": {...},
      "Files": {...},
      "Jobs": {...},
      "SystemClock": {...},
      "Assets": {...},
      "Analytics": {...},
      "Notifications": {...},
      "Policies": {...},
      "Reports": {...},
      "Telemetry": {...}
    }
  ]
}
```

Table 261: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Telemetry resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Telemetry/

HEAD /Compute/Devices/{id}/Telemetry/ pings the Telemetry resource.

Table 262: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 263: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Telemetry/

OPTIONS /Compute/Devices/{id}/Telemetry/ returns the allowable HTTP Methods list for this resource.

Table 264: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 265: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later



Compute Device Service

In This Chapter:

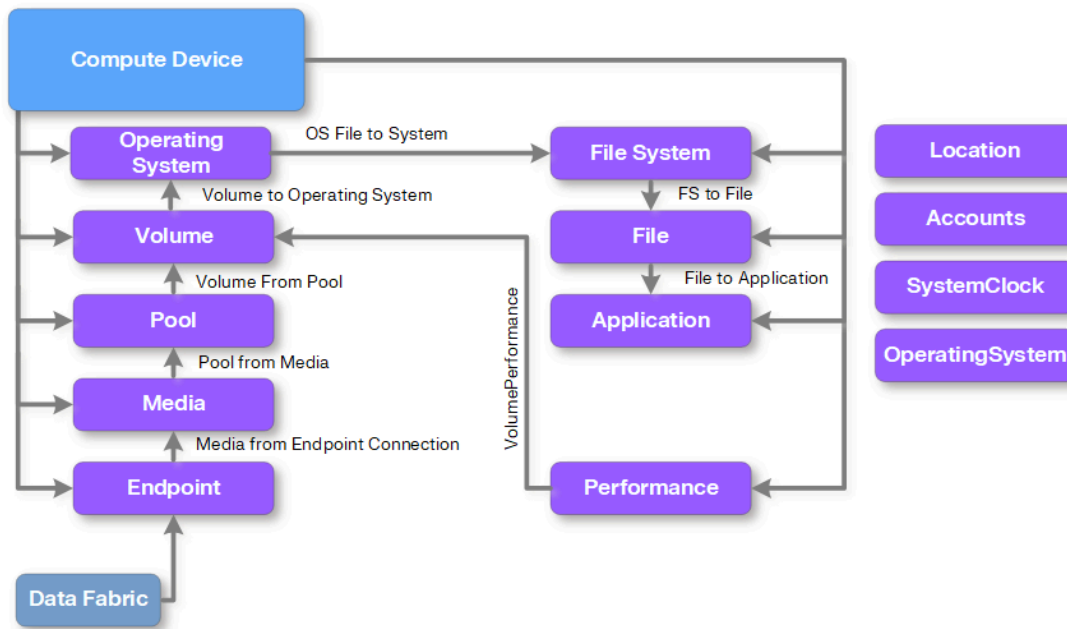
- Modeling Compute Device Resources..... 175
- Physical Devices.....175

4.1 Modeling Compute Device Resources

The Compute Device modeling includes both physical and logical/virtual resources. The physical resource model includes the overall Compute Device that contains a collection of processors, power supplies and fans, and the attached Storage Media (Storage and/or Memory). A Chassis Device may provide the power and cooling resources separately if the Compute Device is separate from the enclosure services. These physical resources are represented in the figure below.

The logical and virtual resources model include those resources that are logical or virtual in nature. These include Storage Pools, Storage Volumes, Storage Endpoints, File System, and Performance.

Figure 2: Compute Resource Physical and Virtual/Logical Model



4.2 Physical Devices

The OCAPI's physical resource model includes the overall Compute Proxy Device. The topics in this section provide information for accessing and managing the features of these physical resources.

4.2.1 /Compute/Devices/

The Collection-level methods and attributes of /Compute/Devices/ return information about the Devices collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 266: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Compute/Devices/{id}/ (page 179) for Instance Attribute details

GET /Compute/Devices/

GET /Compute/Devices/ returns the Collection of Devices.

Table 267: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/
```

Table 268: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Devices + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/

HEAD /Compute/Devices/ pings the Devices collection.

Table 269: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 270: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/

OPTIONS /Compute/Devices/ returns the allowable HTTP Methods list for this resource.

Table 271: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 272: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.2.2 /Compute/Devices/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/ return information about a specific Device and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 273: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
SystemType.Name	String	Mandatory	No	"Compute"	The domain type string indicating the type of Device Resource
SystemType.ID	Number	Mandatory	No	1	The domain type number indicating the type of Device Resource
Name	String	Mandatory	Yes	Free-Form 256 Chars	The user-defined Friendly Name for this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
OperatingSystem.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Operating System Resource
OperatingSystem.Name	String	Mandatory	No	Free-Form URI	Resource Manager Data Center Edition Application Name
OperatingSystem.OSType.Name	String	Mandatory	No	"Winnt" "Linux"	Resource Manager Data Center Edition running on this OS Type string value
OperatingSystem.OSType.ID	Number	Mandatory	No	18 36	Resource Manager Data Center Edition running on this OS Type number value
OperatingSystem.Version	String	Mandatory	No	Free-Form URI	Resource Manager Data Center Edition Application Version

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Serial Number	String	Mandatory	No	Free-Form 64 Chars	The Compute Node Serial Number
Model	String	Mandatory	No	"Resource Manager Data Center"	Compute Node application model
Manufacturer	String	Mandatory	No	"WDC"	Compute Node manufacturer
Capabilities.Members[].Name	String	Mandatory	No	"Management" "File Server", "Server", "Central Processor Device"	The capabilities information value(s) regarding the Resource
Capabilities.Members[].ID	Number	Mandatory	No	14 16 39 47101	The capabilities information value map(s) regarding the Resource
Capabilities.Members[].CapabilitiesDescription	String	Mandatory	No	Free-form characters	Entry describing the capability
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536 - 65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
IPAddresses.Members[].IPAddress	String Array	Mandatory	No	IPv4 or IPv6 pattern	The IP Address list for this Resource
Architecture	String	Optional	No	Free-form characters	The Compute Architecture type
Bios.Manufacturer	String	Mandatory	No	Free-form characters	The BIOS Manufacturer information
Bios.Version	String	Mandatory	No	Free-form characters	The BIOS Version information
Bios.ReleaseDate	String	Mandatory	No	Free-form characters	The BIOS Release Date
ChassisPackageType.Name	String	Optional	No	"Other" "Unknown" "Desktop" "Low Profile Desktop" "Pizza Box" "Mini Tower" "Tower" "Portable" "Laptop" "Notebook" "Hand Held" "Docking Station" "All in One" "Sub Notebook" "Space-Saving" "Lunch Box" "Main System Chassis" "Expansion Chassis" "SubChassis" "Bus Expansion Chassis" "Peripheral Chassis" "Storage Chassis" "Rack Mount Chassis" "Sealed-Case PC" "Multi-system Chassis"	The Compute Node chassis package value information

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
ChassisPackageType.ID	Number	Optional	No	1 - 25	The Compute Node chassis package value map
Domain	String	Mandatory	No	Free-Form 64 Chars	The Domain that this Compute Node is a member of
Memory	Number	Mandatory	No	Integer in Bytes	The total memory on this Compute Node in Bytes
RemainingMemory	Number	Mandatory	No	Integer in Bytes	The remaining (not used) memory on this Compute Node in Bytes
Rackmountable.Name				"Unknown" "False" "True"	The Rackmountable value based on ChassisType
Rackmountable.ID	Number	Optional	No	1 - 25	The Rackmountable value map based on ChassisType value map
InformationStructure.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Information Structure Resource
Location.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Location Resource
Accounts.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Accounts Resource
Files.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Files Resource
SystemClock.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the System Clock Resource
Adapters.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Adapters Resource collection
Media.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Media Resource
Performance.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Performance Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Ports. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Ports Resource
PowerSupplies. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Power Supplies Resource
Processors. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Proecessors Resource
Volumes. Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Volumes Resource

GET /Compute/Devices/{id}/

GET /Compute/Devices/{id}/ returns information regarding a specific Device based on the {id} in the URI address string.

Table 274: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/",
  "SystemType": {
    "ID": 1,
    "Name": "Compute"
  },
  "Name": "cos-r16-s1",
  "ID": "0123456789",
  "OperatingSystem": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/",
    "Name": "Linux",
    "Architecture": "x86_64",
    "OSDescription": "Ubuntu 22.04 (Jammy Jellyfish) 5.15.0-69-generic",
    "SerialNumber": "0123456789",
    "OSType": {
```

```

        "ID": 36,
        "Name": "Linux"
    },
    "Version": "Ubuntu 22.04 (Jammy Jellyfish) 5.15.0-69-generic",
    "Status": {
        "State": {
            "ID": 16,
            "Name": "In service"
        },
        "Health": [
            {
                "ID": 5,
                "Name": "OK"
            }
        ]
    },
    "SerialNumber": "S199310X5A12689",
    "Model": "SSG-5028R-E1CR12L-CE010",
    "Manufacturer": "Supermicro",
    "Capabilities": {
        "Members": [
            {
                "ID": 14,
                "Name": "Management",
                "CapabilityDescription": "This device provides software system
management capabilities."
            },
            {
                "ID": 16,
                "Name": "File Server",
                "CapabilityDescription": "This device is a file server."
            },
            {
                "ID": 39,
                "Name": "Server",
                "CapabilityDescription": "This device is a compute server."
            },
            {
                "ID": 47101,
                "Name": "Central Processor Device",
                "CapabilityDescription": "This device provides general purpose CPU-
based compute processors."
            }
        ]
    },
    "Status": {
        "State": {
            "ID": 16,
            "Name": "In service"
        },
        "Health": [
            {
                "ID": 5,
                "Name": "OK"
            }
        ]
    },
    "Details": [
        "None"
    ]
}

```

```

    ]
  },
  "IPAddresses": {
    "Members": [
      {
        "IPAddress": "10.202.239.211"
      }
    ]
  },
  "Architecture": "x86_64",
  "Bios": {
    "Manufacturer": "American Megatrends Inc.",
    "Version": "2.0b",
    "ReleaseDate": "04/14/2017"
  },
  "ChassisPackageType": {
    "ID": 1,
    "Name": "Other"
  },
  "InformationStructure": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/InformationStructure/"
  },
  "Domain": "",
  "Memory": 134961729536,
  "RemainingMemory": 128453312512,
  "Rackmountable": {
    "ID": 1,
    "Name": "Unknown"
  },
  "Location": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/"
  },
  "Accounts": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Accounts/"
  },
  "Adapters": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Adapters/"
  },
  "Files": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/"
  },
  "Media": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Media/"
  },
  "Performance": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Performance/"
  },
  "Ports": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Ports/"
  },
  "PowerSupplies": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/PowerSupplies/"
  },
  "Processors": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/Processors/"
  },
  "SystemClock": {
    "Self": "http://10.20.30.40/Compute/Devices/0123456789/SystemClock/"
  },
}

```

```

"Volumes": {
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Volumes/"
}
}
    
```

Table 275: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/

HEAD /Compute/Devices/{id}/ pings this Storage Device.

Table 276: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 277: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/

OPTIONS /Compute/Devices/{id}/ returns the allowable HTTP Methods list for this resource.



Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

Table 278: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 279: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.2.3 /Compute/Devices/{id}/Processors/

The Collection-level methods and attributes of /Compute/Devices/{id}/Processors/ return information about the Processors collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 280: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Processors/{id}/ (page 190) for Instance Attribute details

GET /Compute/Devices/{id}/Processors/

GET /Compute/Devices/{id}/Processors/ returns the Collection of Controllers.

Table 281: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Processors/
```

Table 282: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Controllers + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Processors/

HEAD /Compute/Devices/{id}/Processors/ pings the Controllers collection.

Table 283: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 284: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Processors/

OPTIONS /Compute/Devices/{id}/Processors/ returns the allowable HTTP Methods list for this resource.

Table 285: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.2.4 /Compute/Devices/{id}/Processors/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Processors/{id}/ return information about a specific Processor and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 286: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	Yes	Free-Form 256 Chars	The user-defined Friendly Name for this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
StatusHealth[.ID]	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Architecture	String	Mandatory	No	Free-form string indicating the architecture	The architecture type for the processor
Cores	Number	Mandatory	No	Unsigned Integer	The number of processor cores
DataWidth	String	Mandatory	No	Free-form string indicating the data width in bits	The number of processor cores
ProcessorDescription	String	Mandatory	No	Free-form 256 Chars	The number of processor cores
Family	Number	Mandatory	No	Unsigned Integer	The processor family value
LogicalProcessors	Number	Mandatory	No	Unsigned Integer	The number of logical processors
Manufacturer	String	Mandatory	No	Free-form 64 Chars	The processor manufacturer
Model	Number	Mandatory	No	Unsigned Integer	The processor model name or number
ProcessorID	String	Mandatory	No	Hex String	The processor unique identifier
ProcessorSpeed.BaseUnits	String	Mandatory	No	MHz	The base units for the processor speed
ProcessorSpeed.CurrentClockSpeed	Number	Mandatory	No	0 - n	The current speed of the processor
ProcessorSpeed.MaxClockSpeed	Number	Mandatory	No	0 - n	The maximum speed of the processor
Stepping	Number	Mandatory	No	Unsigned Integer	The processor stepping value
Revision	String	Mandatory	No	Free-form 64 Chars	The processor version
LoadPercentage	Number	Mandatory	No	0 - 100	The processor stepping value

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Role	String	Mandatory	No	"Central Processor" "Math Processor" "Graphics Processing Unit" "Field-Programmable Gate Array"	The processor role

GET /Compute/Devices/{id}/Processors/{id}/

GET /Compute/Devices/{id}/Processors/{id}/ returns information regarding a specific Controller based on the {id} in the URI address string.

Table 287: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Processors/CPU1
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Processors/CPU1/",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ],
    "Details": [
      "None"
    ]
  },
  "Architecture": "x86_64",
  "Cores": 10,
  "DataWidth": "64-bit",
  "ProcessorDescription": "Type 0, Family 6, Model 63, Stepping 2",
  "Family": 6,
}
```

```

    "ID": "CPU1",
    "LogicalProcessors": 20,
    "Manufacturer": "Intel",
    "Model": 63,
    "Name": "Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz",
    "ProcessorID": "BFEBFBFF000306F2",
    "ProcessorSpeed": {
      "BaseUnits": "MHz",
      "CurrentClockSpeed": 2300,
      "MaxClockSpeed": 4000
    },
    "Stepping": 2,
    "Revision": "Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz",
    "LoadPercentage": 0,
    "Role": "Central Processor"
  }

```

Table 288: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Controller information in the response body + ETag Header
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Processors/{id}/

HEAD /Compute/Devices/{id}/Processors/{id}/ pings this Controller.

Table 289: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 290: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Processors/{id}/

OPTIONS /Compute/Devices/{id}/Processors/{id}/ returns the allowable HTTP Methods list for this resource.

Table 291: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

4.2.5 /Compute/Devices/{id}/Adapters/

The Collection-level methods and attributes of /Compute/Devices/{id}/Adapters/ return information about the Adapters collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 292: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Adapters/{id}/ (page 197) for Instance Attribute details

GET /Compute/Devices/{id}/Adapters/

GET /Compute/Devices/{id}/Adapters/ returns the Collection of Adapters.

Table 293: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Adapters
```

Table 294: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Adapters + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Adapters/

HEAD /Compute/Devices/{id}/Adapters/ pings the Adapters collection.

Table 295: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 296: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Adapters/

OPTIONS /Compute/Devices/{id}/Adapters/ returns the allowable HTTP Methods list for this resource.

Table 297: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.2.6 /Compute/Devices/{id}/Adapters/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Adapters/{id}/ return information about a specific Adapter and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 298: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Associations	String Array	Mandatory	No	Adapter Ports	The associations among resources based on resource IDs

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Ports.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Ports associated with this Adapter

GET /Compute/Devices/{id}/Adapters/{id}/

GET /Compute/Devices/{id}/Adapters/{id}/ returns information regarding a specific Adapter based on the {id} in the URI address string.

Table 299: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Adapters/enol/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Adapters/enol/",
  "ID": "enol",
  "Status": {
    "State": {
      "ID": 0,
      "Name": "Unknown"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Associations": {
    "Adapters": [
      "enol"
    ],
    "Ports": [
      "0c_c4_7a_68_e5_60_enol_inet",
      "0c_c4_7a_68_e5_60_enol_inet611"
    ]
  }
}
```



```
"Ports": "http://10.20.30.40/Compute/Devices/0123456789/Ports/?Adapters=en01"
}
```

Table 300: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Adapter information in the response body + ETag Header
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Adapters/{id}/

HEAD /Compute/Devices/{id}/Adapters/{id}/ pings this Adapter.

Table 301: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 302: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Adapters/{id}/

OPTIONS /Compute/Devices/{id}/Adapters/{id}/ returns the allowable HTTP Methods list for this resource.

Table 303: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

4.2.7 /Compute/Devices/{id}/Adapters/{id}/Ports/

The Collection-level methods and attributes of /Compute/Devices/{id}/Adapters/{id}/Ports/ return information about the Ports collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 304: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ (page 202) for Instance Attribute details

GET /Compute/Devices/{id}/Adapters/{id}/Ports/

GET /Compute/Devices/{id}/Adapters/{id}/Ports/ returns the Collection of Ports.

Table 305: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Adapters/management/Ports
```

Table 306: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Ports + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Adapters/{id}/Ports/

HEAD /Compute/Devices/{id}/Adapters/{id}/Ports/ pings the Ports collection.

Table 307: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 308: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Adapters/{id}/Ports/

OPTIONS /Compute/Devices/{id}/Adapters/{id}/Ports/ returns the allowable HTTP Methods list for this resource.

Table 309: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.2.8 /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ return information about a specific Port and enable management operations.

HTTP Methods:

GET

PUT

HEAD

OPTIONS

Table 310: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
AddressOrigin.Name	String	Mandatory	Yes	"UNKNOWN" "OTHER" "NOT APPLICABLE" "STATIC" "DHCP"	Information value as to where the address is supplied

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
AddressOrigin.ID	Number	Mandatory	Yes	0 - 4	Information value map as to where the address is supplied
IPv4Address	String	Mandatory	Yes	IPv4 4-Octet pattern + CIDR mask	The IPv4 Network IP Address for this Device. Note: 0.0.0.0/8 & 127.0.0.0/8 are reserved and rejected.
IPGateway	String	Optional	Yes	IPv4 4-Octet pattern	The Network IP Gateway address setting
MACAddress	String	Mandatory	No	6-hex digit HW address	
NetworkType.Name	String	Mandatory	No	"LAN" "WLAN" "WAN" "MAN" "SAN" "VLAN" "Ethernet Network" "IP Network" "IPv4 Network" "IPv6 Network"	The network type value
NetworkType.ID	Number	Mandatory	No	0 - 8	The network type value map
MTUBytes	Number	Mandatory	Yes	Range: 46 - 9216 (default: 1500)	The current Maximum Transfer Bytes value
DNS	String Array	Optional	Yes	IPv4 4-Octet pattern	List of DNS server addresses

GET /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/

GET /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ returns information regarding a specific Port based on the {id} in the URI address string.

Table 311: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Adapters/management/
  Ports/01_0a_f7_95_79_3c
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Adapters/management/Ports/01_0a_f7_95_79_3c/",
  "ID": "01_0a_f7_95_79_3c",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "AddressOrigin": {
    "ID": 4,
    "Name": "DHCP"
  },
  "IPv4Address": "10.20.30.40/22",
  "IPGateway": "",
  "MACAddress": "01:0a:f7:95:79:3c",
  "NetworkType": {
    "ID": 8,
    "Name": "IPv4 Network"
  },
  "MTUBytes": 1500
}
```

Table 312: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Adapter information in the response body + ETag Header
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

PUT /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/

PUT /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ modifies an attribute or executes an operation for this Port.

Table 313: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT Response Body

```
{
  "AddressOrigin": {
    "ID": number,
    "Name": "DHCP | STATIC"
  },
  "IPv4Address": "ipv4_address/cidr",
  "IPGateway": "ipv4_gateway",
  "MTUBytes": 1500,
  "DNS": [
    "ipv4_address"
  ]
}
```

Table 314: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Port information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an Etag value in the Request Header
500	Internal Server Error	System could not process the request

HEAD /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/

HEAD /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ pings this Port.

Table 315: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 316: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/

OPTIONS /Compute/Devices/{id}/Adapters/{id}/Ports/{id}/ returns the allowable HTTP Methods list for this resource.

Table 317: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

4.2.9 /Compute/Devices/{id}/PowerSupplies/

The Collection-level methods and attributes of /Compute/Devices/{id}/PowerSupplies/ return information about the Power Supplies collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 318: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/PowerSupplies/{id}/ (page 209) for Instance Attribute details

GET /Compute/Devices/{id}/PowerSupplies/

GET /Compute/Devices/{id}/PowerSupplies/ returns the Collection of Power Supplies.

Table 319: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies
```

Table 320: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Power Supplies + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/PowerSupplies/

HEAD /Compute/Devices/{id}/PowerSupplies/ pings the Power Supplies collection.

Table 321: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 322: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/PowerSupplies/

OPTIONS /Compute/Devices/{id}/PowerSupplies/ returns the allowable HTTP Methods list for this resource.

Table 323: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.2.10 /Compute/Devices/{id}/PowerSupplies/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/PowerSupplies/{id}/ return information about a specific Power Supply and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 324: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Name	String	Mandatory	No	Free-Form 64 Chars	
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Power Supply
PartNumber	String	Mandatory	No	Free-Form 32 Characters	The Part Number for this Power Supply
SerialNumber	String	Mandatory	No	Free-Form 32 Characters	The Serial Number of this Power Supply
Manufacturer	String	Mandatory	No	Free-Form 32 Characters	The Manufacturer of this Power Supply
TotalOutputPower	Number	Optional	No	Number in Watts	The total output power in watts
BaseUnits.ID	Number	Optional	No	7	The Base Units value map
BaseUnits.Name	String	Optional	No	Watts	The Base Units value as Watts
RateUnits.ID	Number	Optional	No	0	The Rate Units value map
RateUnits.Name	String	Optional	No	None	The Rate Units value
UnitModifier	Number	Optional	No	0	The Unit Modifier to determine order of magnitude to multiply the Total Power Output as Base 10 * Unit Modifier

GET /Compute/Devices/{id}/PowerSupplies/{id}/

GET /Compute/Devices/{id}/PowerSupplies/{id}/ returns information regarding a specific Power Supply based on the {id} in the URI address string.

Table 325: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/1
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/PowerSupplies/1/",
  "ID": "1",
  "Name": "PowerSupply 1",
  "Status": {
    "State": {
      "ID": "16",
      "Name": "In service"
    },
    "Health": [
      {
        "ID": "5",
        "Name": "OK"
      }
    ]
  },
  "PartNumber": " PWS-920P-SQ",
  "SerialNumber": " P9212CF32AT4462",
  "Manufacturer": " SUPERMICRO",
  "TotalOutputPower": 920,
  "BaseUnits": {
    "ID": "7",
    "Name": "Watts"
  },
  "RateUnits": {
    "ID": "0",
    "Name": "None"
  },
  "UnitModifier": 0
}
```

Table 326: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/PowerSupplies/{id}/

PUT /Compute/Devices/{id}/PowerSupplies/{id}/ modifies an attribute or executes an operation for this Power Supply.

Table 327: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/
PowerSupplyAFRU/?IPAddress=10.20.30.41
--data '{
  "IndicatorLED": {
    "ID": 2
  }
}'
```

Table 328: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header

Response Code	Name	Definition
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/PowerSupplies/{id}/

HEAD /Compute/Devices/{id}/PowerSupplies/{id}/ pings this Power Supply.

