

Cloud REST API

v0.9

Last Updated:	Dec 03, 2015
Document Version:	4.40

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0. Recent Documentation Revisions

Note: Older documentation revisions appear in a section the end of the document.

0.1. Changes Introduced in Version 4.40 (this document)

This document revision relates to a *major* Cloud Control release.

Much of the impact relates to API 2 functions handled separately in the Cloud Control API 2 documentation available on the Community. This API 0.9 update coincides with the release of API 2.1.

In light of these changes, the API definitions within this document have been reorganized to clarify which API functions are accessible only through API 0.9 and which have replaced by an API 2 function.

As of this revision the API definitions are separated into the following three main sections:

- **API Functions available only in API 0.9**
- **API Functions replaced by the API 2**
- **Deprecated API Functions**

This revision includes updates to the following functions in the **API Functions available only in API 0.9** section:

- **Import Customer Image** is updated to accept OVF Packages which explicitly specify the number of Cores per Socket for the imported Customer Image. See the Community for details of OVF package requirements:
<https://community.opsourcecloud.net/View.jsp?proclId=afd079cdeda379c8e2dfb1d392d67d01>
- **Modify Server** is updated to reject operations for Cloud Servers with out of date Virtual Hardware with a new response code; REASON_819.

This revision moves the following API 0.9 functions to the **API Functions replaced by API 2** section:

- **List Server Images (with Parameters)**
- **Get Server Image**
- **Modify Customer Server Image with Disk Speed**

Other changes to this documentation:

- A correction to the **Enable Backup for a Server** response. Invalid optional additionalInformation "assetId" element has been removed from the response.
- Document revisions 4.11 to 4.26 have been moved to the Older Documentation Revisions section.

0.2. Changes Introduced in Version 4.30

This document revision relates to a *major* Cloud Control release. The majority of the impact is to API 2.0 functions handled separately in the Cloud Control API 2.0 documentation. The API 0.9 functions impacted are detailed below:

- **Server Anti-Affinity Rules:**
 - **Create Server Anti-Affinity Rule** is enhanced to support creation of rules at MCP 2.0 data centers. Includes additional validation scenarios.
 - **Delete Server Anti-Affinity Rule** is enhanced to support deletion of rules at MCP 2.0 data centers. No additional validation scenarios.
 - **List Server Anti-Affinity Rules** is deprecated in favor of the **API 2.0 List Server Anti-Affinity Rules** function. Please refer to the API 2.0 Cloud Control API documentation for this function.
- With the introduction of Cloud Monitoring for Servers, the following API functions have updated validation responses:
 - **Delete Server** can return a