Table 329: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 330: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/PowerSupplies/{id}/

OPTIONS /Compute/Devices/{id}/PowerSupplies/{id}/ returns the allowable HTTP Methods list for this resource.

Table 331: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 332: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.2.11 /Compute/Devices/{id}/Media/

The Collection-level methods and attributes of /Compute/Devices/{id}/Media/ return information about the Media collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 333: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Media/{id}/ (page 217) for Instance Attribute details

GET /Compute/Devices/{id}/Media/

GET /Compute/Devices/{id}/Media/ returns the Collection of Media.

Table 334: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 335: GET Query Parameters

Query Parameter	Description
?SmartLog=true	Adds the "SmartLog" JSON object attributes based on the particular protocol type (e.g, ATA, SCSI, and NVMe) for all the Media Instances

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Media/
```

Table 336: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Media + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Media/

HEAD /Compute/Devices/{id}/Media/ pings the Media collection.

Table 337: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 338: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Media/

OPTIONS /Compute/Devices/{id}/Media/ returns the allowable HTTP Methods list for this resource.

Table 339: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.2.12 /Compute/Devices/{id}/Media/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Media/{id}/ return information about a specific Medium and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 340: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
SerialNumber	String	Mandatory	No	Free-Form 64 Chars	The serial number for this Resource
Model	String	Mandatory	No	Free-Form 64 Chars	The vendor name for this Resource
Version	String	Mandatory	No	Free-Form 32 Chars	The Operating System or Firmware Version
Manufacturer	String	Mandatory	No	Free-Form 64 Chars	The vendor name for this Resource
Protocol. Name	String	Mandatory	No	"Universal Serial Bus" "Serial ATA" "SAS" "Nvme" "NvmeoF"	The Media Protocol Name
Protocol. ID	Number	Mandatory	No	15 47 65536-65538	The Media Protocol ID value map
DiskType. Name	String	Mandatory	No	"Unknown" "Other" "HDD" "SSD" "Hybrid" "CD-DVD"	The Media Disk Type Name
DiskType. ID	Number	Mandatory	No	0 - 5	The Media Disk Type ID value map

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Mandatory	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Device
Capacity	Number	Mandatory	No	Integer value in Bytes	The total capacity of the Medium Resource in Bytes
DeviceHandle	String	Optional	No	Free-Form Characters	The current Device Handle name attached to this Medium Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
MultiplePathsDetected	Boolean	Optional	No	true false	Indicates if this Media Resource has multiple paths detected
DurableName	String	Optional	No	WWN or UUID Format	The in-band data path identifier
Associations	String Array	Mandatory	No	Media Volumes	Indicates the associations among linked resources based on ID
Volumes.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Volumes associated with this Medium resource

GET /Compute/Devices/{id}/Media/{id}/

GET /Compute/Devices/{id}/Media/{id}/ returns information regarding a specific Medium based on the {id} in the URI address string.

Table 341: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 342: GET Query Parameters

Query Parameter	Description
?SmartLog=true	Adds the "SmartLog" JSON object attributes based on the particular protocol type (e.g. ATA, SCSI, and NVMe) for all the Media Instances

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Media/BTWA53140407240AGN
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Media/BTWA53140407240AGN/" ,
```

```

    "ID": "BTWA53140407240AGN",
    "Name": "",
    "Status": {
      "State": {
        "ID": 16,
        "Name": "In service"
      },
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ]
    },
    "Associations": {
      "Media": [
        "BTWA53140407240AGN"
      ],
      "Volumes": [
        "4D4B-2427",
        "e5a11a79-bd5e-49de-balb-7ba7977878bf"
      ]
    },
    "Capacity": 240057409536,
    "AlternateDeviceHandle": "/dev/sda",
    "DeviceHandle": "/dev/sg0",
    "Manufacturer": "INTEL",
    "Model": "SSDSC2BB24",
    "MultiplePathsDetected": false,
    "Protocol": {
      "ID": 47,
      "Name": "Serial ATA"
    },
    "DiskType": {
      "ID": 2,
      "Name": "HDD"
    },
    "Version": "0130",
    "SerialNumber": "BTWA53140407240AGN",
    "DurableName": "",
    "Volumes": "http://10.20.30.40/Compute/Devices/0123456789/Volumes/?
Media=BTWA53140407240AGN"
  }

```

Table 343: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Media information in the response body + ETag Header
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Media/{id}/

HEAD /Compute/Devices/{id}/Media/{id}/ pings this Medium.

Table 344: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 345: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Media/{id}/

OPTIONS /Compute/Devices/{id}/Media/{id}/ returns the allowable HTTP Methods list for this resource.

Table 346: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

4.3 Logical Devices

The OCAPI's logical and virtual resources model include those resources that are logical or virtual in nature. The topics in this section provide information for accessing and managing the features of these logical and virtual resources.

4.3.1 /Compute/Devices/{id}/Volumes/

The Collection-level methods and attributes of /Compute/Devices/{id}/Volumes/ return information about the Volumes collection and enable management operations.

HTTP Methods:

GET
POST
HEAD
OPTIONS

Table 347: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Volumes/{id}/ (page 225) for Instance Attribute details

GET /Compute/Devices/{id}/Volumes/

GET /Compute/Devices/{id}/Volumes/ returns the Collection of Volumes.

Table 348: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Volumes/
```

Table 349: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Volume + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

POST /Compute/Devices/{id}/Volumes/

POST /Compute/Devices/{id}/Volumes/ creates a new Volume.

Table 350: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST Request Body

```
{
  "Name": "volume_name",
  "Capacity" : bytes,
  "Description": "desc",
  "PoolID": pool_id
}
```

Table 351: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Volume information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
500	Internal Server Error	System could not process the request

HEAD /Compute/Devices/{id}/Volumes/

HEAD /Compute/Devices/{id}/Volumes/ pings the Volume collection.

Table 352: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 353: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Volumes/

OPTIONS /Compute/Devices/{id}/Volumes/ returns the allowable HTTP Methods list for this resource.

Table 354: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.3.2 /Compute/Devices/{id}/Volumes/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Volumes/{id}/ return information about a specific Volume and enable management operations.

HTTP Methods:

[GET](#)

[PUT](#)

[DELETE](#)

[HEAD](#)

[OPTIONS](#)

Table 355: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	Yes	Free-Form 256 Chars	The user-defined name of this Volume
UUID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Capacity	Number	Mandatory	No	Integer Bytes	The total number of raw bytes for this Volume from the FS point of view
RemainingCapacity	Number	Mandatory	No	Integer Bytes	The total number of raw remaining bytes for this Volume from the FS point of view
BlockSize	Number	Optional	No	Integer Bytes	The block size for this Volume
DeviceHandle	String	Optional	No	Free-Form 64 Chars	The operating system connection to this Volume
FsType	String	Mandatory	No	"ext4" "NTFS"	The Filesystem Type formatted onto this Volume
MountPoint	String	Mandatory	No	Free-Form 64 Chars	The Volume mount point name on this system
Associations	String Array	Mandatory	No	Media Volumes	The associations among resources based on ID

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.Name	String Array	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Media.Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link to the Media for this Volume

GET /Compute/Devices/{id}/Volumes/{id}/

GET /Compute/Devices/{id}/Volumes/{id}/ returns information regarding a specific Volume based on the {id} in the URI address string.

Table 356: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Volumes/4D4B-2427
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Volumes/4D4B-2427/",
  "ID": "4D4B-2427",
  "Status": {
    "State": {
      "ID": 0,
      "Name": "Unknown"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "BlockSize": 512,
  "Capacity": 1124995072,
  "RemainingCapacity": 1118629888,
  "DeviceHandle": "/dev/sda1",
  "FsType": "vfat",
  "MountPoint": "/boot/efi",
  "UUID": "4D4B-2427",
  "Associations": {
    "Media": [
      "BTWA53140407240AGN"
    ],
    "Volumes": [
      "4D4B-2427"
    ]
  },
  "Media": "http://10.20.30.40/Compute/Devices/0123456789/Media/?Volumes=4D4B-2427"
}
```

Table 357: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Volume information in the response body + ETag Header
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

PUT /Compute/Devices/{id}/Volumes/{id}/

PUT /Compute/Devices/{id}/Volumes/{id}/ modifies an attribute or executes an operation for this Volume.

Table 358: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Volumes/4D4B-2427
--data '{
  "Name": "volume_name",
  "Description": "desc",
}'
```

Table 359: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Volume information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	A new parameter value already exists (e.g., Name)
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header

Response Code	Name	Definition
500	Internal Server Error	System could not process the request

DELETE /Compute/Devices/{id}/Volumes/{id}/

DELETE /Compute/Devices/{id}/Volumes/{id}/ deletes this Volume.

Table 360: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/Compute/Devices/0123456789/Volumes/4D4B-2427
```



Note: The last remaining "Admin" role account cannot be deleted to prevent loss of communication with the Device.

Table 361: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
500	Internal Server Error	System could not process the request

HEAD /Compute/Devices/{id}/Volumes/{id}/

HEAD /Compute/Devices/{id}/Volumes/{id}/ pings this Volume.

Table 362: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 363: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Volumes/{id}/

OPTIONS /Compute/Devices/{id}/Volumes/{id}/ returns the allowable HTTP Methods list for this resource.

Table 364: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

4.3.3 /Compute/Devices/{id}/Accounts/

The Collection-level methods and attributes of /Compute/Devices/{id}/Accounts/ return information about the Accounts collection and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 365: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Accounts/{id}/ (page 235) for Instance Attribute details

GET /Compute/Devices/{id}/Accounts/

GET /Compute/Devices/{id}/Accounts/ returns the Collection of Accounts.

Table 366: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/ComputeDevices/0123456789/Accounts/
```

Table 367: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Accounts + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Accounts/

POST /Compute/Devices/{id}/Accounts/ creates a new Account.

Table 368: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/Compute/Devices/01234567890/Accounts/
--data '{
  "UserID": "user_id",
  "BasicAuthentication": {
    "UserPassword": "password"
  },
  "DigestAuthentication": {
    "UserPassword": "password"
  },
  "JWTAuthentication": {
    "UserPassword": "password"
  },
  "Role": {
    "ID": 0 | 1
  }
}'
```

Table 369: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Account information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Accounts/

HEAD /Compute/Devices/{id}/Accounts/ pings the Accounts collection.

Table 370: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 371: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Accounts/

OPTIONS /Compute/Devices/{id}/Accounts/ returns the allowable HTTP Methods list for this resource.

Table 372: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 373: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource

Response Code	Name	Definition
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.4 /Compute/Devices/{id}/Accounts/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Accounts/{id}/ return information about a specific Account and enable management operations.

HTTP Methods: GET PUT DELETE HEAD OPTIONS

Table 374: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 64 Chars Valid characters include: "a-z A-Z 0-9 - -"	The Identifier this particular Account
BasicAuthentication. UserPassword SHA1Checksum	String	Mandatory	No	Free-Form 128 Characters	The basic authentication checksum
BasicAuthentication. UserPassword	String	Optional	Yes	Free-Form 128 Characters	The user password used to create the checksum (not shown in the GET response)
DigestAuthentication. UserPassword MD5Checksum	String	Mandatory	No	Free-Form 128 Characters	The digest authentication checksum
DigestAuthentication. UserPassword	String	Optional	Yes	Free-Form 128 Characters	The user password used to create the checksum (not shown in the GET response)
DigestAuthentication. Realm	String	Optional	No	Free-Form 128 Characters	The digest authentication realm
Role. Name	String	Mandatory	No	"Admin"	The Role type string for this Account
Role. ID	Number	Mandatory	No	0	The Role type value for this Account
UserID	String	Mandatory	Yes	Free-Form 64 Chars	The user identifier for this Account

GET /Compute/Devices/{id}/Accounts/{id}/

GET /Compute/Devices/{id}/Accounts/{id}/ returns information regarding a specific Account based on the {id} in the URI address string.

Table 375: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Accounts/admin
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Accounts/admin/",
  "ID": "admin",
  "BasicAuthentication": {
    "UserPasswordSHA1Checksum": "{SHA}0DPiKuNIrrVmD8IUCuw1hQxNqZc="
  },
  "DigestAuthentication": {
    "UserPasswordMD5Checksum": "97ebad852d0dabfd6b71ae26fff61fa3",
    "Realm": "Western Digital Corporation"
  },
  "JWTAuthentication": {
    "UserPasswordMD5Checksum": "b80648545a30e0999892b517127c0e17"
  },
  "Role": {
    "ID": 0,
    "Name": "Admin"
  },
  "UserID": "admin"
}
```

Table 376: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Accounts/{id}/

PUT /Compute/Devices/{id}/Accounts/{id}/ modifies an attribute or executes an operation for this Account.

Table 377: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Accounts/test
--data '{
  "UserID": "test",
  "BasicAuthentication": {
    "UserPassword": "new_password"
  },
  "Role": {
    "ID": 1
  }
}'
```

Table 378: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist

Response Code	Name	Definition
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Compute/Devices/{id}/Accounts/{id}/

DELETE /Compute/Devices/{id}/Accounts/{id}/ deletes this Account.

Table 379: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Accounts/test
```



Note: The last remaining "Admin" role account cannot be deleted to prevent loss of communication with the Device.

Table 380: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	In the case of only one account, that last one cannot be deleted
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is Busy, client should try again later

HEAD /Compute/Devices/{id}/Accounts/{id}/

HEAD /Compute/Devices/{id}/Accounts/{id}/ pings this Account.

Table 381: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 382: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Accounts/{id}/

OPTIONS /Compute/Devices/{id}/Accounts/{id}/ returns the allowable HTTP Methods list for this resource.

Table 383: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 384: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.5 /Compute/Devices/{id}/OperatingSystem/

The methods and attributes of /Compute/Devices/{id}/OperatingSystem/ return information about the Operating System (Application) and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 385: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware name
Architecture	String	Optional	No	"x84_64"	The Operating System platform CPU Architecture information
OSDescription	String	Optional	No	Free-Form 128 Chars	The Operating System description information
OSType.Name	String	Mandatory	No	"Winnt" "Linux"	The Operating System Type value
OSType.ID	Number	Mandatory	No	18 36	The Operating System Type value map
SerialNumber	String	Optional	No	Free-Form 128 Chars	The Operating System serial Number
Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Application Version
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status. Health[]. Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status. Health[]. ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries

GET /Compute/Devices/{id}/OperatingSystem/

GET /Compute/Devices/{id}/OperatingSystem/ returns the information of the Operating System resource.

Table 386: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/OperatingSystem/",
  "Name": "Linux",
  "Architecture": "x86_64",
  "OSDescription": "Ubuntu 22.04 (Jammy Jellyfish) 5.15.0-69-generic",
  "SerialNumber": "0123456789",
  "OSType": {
    "ID": 36,
    "Name": "Linux"
  },
  "Version": "Ubuntu 22.04 (Jammy Jellyfish) 5.15.0-69-generic",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  }
}
```

Table 387: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Operating System resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/OperatingSystem/

HEAD /Compute/Devices/{id}/OperatingSystem/ pings the Operating System resource.

Table 388: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 389: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/OperatingSystem/

OPTIONS /Compute/Devices/{id}/OperatingSystem/ returns the allowable HTTP Methods list for this resource.

Table 390: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 391: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.6 /Compute/Devices/{id}/Files/

The Collection-level methods and attributes of /Compute/Devices/{id}/Files/ return information about the Files collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 392: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See / Compute/Devices/{id}/Files/{id}/ (page 249) for Instance Attribute details

GET /Compute/Devices/{id}/Files/

GET /Compute/Devices/{id}/Files/ returns the Collection of Files.

Table 393: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Files/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/",
  "Members": [
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/auditlog/",
      "ID": "auditlog",
      "Description": "Audit Log"
    }
  ]
}
```

```

    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/syslog/",
      "ID": "syslog",
      "Description": "System Log"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/authlog/",
      "ID": "authlog",
      "Description": "Auth Log"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/kernlog/",
      "ID": "kernlog",
      "Description": "Kernel Log"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/notices/",
      "ID": "notices",
      "Description": "Notices"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/eula/",
      "ID": "eula",
      "Description": "EULA"
    },
    {
      "Self": "http://10.20.30.40/Compute/Devices/0123456789/Files/telemetry/",
      "ID": "telemetry",
      "Description": "Telemetry"
    }
  ],
  "TLSCertAndKey": {},
  "LDAPCert": {}
}

```



Note: If a custom TLS/SSL Certificate and/or an LDAP Client Certificate have been uploaded, these will also be listed in the GET /Files response with links to retrieve them.



Note: The Compute Device connection returns the GET /Telemetry JSON information (with local Media SmartLog info along with any in-band attached Storage Device GET /Telemetry JSON information with Media SmartLog info) and with the above Log Files within the GET /Files/telemetry download bundle.

Table 394: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Files + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Files/

HEAD /Compute/Devices/{id}/Files/ pings this Files collection.

Table 395: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 396: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Files/

OPTIONS /Compute/Devices/{id}/Files/ returns the allowable HTTP Methods list for this resource.

Table 397: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 398: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.7 /Compute/Devices/{id}/Files/{id}/

The Device-level methods and attributes of /Compute/Devices/{id}/Files/{id}/ return information about a specific File and enable management operations.

HTTP Methods:

GET

POST

HEAD

OPTIONS

Table 399: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier
Name	String	Mandatory	No	Free-Form 256 Chars	The name of the file

GET /Compute/Devices/{id}/Files/{id}/

GET /Compute/Devices/{id}/Files/{id}/ returns information regarding a specific File based on the {id} in the URI address string.

Table 400: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command – Audit Log

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Files/auditlog
```

Example GET Response Body – Audit Log

```
datetime:20231003_140317+00
addr:[10.20.30.40:59634]
type:Response
status code:401
user:
path:/Compute/Devices/0123456789/
```

Table 401: Available Files

OS	File Type	Description
All	auditlog	Returns the current audit log entries as text to the requestor (content-type: text/plain)
	notices	Returns the 3rd Party open-source software entries and their licensing used in this application
	eula	Returns the End-User License Agreement documentation
	cert_pem (204 No Content or 200 OK)	If the User uploaded a custom Cert/Key pair, returns the current SSL certificate entry as text to the requestor (content-type: text/plain)
	key_pem (405 Method Not Allowed)	If the User uploaded a custom Cert/Key pair, SSL key GET not allowed for security of the key (403 Forbidden response)
Linux	syslog	Returns system log
	authlog	Returns authorization log
	kernlog	Returns the kernel log
Windows	syslog	Returns system log
	applicationlog	Returns the list of Open Source usage upon request
	securitylog	Returns the EULA license agreement



Note: Specifying "telemetry" in the GET operation will return a compressed file bundle of several system files and the GET /Telemetry JSON full data. The web client should wait for the HTTP response before trying to request telemetry again. All the other files will return their "text/plain" output to the web client.

Table 402: GET Response Codes

Response Code	Name	Definition
200	OK	OK & File information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Compute/Devices/{id}/Files/{id}/

POST /Compute/Devices/{id}/Files/{id}/ updates the requested file.

Table 403: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
Content-Type: multipart/form-data	Mandatory	The FW image file is of content type "multipart/form-data"

Example POST curl Command – Adding an SSL Certificate & Key

```
curl
  -i
  -u admin:admin
  -X POST http://10.20.30.40/Compute/Devices/0123456789/Files/TLSCertAndKey/
  -H "Content-Type: multipart/form-data"
  -F "cert.pem=@cert.pem"
  -F "key.pem=@key.pem"
```

Example POST Request Body – Adding an SSL Certificate & Key

```
Content-Disposition: form-data; cert.pem="{file_name}"
{file body}
Content-Disposition: form-data; key.pem="{file_name}"
{file body}
```



Note: Both Certificate and Key files MUST be sent together in the same POST request.



Note: Once the Certificate and Key files are uploaded, the API will restart for the certificate/key to take effect. See PUT [/Query/InformationStructure/](#) (page 16) {"RestartAPI": true}.



Note: The Certificate and Key files cannot be validated, therefore the user must make sure the files are valid before uploading. If they are invalid, the result is the HTTPS service will not operate.

Example POST curl Command – Adding an LDAP Client SSL Certificate

```
curl
  -i
  -u admin:admin
  -X POST http://10.20.30.40/Compute/Devices/0123456789/Files/LDAPCert/
  -H "Content-Type: multipart/form-data"
  -F "cert.pem=@ldapcert.pem"
```

Example POST Request Body – Adding an LDAP Client SSL Certificate

```
Content-Disposition: form-data; ldapcert.pem="{file_name}"
{file body}
```



Note: The Certificate file cannot be validated, therefore the user must make sure the files are valid before uploading. If they are invalid, the result is the LDAP service will not operate properly.

Table 404: POST Response Codes

Response Code	Name	Definition
201	Created	Created & File information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Files/{id}/

HEAD /Compute/Devices/{id}/Files/{id}/ pings a specific Compute File.

Table 405: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 406: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Files/{id}/

OPTIONS /Compute/Devices/{id}/Files/{id}/ returns the allowable HTTP Methods list for this resource.

Table 407: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 408: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
204	No Content	No Content & "Allow" list of methods in the response header. Some files will return 204 No Content indicating that there is no entity body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.8 /Compute/Devices/{id}/Location/

The methods and attributes of /Compute/Devices/{id}/Location/ return information about the resource Location and enable management operations.

HTTP Methods:

[GET](#)

[PUT](#)

[DELETE](#)

[HEAD](#)

[OPTIONS](#)

Table 409: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Country	String	Optional	Yes	Free-Form 64 Chars	The Country name where this Device is located
Territory	String	Optional	Yes	Free-Form 64 Chars	The Territory name where this Device is located
State	String	Optional	Yes	Free-Form 64 Chars	The State name where this Device is located
City	String	Optional	Yes	Free-Form 64 Chars	The City name where this Device is located
Address1	String	Optional	Yes	Free-Form 64 Chars	The first Address information where this Device is located
Address2	String	Optional	Yes	Free-Form 64 Chars	The second Address information where this Device is located as needed
Address3	String	Optional	Yes	Free-Form 64 Chars	The third Address information where this Device is located as needed
PostalCode	String	Optional	Yes	Free-Form 32 Chars	The Postal or Zip Code name where this Device is located
SiteName	String	Optional	Yes	Free-Form 32 Chars	The friendly Site Name
Building	String	Optional	Yes	Free-Form 32 Chars	The Building name or number where this Device is located

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Room	String	Optional	Yes	Free-Form 32 Chars	The Room name or number in the Building where this Device is located
Pod	String	Optional	Yes	Free-Form 32 Chars	The Pod name or number in the Room this Device is located as needed
Row	String	Optional	Yes	Free-Form 32 Chars	The Row name or number in the Room or Pod this Device is located
Rack	String	Optional	Yes	Free-Form 32 Chars	The Rack name or number in the Row this Device is located
Shelf	String	Optional	Yes	Free-Form 32 Chars	The Shelf name or number of the Rack this Device is located
Device	String	Optional	Yes	Free-Form 32 Chars	The Device name or number of the Rack this Device is located
Item	String	Optional	Yes	Free-Form 32 Chars	The Item name indicating the Shelf units or dimension for this Device
GPSCoords	String	Optional	Yes	Decimal Latitude, Decimal Longitude Format	The GPS coordinates of the location of this Device
OtherLocationInfo	String	Optional	Yes	Free-Form 64 Chars	A place-holder for other location information

GET /Compute/Devices/{id}/Location/

GET /Compute/Devices/{id}/Location/ returns the Location information.

Table 410: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/Location/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/",
  "Country": "USA",
  "Territory": "",
  "State": "Colorado",
  "City": "Colorado Springs",
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "",
  "PostalCode": "80921",
  "SiteName": "WD COS DataCenter 1",
  "Building": "9950",
  "Room": "159",
  "Pod": "p2",
  "Rack": "r02",
  "Shelf": "30",
  "Device": "5",
  "Item": "Rack Units",
  "GPSCoords": "38.9838684,-104.8040493",
  "OtherLocationInfo": "This is other info"
}
```

Table 411: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Location information + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Compute/Devices/{id}/Location/

PUT /Compute/Devices/{id}/Location/ modifies an attribute of the Location.

Table 412: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Compute/Devices/0123456789/Location/
--data '{
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "North",
  "Building": "9950",
  "City": "Colorado Springs",
  "Country": "USA",
  "Device": "255",
  "GPSCoords": "38.9838643,-104.806244",
  "Item": "Rack Units",
  "OtherLocationInfo": "More Info",
  "Pod": "2",
  "PostalCode": "80921",
  "Rack": "2",
  "Room": "159",
  "Row": "2",
  "Shelf": "24",
  "SiteName": "WDC COS DataCenter",
  "State": "Colorado",
  "Territory": "El Paso"
}'
```

Example PUT Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Location/"
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "North",
  "Building": "9950",
  "City": "Colorado Springs",
  "Country": "USA",
  "Device": "255",
  "GPSCoords": "38.9838643,-104.806244",
  "Item": "Rack Units",
  "OtherLocationInfo": "More Info",
```

```

"Pod": "2",
"PostalCode": "80921",
"Rack": "2",
"Room": "159",
"Row": "2",
"Shelf": "24",
"SiteName": "WDC COS DataCenter",
"State": "Colorado",
"Territory": "El Paso"
}
    
```

Table 413: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Location information with no response body
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	Resource could not execute the request

DELETE /Compute/Devices/{id}/Location/

DELETE /Compute/Devices/{id}/Location/ deletes Location information.

Table 414: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```

curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Compute/Devices/0123456789/Location/
    
```

Table 415: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Compute/Devices/{id}/Location/

HEAD /Compute/Devices/{id}/Location/ pings the Location resource.

Table 416: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 417: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Location/

OPTIONS /Compute/Devices/{id}/Location/ returns the allowable HTTP Methods list for this resource.

Table 418: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text

Header	Mandatory or Optional	Description
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 419: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.9 /Compute/Devices/{id}/SystemClock/

The methods and attributes of /Compute/Devices/{id}/SystemClock/ return information about the System Clock and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 420: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Uptime.Duration	String	Mandatory	No		The current uptime value in ISO 8601 format
Uptime.Days	Number	Mandatory	No	0 - n	The current uptime Days since boot
Uptime.Hours	Number	Mandatory	No	0 - 23	The current uptime Hours since boot
Uptime.Minutes	Number	Mandatory	No	0 - 59	The current uptime Minutes since boot
Uptime.Seconds	Number	Mandatory	No	0 - 59	The current uptime Seconds since boot

GET /Compute/Devices/{id}/SystemClock/

GET /Compute/Devices/{id}/SystemClock/ returns the System Clock information.

Table 421: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Compute/Devices/0123456789/SystemClock/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/SystemClock/",
  "Date": "17-Aug-2022",
  "Time": "12:34:13",
  "TimeZone": "(UTC-6.00) MDT",
  "TimeZoneSetting": "MDT",
  "DST": "Enabled",
  "Uptime": {
    "Duration": "P82DT1H26M51S",
    "Days": 82,
    "Hours": 1,
    "Minutes": 26,
    "Seconds": 51
  }
}
```

Table 422: GET Response Codes

Response Code	Name	Definition
200	OK	OK & System Clock information + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned. Note: Due to the time changing every second, catching a 304 response will be very rare
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/SystemClock/

HEAD /Compute/Devices/{id}/SystemClock/ pings the System Clock resource.

Table 423: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 424: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/SystemClock/

OPTIONS /Compute/Devices/{id}/SystemClock/ returns the allowable HTTP Methods list for this resource.

Table 425: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 426: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

4.3.10 /Compute/Devices/{id}/Performance/

The methods and attributes of /Compute/Devices/{id}/Performance/ return information about the Performance resource and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 427: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Diskstats[].Name	String	Mandatory	No	Free-Form 64 Chars	Name of the device
Diskstats[].UnixNano	Number	Mandatory	No	Integer epoch time	Epoch Nanoseconds
Diskstats[].BusMaj	Number	Mandatory	No	0 - n	Major Bus Number
Diskstats[].BusMin	Number	Mandatory	No	0 - n	Minor Bus Number
Diskstats[].Device	URI String	Mandatory	No	Free-Form URI Format 256 Chars	URI to the Device as Volume or Media
Diskstats[].DeviceHandle	String	Mandatory	No	Free-Form 64 Chars	The system connection to this Volume
Diskstats[].ReadsComplete	Number	Mandatory	No	0 - n	Integer counter for number of bytes read
Diskstats[].ReadsMerged	Number	Mandatory	No	0 - n	Number of requests collapsed into one single read request
Diskstats[].SectorsRead	Number	Mandatory	No	0 - n	Number of sectors read
Diskstats[].MillisecondsSpentReading	Number	Mandatory	No	0 - n	Read time in milliseconds
Diskstats[].WritesComplete	Number	Mandatory	No	0 - n	Integer counter for number of bytes written
Diskstats[].WritesMerged	Number	Mandatory	No	0 - n	Number of requests collapsed into one single write request

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Diskstats[].SectorsWritten	Number	Mandatory	No	0 - n	Number of sectors written
Diskstats[].MillisecondsSpentWriting	Number	Mandatory	No	0 - n	Write time in milliseconds
Diskstats[].IOsInProgress	Number	Mandatory	No	0 - n	Current number of IO operations in progress
Diskstats[].MillisecondsSpentDoingIO	Number	Mandatory	No	0 - n	Time spent doing IO in milliseconds
Diskstats[].WeightedNumberOfMillisecondsSpentDoingIO	Number	Mandatory	No	0 - n	Field is incremented by the time spent doing I/O multiplied by the number of I/O requests in progress, to provide time weighted by number of active requests

GET /Compute/Devices/{id}/Performance/

GET /Compute/Devices/{id}/Performance/ returns the information of the Performance resource.

Table 428: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Compute/Devices/0123456789/Performance
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Compute/Devices/0123456789/Performance/",
  "DiskStats": [
    {
      "UnixNano": 1697050529417774300,
      "BusMaj": 8,
      "BusMin": 1,
      "Device": "http://10.20.30.40/Compute/Devices/0123456789/Performance/
Volumes/4D4B-2427/",
      "DeviceHandle": "/dev/sda1",
      "ReadsComplete": 1359,
      "ReadsMerged": 8891,
      "SectorsRead": 135260,
      "MillisecondsSpentReading": 427,
      "WritesComplete": 2,
      "WritesMerged": 0,
      "SectorsWritten": 2,
      "MillisecondsSpentWriting": 0,
      "IOsInProgress": 0,
      "MillisecondsSpentDoingIO": 3896,
      "WeightedNumberOfMillisecondsSpentDoingIO": 2894
    }
  ]
}
```

Table 429: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Performance information in the response body
304	Not Modified	
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource

HEAD /Compute/Devices/{id}/Performance/

HEAD /Compute/Devices/{id}/Performance/ pings the Performance resource.

Table 430: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 431: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

OPTIONS /Compute/Devices/{id}/Performance/

OPTIONS /Compute/Devices/{id}/Performance/ returns the allowable HTTP Methods list for this resource.

Table 432: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the “Allow” list of methods in the response header. The response body provides the JSON Schema for this resource
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

4.3.11 /Compute/Devices/{id}/Telemetry/

The methods and attributes of /Compute/Devices/{id}/Telemetry/ return information about the Telemetry resource and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 433: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
LastAccessed	String	Mandatory	No	datetime based on UTC	The UTC time of the request
Members[]	String Array	Mandatory	No	Member Entry	This is the instantaneous, fully expanded metadata from this Device

GET /Compute/Devices/{id}/Telemetry/

GET /Compute/Devices/{id}/Telemetry/ returns the information of the Telemetry resource.

Table 434: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.202.237.61:80/Compute/Devices/78dde6b28cc44503bbdc446d8c85b3e/Telemetry/
```

Example GET Response Body



Note: In this example, the Compute Device is proxy managing 3 other Storage Devices, so this Telemetry response includes those as well.

```
{
  "Self": "http://10.202.237.61:80/Compute/Devices/78dde6b28cc44503bbdc446d8c85b3e/Telemetry/",
  "LastAccessed": "26-Jan-2024 12:48:34 UTC",
  "Members": [
    {
      "Self": "http://10.202.237.61:80/Compute/Devices/78dde6b28cc44503bbdc446d8c85b3e/",
      "SystemType": {...},
      "Name": "cos-r16-s2",
      "ID": "78dde6b28cc44503bbdc446d8c85b3e",
      "OperatingSystem": {...},
      "SerialNumber": "0123456789",
      "Model": "Super Server",
      "Manufacturer": "Supermicro",
      "Capabilities": {...},
      "Status": {...},
      "IPAddresses": {...},
      "Architecture": "x86_64",
      "InformationStructure": {...},
      "Domain": "",
      "Memory": 134951862272,
      "RemainingMemory": 130660556800,
      "Rackmountable": {...},
      "Location": {...},
      "Accounts": {...},
      "Adapters": {...},
      "Files": {...},
      "Media": {...},
      "Performance": {...},
      "Ports": {...},
      "PowerSupplies": {...},
      "Processors": {...},
      "SystemClock": {...},
      "Volumes": {...},
      "Telemetry": {...}
    },
    {...},
    {...},
    {...}
  ]
}
```

Table 435: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Telemetry resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Compute/Devices/{id}/Telemetry/

HEAD /Compute/Devices/{id}/Telemetry/ pings the Telemetry resource.

Table 436: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 437: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Compute/Devices/{id}/Telemetry/

OPTIONS /Compute/Devices/{id}/Telemetry/ returns the allowable HTTP Methods list for this resource.

Table 438: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 439: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later



Proxied Node Storage In-Band

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5.1 Physical Devices

The OCAPI's physical resource model includes the overall Compute Proxy Device. The topics in this section provide information for accessing and managing the features of these physical resources.

5.1.1 /Storage/Devices/

The Collection-level methods and attributes of /Storage/Devices/ return information about the Devices collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 440: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/ (page 276) for Instance Attribute details

GET /Storage/Devices/

GET /Storage/Devices/ returns the Collection of Devices.

Table 441: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/
```

Table 442: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Devices + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/

HEAD /Storage/Devices/ pings the Devices collection.

Table 443: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 444: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/

OPTIONS /Storage/Devices/ returns the allowable HTTP Methods list for this resource.

Table 445: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 446: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.2 /Storage/Devices/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/ return information about a specific Device and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 447: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 256 Chars	The user-defined Friendly Name for this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
SerialNumber	String	Mandatory	No	Free-Form 64 Chars	The serial number for this Resource
Model	String	Mandatory	No	Free-Form 64 Chars	The model name or number for this Resource
SystemType.Name	String	Mandatory	No	"Storage"	The domain type string indicating the type of Device Resource
SystemType.ID	Number	Mandatory	No	2	The domain type number indicating the type of Device Resource
Manufacturer	String	Mandatory	No	Free-Form 64 Chars	The vendor name for this Resource
OperatingSystem.Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
OperatingSystem.Name	String	Optional	No	Free-Form 128 Chars	The Operating System or Firmware Name
OperatingSystem.OSType.ID	Number	Mandatory	No	59	Indicates dedicated software

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
OperatingSystem.OSType.Name	String	Mandatory	No	Dedicated	Indicates dedicated software value
OperatingSystem.Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware Version
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536 - 65538	The current health value map of this Resource. There can be 1 or more ID entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
Capabilities.Members[].Name	String	Mandatory	No	"Chassis Manager" "Chassis Device Enclosure"	The capabilities information value(s) regarding the Resource
Capabilities.Members[].ID	Number	Mandatory	No	29 31	The capabilities information value map(s) regarding the Resource
Capabilities.Members[].CapabilityDescription	String	Mandatory	No	Free-form	Entry describing the capability
IPAddresses.Members[].IPAddress	String	Mandatory	Yes	IPv4 or IPv6 pattern	The IP Address list for this Resource
TotalCapacity	Number	Mandatory	No	Bytes	Total Capacity of the Device in "Bytes"
DurableName	String	Optional	No	WWN or UUID Format	This is the unique ID for discovery in the In-Band Data Path
DeviceHandle	String	Mandatory	No	Handle from the Hardware point-of-view	The handle for communicating to this Device
SlotNumber	Number	Optional	No	1 or 2 for Devices with Controllers (IOMs)	This is the "side" that this connection is going to
PowerState.Name	String	Optional	No	"On" "Sleep" "Off"	The current Power State of the Device
PowerState.ID	Number	Optional	No	2 4 6	The current Power State of the Device value map
EnclosureCover	String	Optional	No	"OK" "Critical"	The current status of the Enclosure Cover, if supported
Adapters.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Adapters Resource collection
Connectors.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Connectors Resource Collection

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Controllers.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Controllers Resource Collection
Expanders.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Expanders Resource Collection
Ports.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Ports Resource
Fans.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Fan Resource Collection
PowerSupplies.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Power Supplies Resource
Sensors.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Sensor Resource
Location.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Location Resource
Jobs.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Jobs Resource
Files.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Files Resource
ZoneSets.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the ZoneSets Resource
Reboot	Boolean	WriteOnly	Yes	true	Directs this device to reboot
FirmwareActivate	Boolean	WriteOnly	Yes	true	Directs this device to Activate the previously uploaded Device OS image

GET /Storage/Devices/{id}/

GET /Storage/Devices/{id}/ returns information regarding a specific Device based on the {id} in the URI address string.

Table 448: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 449: GET Query Parameters

Parameter	Description
?AllLog=true	Downloads the "all_logs_bundle.tar" file, which contains log files from both Controllers (IOMs) as "all_logs_bundle_<device ID>_<timestamp>.tgz"

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/12345
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/12345/",
  "SystemType": {
    "ID": 2,
    "Name": "Storage"
  },
  "Name": "12345",
  "ID": "12345",
  "OperatingSystem": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/OperatingSystem/",
    "Name": "Vendor Firmware",
    "OSType": {
      "ID": 59,
      "Name": "Dedicated"
    },
    "Version": "4.0.86"
  },
  "SerialNumber": "THCLS03819EZ0090",
  "Model": "H4060-J",
  "Manufacturer": "HGST",
  "Capabilities": {
    "Members": [
      {
        "ID": 3,
        "Name": "Storage",
        "CapabilityDescription": "This device is a storage provider."
      },
      {
        "ID": 15,
        "Name": "Block Server",
        "CapabilityDescription": "This device provides block storage."
      },
      {
        "ID": 31,
        "Name": "Storage Device Enclosure",
```

```

    "CapabilityDescription": "This device is a storage-based enclosure
type."
    },
    {
        "ID": 47202,
        "Name": "Disk Media Device",
        "CapabilityDescription": "This device provides disk-based storage
volumes."
    }
]
},
"Status": {
    "State": {
        "ID": 16,
        "Name": "In service"
    },
    "Health": [
        {
            "ID": 5,
            "Name": "OK"
        }
    ],
    "Details": [
        "None"
    ]
},
"DeviceHandle": "/dev/sg2",
"DurableName": "0123456789",
"IPAddresses": {
    "Members": [
        {
            "IPAddress": "10.20.30.41"
        }
    ]
},
"PowerState": {
    "ID": 2,
    "Name": "On"
},
"SlotNumber": 1,
"TotalCapacity": 600049880924160,
"EnclosureCover": "OK",
"Location": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Location/"
},
"IndicatorLED": {
    "ID": 4,
    "Name": "Off"
},
"Adapters": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Adapters/"
},
"Connectors": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Connectors/"
},
"Controllers": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Controllers/"
},
"Expanders": {

```

```

    "Self": "http://10.20.30.40/Storage/Devices/12345/Expanders/"
  },
  "Fans": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Fans/"
  },
  "Files": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Files/"
  },
  "Jobs": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Jobs/"
  },
  "Media": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Media/"
  },
  "Ports": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Ports/"
  },
  "PowerSupplies": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/PowerSupplies/"
  },
  "Sensors": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Sensors/"
  },
  "Slots": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Slots/"
  },
  "ZoneSets": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/ZoneSets/"
  },
  "Telemetry": {
    "Self": "http://10.20.30.40/Storage/Devices/12345/Telemetry/"
  }
}

```

Table 450: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/

PUT /Storage/Devices/{id}/ modifies an attribute or executes an operation for this Device.

Table 451: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789
--data '{
  "IndicatorLED": {
    "ID": 2
  }
}'
```

Table 452: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
202	Accepted	Accepted & Jobs URI returned in the header to get more information regarding the long-lived operation
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/

HEAD /Storage/Devices/{id}/ pings this Storage Device.

Table 453: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 454: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/

OPTIONS /Storage/Devices/{id}/ returns the allowable HTTP Methods list for this resource.



Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

Table 455: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	Optional	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 456: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.3 /Storage/Devices/{id}/Controllers/

The Collection-level methods and attributes of /Storage/Devices/{id}/Controllers/ return information about the Controllers collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 457: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Controllers/{id}/ (page 289) for Instance Attribute details

GET /Storage/Devices/{id}/Controllers/

GET /Storage/Devices/{id}/Controllers/ returns the Collection of Controllers.

Table 458: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 459: GET Query Parameters

Parameter	Description
-----------	-------------

Downloads a bundled, compressed file with one or both Controller Instances E6 Log to the requesting web client.

FILENAME FORMAT:

e6log_<deviceID>_Controller_Collection_<timestamp>.tgz

?E6Log=true



Note: At the Collection level, both Controller E6 Logs are retrieved, bundled into a compressed TGZ file, and downloaded for convenience.

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Controllers/
```

Table 460: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Controllers + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Controllers/

HEAD /Storage/Devices/{id}/Controllers/ pings the Controllers collection.

Table 461: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 462: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Controllers/

OPTIONS /Storage/Devices/{id}/Controllers/ returns the allowable HTTP Methods list for this resource.

Table 463: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 464: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy, client should try again later

5.1.4 /Storage/Devices/{id}/Controllers/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Controllers/{id}/ return information about a specific Controller and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 465: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
PartNumber	String	Mandatory	No	Free-Form 32 Chars	PartNumber or Model Name
SerialNumber	String	Mandatory	No	Free-Form 32 Chars	Serial Number for the Controller
Version	String	Mandatory	No	Major.Minor.Patch	The current Device OS Version on this Controller
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
ProtocolIdentifier.Name	String	Mandatory	No	"SAS Serial SCSI Protocol"	Indicates the communication protocol name
ProtocolIdentifier.ID	Number	Mandatory	No	6	Indicates the communication protocol value ID
RemovalConditions.Name	String	Mandatory	No	"Unknown" "Not applicable" "Removable when off" "Removable when on or off" "Removable, removal not currently safe"	Indicates removal capabilities
RemovalConditions.ID	Number	Mandatory	No	0 2 3 4 10	Indicates removal capabilities value ID
DeviceHandle	String	Mandatory	No	/dev/sgX (Linux) or SCSI0:1,2,3 (Windows)	Handle for communication to the Hardware

GET /Storage/Devices/{id}/Controllers/{id}/

GET /Storage/Devices/{id}/Controllers/{id}/ returns information regarding a specific Controller based on the {id} in the URI address string.

Table 466: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 467: GET Query Parameters

Parameter	Description
?E6Log=true	Downloads the binary E6 Log for this particular Controller Instance to the requesting web client FILENAME FORMAT: e6log_<deviceID>_<controllerID>_<timestamp>.bin



Note: At the Instance level, the Controller E6 Log is retrieved into a BIN data file, and downloaded for convenience.

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Controllers/IOModuleBFRU/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Controllers/IOModuleBFRU/",
  "ID": "IOModuleBFRU",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "IOModuleBFRU",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  }
}
```

```

    ],
    "Details": [
      "None"
    ]
  },
  "PartNumber": "1EB1049-A2",
  "SerialNumber": "THCLS00320EG0029",
  "Version": "4.0.86",
  "DurableName": "5000ccab0410a1fc",
  "ProtocolIdentifier": {
    "ID": 6,
    "Name": "SAS Serial SCSI Protocol"
  },
  "RemovalConditions": {
    "ID": 4,
    "Name": "Removable when on or off"
  },
  "DeviceHandle": "/dev/sg3"
}

```

Table 468: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Controller information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Controllers/{id}/

PUT /Storage/Devices/{id}/Controllers/{id}/ modifies an attribute or executes an operation for this Controller.

Table 469: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -H "If-Match: 3677651d2011428f32120a029b015e80"
  -X PUT http://10.20.30.40/Storage/Devices/0123456789/Controller/1
  --data '{
    "Reboot": true
  }'
```

Table 470: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Controller information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	A new parameter value already exists (e.g., Name or NQN)
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Controllers/{id}/

HEAD /Storage/Devices/{id}/Controllers/{id}/ pings this Controller.

Table 471: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 472: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Controllers/{id}/

OPTIONS /Storage/Devices/{id}/Controllers/{id}/ returns the allowable HTTP Methods list for this resource.

Table 473: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 474: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.5 /Storage/Devices/{id}/Connectors/

The Collection-level methods and attributes of /Storage/Devices/{id}/Connectors/ return information about the Connectors collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 475: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Connectors/{id}/ (page 298) for Instance Attribute details

GET /Storage/Devices/{id}/Connectors/

GET /Storage/Devices/{id}/Connectors/ returns the Collection of Connectors.

Table 476: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Connectors/
```

Table 477: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Connectors + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Connectors/

HEAD /Storage/Devices/{id}/Connectors/ pings the Connectors collection.

Table 478: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 479: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Connectors/

OPTIONS /Storage/Devices/{id}/Connectors/ returns the allowable HTTP Methods list for this resource.

Table 480: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 481: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.6 /Storage/Devices/{id}/Connectors/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Connectors/{id}/ return information about a specific Connectors and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 482: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
CablePresent	Boolean	Mandatory	No	true false	Indicates whether or not a cable is plugged into the Connector
ConnectorDescription	String	Mandatory	No	"Mini SAS HD 4x receptacle (see SAS-4 and SFF-8644)[max number of phys: 4]"	Indicates the type of connector
Layout.Name	String	Mandatory	No	"PCI-E x4"	Indicates the type of connector protocol
Layout.ID	Number	Mandatory	No	4	Indicates the type of connector protocol value ID

GET /Storage/Devices/{id}/Connectors/{id}/

GET /Storage/Devices/{id}/Connectors/{id}/ returns the information regarding a specific Connector based on the {id} in the URI address string.

Table 483: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Connectors/CONN_HOST_02/
```

Example GET Response Body

```
{
```

```

"Self": "http://10.20.30.40/Storage/Devices/0123456789/Connectors/CONN_HOST_02/",
"ID": "CONN_HOST_02",
"IndicatorLED": {
  "ID": 4,
  "Name": "Off"
},
"Name": "CONN HOST 02",
"Status": {
  "State": {
    "ID": 16,
    "Name": "In service"
  },
  "Health": [
    {
      "ID": 5,
      "Name": "OK"
    }
  ]
},
"ConnectorDescription": "Mini SAS HD 4x receptacle (see SAS-4 and SFF-8644)[max
number of phys: 4]",
"CablePresent": true,
"Layout": {
  "ID": 4,
  "Name": "PCI-E x4"
}
}

```

Table 484: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Connector information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Connectors/{id}/

HEAD /Storage/Devices/{id}/Connectors/{id}/ pings this Connector.

Table 485: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 486: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Connectors/{id}/

OPTIONS /Storage/Devices/{id}/Connectors/{id}/ returns the allowable HTTP Methods list for this resource.

Table 487: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 488: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.7 /Storage/Devices/{id}/Expanders/

The Collection-level methods and attributes of /Storage/Devices/{id}/Expanders/ return information about the Expanders collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 489: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Expanders/{id}/ (page 305) for Instance Attribute details

GET /Storage/Devices/{id}/Expanders/

GET /Storage/Devices/{id}/Expanders/ returns the Collection of Expanders.

Table 490: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Expanders
```

Table 491: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Expanders + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Expanders/

HEAD /Storage/Devices/{id}/Expanders/ pings this Expander collection.

Table 492: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 493: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Expanders/

OPTIONS /Storage/Devices/{id}/Expanders/ returns the allowable HTTP Methods list for this resource.

Table 494: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 495: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.8 /Storage/Devices/{id}/Expanders/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Expanders/{id}/ return information about a specific Expander and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 496: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status. Health[]. ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
IndicatorLED. Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED. ID	Number	Mandatory	No	4 2	The current state value map of the Indicator LED for this Resource
Version	String	Mandatory	No	Major-Minor Format	The current Expander FW image version
DurableName	String	Mandatory	No	WWN or UUID Format	The in-band discovery identifier

GET /Storage/Devices/{id}/Expanders/{id}/

GET /Storage/Devices/{id}/Expanders/{id}/ returns the information regarding a specific Connector based on the {id} in the URI address string.

Table 497: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Expanders/EXP_IOMA_0/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Expanders/EXP_IOMA_0/",
  "ID": "EXP_IOMA_0",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  }
}
```

```

    },
    "Name": "EXP IOMA 0",
    "Status": {
      "State": {
        "ID": 16,
        "Name": "In service"
      },
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ]
    },
    "Version": "3010-007",
    "DurableName": "5000ccab0410a1bd"
  }
}

```

Table 498: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Expander information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Expanders/{id}/

HEAD /Storage/Devices/{id}/Expanders/{id}/ pings this Expander.

Table 499: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 500: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Expanders/{id}/

OPTIONS /Storage/Devices/{id}/Expanders/{id}/ returns the allowable HTTP Methods list for this resource.

Table 501: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 502: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.9 /Storage/Devices/{id}/Ports/

The Collection-level methods and attributes of /Storage/Devices/{id}/Ports/ return information about the Ports collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 503: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Ports/{id}/ (page 312) for Instance Attribute details

GET /Storage/Devices/{id}/Ports/

GET /Storage/Devices/{id}/Ports/ returns the Collection of Ports.

Table 504: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Ports
```

Table 505: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Ports + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Ports/

HEAD /Storage/Devices/{id}/Ports/ pings the Ports collection.

Table 506: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 507: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Ports/

OPTIONS /Storage/Devices/{id}/Ports/ returns the allowable HTTP Methods list for this resource.

Table 508: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 509: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.10 /Storage/Devices/{id}/Ports/{id}/


The Device-level methods and attributes of /Storage/Devices/{id}/Ports/{id}/ return information about a specific Port and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 510: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[.ID]	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
AddressOrigin.Name	String	Mandatory	Yes	"UNKNOWN" "OTHER" "NOT APPLICABLE" "STATIC" "DHCP" "BOOTP" "IPv4 Link Local" "DHCPv6" "IPv6 Link Local" "DHCPv4"	Information value as to where the address is supplied
AddressOrigin.ID	Number	Mandatory	Yes	0 1 2 3 4 5 6 7 10 65536	Information value map as to where the address is supplied
IPv4Address	String	Mandatory	Yes	IPv4 4-Octet pattern + CIDR mask	The Network IP Address for this Device; IPv4 type  Note: 0.0.0.0/8 & 127.0.0.0/8 are reserved and rejected.
IPv4Gateway	String	Optional	Yes	IPv4 4-Octet pattern	The Network IP Gateway address setting for IPv4
IPv6Address	String	Mandatory	Yes	IPv6 Hex pattern + CIDR mask	The Network IP Address for this Device; IPv6 type
IPv6Gateway	String	Optional	Yes	IPv6 Hex pattern	The Network IP Gateway address setting for IPv6
MACAddress	String	Mandatory	No	6-hex digit HW address	Unique MAC Address reported by the local hardware adapter

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
NetworkType.Name	String	Mandatory	No	"LAN" "WLAN" "WAN" "MAN" "SAN" "VLAN" "Ethernet Network" "IP Network" "IPv4 Network" "IPv6 Network"	The network type value
NetworkType.ID	Number	Mandatory	No	0 1 2 3 4 5 6 7 8	The network type value map
MTUBytes	Number	Mandatory	Yes	Range: 46 - 9216 (default: 1500)	The current Maximum Transfer Bytes value
Adapters.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Link to get the Adapter information hosting this Port

GET /Storage/Devices/{id}/Ports/{id}/

GET /Storage/Devices/{id}/Ports/{id}/ returns the information regarding a specific Port based on the {id} in the URI address string.

Table 511: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command (IPv4)

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Ports/01_0a_f7_95_79_3c/
```

Example GET Response Body (IPv4)

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Ports/01_0a_f7_95_79_3c/" ,
  "ID": "01_0a_f7_95_79_3c",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {

```

```

        "ID": 5,
        "Name": "OK"
    }
]
},
"AddressOrigin": {
    "ID": 4,
    "Name": "DHCP"
},
"IPv4Address": "10.20.30.40/22",
"IPGateway": "",
"MACAddress": "01:0a:f7:95:79:3c",
"NetworkType": {
    "ID": 8,
    "Name": "IPv4 Network"
},
"MTUBytes": 1500,
"Adapters": "http://10.20.30.40/Storage/Devices/0123456789/Adapters/?
portid=01_0a_f7_95_79_3c"
}
}

```

Example GET curl Command (IPv6)

```

curl
-i
-u admin:admin
-X GET http://10.20.40:80/Storage/Devices/0123456789/
Ports/00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64/

```

Example GET Response Body (IPv6)

```

{
  "Self": "http://10.20.40:80/Storage/Devices/0123456789/
Ports/00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64/",
  "ID": "00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64",
  "Status": {
    "State": {
      "ID": 0,
      "Name": "Unknown"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "AddressOrigin": {
    "ID": 7,
    "Name": "DHCPv6"
  },
  "IPv6Address": "fdf4:cfad:91f3:6061::18/64",
  "MACAddress": "00:0c:ca:09:00:3c",
  "NetworkType": {
    "ID": 9,
    "Name": "IPv6 Network"
  },
  "MTUBytes": 1500,
}

```

```
"Adapters": "http://10.20.30.40:80/Storage/Devices/0123456789/Adapters/?
portid=00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64"
}
```

Table 512: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Port information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Ports/{id}/

PUT /Storage/Devices/{id}/Ports/{id}/ modifies an attribute or executes an operation for this Port.

Table 513: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.41/Storage/Devices/9876543210/Ports/00_0c_ca_09_00_2d_inet
--data '{
  "AddressOrigin": {
    "ID": 65536
  }
}'
```

Table 514: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Port information in the response body + ETag Header

Response Code	Name	Definition
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Storage/Devices/{id}/Ports/{id}/

HEAD /Storage/Devices/{id}/Ports/{id}/ pings this Port.

Table 515: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 516: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Ports/{id}/

OPTIONS /Storage/Devices/{id}/Ports/{id}/ returns the allowable HTTP Methods list for this resource.



Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

Table 517: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	<p>Schema - Returns the schema information in "pretty" JSON text as plain text</p> <p>ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header</p>

Table 518: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.11 /Storage/Devices/{id}/PowerSupplies/

The Collection-level methods and attributes of /Storage/Devices/{id}/PowerSupplies/ return information about the Power Supplies collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 519: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/PowerSupplies/{id}/ (page 322) for Instance Attribute details

GET /Storage/Devices/{id}/PowerSupplies/

GET /Storage/Devices/{id}/PowerSupplies/ returns the Collection of Power Supplies.

Table 520: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies
```

Table 521: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Power Supplies + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/PowerSupplies/

HEAD /Storage/Devices/{id}/PowerSupplies/ pings the Power Supplies collection.

Table 522: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 523: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/PowerSupplies/

OPTIONS /Storage/Devices/{id}/PowerSupplies/ returns the allowable HTTP Methods list for this resource.

Table 524: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 525: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.12 /Storage/Devices/{id}/PowerSupplies/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/PowerSupplies/{id}/ return information about a specific Power Supply and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 526: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Name	String	Mandatory	No	Free-Form 64 Chars	
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Power Supply
PartNumber	String	Mandatory	No	Free-Form 32 Characters	The Part Number for this Power Supply
SerialNumber	String	Mandatory	No	Free-Form 32 Characters	The Serial Number of this Power Supply
Model	String	Optional	No	Free-Form 32 Characters	The model of this Power Supply
Manufacturer	String	Mandatory	No	Free-Form 32 Characters	The manufacturer of this Power Supply
TotalOutputPower	Number	Optional	No	Number in Watts	The total output power rating
BaseUnits.ID	Number	Optional	No	7	BaseUnits value ID (7 = Watts)
BaseUnits.Name	String	Optional	No	Watts	BaseUnits name (Watts)
RateUnits.ID	Number	Optional	No	0	RateUnits ID
RateUnits.Name	String	Optional	No	None	RateUnits Name
UnitModifier	Number	Optional	No	0	Unit modifier (multiplier) based on 10^x where x is the UnitModifier value to convert the TotalOutput Power to Watts

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
RemovalConditions.Name	String	Mandatory	No	"Unknown" "Not applicable" "Removable when off" "Removable when on or off" "Removable, removal not currently safe"	Indicates removal capabilities
RemovalConditions.ID	Number	Mandatory	No	0 2 3 4 10	Indicates removal capabilities value ID

GET /Storage/Devices/{id}/PowerSupplies/{id}/

GET /Storage/Devices/{id}/PowerSupplies/{id}/ returns information regarding a specific Power Supply based on the {id} in the URI address string.

Table 527: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/POWER_SUPPLY_A/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/POWER_SUPPLY_A/",
  "ID": "PSU_A",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "PSU A",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    }
  },
  "Health": [
    {
      "ID": 5,
      "Name": "OK"
    }
  ]
}
```

```

    }
  ],
  "Details": [
    "None"
  ]
},
"PartNumber": "DPS-1600AB-12",
"SerialNumber": "IQHD1939009335",
"RemovalConditions": {
  "ID": 4,
  "Name": "Removable when on or off"
},
"Manufacturer": "DELTA",
"Model": "DPS-1600AB-12",
"TotalOutputPower": 1600,
"BaseUnits": {
  "ID": 7,
  "Name": "Watts"
},
"RateUnits": {
  "ID": 0,
  "Name": "None"
},
"UnitModifier": 0
}

```

Table 528: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/PowerSupplies/{id}/

PUT /Storage/Devices/{id}/PowerSupplies/{id}/ modifies an attribute or executes an operation for this Power Supply.

Table 529: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/PowerSupplyAFRU/
--data '{
  "IndicatorLED": {
    "ID": 2
  }
}'
```

Table 530: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/PowerSupplies/{id}/

HEAD /Storage/Devices/{id}/PowerSupplies/{id}/ pings this Power Supply.

Table 531: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 532: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/PowerSupplies/{id}/

OPTIONS /Storage/Devices/{id}/PowerSupplies/{id}/ returns the allowable HTTP Methods list for this resource.

Table 533: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 534: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.13 /Storage/Devices/{id}/Fans/

The Collection-level methods and attributes of /Storage/Devices/{id}/Fans/ return information about the Fans collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 535: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Fans/{id}/ (page 331) for Instance Attribute details

GET /Storage/Devices/{id}/Fans/

GET /Storage/Devices/{id}/Fans/ returns the Collection of Fans.

Table 536: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Fans
```

Table 537: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Fans + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Fans/

HEAD /Storage/Devices/{id}/Fans/ pings the Fans collection.

Table 538: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 539: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Fans/

OPTIONS /Storage/Devices/{id}/Fans/ returns the allowable HTTP Methods list for this resource.

Table 540: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 541: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.14 /Storage/Devices/{id}/Fans/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Fans/{id}/ return information about a specific Fan and enable management operations.

HTTP Methods:

GET

PUT

HEAD

OPTIONS

Table 542: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Fan
CurrentSpeed	Number	Mandatory	No	0 - n	The current speed of the fan in RPM
BaseUnits.Name	String	Mandatory	No	"RPM"	The base units value for the speed value
BaseUnits.ID	Number	Mandatory	No	19	The base units value map for the speed value
RateUnits.Name	String	Mandatory	No	"None"	The rate units value for the fan
RateUnits.ID	Number	Mandatory	No	0	The rate units value map for the fan
UnitModifier	Number	Mandatory	No	0	The unit modifier for the fan speed
RemovalConditions.ID	Number	Mandatory	No	0 2 3 4 10	The value map of the removal conditions for this FRU
RemovalConditions.Name	String	Mandatory	No	"Unknown" "Not Applicable" "Removable when off" "Removable when on or off" "Removable, removal not currently safe"	The value of the removal conditions for this FRU
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource

GET /Storage/Devices/{id}/Fans/{id}/

GET /Storage/Devices/{id}/Fans/{id}/ returns the information regarding a specific Fan based on the {id} in the URI address string.

Table 543: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Fans/FAN_ENCL_1/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Fans/FAN_ENCL_1/",
  "ID": "FAN_ENCL_1",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "FAN ENCL 1",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "CurrentSpeed": 2980,
  "BaseUnits": {
    "ID": 19,
    "Name": "RPM"
  },
  "RateUnits": {
    "ID": 0,
    "Name": "None"
  },
  "UnitModifier": 0,
  "RemovalConditions": {
    "ID": 4,
    "Name": "Removable when on or off"
  }
}
```

}

Table 544: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Fan information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Fans/{id}/

PUT /Storage/Devices/{id}/Fans/{id}/ modifies an attribute or executes an operation for this Fan.

Table 545: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/Fans/FAN_ENCL_1/
--data '{
  "IndicatorLED": {
    "ID": 2
  }
}'
```

Table 546: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Fan information in the response body + ETag Header

Response Code	Name	Definition
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Fans/{id}/

HEAD /Storage/Devices/{id}/Fans/{id}/ pings the Fans collection.

Table 547: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 548: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Fans/{id}/

OPTIONS /Storage/Devices/{id}/Fans/{id}/ returns the allowable HTTP Methods list for this resource.

Table 549: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 550: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.15 /Storage/Devices/{id}/Sensors/

The Collection-level methods and attributes of /Storage/Devices/{id}/Sensors/ return information about the Sensors collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 551: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Sensors/{id}/ (page 340) for Instance Attribute details

GET /Storage/Devices/{id}/Sensors/

GET /Storage/Devices/{id}/Sensors/ returns the Collection of Sensors.

Table 552: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Sensors
```

Table 553: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Sensors + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Sensors/

HEAD /Storage/Devices/{id}/Sensors/ pings the the Sensors collection.

Table 554: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 555: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Sensors/

OPTIONS /Storage/Devices/{id}/Sensors/ returns the allowable HTTP Methods list for this resource.

Table 556: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 557: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.16 /Storage/Devices/{id}/Sensors/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Sensors/{id}/ return information about a specific Sensor and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 558: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Name	String	Mandatory	No	Free-Form 256 Chars	The name of this resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the sensor
CurrentReading	Number	Mandatory	No	Signed Integer	The current reading value for the sensor
SensorType.Name	String	Mandatory	No	"Temperature"	The sensor type value
SensorType.ID	Number	Mandatory	No	2	The sensor type value map
BaseUnits.Name	String	Mandatory	No	"Degrees C" "Degrees F"	The base units value for the sensor current reading
BaseUnits.ID	Number	Mandatory	No	2 3	The base units value map for the sensor current reading
RateUnits.Name	String	Mandatory	No	"None"	The rate units value for the sensor current reading
RateUnits.ID	Number	Mandatory	No	0	The rate units value map for the sensor current reading
UnitModifier	Number	Mandatory	No	Signed Integer	The unit modifier for the sensor current reading
HighThreshold Fatal	Number	Optional	No	Signed Integer	The high threshold fatal value usually for temperature
HighThreshold Critical	Number	Optional	No	Signed Integer	The high threshold critical value usually for temperature
LowThreshold Critical	Number	Optional	No	Signed Integer	The low threshold critical value usually for temperature
LowThreshold Fatal	Number	Optional	No	Signed Integer	The low threshold fatal value usually for temperature

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	No	4 2	The current state value map of the Indicator LED for this Resource

GET /Storage/Devices/{id}/Sensors/{id}/

GET /Storage/Devices/{id}/Sensors/{id}/ returns the information regarding a specific Sensor based on the {id} in the URI address string.

Table 559: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Sensors/TEMP_PSU_A_PRI/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Sensors/TEMP_PSU_A_PRI/",
  "ID": "TEMP_PSU_A_PRI",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "TEMP PSU A PRI",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  }
}
```



```

    },
    "SensorType": {
      "ID": 2,
      "Name": "Temperature"
    },
    },
    "CurrentReading": 62,
    "BaseUnits": {
      "ID": 2,
      "Name": "Degrees C"
    },
    },
    "RateUnits": {
      "ID": 0,
      "Name": "None"
    },
    },
    "UnitModifier": 0,
    "HighThresholdFatal": 110,
    "HighThresholdCritical": 107,
    "LowThresholdCritical": 5,
    "LowThresholdFatal": 1
  }
}

```

Table 560: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Sensor information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Sensors/{id}/

HEAD /Storage/Devices/{id}/Sensors/{id}/ pings a specific Sensor.

Table 561: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 562: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Sensors/{id}/

OPTIONS /Storage/Devices/{id}/Sensors/{id}/ returns the allowable HTTP Methods list for this resource.

Table 563: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 564: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.17 /Storage/Devices/{id}/Slots/

The Collection-level methods and attributes of /Storage/Devices/{id}/Slots/ return information about the Slots collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 565: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Slots/ (page 345) for Instance Attribute details

GET /Storage/Devices/{id}/Slots/

GET /Storage/Devices/{id}/Slots/ returns the Collection of Slots.

Table 566: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Slots
```

Table 567: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Slots + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Slots/

HEAD /Storage/Devices/{id}/Slots/ pings the Slots collection.

Table 568: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 569: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Slots/

OPTIONS /Storage/Devices/{id}/Slots/ returns the allowable HTTP Methods list for this resource.

Table 570: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 571: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.18 /Storage/Devices/{id}/Slots/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Slots/{id}/ return information about a specific Slot and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 572: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
PowerState.Name	String	Optional	No	"On" "Off"	The current Power State of the Slot
PowerState.ID	Number	Optional	No	2 6	The current Power State of the Slot value map
Associations	String Array	Mandatory	No	"Media" "Slots"	The associations among resources based on ID
Medium	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Medium or Drive

GET /Storage/Devices/{id}/Slots/{id}/

GET /Storage/Devices/{id}/Slots/{id}/ returns information about a specific Slot based on the {id} in the URI address string .

Table 573: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Slots/SLOT_000_7PGL4LXG/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Slots/SLOT_000_7PGL4LXG/",
  "ID": "SLOT_000_7PGL4LXG",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "PowerState": {
    "ID": 2,
    "Name": "On"
  },
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Associations": {
    "Media": [
      "5000cca25120fff2"
    ],
    "Slots": [
      "SLOT_000_7PGL4LXG"
    ]
  },
  "Medium": "http://10.202.239.39:80/Storage/Devices/5000ccab0410a180/Media/5000cca25120fff2/"
}
```

Table 574: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Slot information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Slots/{id}/

HEAD /Storage/Devices/{id}/Slots/{id}/ pings a specific Slot.

Table 575: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 576: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Slots/{id}/

OPTIONS /Storage/Devices/{id}/Slots/{id}/ returns the allowable HTTP Methods list for this resource.

Table 577: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 578: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource

Response Code	Name	Definition
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.19 /Storage/Devices/{id}/Media/

The Collection-level methods and attributes of /Storage/Devices/{id}/Media/ return information about the Media collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 579: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Media/{id}/ (page 356) for Instance Attribute details

GET /Storage/Devices/{id}/Media/

GET /Storage/Devices/{id}/Media/ returns the Collection of Media.

Table 580: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 581: GET Query Parameters

Parameter	Description
?SmartLog=true	Adds the "SmartLog" JSON object attributes based on the particular protocol type (e.g, ATA, SCSI, and NVMe) for all the Media Instances
?E6Log=true	Retrieves a collection bundle file of E6 Logs for all the currently discovered Media that support the E6 Log capability

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Media/
```

Table 582: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Media + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Media/

HEAD /Storage/Devices/{id}/Media/ pings the Media collection.

Table 583: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 584: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Media/

OPTIONS /Storage/Devices/{id}/Media/ returns the allowable HTTP Methods list for this resource.

Table 585: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 586: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.1.20 /Storage/Devices/{id}/Media/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Media/{id}/ return information about a specific Medium and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 587: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars; no spaces allowed	The user-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Capacity	Number	Mandatory	No	Integer Bytes	The total number of raw bytes for this Resource
Model	String	Mandatory	No	Free-Form 32 Chars	The model name or number for this Resource
Manufacturer	String	Mandatory	No	Free-Form 32 Chars	The manufacturer name for this Resource
SerialNumber	String	Mandatory	No	Alphanumeric values	The serial number for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
Associations	String Array	Mandatory	No	"Media" "Slots"	Lists the associated Resource IDs
Version	String	Mandatory	No	Free-Form URI Format 16 Chars	FW Version of the Medium Device
Protocol.ID	Number	Mandatory	No	4 5 65536 65537	Protocol Interface Type ID
Protocol.Name	String	Mandatory	No	"Serial ATA" "SAS" "NVMe"	Protocol Interface Type Name
DiskType.ID	Number	Mandatory	No	2 3	Disk Type ID
DiskType.Name	String	Mandatory	No	"HDD" "SSD"	Disk Type Name
DurableName	String	Mandatory	No	Typically a WWN	Durable Name/ID for the Medium
Slots	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Slots

GET /Storage/Devices/{id}/Media/{id}/

GET /Storage/Devices/{id}/Media/{id}/ returns information regarding a specific Medium based on the {id} in the URI address string.

Table 588: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 589: GET Query Parameters

Query Parameter	Description
?SmartLog=true	Adds the "SmartLog" JSON object attributes based on the particular protocol type (e.g, ATA, SCSI, and NVMe) for all the Media Instances
?E6Log=true	Retrieves a collection bundle file of E6 Log Mode Pages for the instances of Media that support the E6 Log capability

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Media/5000cca25103b366/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Media/5000cca25103b366/",
  "ID": "5000cca25103b366",
  "Name": "SLOT 006",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Associations": {
    "Media": [
      "5000cca25103b366"
    ],
    "Slots": [
      "SLOT_006_7PG212XR"
    ]
  },
  "Capacity": 10000831348736,
  "AlternateDeviceHandle": "",
  "DeviceHandle": "/dev/sg10",
  "Manufacturer": "HGST",
```



```

"Model": "HUH721010AL4204",
"MultiplePathsDetected": false,
"Protocol": {
  "ID": 65536,
  "Name": "SAS"
},
"DiskType": {
  "ID": 2,
  "Name": "HDD"
},
"Version": "C9G0",
"SerialNumber": "7PG212XR",
"DurableName": "5000cca25103b366",
"Slots": "http://10.202.239.39:80/Storage/Devices/5000ccab0410a180/Slots/
SLOT_006_7PG212XR/"
}
    
```

Table 590: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Medium information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Media/{id}/

PUT /Storage/Devices/{id}/Media/{id}/ modifies an attribute or executes an operation for this Medium.

Table 591: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Table 592: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Medium information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Media/{id}/

HEAD /Storage/Devices/{id}/Media/{id}/ pings this Medium.

Table 593: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 594: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Media/{id}/

OPTIONS /Storage/Devices/{id}/Media/{id}/ returns the allowable HTTP Methods list for this resource.

Table 595: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 596: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2 Logical Devices

The OCAPI's logical and virtual resources model include those resources that are logical or virtual in nature. The topics in this section provide information for accessing and managing the features of these logical and virtual resources.

5.2.1 /Storage/Devices/{id}/Location/

The methods and attributes of /Storage/Devices/{id}/Location/ return information about the Location resource and enable management operations.

HTTP Methods:

GET
PUT
DELETE
HEAD
OPTIONS

Table 597: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Country	String	Optional	Yes	Free-Form 64 Chars	The Country name where this Device is located
Territory	String	Optional	Yes	Free-Form 64 Chars	The Territory name where this Device is located
State	String	Optional	Yes	Free-Form 64 Chars	The State name where this Device is located
City	String	Optional	Yes	Free-Form 64 Chars	The City name where this Device is located

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Address1	String	Optional	Yes	Free-Form 64 Chars	The first Address information where this Device is located
Address2	String	Optional	Yes	Free-Form 64 Chars	The second Address information where this Device is located as needed
Address3	String	Optional	Yes	Free-Form 64 Chars	The third Address information where this Device is located as needed
PostalCode	String	Optional	Yes	Free-Form 32 Chars	The Postal or Zip Code name where this Device is located
SiteName	String	Optional	Yes	Free-Form 32 Chars	The friendly Site Name
Building	String	Optional	Yes	Free-Form 32 Chars	The Building name or number where this Device is located
Room	String	Optional	Yes	Free-Form 32 Chars	The Room name or number in the Building where this Device is located
Pod	String	Optional	Yes	Free-Form 32 Chars	The Pod name or number in the Room this Device is located as needed
Row	String	Optional	Yes	Free-Form 32 Chars	The Row name or number in the Room or Pod this Device is located
Rack	String	Optional	Yes	Free-Form 32 Chars	The Rack name or number in the Row this Device is located
Shelf	String	Optional	Yes	Free-Form 32 Chars	The Shelf name or number of the Rack this Device is located
Device	String	Optional	Yes	Free-Form 32 Chars	The Device name or number of the Rack this Device is located

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Item	String	Optional	Yes	Free-Form 32 Chars	The Item name indicating the Shelf units or dimension for this Device
GPSCoords	String	Optional	Yes	Decimal Latitude, Decimal Longitude Format	The GPS coordinates of the location of this Device
OtherLocationInfo	String	Optional	Yes	Free-Form 64 Chars	A place-holder for other location information

GET /Storage/Devices/{id}/Location/

GET /Storage/Devices/{id}/Location/ returns the Location information.

Table 598: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Location/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Location/",
  "Country": "USA",
  "Territory": "",
  "State": "Colorado",
  "City": "Colorado Springs",
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "",
  "PostalCode": "80921",
  "SiteName": "WD COS DataCenter 1",
  "Building": "100",
  "Room": "1",
  "Pod": "p2",
  "Rack": "r02",
  "Shelf": "30",
  "Device": "5",
```

```
"Item": "Rack Units",
"GPSCoords": "38.9838684,-104.8040493",
"OtherLocationInfo": "This is other info"
}
```

Table 599: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Location information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Location/

PUT /Storage/Devices/{id}/Location/ modifies an attribute of the Location.

Table 600: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/Location/
--data '{
  "City": "COS"
}'
```

Example PUT Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Location/"
  "City": "COS"
}
```

```
}
```

Table 601: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Location information with no response body
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	Resource could not execute the request

DELETE /Storage/Devices/{id}/Location/

DELETE /Storage/Devices/{id}/Location/ deletes all Location information for this resource.

Table 602: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Storage/Devices/0123456789/Location/
```

Table 603: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Storage/Devices/{id}/Location/

HEAD /Storage/Devices/{id}/Location/ pings the Location resource.

Table 604: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 605: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Location/

OPTIONS /Storage/Devices/{id}/Location/ returns the allowable HTTP Methods list for this resource.

Table 606: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 607: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.2 /Storage/Devices/{id}/OperatingSystem/

The methods and attributes of /Storage/Devices/{id}/OperatingSystem/ return information about the Operating System (Application) and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 608: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware name
OSType.Name	String	Mandatory	No	Depends on Operating System Type	The Operating System Type value
OSType.ID	Number	Mandatory	No	Depends on Operating System Type	The Operating System Type value map
Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware Version

GET /Storage/Devices/{id}/OperatingSystem/

GET /Storage/Devices/{id}/OperatingSystem/ returns the information of the Operating System resource.

Table 609: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/OperatingSystem/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/OperatingSystem/",
  "Name": "Vendor Firmware",
  "OSType": {
    "ID": 59,
    "Name": "Dedicated"
  },
  "Version": "4.0.13"
}
```

Table 610: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Operating System resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/OperatingSystem/

HEAD /Storage/Devices/{id}/OperatingSystem/ pings the Operating System resource.

Table 611: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 612: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/OperatingSystem/

OPTIONS /Storage/Devices/{id}/OperatingSystem/ returns the allowable HTTP Methods list for this resource.

Table 613: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 614: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.3 /Storage/Devices/{id}/Jobs/

The Collection-level methods and attributes of /Storage/Devices/{id}/Jobs/ return information about the Jobs collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 615: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Jobs/{id}/ (page 374) for Instance Attribute details

GET /Storage/Devices/{id}/Jobs/

GET /Storage/Devices/{id}/Jobs/ returns the Collection of Jobs.

Table 616: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Jobs/
```

Table 617: GET Response Codes

Response Code	Name	Definition
200	OK	OK & list of Jobs + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Jobs/

HEAD /Storage/Devices/{id}/Jobs/ pings the Jobs collection.

Table 618: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 619: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Jobs/

OPTIONS /Storage/Devices/{id}/Jobs/ returns the allowable HTTP Methods list for this resource.

Table 620: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 621: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.4 /Storage/Devices/{id}/Jobs/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Jobs/{id}/ return information about a specific Job and enable management operations.

HTTP Methods:

GET
DELETE
HEAD
OPTIONS

Table 622: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	"FirmwareUpdate_{id}" "Reboot_{id}" "FirmwareActivate_{id}"	The Name of this particular Job
Status. State. Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service" "Inoperative" "Write Protected" "Reboot Needed" "Activate Needed" "Activate with reboot needed" "Activate invalidated by reboot"	The current state value of this Resource
Status. State. ID	Number	Mandatory	No	0-16 65537-65542	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
PercentComplete	Number	Mandatory	No	0-100	The percent complete status of the Job

GET /Storage/Devices/{id}/Jobs/{id}/

GET /Storage/Devices/{id}/Jobs/{id}/ returns information regarding a specific Job based on the {id} in the URI address string.

Table 623: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Jobs/FirmwareUpdate_0123456789
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Jobs/",
  "Members": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/0123456789/Jobs/FirmwareUpdate_0123456789/",
      "ID": "FirmwareUpdate_0123456789",
    }
  ]
}
```

```

"StartTime": "09-Oct-2023 23:05:59 UTC",
"ElapsedTime": "09-Oct-2023 23:08:37 UTC",
"Owner": "http://10.20.30.40/Storage/Devices/0123456789/",
"PercentComplete": 100,
"Status": {
  "State": {
    "ID": 65540,
    "Name": "Activate needed"
  },
  "Health": [
    {
      "ID": 5,
      "Name": "OK"
    }
  ],
  "Details": [
    "FW update completed. Waiting for activation."
  ]
}
}
]
}

```

Table 624: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Job information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Storage/Devices/{id}/Jobs/{id}/

DELETE /Storage/Devices/{id}/Jobs/{id}/ deletes a specific Job.



Note: **NOTE:** When deleting firmware-related jobs, the recommended order is to delete FirmwareUpdate before FirmwareActivate.



Note: Jobs cannot be deleted when in-progress (i.e. when PercentComplete is less than 100%).

Table 625: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Storage/Devices/0123456789/Jobs/Reboot_0123456789
```

Table 626: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	If job is still in progress
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Jobs/{id}/

HEAD /Storage/Devices/{id}/Jobs/{id}/ pings a specific Job.

Table 627: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 628: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Jobs/{id}/

OPTIONS /Storage/Devices/{id}/Jobs/{id}/ returns the allowable HTTP Methods list for this resource.

Table 629: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 630: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.5 /Storage/Devices/{id}/Files/

The Collection-level methods and attributes of /Storage/Devices/{id}/Files/ return information about the Files collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 631: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Files/{id}/ (page 382) for Instance Attribute details

GET /Storage/Devices/{id}/Files/

GET /Storage/Devices/{id}/Files/ returns the Collection of Files.

Table 632: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Files/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/",
  "Members": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/telemetry",
      "ID": "telemetry",
      "Description": "Telemetry"
    }
  ]
}
```

```
    ]
  }
```



Note: The In-Band Storage device connection returns the GET /Telemetry JSON information (with Media SmartLog info) and any Controller E6 Logs and Media E6 Logs.

Table 633: GET Response Codes

Response Code	Name	Definition
200	OK	OK & list of Files + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Files/

HEAD /Storage/Devices/{id}/Files/ pings the Files collection.

Table 634: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 635: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Files/

OPTIONS /Storage/Devices/{id}/Files/ returns the allowable HTTP Methods list for this resource.

Table 636: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 637: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.6 /Storage/Devices/{id}/Files/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Files/{id}/ return information about a specific File and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 638: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier
Name	String	Mandatory	No	Free-Form 256 Chars	The name of the file

GET /Storage/Devices/{id}/Files/{id}/

GET /Storage/Devices/{id}/Files/{id}/ returns information regarding a specific File based on the {id} in the URI address string.

Table 639: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Files/telemetry
```

Table 640: GET Response Codes

Response Code	Name	Definition
200	OK	OK & File information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Files/{id}/

HEAD /Storage/Devices/{id}/Files/{id}/ pings a specific File.

Table 641: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 642: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Files/{id}/

OPTIONS /Storage/Devices/{id}/Files/{id}/ returns the allowable HTTP Methods list for this resource.

Table 643: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 644: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
204	No Content	No Content & "Allow" list of methods in the response header. Some files will return 204 No Content indicating that there is no entity body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.7 /Storage/Devices/{id}/ZoneSets/

The Collection-level methods and attributes of /Storage/Devices/{id}/ZoneSets/ return information about the Zone Sets collection and enable management operations.

HTTP Methods:

- GET
- POST
- HEAD
- OPTIONS

Table 645: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Type. Name	String	Mandatory	No	"Fixed Configuration" "Custom File Configuration"	Indicates the supported type of ZoneSet configuration of the Device. "Fixed" indicates using native static configurations (e.g., Config 1, 2 or 3 or Disabled). "Custom" indicates supporting "custom file" upload to change the ZoneSet configuration.
Type. ID	Number	Mandatory	No	1 2	The ZoneSet configuration type value ID
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/ZoneSets/{id}/ (page 389) for Instance Attribute details

GET /Storage/Devices/{id}/ZoneSets/

GET /Storage/Devices/{id}/ZoneSets/ returns the Collection of ZoneSets.

Table 646: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/
```

Table 647: GET Response Codes

Response Code	Name	Definition
200	OK	OK & list of Files + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Storage/Devices/{id}/ZoneSets/

POST /Storage/Devices/{id}/ZoneSets/ uploads a custom configuration file for ZoneSets.

Table 648: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example POST curl Command

```
curl
-i
-u admin:admin
-X POST http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/
-H "Content-Type: multipart/form-data"
-F "ZoneSetsFile=@customZoneConfigFile.bin"
```

Table 649: POST Response Codes

Response Code	Name	Definition
201	OK	Created & ZoneSet information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/ZoneSets/

HEAD /Storage/Devices/{id}/ZoneSets/ pings the ZoneSets collection.

Table 650: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 651: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/ZoneSets/

OPTIONS /Storage/Devices/{id}/ZoneSets/ returns the allowable HTTP Methods list for this resource.

Table 652: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 653: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.8 /Storage/Devices/{id}/ZoneSets/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/ZoneSets/{id}/ return information about a specific Zone Set and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 654: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Name	String	Mandatory	No	Free-Form 64 Chars	The Name of this ZoneSet
ID	String	Mandatory	No	Free-Form 64 Chars. Valid characters include: a-z A-Z 0-9 _ -	The Identifier of this particular ZoneSet
Description	String	Mandatory	No	Free-Form 128 Characters	Description of this ZoneSet
Active	Boolean	Mandatory	Yes	true false	Determines if the ZoneSet is currently active. When a ZoneSet is set to "true", all other ZoneSets are set to "false" automatically.
MaxNumZor	Number	Mandatory	No	Data102 = 102 Data60 = 60	The maximum number of media members per ZoneSet for this Configuration
MaxNumZor	Number	Mandatory	No	1 2 3 6	The maximum number of zones per ZoneSet for this Configuration
Associations	String Array	Mandatory	No	Device ZoneSets	Association between the Enclosure and the ZoneSets
Zones[].ID	String	Mandatory	No	ZoneSet 0 : 1 (1 Zone) ZoneSet 1 : 1 - 6 (6 Zones) ZoneSet 2 : 1 - 3 (3 Zone) ZoneSet 3 : 1 - 2 (2 Zones)	The Zone ID for each of the Zones within a ZoneSet

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Zones[].NumZoneMembers	Number	Mandatory	No	Data102 Media Members Per Zone ZoneSet 0 : 102 ZoneSet 1 : 17 ZoneSet 2 : 34 ZoneSet 3 : 51 Data60 Media Per Zone ZoneSet 0 : 60 ZoneSet 1 : 10 ZoneSet 2 : 20 ZoneSet 3 : 30	Media Member arrangement. There are 102 Media (Drives) in the Data102 and 60 Media (Drives) in the Data60
Zones[].Connectors	String Array	Mandatory	No	Host Connectors Per Zone ZoneSet 0 : 12 ZoneSet 1 : 2 ZoneSet 2 : 4 ZoneSet 3 : 6	Host Connector zoning arrangement. There are 12 Host Connectors, 6 per Controller (IOM).
Zones[].Media	String Array	Mandatory	No	Data102 Media Per Zone ZoneSet 0 : 1 - 102 ZoneSet 1 : 1 - 17, 18 - 34, 35 - 51, 52- 68 , 69 - 85, 86 - 102 ZoneSet 2 : 1 - 34, 35 - 68, 69 - 102 ZoneSet 3 : 1 - 51, 52 - 102 Data60 Media Per Zone ZoneSet 0 : 1 - 60 ZoneSet 1 : 1 - 10, 11 - 20, 21 - 30, 31- 40 , 41 - 50, 51 - 60 ZoneSet 2 : 1 - 20, 21 - 40, 41 - 60 ZoneSet 3 : 1 - 30, 31 - 60	

GET /Storage/Devices/{id}/ZoneSets/{id}/

GET /Storage/Devices/{id}/ZoneSets/{id}/ returns information about a specific ZoneSet based on the {id} in the URI address string.

Table 655: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/1/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/1/",
  "Name": "Zone Set 1",
  "ID": "1",
  "Description": "Configuration 1",
  "Active": false,
  "MaxNumZoneMembers": 17,
  "MaxNumZonesPerZoneSet": 6,
  "Associations": {
    "Device": [
      "5000CCAB04110A00"
    ],
    "ZoneSets": [
      "1"
    ]
  },
  "Zones": [
    {
      "ID": "1",
      "NumZoneMembers": 17,
      "Connectors": [
        "1",
        "7"
      ],
      "Media": [
        "1",
        "2",
        "3",
        "4",
        "5",
        "6",
        "7",
        "8",
        "9",
        "10",
        "11",
        "12",
        "13",
        "14",
```

```
        "15",
        "16",
        "17"
    ]
},
{
    "ID": "2",
    "NumZoneMembers": 17,
    "Connectors": [
        "2",
        "8"
    ],
    "Media": [
        "18",
        "19",
        "20",
        "21",
        "22",
        "23",
        "24",
        "25",
        "26",
        "27",
        "28",
        "29",
        "30",
        "31",
        "32",
        "33",
        "34"
    ]
},
{
    "ID": "3",
    "NumZoneMembers": 17,
    "Connectors": [
        "3",
        "9"
    ],
    "Media": [
        "35",
        "36",
        "37",
        "38",
        "39",
        "40",
        "41",
        "42",
        "43",
        "44",
        "45",
        "46",
        "47",
        "48",
        "49",
        "50",
        "51"
    ]
},
}
```

```
{
  "ID": "4",
  "NumZoneMembers": 17,
  "Connectors": [
    "4",
    "10"
  ],
  "Media": [
    "52",
    "53",
    "54",
    "55",
    "56",
    "57",
    "58",
    "59",
    "60",
    "61",
    "62",
    "63",
    "64",
    "65",
    "66",
    "67",
    "68"
  ]
},
{
  "ID": "5",
  "NumZoneMembers": 17,
  "Connectors": [
    "5",
    "11"
  ],
  "Media": [
    "69",
    "70",
    "71",
    "72",
    "73",
    "74",
    "75",
    "76",
    "77",
    "78",
    "79",
    "80",
    "81",
    "82",
    "83",
    "84",
    "85"
  ]
},
{
  "ID": "6",
  "NumZoneMembers": 17,
  "Connectors": [
    "6",
```

```

        "12"
    ],
    "Media": [
        "86",
        "87",
        "88",
        "89",
        "90",
        "91",
        "92",
        "93",
        "94",
        "95",
        "96",
        "97",
        "98",
        "99",
        "100",
        "101",
        "102"
    ]
}
]
}
}

```

Table 656: GET Response Codes

Response Code	Name	Definition
200	OK	OK & ZoneSet information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/ZoneSets/{id}/

HEAD /Storage/Devices/{id}/ZoneSets/{id}/ pings a specific Zone File.

Table 657: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 658: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/ZoneSets/{id}/

OPTIONS /Storage/Devices/{id}/ZoneSets/{id}/ returns the allowable HTTP Methods list for this resource.

Table 659: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 660: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

5.2.9 /Storage/Devices/{id}/Telemetry/

The methods and attributes of /Storage/Devices/{id}/Telemetry/ return information about the Telemetry resource and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 661: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
LastAccessed	String	Mandatory	No	Datetime based on UTC	The UTC time of the request
Members[]	String Array	Mandatory	No	Member Entry	This is the instantaneous, fully expanded metadata from this Device

GET /Storage/Devices/{id}/Telemetry/

GET /Storage/Devices/{id}/Telemetry/ returns information about the Telemetry resource.

Table 662: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Telemetry/
```

Example GET Response Body

```
{
  "Self": "http://10.202.237.61:80/Compute/Devices/0123456789/Telemetry/",
  "LastAccessed": "26-Jan-2024 12:48:34 UTC",
  "Members": [
    {
      "Self": "http://10.202.237.61:80/Compute/Devices/0123456789/",
      "SystemType": { ... },
      "Name": "cos-r16-s2",
      "ID": "0123456789",
      "OperatingSystem": { ... },
      "SerialNumber": "0123456789",
      "Model": "H4102-J",
      "Manufacturer": "WDC",
      "Capabilities": { ... },
      "Status": { ... },
      "DurableName": "0123456789",
      "DeviceHandle": "/dev/sg2",
      "IPAddresses": { ... },
      "PowerState": { ... },
      "TotalCapacity": 424024316084224,
      "EnclosureCover": "OK",
      "Location": { ... },
      "IndicatorLED": { ... },
      "Adapters": { ... },
      "Connectors": { ... },
      "Controllers": { ... },
      "Expanders": { ... },
      "Fans": { ... },
      "Files": { ... },
      "Jobs": { ... },
      "Media": { ... },
      "Ports": { ... },
      "PowerSupplies": { ... },
      "Sensors": { ... },
      "Slots": { ... },
      "ZoneSets": { ... },
      "Telemetry": { ... }
    }
  ]
}
```

Table 663: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Telemetry resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Telemetry/

HEAD /Storage/Devices/{id}/Telemetry/ pings the Telemetry resource.

Table 664: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 665: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Telemetry/

OPTIONS /Storage/Devices/{id}/Telemetry/ returns the allowable HTTP Methods list for this resource.

Table 666: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 667: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource

Response Code	Name	Definition
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later



Proxied Node Storage Out-of-Band

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6.1 Physical Devices

The OCAPI's physical resource model includes the overall Compute Proxy Device. The topics in this section provide information for accessing and managing the features of these physical resources.

6.1.1 /Storage/Devices/

The Collection-level methods and attributes of /Storage/Devices/ return information about the Devices collection and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 668: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/ (page 404) for Instance Attribute details

GET /Storage/Devices/

GET /Storage/Devices/ returns the Collection of Devices.

Table 669: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/
```

Table 670: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Devices + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no response body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/

HEAD /Storage/Devices/ pings the Devices collection.

Table 671: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 672: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/

OPTIONS /Storage/Devices/ returns the allowable HTTP Methods list for this resource.

Table 673: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	Etag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 674: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no response body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.2 /Storage/Devices/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/ return information about a specific Device and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 675: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	Yes	Free-Form 256 Chars	The user-defined Friendly Name for this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Serial Number	String	Mandatory	No	Free-Form 64 Chars	The serial number for this resource
Model	String	Mandatory	No	Free-Form 64 Chars	The model name or number for this Resource
SystemType.Name	String	Mandatory	No	"Storage"	The domain type string indicating the type of Device Resource
SystemType.ID	Number	Mandatory	No	2	The domain type number indicating the type of Device Resource
ChassisPackageType.Name	String	Optional	No	"RackMount"	The type of chassis for this Resource
ChassisPackageType.ID	Number	Optional	No	2	The type of chassis for this Resource value map
Manufacturer	String	Mandatory	No	Free-Form 64 Chars	The vendor name for this Resource
OperatingSystem.Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
OperatingSystem.Name	String	Optional	No	Free-Form 128 Chars	The Operating System or Firmware Name
OperatingSystem.OSType.ID	Number	Mandatory	No	59	Indicates dedicated software
OperatingSystem.OSType.Name	String	Mandatory	No	Dedicated	Indicates dedicated software value
OperatingSystem.Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware Version
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536 - 65538	The current health value map of this Resource. There can be 1 or more ID entries.
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
Capabilities.Members[].Name	String	Mandatory	No	"Chassis Manager" "Chassis Device Enclosure"	The capabilities information value(s) regarding the Resource
Capabilities.Members[].ID	Number	Mandatory	No	29 31	The capabilities information value map(s) regarding the Resource
Capabilities.Members[].CapabilityDescription	String	Mandatory	No	Free-Form	Entry describing the capability
IpAddresses.Members[].IpAddress	String	Mandatory	Yes	IPv4 or IPv6 pattern	The IP Address list for this Resource
TotalCapacity	Number	Mandatory	No	Bytes	This is the Total Capacity of the Device in "Bytes"
DurableName	String	Optional	No	WWN or UUID Format	This is the unique ID for discovery in the In-Band Data Path
SlotNumber	Number	Optional	No	1 or 2 for Devices with Controllers (IOMs)	This is the "side" that this connection is going to
PowerState.Name	String	Optional	No	"On" "Sleep" "Off"	This is the current Power State of the Device

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
PowerState.ID	Number	Optional	No	2 4 6	This is the current Power State of the Device value map
Hostname	String	Optional	No	Server Hostname Formatting	This is the Hostname as provided by the DNS based on the IP Address
InformationStructure	String	Optional	No	Free-Form URI	Fully qualified link to the InformationStructure Resource Collection
Accounts.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Account Resource Collection
Adapters.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Adapter Resource Collection
Connectors.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Connectors Resource Collection
Controllers.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Controllers Resource Collection
Expanders.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Expanders Resource Collection
Ports.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Ports Resource Collection
Fans.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Fan Resource Collection
PowerSupplies.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to Power Supply Resource Collection
Sensors.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Sensor Resource
Location.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Location Resource
Jobs.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Jobs Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Files.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the Files Resource
ZoneSets.Self	String	Mandatory	No	Free-Form URI	Fully qualified link to the ZoneSets Resource
Reboot	Boolean	WriteOnly	Yes	true	Directs this device to reboot
FirmwareActivate	Boolean	WriteOnly	Yes	true	Directs this device to Activate the previously uploaded Device OS image

GET /Storage/Devices/{id}/

GET /Storage/Devices/{id}/ returns information regarding a specific Device based on the {id} in the URI address string.

Table 676: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/?IPAddress=10.20.30.41",
  "SystemType": {
    "ID": 2,
    "Name": "Storage"
  },
  "Name": "0123456789",
  "ID": "0123456789",
  "OperatingSystem": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/OperatingSystem/?
IPAddress=10.20.30.41",
    "Name": "Vendor Firmware",
    "OSType": {
      "ID": 59,
      "Name": "Dedicated"
    }
  }
}
```

```

    },
    "Version": "3.1.11"
  },
  "SerialNumber": "THCLS03819EZ0090",
  "Model": "H4060-J",
  "Manufacturer": "HGST",
  "Capabilities": {
    "Members": [
      {
        "ID": 3,
        "Name": "Storage",
        "CapabilityDescription": "This device is a storage provider."
      },
      {
        "ID": 15,
        "Name": "Block Server",
        "CapabilityDescription": "This device provides block storage."
      },
      {
        "ID": 31,
        "Name": "Storage Device Enclosure",
        "CapabilityDescription": "This device is a storage-based enclosure
type."
      },
      {
        "ID": 47202,
        "Name": "Disk Media Device",
        "CapabilityDescription": "This device provides disk-based storage
volumes."
      }
    ]
  },
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Details": [
    "Ports: IOM-A: Cannot read property 'value' of null",
    "Operating System: IOM-A: Version: Cannot read property 'value' of
undefined"
  ]
},
"Hostname": "oobm-00-0c-ca-08-30-e0.hgst.com.",
"DurableName": "0123456789",
"IPAddresses": {
  "Members": [
    {
      "IPAddress": "10.20.30.41"
    }
  ]
},
"ChassisPackageType": {

```

```

    "ID": 2,
    "Name": "RackMount"
  },
  "InformationStructure": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/InformationStructure/?
IPAddress=10.20.30.41"
  },
  "PowerState": {
    "ID": 2,
    "Name": "On"
  },
  "SlotNumber": 2,
  "TotalCapacity": 600049880924160,
  "Location": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Location/?
IPAddress=10.20.30.41"
  },
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Accounts": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Accounts/?
IPAddress=10.20.30.41"
  },
  "Adapters": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Adapters/?
IPAddress=10.20.30.41"
  },
  "Connectors": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Connectors/?
IPAddress=10.20.30.41"
  },
  "Controllers": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Controllers/?
IPAddress=10.20.30.41"
  },
  "Expanders": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Expanders/?
IPAddress=10.20.30.41"
  },
  "Fans": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Fans/?
IPAddress=10.20.30.41"
  },
  "Files": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/?
IPAddress=10.20.30.41"
  },
  "Jobs": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Jobs/?
IPAddress=10.20.30.41"
  },
  "Media": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Media/?
IPAddress=10.20.30.41"
  },
  "Ports": {

```

```

    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Ports/?
IPAddress=10.20.30.41"
  },
  "PowerSupplies": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/?
IPAddress=10.20.30.41"
  },
  "Sensors": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/Sensors/?
IPAddress=10.20.30.41"
  },
  "ZoneSets": {
    "Self": "http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/?
IPAddress=10.20.30.41"
  }
}

```

Table 677: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/

PUT /Storage/Devices/{id}/ modifies an attribute or executes an operation for this Device.

Table 678: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -H "If-Match: 3677651d2011428f32120a029b015e80"
  -X PUT http://10.20.30.40/Storage/Devices/0123456789
  --data '{
    "IndicatorLED": {
      "ID": 2
    }
  }'
```

Table 679: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Device information in the response body + ETag Header
	Accepted	Accepted & Jobs URI returned in the header to get more information regarding the long-lived operation
	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/

HEAD /Storage/Devices/{id}/ pings this Storage Device.

Table 680: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 681: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/

OPTIONS /Storage/Devices/{id}/ returns the allowable HTTP Methods list for this resource.



Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

Table 682: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	Optional	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 683: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.3 /Storage/Devices/{id}/Controllers/

The Collection-level methods and attributes of /Storage/Devices/{id}/Controllers/ return information about the Controllers collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 684: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Controllers/{id}/ (page 417) for Instance Attribute details

GET /Storage/Devices/{id}/Controllers/

GET /Storage/Devices/{id}/Controllers/ returns the collection of Controllers.

Table 685: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Controllers/
```

Table 686: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Controllers + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no response body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Controllers/

HEAD /Storage/Devices/{id}/Controllers/ pings the Controllers collection.

Table 687: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 688: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Controllers/

OPTIONS /Storage/Devices/{id}/Controllers/ returns the allowable HTTP Methods list for this resource.

Table 689: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 690: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides information based on the Request Header setting
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is Busy, client should try again later

6.1.4 /Storage/Devices/{id}/Controllers/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Controllers/{id}/ return information about a specific Controller and enable management operations.

HTTP Methods:

- GET
- PUT
- HEAD
- OPTIONS

Table 691: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
Id	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
HostName	String	Mandatory	No	Free-Form 256 Chars	The resource HostName based on the Device Name with suffix of "-ioma" or "-iomb"
PartNumber	String	Mandatory	No	Free-Form 32 Chars	
SerialNumber	String	Mandatory	No	Free-Form 32 Chars	
Model	String	Mandatory	No	Free-Form 32 Chars	
Manufacturer	String	Mandatory	No	Free-Form 32 Chars	
Version	String	Mandatory	No	Major.Minor.Patch	The current Device OS Version on this Controller
Associations	String Array Entries	Mandatory	No	Ports[List of IDs] Controllers[List of IDs]	Lists the associated Resource IDs along with this Resource ID

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries.
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536 - 65538	The current health value map of this Resource. There can be 1 or more Id entries.
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
Ports	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Ports
Sensors	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Ports

GET /Storage/Devices/{id}/Controllers/{id}/

GET /Storage/Devices/{id}/Controllers/{id}/ returns information regarding a specific Controller based on the {id} in the URI address string.

Table 692: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Controllers/IOModuleBFRU/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Controllers/IOModuleBFRU/?
IPAddress=10.20.30.41",
  "ID": "IOModuleBFRU",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "IOModuleBFRU",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Associations": {
    "Controllers": [
      "IOModuleBFRU"
    ],
    "Ports": [
      "00_0c_ca_08_30_e0_inet"
    ]
  },
  "HostName": "oobm-00-0c-ca-08-30-e0",
  "PartNumber": "1EB1049-A2",
  "SerialNumber": "THCLS03719EG006B",
  "Model": "1EB1049-A2",
  "Manufacturer": "HGST",
  "Version": "3.1.11",
  "Ports": "http://10.20.30.40/Storage/Devices/0123456789/Ports/?
Controllers=IOModuleBFRU/\\u0026IPAddress=10.20.30.41/",
  "Sensors": "http://10.20.30.40/Storage/Devices/0123456789/Sensors/?
Controllers=IOModuleBFRU/\\u0026IPAddress=10.20.30.41/"
}
```

```
}

```

Table 693: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Controller information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Controllers/{id}/

PUT /Storage/Devices/{id}/Controllers/{id}/ modifies an attribute or executes an operation for this Controller.

Table 694: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Table 695: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Controller information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
409	Conflict	A new parameter value already exists (e.g., Name or NQN)
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Controllers/{id}/

HEAD /Storage/Devices/{id}/Controllers/{id}/ pings this Controller.

Table 696: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 697: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Controllers/{id}/

OPTIONS /Storage/Devices/{id}/Controllers/{id}/ returns the allowable HTTP Methods list for this resource.

Table 698: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 699: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.5 /Storage/Devices/{id}/Connectors/

The Collection-level methods and attributes of /Storage/Devices/{id}/Connectors/ return information about the Connectors collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 700: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Controllers/{id}/ (page 417) for Instance Attribute details

GET /Storage/Devices/{id}/Connectors/

GET /Storage/Devices/{id}/Connectors/ returns the collection of Controllers.

Table 701: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Connectors/
```

Table 702: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Controllers + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Connectors/

HEAD /Storage/Devices/{id}/Connectors/ pings the Controllers collection.

Table 703: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 704: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Connectors/

OPTIONS /Storage/Devices/{id}/Connectors/ returns the allowable HTTP Methods list for this resource.

Table 705: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 706: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides information based on the Request Header setting.
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.6 /Storage/Devices/{id}/Connectors/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Connectors/{id}/ return information about a specific Connector and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 707: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
CablePresent	Boolean	Mandatory	No	true false	Indicates whether or not a cable is plugged into the Connector
Controllers	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Controllers

GET /Storage/Devices/{id}/Connectors/{id}/

GET /Storage/Devices/{id}/Connectors/{id}/ returns the information regarding a specific Connector based on the {id} in the URI address string.

Table 708: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Connectors/3
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Connectors/3/?
IPAddress=10.20.30.41",
  "ID": "3",
  "Name": "CONN HOST 02",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    }
  },
}
```

```

    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ],
    "CablePresent": true,
    "Controllers": "http://10.20.30.40/Storage/Devices/0123456789/Controllers/?
Connectors=3/\\u0026IPAddress=10.20.30.41/"
  }

```

Table 709: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Connector information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Connectors/{id}/

HEAD /Storage/Devices/{id}/Connectors/{id}/ pings a specific controller.

Table 710: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 711: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Connectors/{id}/

OPTIONS /Storage/Devices/{id}/Connectors/{id}/ returns the allowable HTTP Methods list for this resource.

Table 712: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 713: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.7 /Storage/Devices/{id}/Expanders/

The Collection-level methods and attributes of /Storage/Devices/{id}/Expanders/ return information about the Expanders collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 714: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Expanders/{id}/ (page 433) for Instance Attribute details

GET /Storage/Devices/{id}/Expanders/

GET /Storage/Devices/{id}/Expanders/ returns the collection of Expanders.

Table 715: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Expanders
```

Table 716: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Expanders + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Expanders/

HEAD /Storage/Devices/{id}/Expanders/ pings the Expanders collection.

Table 717: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 718: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Expanders/

OPTIONS /Storage/Devices/{id}/Expanders/ returns the allowable HTTP Methods list for this resource.

Table 719: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 720: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides information based on the Request Header setting
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.8 /Storage/Devices/{id}/Expanders/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Expanders/{id}/ return information about a specific Expander and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 721: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars	The device-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status. Health[]. ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status. Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
Version	String	Mandatory	No	Major-Minor Format	The current Expander FW image version
DurableName	String	Mandatory	No	WWN or UUID Format	The in-band discovery identifier
Controllers	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Sensors

GET /Storage/Devices/{id}/Expanders/{id}/

GET /Storage/Devices/{id}/Expanders/{id}/ returns information about a specific expander based on the {id} in the URI address string.

Table 722: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Expanders/PrimaryA
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Expanders/PrimaryA/?
IPAddress=10.20.30.41",
  "ID": "PrimaryA",
  "Name": "EXP IOMA 0",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    }
  },
}
```

```

    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ],
    "Version": "4008-020",
    "Controllers": "http://10.20.30.40/Storage/Devices/0123456789/Controllers/?
Expanders=PrimaryA/\\u0026IPAddress=10.20.30.41/",
    "DurableName": "5000CCAB040E7FBD"
  }

```

Table 723: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Expander information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Expanders/{id}/

HEAD /Storage/Devices/{id}/Expanders/{id}/ pings a specific expander.

Table 724: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 725: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Expanders/{id}/

OPTIONS /Storage/Devices/{id}/Expanders/{id}/ returns the allowable HTTP Methods list for this resource.

Table 726: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 727: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.9 /Storage/Devices/{id}/Ports/

The Device-level methods and attributes of /Storage/Devices/{id}/Ports/ return information about the Ports collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 728: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Ports/{id}/ (page 440) for Instance Attribute details

GET /Storage/Devices/{id}/Ports/

GET /Storage/Devices/{id}/Ports/ returns the Collection of Ports.

Table 729: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Ports
```

Table 730: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Ports + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Ports/

HEAD /Storage/Devices/{id}/Ports/ pings the Ports collection.

Table 731: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 732: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Ports/

OPTIONS /Storage/Devices/{id}/Ports/ returns the allowable HTTP Methods list for this resource.

Table 733: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 734: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later


6.1.10 /Storage/Devices/{id}/Ports/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Ports/{id}/ return information about a specific Port and enable management operations.

HTTP Methods: GET PUT HEAD OPTIONS

Table 735: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[.ID]	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None".	The current Health Details of the Device
AddressOrigin.Name	String	Mandatory	Yes	"UNKNOWN" "OTHER" "NOT APPLICABLE" "STATIC" "DHCP" "BOOTP" "IPv4 Link Local" "DHCPv6" "IPv6 Link Local" "DHCPv4"	Information value as to where the address is supplied
AddressOrigin.ID	Number	Mandatory	Yes	0 1 2 3 4 5 6 7 10 65536	Information value map as to where the address is supplied
IPv4Address	String	Mandatory	Yes	IPv4 4-Octet pattern + CIDR mask	The Network IP Address for this Device; IPv4 type  Note: 0.0.0.0/8 & 127.0.0.0/8 are reserved and rejected.
IPv4Gateway	String	Optional	Yes	IPv4 4-Octet pattern	The Network IP Gateway address setting for IPv4
IPv6Address	String	Mandatory	Yes	IPv6 Hex pattern + CIDR mask	The Network IP Address for this Device; IPv6 type
IPv6Gateway	String	Optional	Yes	IPv6 Hex pattern	The Network IP Gateway address setting for IPv6
MACAddress	String	Mandatory	No	6-hex digit HW address	Unique MAC Address reported by the local hardware adapter

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
NetworkType.Name	String	Mandatory	No	"LAN" "WLAN" "WAN" "MAN" "SAN" "VLAN" "Ethernet Network" "IP Network" "IPv4 Network" "IPv6 Network"	The network type value
NetworkType.ID	Number	Mandatory	No	0 1 2 3 4 5 6 7 8	The network type value map
MTUBytes	Number	Mandatory	Yes	Range: 46 - 9216 (default: 1500)	The current Maximum Transfer Bytes value
Adapters.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Link to get the Adapter information hosting this Port

GET /Storage/Devices/{id}/Ports/{id}/

GET /Storage/Devices/{id}/Ports/{id}/ returns information regarding a specific Port based on the {id} in the URI address string.

Table 736: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command (IPv4)

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Ports/01_0a_f7_95_79_3c
```

Example GET Response Body (IPv4)

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Ports/01_0a_f7_95_79_3c/",
  "ID": "01_0a_f7_95_79_3c",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {

```

```

        "ID": 5,
        "Name": "OK"
    }
]
},
"AddressOrigin": {
    "ID": 4,
    "Name": "DHCP"
},
"IPv4Address": "10.20.30.40/22",
"IPGateway": "",
"MACAddress": "01:0a:f7:95:79:3c",
"NetworkType": {
    "ID": 8,
    "Name": "IPv4 Network"
},
"MTUBytes": 1500,
"Adapters": "http://10.20.30.40/Storage/Devices/0123456789/Adapters/?portid=01_0a_f7_95_79_3c"
}

```

Example GET curl Command (IPv6)

```

curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Ports/00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64

```

Example GET Response Body (IPv6)

```

{
  "Self": "http://10.20.40:80/Storage/Devices/0123456789/Ports/00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64/",
  "ID": "00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64",
  "Status": {
    "State": {
      "ID": 0,
      "Name": "Unknown"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "AddressOrigin": {
    "ID": 7,
    "Name": "DHCPv6"
  },
  "IPv6Address": "fdf4:cfad:91f3:6061::18/64",
  "MACAddress": "00:0c:ca:09:00:3c",
  "NetworkType": {
    "ID": 9,
    "Name": "IPv6 Network"
  },
  "MTUBytes": 1500,
}

```

```
"Adapters": "http://10.20.30.40:80/Storage/Devices/0123456789/Adapters/?
portid=00_0c_ca_09_00_3c_fdf4_cfad_91f3_6061_18_64"
}
```

Table 737: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Port information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Ports/{id}/

PUT /Storage/Devices/{id}/Ports/{id}/ modifies an attribute or executes an operation for this Port.

Table 738: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.41/Storage/Devices/9876543210/Ports/00_0c_ca_09_00_2d_inet
--data '{
  "AddressOrigin": {
    "ID": 65536
  }
}'
```

Table 739: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Port information in the response body + ETag Header

Response Code	Name	Definition
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Storage/Devices/{id}/Ports/{id}/

HEAD /Storage/Devices/{id}/Ports/{id}/ pings a specific Port.

Table 740: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 741: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Ports/{id}/


OPTIONS /Storage/Devices/{id}/Ports/{id}/ returns the allowable HTTP Methods list for this resource.

Table 742: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 743: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later  Note: There may be some attributes returned in the OPTIONS response schema that may not be directly supported by this resource.

6.1.11 /Storage/Devices/{id}/PowerSupplies/

The Collection-level methods and attributes of /Storage/Devices/{id}/PowerSupplies/ return information about the Power Supplies collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 744: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/PowerSupplies/{id}/ (page 450) for Instance Attribute details

GET /Storage/Devices/{id}/PowerSupplies/

GET /Storage/Devices/{id}/PowerSupplies/ returns the Collection of Power Supplies.

Table 745: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies
```

Table 746: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Power Supplies + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/PowerSupplies/

HEAD /Storage/Devices/{id}/PowerSupplies/ pings the Power Supplies collection.

Table 747: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 748: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/PowerSupplies/

OPTIONS /Storage/Devices/{id}/PowerSupplies/ returns the allowable HTTP Methods list for this resource.

Table 749: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 750: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.12 /Storage/Devices/{id}/PowerSupplies/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/PowerSupplies/{id}/ return information about a specific Power Supply and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 751: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Name	String	Mandatory	No	Free-Form 64 Chars	
IndicatorLED.Name	String	Mandatory	No	"Off" "Lit"	The current state value of the Indicator LED for this Resource
IndicatorLED.ID	Number	Mandatory	Yes	4 2	The current state value map of the Indicator LED for this Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Power Supply
PartNumber	String	Mandatory	No	Free-Form 32 Characters	The Part Number for this Power Supply
SerialNumber	String	Mandatory	No	Free-Form 32 Characters	The Serial Number of this Power Supply
Model	String	Optional	No	Free-Form 32 Characters	The model of this Power Supply
TotalOutputPower	Number	Optional	No	Number in Watts	The total output power in watts
BaseUnits.ID	Number	Optional	No	7	The Base Units value map
BaseUnits.Name	String	Optional	No	Watts	The Base Units value as Watts
RateUnits.ID	Number	Optional	No	0	The Rate Units value map
RateUnits.Name	String	Optional	No	None	The Rate Units value
UnitModifier	Number	Optional	No	0	The Unit Modifier to determine order of magnitude to multiply the Total Power Output as Base 10 * Unit Modifier

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Sensors	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Sensors Link

GET /Storage/Devices/{id}/PowerSupplies/{id}/

GET /Storage/Devices/{id}/PowerSupplies/{id}/ returns information regarding a specific Power Supply based on the {id} in the URI address string.

Table 752: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/
  PowerSupplyAFRU/?IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/
  PowerSupplyAFRU/?IPAddress=10.20.30.41",
  "ID": "PowerSupplyAFRU",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "PSU A",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "PartNumber": "DPS-1600AB-12",
  "SerialNumber": "IQHD1937008122",
  "Manufacturer": "DELTA",
  "Model": "DPS-1600AB-12",
```

```

    "TotalOutputPower": 1600,
    "BaseUnits": {
      "ID": 7,
      "Name": "Watts"
    },
    "RateUnits": {
      "ID": 0,
      "Name": "None"
    },
    "UnitModifier": 0,
    "Sensors": "http://10.20.30.40/Storage/Devices/0123456789/Sensors/?
PowerSupplies=PowerSupplyAFRU/?IPAddress=10.20.30.41/",
  }

```

Table 753: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/PowerSupplies/{id}/

PUT /Storage/Devices/{id}/PowerSupplies/{id}/ modifies an attribute or executes an operation for this Power Supply.

Table 754: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e80"
  -X PUT http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/
PowerSupplyAFRU/?IPAddress=10.20.30.41
  --data '{
    "IndicatorLED": {
      "ID": 2
    }
  }'
```

Table 755: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Power Supply information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/PowerSupplies/{id}/

HEAD /Storage/Devices/{id}/PowerSupplies/{id}/ pings this Power Supply.

Table 756: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 757: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/PowerSupplies/{id}/

OPTIONS /Storage/Devices/{id}/PowerSupplies/{id}/ returns the allowable HTTP Methods list for this resource.

Table 758: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 759: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.13 /Storage/Devices/{id}/Fans/

The Collection-level methods and attributes of /Storage/Devices/{id}/Fans/ return information about the Fans collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 760: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Fans/{id}/ (page 459) for Instance Attribute details

GET /Storage/Devices/{id}/Fans/

GET /Storage/Devices/{id}/Fans/ returns the Collection of Fans.

Table 761: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Fans
```

Table 762: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Fans + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Fans/

HEAD /Storage/Devices/{id}/Fans/ pings the Fans collection.

Table 763: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 764: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Fans/

OPTIONS /Storage/Devices/{id}/Fans/ returns the allowable HTTP Methods list for this resource.

Table 765: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 766: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.14 /Storage/Devices/{id}/Fans/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Fans/{id}/ return information about a specific Fan and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 767: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Device
CurrentSpeed	Number	Mandatory	No	0 - n	The current speed of the fan in Percent
BaseUnits.Name	String	Mandatory	No	"Percent"	The base units value for the speed value
BaseUnits.ID	Number	Mandatory	No	65	The base units value map for the speed value
RateUnits.Name	String	Mandatory	No	"None"	The rate units value for the fan
RateUnits.ID	Number	Mandatory	No	0	The rate units value map for the fan
UnitModifier	Number	Mandatory	No	0	The unit modifier for the fan speed
RemovalConditions.ID	Number	Mandatory	No	0 2 3 4	The value map of the removal conditions for this FRU
RemovalConditions.Name	String	Mandatory	No	"Unknown" "Not Applicable" "Removable when off" "Removable when on or off"	The value of the removal conditions for this FRU

GET /Storage/Devices/{id}/Fans/{id}/

GET /Storage/Devices/{id}/Fans/{id}/ returns the information regarding a specific Fan based on the {id} in the URI address string.

Table 768: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Fans/FAN_ENCL_0
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Fans/FAN_ENCL_0/",
  "ID": "FAN_ENCL_0",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Status": {
    "State": {
      "ID": 0,
      "Name": "Unknown"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "CurrentSpeed": 45,
  "BaseUnits": {
    "ID": 65,
    "Name": "Percent"
  },
  "RateUnits": {
    "ID": 0,
    "Name": "None"
  },
  "UnitModifier": 0,
  "RemovalConditions": {
    "ID": 4,
    "Name": "Removable when on or off"
  }
}
```

Table 769: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Fan information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Fans/{id}/

HEAD /Storage/Devices/{id}/Fans/{id}/ pings a specific Fan.

Table 770: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 771: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Fans/{id}/

OPTIONS /Storage/Devices/{id}/Fans/{id}/ returns the allowable HTTP Methods list for this resource.

Table 772: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 773: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.15 /Storage/Devices/{id}/Sensors/

The Collection-level methods and attributes of /Storage/Devices/{id}/Sensors/ return information about the Sensors collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 774: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Sensors/{id}/ (page 467) for Instance Attribute details

GET /Storage/Devices/{id}/Sensors/

GET /Storage/Devices/{id}/Sensors/ returns the Collection of Sensors.

Table 775: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Sensors
```

Table 776: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Sensors + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Sensors/

HEAD /Storage/Devices/{id}/Sensors/ pings the Sensor collection.

Table 777: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 778: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Sensors/

OPTIONS /Storage/Devices/{id}/Sensors/ returns the allowable HTTP Methods list for this resource.

Table 779: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)		Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 780: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.16 /Storage/Devices/{id}/Sensors/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Sensors/{id}/ return information about a specific Sensor and enable management operations.

HTTP Methods:

[GET](#)

[HEAD](#)

[OPTIONS](#)

Table 781: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Name	String	Mandatory	No	Free-Form 256 Chars	The name of this resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more ID entries
Status.Details[]	String Array	Optional	No	Free-Form 32 Characters per Array entry. If no entry, then "None"	The current Health Details of the Device
CurrentReading	Number	Mandatory	No	Signed Integer	The current reading value for the sensor
SensorType.Name	String	Mandatory	No	"Temperature"	The sensor type value
SensorType.ID	Number	Mandatory	No	2	The sensor type value map
BaseUnits.Name	String	Mandatory	No	"Degrees C" "Degrees F"	The base units value map for the sensor current reading
BaseUnits.ID	Number	Mandatory	No	2 3	The base units value for the sensor current reading
RateUnits.Name	String	Mandatory	No	"None"	The rate units value for the sensor current reading
RateUnits.ID	Number	Mandatory	No	0	The rate units value map for the sensor current reading
UnitModifier	Number	Mandatory	No	Signed Integer	The unit modifier for the sensor current reading
HighThreshold Fatal	Number	Optional	No	Signed Integer	The high threshold fatal value usually for temperature
HighThreshold Critical	Number	Optional	No	Signed Integer	The high threshold critical value usually for temperature
LowThreshold Critical	Number	Optional	No	Signed Integer	The low threshold critical value usually for temperature
LowThreshold Fatal	Number	Optional	No	Signed Integer	The low threshold fatal value usually for temperature

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Associations	String Array Entries	Optional	No	Sensors["Self.ID"] PowerSupplies[List of IDs]	Lists the associated Resource IDs along with this Resource ID
PowerSupplies	String	Optional	No	Free-Form URI	Fully qualified link to the Power Supplies Resource

GET /Storage/Devices/{id}/Sensors/{id}/

GET /Storage/Devices/{id}/Sensors/{id}/ returns the information regarding a specific Sensor based on the {ID} in the URI address string.

Table 782: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Sensors/TEMP_PSU_A_PRI_3_1
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40:80/Storage/Devices/0123456789/Sensors/TEMP_PSU_A_PRI_3_1/",
  "ID": "TEMP_PSU_A_PRI_3_1",
  "Name": "TEMP PSU A PRI",
  "Status": {
    "State": {
      "ID": 16,
      "Name": "In service"
    },
    "Health": [
      {
        "ID": 5,
        "Name": "OK"
      }
    ]
  },
  "Associations": {
    "PowerSupplies": [
      "1"
    ]
  }
}
```

```

    },
    "SensorType": {
      "ID": 2,
      "Name": "Temperature"
    },
    },
    "CurrentReading": 44,
    "BaseUnits": {
      "ID": 2,
      "Name": "Degrees C"
    },
    },
    "RateUnits": {
      "ID": 0,
      "Name": "None"
    },
    },
    "UnitModifier": 0,
    "HighThresholdFatal": 125,
    "HighThresholdCritical": 120,
    "LowThresholdCritical": 0,
    "LowThresholdFatal": 0,
    "PowerSupplies": "http://10.20.30.40/Storage/Devices/0123456789/PowerSupplies/?
Sensors=TEMP_PSU_A_PRI_3_1"
  }
}

```

Table 783: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Sensor information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Sensors/{id}/

HEAD /Storage/Devices/{id}/Sensors/{id}/ pings a specific Sensor.

Table 784: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 785: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Sensors/{id}/

OPTIONS /Storage/Devices/{id}/Sensors/{id}/ returns the allowable HTTP Methods list for this resource.

Table 786: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 787: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.17 /Storage/Devices/{id}/Media/

The Collection-level methods and attributes of /Storage/Devices/{id}/Media/ return information about the Media collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 788: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Media/{id}/ (page 475) for Instance Attribute details

GET /Storage/Devices/{id}/Media/

GET /Storage/Devices/{id}/Media/ returns the Collection of Media.

Table 789: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Media
```

Table 790: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Media + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Media/

HEAD /Storage/Devices/{id}/Media/ pings the Media collection.

Table 791: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 792: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Media/

OPTIONS /Storage/Devices/{id}/Media/ returns the allowable HTTP Methods list for this resource.

Table 793: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)		Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 794: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.1.18 /Storage/Devices/{id}/Media/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Media/{id}/ return information about a specific Medium and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 795: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 32 Chars; no spaces allowed	The user-defined name of this Resource
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier that is unique in space and time
Capacity	Number	Mandatory	No	Integer Bytes; on 1024^3 boundary	The total number of raw bytes for this Resource
Model	String	Mandatory	No	Free-Form 32 Chars	The model name for this Resource
Manufacturer	String	Mandatory	No	Free-Form 32 Chars	The manufacturer name for this Resource
SerialNumber	String	Mandatory	No	Alphanumeric values	The serial number for the Resource
Status.State.Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service"	The current state value of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.State.ID	Number	Mandatory	No	0 - 16	The current state value map of this Resource
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
Associations	String Array Entries	Mandatory	No	Associations[List of IDs]	Lists the associated Resource IDs
Version	String	Mandatory	No	Free-Form URI Format 16 Chars	FW Version of the Medium Device
Protocol.ID	Number	Mandatory	No	4 5 65536 65537	Protocol Interface Type ID
Protocol.Name	String	Mandatory	No	"Serial ATA" "SAS" "NVMe"	Protocol Interface Type Name
DiskType.ID	Number	Mandatory	No	2 3	Disk Type ID
DiskType.Name	String	Mandatory	No	"HDD" "SSD"	Disk Type Name
PowerState.ID	Number	Mandatory	Yes	2 4 6	The Power State identifier indicating the current power state
PowerState.Name	String	Mandatory	No	"On" "Sleep" "Off"	The Power State string indicating the current power state

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
IndicatorLED.ID	Number	Mandatory	Yes	2 4	The Indicator LED identifier indicating the current LED state
IndicatorLED.Name	String	Mandatory	No	"Lit" "Off"	The Indicator LED string indicating the current LED state
DurableName	String	Mandatory	No	Typically a WWN	Durable Name/ID for the Medium
Sensors	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Link to the participating Sensors

GET /Storage/Devices/{id}/Media/{id}/

GET /Storage/Devices/{id}/Media/{id}/ returns information regarding a specific Medium based on the {ID} in the URI address string.

Table 796: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Media/1/?IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Media/1/?
IPAddress=10.20.30.41",
  "ID": "1",
  "IndicatorLED": {
    "ID": 4,
    "Name": "Off"
  },
  "Name": "SLOT 000",
  "PowerState": {
    "ID": 2,
    "Name": "On"
  },
  "Status": {
    "State": {
```

```

        "ID": 16,
        "Name": "In service"
    },
    "Health": [
        {
            "ID": 5,
            "Name": "OK"
        }
    ],
    "Details": [
        "None"
    ]
},
"Associations": {
    "Device": [
        "0123456789"
    ],
    "Media": [
        "1"
    ]
},
"Capacity": 10000831348736,
"Manufacturer": "HGST",
"Model": "HUH721010AL4200",
"Protocol": {
    "ID": 65536,
    "Name": "SAS"
},
"DiskType": {
    "ID": 2,
    "Name": "HDD"
},
"Version": "A9G0",
"SerialNumber": "7PGL4LXG",
"DurableName": "5000CCA25120FFF2",
"Sensors": "http://10.20.30.40/Storage/Devices/0123456789/Sensors/?Media=1/?
IPAddress=10.20.30.41/"
}

```

Table 797: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Medium information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Media/{id}/

PUT /Storage/Devices/{id}/Media/{id}/ modifies an attribute or executes an operation for this Medium.

Table 798: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/Media/1/?IPAddress=10.20.30.41
--data '{
  "PowerState": {
    "ID": 2
  }
}'
```

Table 799: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Medium information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource does not exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Media/{id}/

HEAD /Storage/Devices/{id}/Media/{id}/ pings this Medium.

Table 800: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 801: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Media/{id}/

OPTIONS /Storage/Devices/{id}/Media/{id}/ returns the allowable HTTP Methods list for this resource.

Table 802: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)		Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 803: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2 Logical Devices

The OCAPI's logical and virtual resources model include those resources that are logical or virtual in nature. The topics in this section provide information for accessing and managing the features of these logical and virtual resources.

6.2.1 /Storage/Devices/{id}/Location/

The methods and attributes of /Storage/Devices/{id}/Location/ return information about the Location resource and enable management operations.

HTTP Methods:

[GET](#)

[PUT](#)

[DELETE](#)

[HEAD](#)

[OPTIONS](#)

Table 804: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Country	String	Optional	Yes	Free-Form 64 Chars	The Country name where this Device is located
Territory	String	Optional	Yes	Free-Form 64 Chars	The Territory name where this Device is located
State	String	Optional	Yes	Free-Form 64 Chars	The State name where this Device is located
City	String	Optional	Yes	Free-Form 64 Chars	The City name where this Device is located
Address1	String	Optional	Yes	Free-Form 64 Chars	The first Address information where this Device is located
Address2	String	Optional	Yes	Free-Form 64 Chars	The second Address information where this Device is located as needed
Address3	String	Optional	Yes	Free-Form 64 Chars	The third Address information where this Device is located as needed

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
PostalCode	String	Optional	Yes	Free-Form 32 Chars	The Postal or Zip Code name where this Device is located
SiteName	String	Optional	Yes	Free-Form 32 Chars	The friendly Site Name
Building	String	Optional	Yes	Free-Form 32 Chars	The Building name or number where this Device is located
Room	String	Optional	Yes	Free-Form 32 Chars	The Room name or number in the Building where this Device is located
Pod	String	Optional	Yes	Free-Form 32 Chars	The Pod name or number in the Room this Device is located as needed
Row	String	Optional	Yes	Free-Form 32 Chars	The Row name or number in the Room or Pod this Device is located
Rack	String	Optional	Yes	Free-Form 32 Chars	The Rack name or number in the Row this Device is located
Shelf	String	Optional	Yes	Free-Form 32 Chars	The Shelf name or number of the Rack this Device is located
Device	String	Optional	Yes	Free-Form 32 Chars	The Device name or number of the Rack this Device is located
Item	String	Optional	Yes	Free-Form 32 Chars	The Item name indicating the Shelf units or dimension for this Device
GPSCoords	String	Optional	Yes	Decimal Latitude, Decimal Longitude Format	The GPS coordinates of the location of this Device
OtherLocationInfo	String	Optional	Yes	Free-Form 64 Chars	A place-holder for other location information

GET /Storage/Devices/{id}/Location/

GET /Storage/Devices/{id}/Location/ returns the Location information.

Table 805: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Location/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/12345/Location/",
  "Country": "USA",
  "Territory": "",
  "State": "Colorado",
  "City": "Colorado Springs",
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "",
  "PostalCode": "80921",
  "SiteName": "WD COS DataCenter 1",
  "Building": "100",
  "Room": "1",
  "Pod": "p2",
  "Rack": "r02",
  "Shelf": "30",
  "Device": "5",
  "Item": "Rack Units",
  "GPSCoords": "38.9838684,-104.8040493",
  "OtherLocationInfo": "This is other info"
}
```

Table 806: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Location information + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Location/

PUT /Storage/Devices/{id}/Location/ modifies an attribute of the Location.

Table 807: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-H "If-Match: 3677651d2011428f32120a029b015e80"
-X PUT http://10.20.30.40/Storage/Devices/0123456789/Location/
--data '{
  "Address1": "9950 Federal Drive",
  "Address2": "Suite 100",
  "Address3": "North",
  "Building": "9950",
  "City": "Colorado Springs",
  "Country": "USA",
  "Device": "255",
  "GPSCoords": "38.9838643,-104.806244",
  "Item": "Rack Units",
  "OtherLocationInfo": "More Info",
  "Pod": "2",
  "PostalCode": "80921",
  "Rack": "2",
  "Room": "159",
  "Row": "2",
  "Shelf": "24",
  "SiteName": "WDC COS DataCenter",
  "State": "Colorado",
  "Territory": "El Paso"
}'
```

Example PUT Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Location/"
}
```

```

"Address1": "9950 Federal Drive",
"Address2": "Suite 100",
"Address3": "North",
"Building": "9950",
"City": "Colorado Springs",
"Country": "USA",
"Device": "255",
"GPSCoords": "38.9838643,-104.806244",
"Item": "Rack Units",
"OtherLocationInfo": "More Info",
"Pod": "2",
"PostalCode": "80921",
"Rack": "2",
"Room": "159",
"Row": "2",
"Shelf": "24",
"SiteName": "WDC COS DataCenter",
"State": "Colorado",
"Territory": "El Paso"
}
    
```

Table 808: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Location information with no response body
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	Resource could not execute the request

DELETE /Storage/Devices/{id}/Location/

DELETE /Storage/Devices/{id}/Location/ deletes Location information.

Table 809: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
  -i
  -u admin:admin
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X DELETE http://10.20.30.40/Storage/Devices/0123456789/Location/
```

Table 810: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful, no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later
500	Internal Server Error	System could not process the request

HEAD /Storage/Devices/{id}/Location/

HEAD /Storage/Devices/{id}/Location/ pings the Location resource.

Table 811: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 812: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Location/

OPTIONS /Storage/Devices/{id}/Location/ returns the allowable HTTP Methods list for this resource.

Table 813: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text
Documentation	Optional	Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 814: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.2 /Storage/Devices/{id}/InformationStructure/

The methods and attributes of /Storage/Devices/{id}/InformationStructure/ return information about the Information Structure resource and enable management operations.

HTTP Methods:

GET
HEAD
OPTIONS

Table 815: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
SystemQuery	String	Mandatory	No	Free-Form URI Format with IP plus "/System/Query"	Link to ask this Device to discover other devices
InformationStructure.Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Link to use to display or modify the InformationStructure
InformationStructure.Name	String	Mandatory	No	Free-Form 64 Chars	The API name
InformationStructure.HTTPPort	Number	Mandatory	Yes	80, or 1024 - 65535 range	Port number for HTTP listener; default = 80
InformationStructure.HTTPSPort	Number	Mandatory	Yes	443, or 1024 - 65535 range	Port number for HTTPS listener; default = 443
InformationStructure.ID	String	Mandatory	No	Free-Form 256 Chars	The query identifier represents the main device ID
InformationStructure.AuthenticationTypeID	Number	Mandatory	Yes	0 = Basic	The current authentication type ID
InformationStructure.AuthenticationTypeName	String	Mandatory	No	Basic	The current authentication type Name
InformationStructure.StructureDescription	String	Mandatory	No	Free-Form 256 Chars	The API Schema Description
InformationStructure.OwningOrganization	String	Mandatory	No	Free-Form 64 Chars	The API Schema Owner
InformationStructure.Status	String	Mandatory	No	Free-Form 64 Chars	The API Schema Version Release Status
InformationStructure.URI	String	Mandatory	No	Free-Form URI Format	The API Schema URI starting point
InformationStructure.Version	String	Mandatory	No	Major.Minor.Release Format	The API Schema Version Number

GET /Storage/Devices/{id}/InformationStructure/

GET /Storage/Devices/{id}/InformationStructure/ returns the Information Structure.

Table 816: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Header	Mandatory or Optional	Description
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/InformationStructure/?
IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/InformationStructure/?
IPAddress=10.20.30.41",
  "AuthenticationType": {
    "ID": 0,
    "Name": "Basic"
  },
  "HTTPPort": 0,
  "HTTPSPort": 443,
  "Name": "Redfish@ API converted to Open Composable API (OCAPI)",
  "OwningOrganization": "DMTF for Redfish@ API; OCP for OCAPI",
  "Status": "Released",
  "StructureDescription": "Converts from DMTF's Redfish@ to the OCP/WDC Open
Composable API.",
  "URI": "/Query/ for OCAPI (/redfish/v1 for Redfish@ API)",
  "Version": "v1.2.0, OCAPI: 1.5.30-277"
}
```

Table 817: GET Response Codes

Response Code	Name	Definition
200	OK	OK & InformationStructure resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/InformationStructure/

HEAD /Storage/Devices/{id}/InformationStructure/ pings the Information Structure resource.

Table 818: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body + Header
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/InformationStructure/

OPTIONS /Storage/Devices/{id}/InformationStructure/ returns the allowable HTTP Methods list for this resource.

Table 819: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 820: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.3 /Storage/Devices/{id}/Accounts/

The Collection-level methods and attributes of /Storage/Devices/{id}/Accounts/ return information about the Accounts collection and enable management operations.

HTTP Methods: GET POST HEAD OPTIONS

Table 821: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See / Storage/Devices/{id}/Accounts/{id} (page 494) for Instance Attribute details.

GET /Storage/Devices/{id}/Accounts/

GET /Storage/Devices/{id}/Accounts/ returns the Collection of Accounts.

Table 822: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Accounts/?
  IPAddress=10.20.30.41
```

Table 823: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Accounts + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned

Response Code	Name	Definition
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

POST /Storage/Devices/{id}/Accounts/

POST /Storage/Devices/{id}/Accounts/ creates a new Account.

Table 824: POST Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Example POST curl Command

```
curl
-i
-u admin:admin
-H "Content-Type: application/json"
-X POST http://10.20.30.40/Storage/Devices/01234567890/Accounts/
--data '{
  "UserID": "test",
  "BasicAuthentication": {
    "UserPassword": "password"
  },
  "Role": {
    "ID": 0
  }
}'
```

Table 825: POST Response Codes

Response Code	Name	Definition
201	Created	Created & Account information in the response body + ETag Header + new URI in Location Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
409	Conflict	A new parameter value already exists (e.g., Name)
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Accounts/

HEAD /Storage/Devices/{id}/Accounts/ pings this Account Collection.

Table 826: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 827: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Accounts/

OPTIONS /Storage/Devices/{id}/Accounts/ returns the allowable HTTP Methods list for this resource.

Table 828: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 829: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.4 /Storage/Devices/{id}/Accounts/{id}

The Device-level methods and attributes of /Storage/Devices/{id}/Accounts/{id} return information about a specific Account and enable management operations.

HTTP Methods:

GET

PUT

HEAD

OPTIONS

Table 830: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 64 Chars. Valid characters include: a-z A-Z 0-9 _ -	The Identifier this particular Account
BasicAuthentication. UserPasswordSHA1Che	String	Mandatory	No	Free-Form 128 Characters	The basic authentication checksum
BasicAuthentication. UserPassword	String	Optional	Yes	Free-Form 128 Characters	The user password used to create the checksum (not shown in the GET response)
Role. Name	String	Mandatory	No	"Admin"	The Role type string for this Account
Role. ID	Number	Mandatory	No	0	The Role type value for this Account
UserID	String	Mandatory	Yes	Free-Form 64 Chars	The user identifier for this Account

GET /Storage/Devices/{id}/Accounts/{id}

GET /Storage/Devices/{id}/Accounts/{id} returns the information regarding a specific Account based on the {id} in the URI address string.

Table 831: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Accounts/admin/?
  IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Accounts/admin/?
  IPAddress=10.20.30.41",
  "ID": "admin",
  "BasicAuthentication": {
    "UserPasswordSHA1Checksum": "{SHA}UnknownForThisDevice"
  },
  "Role": {
    "ID": 0,
    "Name": "Admin"
  },
  "UserID": "admin",
  "RemoteID": "1"
}
```

Table 832: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/Accounts/{id}

PUT /Storage/Devices/{id}/Accounts/{id} modifies an attribute or executes an operation for this Account.

Table 833: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -H "If-Match: 3677651d2011428f32120a029b015e81"
  -X PUT http://10.20.30.40/Storage/Devices/0123456789/Accounts/test/?
  IPAddress=10.20.30.41
  --data '{
    "UserID": "test",
    "BasicAuthentication": {
      "UserPassword": "new_password"
    },
    "Role": {
      "ID": 1
    }
  }'
```

Table 834: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & Account information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing
404	No Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Accounts/{id}

HEAD /Storage/Devices/{id}/Accounts/{id} pings this Account.

Table 835: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 836: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Accounts/{id}

OPTIONS /Storage/Devices/{id}/Accounts/{id} returns the allowable HTTP Methods list for this resource.

Table 837: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 838: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.5 /Storage/Devices/{id}/OperatingSystem/

The methods and attributes of /Storage/Devices/{id}/OperatingSystem/ return information about the Operating System (Application) and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 839: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
Name	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Firmware name
OSType.Name	String	Mandatory	No	"Winnt" "Linux"	The Operating System Type value
OSType.ID	Number	Mandatory	No	18 36	The Operating System Type value map
Version	String	Mandatory	No	Free-Form 128 Chars	The Operating System or Application Version

GET /Storage/Devices/{id}/OperatingSystem/

GET /Storage/Devices/{id}/OperatingSystem/ returns the information of the Operating System resource.

Table 840: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/OperatingSystem/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/OperatingSystem/",
  "Name": "Vendor Firmware",
  "OSType": {
    "ID": 59,
    "Name": "Dedicated"
  },
  "Version": "4.0.13"
}
```

Table 841: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Operating System resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/OperatingSystem/

HEAD /Storage/Devices/{id}/OperatingSystem/ pings the Operating System resource.

Table 842: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 843: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/OperatingSystem/

OPTIONS /Storage/Devices/{id}/OperatingSystem/ returns the allowable HTTP Methods list for this resource.

Table 844: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 845: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.6 /Storage/Devices/{id}/Jobs/

The Collection-level methods and attributes of /Storage/Devices/{id}/Jobs/ return information about the Jobs collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 846: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Jobs/{id}/ (page 505) for Instance Attribute details

GET /Storage/Devices/{id}/Jobs/

GET /Storage/Devices/{id}/Jobs/ returns the Collection of Jobs.

Table 847: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Jobs/
```

Table 848: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Jobs + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Jobs/

HEAD /Storage/Devices/{id}/Jobs/ pings the Jobs collection.

Table 849: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 850: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Jobs/

OPTIONS /Storage/Devices/{id}/Jobs/ returns the allowable HTTP Methods list for this resource.

Table 851: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 852: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource collection does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.7 /Storage/Devices/{id}/Jobs/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Jobs/{id}/ return information about a specific Job and enable management operations.

HTTP Methods:

GET
HEAD
DELETE
OPTIONS

Table 853: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	"FactoryReset"	The Name of this particular Job
Status. State. Name	String	Mandatory	No	"Unknown" "Not available" "Servicing" "Starting" "Stopping" "Stopped" "Aborted" "Dormant" "Completed" "Migrating" "Emigrating" "Immigrating" "Snapshotting" "Shutting down" "In test" "Transitioning" "In service" "Inoperative" "Write Protected" "Reboot Needed" "Activate Needed" "Activate with reboot needed" "Activate invalidated by reboot"	The current state value of this Resource
Status. State. ID	Number	Mandatory	No	0-16 65537-65542	The current state value map of this Resource

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Status.Health[].Name	String (1..*)	Mandatory	No	"Unknown" "OK" "Degraded/Warning" "Minor failure" "Major failure" "Critical failure" "Non-recoverable error" "Not installed" "Not available" "No access allowed"	The current health value of this Resource. There can be 1 or more Name entries
Status.Health[].ID	Number (1..*)	Mandatory	No	0 5 10 15 20 25 30 65536-65538	The current health value map of this Resource. There can be 1 or more Id entries
Status.Details[]	String Array	Optional	No	Free-Form Array entry. If no entry, then "None"	The current Health Details of the Device
PercentComplete	Number	Mandatory	No	0-100	The percent complete status of the Job

GET /Storage/Devices/{id}/Jobs/{id}/

GET /Storage/Devices/{id}/Jobs/{id}/ returns information regarding a specific Job based on the {id} in the URI address string.

Table 854: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET /Storage/Devices/0123456789/Jobs/FirmwareUpdate_0123456789
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Jobs/?IPAddress=10.20.30.41",
  "Members": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/0123456789/Jobs/FirmwareUpdate_0123456789/?IPAddress=10.20.30.41",
```

```

    "ID": "FirmwareUpdate_0123456789",
    "StartTime": "09-Oct-2023 23:05:59 UTC",
    "ElapsedTime": "09-Oct-2023 23:08:37 UTC",
    "Owner": "http://10.20.30.40/Storage/Devices/0123456789/?
IPAddress=10.20.30.41",
    "PercentComplete": 100,
    "Status": {
      "State": {
        "ID": 65540,
        "Name": "Activate needed"
      },
      "Health": [
        {
          "ID": 5,
          "Name": "OK"
        }
      ],
      "Details": [
        "FW update completed. Waiting for activation."
      ]
    }
  }
]
}

```

Table 855: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Job information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Jobs/{id}/

HEAD /Storage/Devices/{id}/Jobs/{id}/ pings this specific Job.

Table 856: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 857: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

DELETE /Storage/Devices/{id}/Jobs/{id}/

DELETE /Storage/Devices/{id}/Jobs/{id}/ deletes a specific Job.



Note: When deleting firmware-related jobs, the recommended order is to delete FirmwareUpdate before FirmwareActivate.



Note: Jobs cannot be deleted when in-progress (i.e. when PercentComplete is less than 100%).

Table 858: DELETE Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example DELETE curl Command



Note: The `If-Match` conditional in this command requires the **ETag** from the GET Response Header.

```
curl
-i
-u admin:admin
-H "If-Match: 3677651d2011428f32120a029b015e81"
-X DELETE http://10.20.30.40/Storage/Devices/0123456789/Jobs/Reboot_0123456789/?
IPAddress=10.20.30.41
```

Table 859: DELETE Response Codes

Response Code	Name	Definition
204	No Content	Delete successful; no content in the response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	The Resource doesn't exist
409	Conflict	If job is still in progress
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Jobs/{id}/

OPTIONS /Storage/Devices/{id}/Jobs/{id}/ returns the allowable HTTP Methods list for this resource.

Table 860: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 861: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.8 /Storage/Devices/{id}/Files/

The Collection-level methods and attributes of /Storage/Devices/{id}/Files/ return information about the Files collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 862: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Optional	No	Resource Collection (0 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/Files/{id}/ (page 513) for Instance Attribute details

GET /Storage/Devices/{id}/Files/

GET /Storage/Devices/{id}/Files/ returns the Collection of Files.

Table 863: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET /Storage/Devices/0123456789/Files/?IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/?
  IPAddress=10.20.30.41",
  "Members": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/datamgr.log?
  IPAddress=10.20.30.41",
      "ID": "datamgr.log",
```



```

        "Description": "Data Manager Log"
    },
    {
        "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/
sep_interface.log?IPAddress=10.20.30.41",
        "ID": "sep_interface.log",
        "Description": "SEP Interface Log"
    },
    {
        "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/messages?
IPAddress=10.20.30.41",
        "ID": "messages",
        "Description": "Messages"
    },
    {
        "Self": "http://10.20.30.40/Storage/Devices/0123456789/Files/telemetry?
IPAddress=10.20.30.41",
        "ID": "telemetry",
        "Description": "Telemetry"
    }
]
}

```

Table 864: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of Files + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Files/

HEAD /Storage/Devices/{id}/Files/ pings this Files collection.

Table 865: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 866: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Files/

OPTIONS /Storage/Devices/{id}/Files/ returns the allowable HTTP Methods list for this resource.

Table 867: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 868: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.9 /Storage/Devices/{id}/Files/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/Files/{id}/ return information about a specific File and enable management operations.

HTTP Methods:

GET

HEAD

OPTIONS

Table 869: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
ID	String	Mandatory	No	Free-Form 256 Chars	The resource identifier
Name	String	Mandatory	No	Free-Form 256 Chars	The name of the file

GET /Storage/Devices/{id}/Files/{id}/

GET /Storage/Devices/{id}/Files/{id}/ returns information regarding a specific File based on the {id} in the URI address string.

Table 870: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

File Options:

- `datamgr.log` – Returns API audit log of HTTP activities
- `sep_interface.log` – Returns current FW build information
- `messages` – Returns customer-facing device log
- `telemetry` – Returns the 3 files above plus the GET /Telemetry JSON full information in a compressed bundle file



Note: Specifying `telemetry` in the GET operation will return a compressed file bundle of several system files and the GET /Telemetry JSON full data. The web client should wait for the HTTP response before trying to request telemetry again. All the other files will return their "text/plain" output to the web client.

Example GET curl Command – Audit Log

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/Files/datamgr.log?
  IPAddress=10.20.30.41
```

Example GET Response Body

```
1970-01-01 00:00:19,363386 INFO : int main(int, char**) Starting the Storage Server
Data Manager.
1970-01-01 00:00:19,363673 TRACE: bool DataManager::run()
1970-01-01 00:00:19,432442 TRACE: virtual bool TableCommon::create()
1970-01-01 00:00:19,444341 TRACE: virtual bool TableFlags::create()
1970-01-01 00:00:19,450680 TRACE: virtual bool TableDescriptors::create()
1970-01-01 00:00:19,458991 TRACE: virtual bool TableSensors::create()
1970-01-01 00:00:19,469541 TRACE: virtual bool TableFans::create()
1970-01-01 00:00:19,476196 TRACE: virtual bool TableSysInfo::create()
1970-01-01 00:00:19,483058 TRACE: bool SysInfo::init()
1970-01-01 00:00:19,607778 TRACE: bool SysInfo::init()
1970-01-01 00:00:19,774472 INFO : bool DataManager::run() Completed initial database
build.
1970-01-01 00:00:19,788992 INFO : bool DataSubscriber::subscribe(std::__cxx11::string,
std::__cxx11::string, DataSubscriber::CBFuncRx) Subscriber connecting to tcp://
localhost:8888
1970-01-01 00:00:19,790512 TRACE: void DataSubscriber::subscriberThread()
1970-01-01 00:00:19,790648 INFO : void DataSubscriber::subscriberThread() Subscriber
thread running
1970-01-01 00:00:19,790705 TRACE: void DataSubscriber::sendReady()
1970-01-01 00:00:40,985707 INFO : void DataSubscriber::sendReady() Received ready
confirmation.
1970-01-01 00:11:34,915634 INFO : void signalHandler(int) Received signal 15 signal
name is: Terminated
1970-01-01 00:00:21,143899 INFO : int main(int, char**) Starting the Storage Server
Data Manager.
1970-01-01 00:00:21,144819 TRACE: bool DataManager::run()
1970-01-01 00:00:21,212564 TRACE: virtual bool TableCommon::create()
1970-01-01 00:00:21,223864 TRACE: virtual bool TableFlags::create()
1970-01-01 00:00:21,230221 TRACE: virtual bool TableDescriptors::create()
1970-01-01 00:00:21,237367 TRACE: virtual bool TableSensors::create()
1970-01-01 00:00:21,247608 TRACE: virtual bool TableFans::create()
1970-01-01 00:00:21,254900 TRACE: virtual bool TableSysInfo::create()
1970-01-01 00:00:21,262911 TRACE: bool SysInfo::init()
1970-01-01 00:00:21,387893 TRACE: bool SysInfo::init()
1970-01-01 00:00:21,554522 INFO : bool DataManager::run() Completed initial database
build.
.
.
.
```

Table 871: GET Response Codes

Response Code	Name	Definition
200	OK	OK & File information in the response body + ETag Header

Response Code	Name	Definition
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Files/{id}/

HEAD /Storage/Devices/{id}/Files/{id}/ pings a specific Compute File.

Table 872: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 873: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Files/{id}/

OPTIONS /Storage/Devices/{id}/Files/{id}/ returns the allowable HTTP Methods list for this resource.

Table 874: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text

Header	Mandatory or Optional	Description
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 875: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
204	No Content	No Content & "Allow" list of methods in the response header. Some files will return 204 No Content indicating that there is no entity body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.10 /Storage/Devices/{id}/ZoneSets/

The Collection-level methods and attributes of /Storage/Devices/{id}/ZoneSets/ return information about the Zone Sets collection and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 876: Collection Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Members	String Array	Mandatory	No	Resource Collection (1 - n entries)	The array of Resource Instances. See /Storage/Devices/{id}/ZoneSets/{id}/ (page 520) for Instance Attribute details

GET /Storage/Devices/{id}/ZoneSets/

GET /Storage/Devices/{id}/ZoneSets/ returns the Collection of ZoneSets.

Table 877: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 878: GET Response Codes

Response Code	Name	Definition
200	OK	OK & List of ZoneSets + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/ZoneSets/

HEAD /Storage/Devices/{id}/ZoneSets/ pings this ZoneSet collection.

Table 879: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 880: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource Collection does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/ZoneSets/

OPTIONS /Storage/Devices/{id}/ZoneSets/ returns the allowable HTTP Methods list for this resource.

Table 881: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 882: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.

Response Code	Name	Definition
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.11 /Storage/Devices/{id}/ZoneSets/{id}/

The Device-level methods and attributes of /Storage/Devices/{id}/ZoneSets/{id}/ return information about a specific Zone Set and enable management operations.

HTTP Methods:

GET
PUT
HEAD
OPTIONS

Table 883: Instance Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	URI String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link for the Collection
Name	String	Mandatory	No	Free-Form 64 Chars	The Name of this ZoneSet
ID	String	Mandatory	No	Free-Form 64 Chars. Valid characters include: a-z A-Z 0-9 _ -	The Identifier this particular ZoneSet
Description	String	Mandatory	No	Free-Form 128 Characters	Description of this ZoneSet
Active	Boolean	Mandatory	Yes	true false	Determines if the ZoneSet is currently active. When a ZoneSet is set to "true", all other ZoneSets are set to "false" automatically.
MaxNumZoneMembers	Number	Mandatory	No	Data102 = 102 Data60 = 60	The maximum number of media members per ZoneSet for this Configuration
MaxNumZonesPerZoneSet	Number	Mandatory	No	1 2 3 6	The maximum number of zones per ZoneSet for this Configuration
Associations	String Array	Mandatory	No	Device ZoneSets	Association between the Enclosure and the ZoneSets

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Zones[].ID	String	Mandatory	No	ZoneSet 0 : 1 (1 Zone) ZoneSet 1 : 1 - 6 (6 Zones) ZoneSet 2 : 1 - 3 (3 Zone) ZoneSet 3 : 1 - 2 (2 Zones)	The Zone ID for each of the Zones within a ZoneSet
Zones[].NumZoneMembers	Number	Mandatory	No	Data102 Media Members Per Zone: ZoneSet 0 : 102 ZoneSet 1 : 17 ZoneSet 2 : 34 ZoneSet 3 : 51 Data60 Media Per Zone: ZoneSet 0 : 60 ZoneSet 1 : 10 ZoneSet 2 : 20 ZoneSet 3 : 30	Media Member arrangement. There are 102 Media (Drives) in the Data102 and 60 Media (Drives) in the Data60
Zones[].Connectors	String Array	Mandatory	No	Host Connectors Per Zone ZoneSet 0 : 12 ZoneSet 1 : 2 ZoneSet 2 : 4 ZoneSet 3 : 6	Host Connector zoning arrangement. There are 12 Host Connectors, 6 per Controller (IOM)

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Zones[].Media	String Array	Mandatory	No	Data102 Media Per Zone: ZoneSet 0 : 1 - 102 ZoneSet 1 : 1 - 17, 18 - 34, 35 - 51, 52- 68 , 69 - 85, 86 - 102 ZoneSet 2 : 1 - 34, 35 - 68, 69 - 102 ZoneSet 3 : 1 - 51, 52 - 102	
				Data60 Media Per Zone: ZoneSet 0 : 1 - 60 ZoneSet 1 : 1 - 10, 11 - 20, 21 - 30, 31- 40 , 41 - 50, 51 - 60 ZoneSet 2 : 1 - 20, 21 - 40, 41 - 60 ZoneSet 3 : 1 - 30, 31 - 60	

GET /Storage/Devices/{id}/ZoneSets/{id}/

GET /Storage/Devices/{id}/ZoneSets/{id}/ returns the information regarding a specific ZoneSet based on the {ID} in the URI address string.

Table 884: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
  -i
  -u admin:admin
  -X GET http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/1/?
  IPAddress=10.20.30.41
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/1/?
  IPAddress=10.20.30.41",
```

```

"Name": "Zone Set 1",
"ID": "1",
"Description": "Configuration 1",
"Active": false,
"MaxNumZoneMembers": 17,
"MaxNumZonesPerZoneSet": 6,
"Associations": {
  "Device": [
    "5000CCAB04110A00"
  ],
  "ZoneSets": [
    "1"
  ]
},
"Zones": [
  {
    "ID": "1",
    "NumZoneMembers": 17,
    "Connectors": [
      "1",
      "7"
    ],
    "Media": [
      "1",
      "2",
      "3",
      "4",
      "5",
      "6",
      "7",
      "8",
      "9",
      "10",
      "11",
      "12",
      "13",
      "14",
      "15",
      "16",
      "17"
    ]
  },
  {
    "ID": "2",
    "NumZoneMembers": 17,
    "Connectors": [
      "2",
      "8"
    ],
    "Media": [
      "18",
      "19",
      "20",
      "21",
      "22",
      "23",
      "24",
      "25",
      "26",

```

```
        "27",
        "28",
        "29",
        "30",
        "31",
        "32",
        "33",
        "34"
    ]
},
{
    "ID": "3",
    "NumZoneMembers": 17,
    "Connectors": [
        "3",
        "9"
    ],
    "Media": [
        "35",
        "36",
        "37",
        "38",
        "39",
        "40",
        "41",
        "42",
        "43",
        "44",
        "45",
        "46",
        "47",
        "48",
        "49",
        "50",
        "51"
    ]
},
{
    "ID": "4",
    "NumZoneMembers": 17,
    "Connectors": [
        "4",
        "10"
    ],
    "Media": [
        "52",
        "53",
        "54",
        "55",
        "56",
        "57",
        "58",
        "59",
        "60",
        "61",
        "62",
        "63",
        "64",
        "65",
```

```
        "66",
        "67",
        "68"
    ]
},
{
    "ID": "5",
    "NumZoneMembers": 17,
    "Connectors": [
        "5",
        "11"
    ],
    "Media": [
        "69",
        "70",
        "71",
        "72",
        "73",
        "74",
        "75",
        "76",
        "77",
        "78",
        "79",
        "80",
        "81",
        "82",
        "83",
        "84",
        "85"
    ]
},
{
    "ID": "6",
    "NumZoneMembers": 17,
    "Connectors": [
        "6",
        "12"
    ],
    "Media": [
        "86",
        "87",
        "88",
        "89",
        "90",
        "91",
        "92",
        "93",
        "94",
        "95",
        "96",
        "97",
        "98",
        "99",
        "100",
        "101",
        "102"
    ]
}
```

```
  ]
}
```

Table 885: GET Response Codes

Response Code	Name	Definition
200	OK	OK & ZoneSet information in the response body + ETag Header
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

PUT /Storage/Devices/{id}/ZoneSets/{id}/

PUT /Storage/Devices/{id}/ZoneSets/{id}/ modifies an attribute or executes an operation for this ZoneSet.

Table 886: PUT Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires Basic authorization
If-Match	Mandatory	The request is conditionally processed only if the current ETag for the resource matches the ETag passed in this header

Example PUT curl Command

```
curl
  -i
  -u admin:admin
  -H "Content-Type: application/json"
  -H "If-Match: 3677651d2011428f32120a029b015e80"
  -X PUT http://10.20.30.40/Storage/Devices/0123456789/ZoneSets/2?
IPAddress=10.20.30.41
  --data '{
    "Active": true
  }'
```

Table 887: PUT Response Codes

Response Code	Name	Definition
200	OK	OK & ZoneSet information in the response body + ETag Header
400	Bad Request	Bad Request (typically a faulty parameter)
401	Unauthorized	Unauthorized; credential entry failed or missing

Response Code	Name	Definition
404	Not Found	The Resource doesn't exist
412	Precondition Failed	Indicates the "If-Match" ETag check failed
428	Precondition Required	Indicates the need for an "If-Match" conditional with an ETag value in the Request Header
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/ZoneSets/{id}/

HEAD /Storage/Devices/{id}/ZoneSets/{id}/ pings this ZoneSet.

Table 888: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 889: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/ZoneSets/{id}/

OPTIONS /Storage/Devices/{id}/ZoneSets/{id}/ returns the allowable HTTP Methods list for this resource.

Table 890: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 891: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

6.2.12 /Storage/Devices/{id}/Telemetry/

The methods and attributes of /Storage/Devices/{id}/Telemetry/ return information about the Telemetry resource and enable management operations.

HTTP Methods: GET HEAD OPTIONS

Table 892: Resource Attributes

Attribute	Type	Mandatory or Optional	User Configurable	Possible Values	Description
Self	String	Mandatory	No	Free-Form URI Format 256 Chars	Describes the fully qualified URI link
LastAccessed	String	Mandatory	No	datetime based on UTC	The UTC time of the request
Members[]	String Array	Mandatory	No	Member Entry	This is the instantaneous, fully expanded metadata from this Device

GET /Storage/Devices/{id}/Telemetry/

GET /Storage/Devices/{id}/Telemetry/ returns the information of the Telemetry resource.

Table 893: GET Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization
If-None-Match	Optional	The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Example GET curl Command

```
curl
-i
-u admin:admin
-X GET http://10.20.30.40/Storage/Devices/0123456789/Telemetry/
```

Example GET Response Body

```
{
  "Self": "http://10.20.30.40/Storage/Devices/0123456789/Telemetry/",
  "LastAccessed": "26-Jan-2024 12:48:34 UTC",
  "Members": [
    {
      "Self": "http://10.20.30.40/Storage/Devices/0123456789/Telemetry/",
      "SystemType": { ... },
      "Name": "WDAP-LGWPTOMIDK",
      "ID": "A0A9CB7F-7D63-4075-8826-48E0ADF3F2C0",
      "OperatingSystem": { ... },
      "Model": "Resource Manager Data Center",
      "Manufacturer": "WDC",
      "Capabilities": { ... },
      "Status": { ... },
      "IPAddresses": { ... },
      "InformationStructure": { ... },
      "ApplicationSettings": { ... },
      "Location": { ... },
      "Accounts": { ... },
      "Files": { ... },
      "Jobs": { ... },
      "SystemClock": { ... },
      "Assets": { ... },
      "Analytics": { ... },
      "Notifications": { ... },
      "Policies": { ... },
      "Reports": { ... },
      "Telemetry": { ... }
    }
  ]
}
```

Table 894: GET Response Codes

Response Code	Name	Definition
200	OK	OK & Telemetry resource information in the response body
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

HEAD /Storage/Devices/{id}/Telemetry/

HEAD /Storage/Devices/{id}/Telemetry/ pings the Telemetry resource.

Table 895: HEAD Request Headers

Header	Mandatory or Optional	Description
Authorization	Mandatory	The request requires either Basic or Digest authorization

Table 896: HEAD Response Codes

Response Code	Name	Definition
200	OK	OK with no response body
401	Unauthorized	Unauthorized; credential entry failed or missing
404	Not Found	Resource does not exist; this IP Address is running an HTTP service but does not recognize this resource
429	Too Many Requests	Indicates API service is busy; client should try again later

OPTIONS /Storage/Devices/{id}/Telemetry/

OPTIONS /Storage/Devices/{id}/Telemetry/ returns the allowable HTTP Methods list for this resource.

Table 897: OPTIONS Request Headers

Header	Mandatory or Optional	Description
(None)	N/A	Returns the full resource schema as Content-Type application/json
Documentation	Optional	Info - Returns documentation information in the form of plain text Schema - Returns the schema information in "pretty" JSON text as plain text
If-None-Match	Optional	ETag - The request is conditionally processed only if the current ETag for the resource does not match the ETag passed in this header

Table 898: OPTIONS Response Codes

Response Code	Name	Definition
200	OK	OK & the "Allow" list of methods in the response header. The response body provides the JSON Schema for this resource
304	Not Modified	If-None-Match ETag value matched, therefore no Response Body will be returned.
404	Not Found	Resource does not exist; this IP Address is running an HTTP service, but does not recognize this resource

Response Code	Name	Definition
429	Too Many Requests	Indicates API service is busy; client should try again later



Appendices

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7.1 References

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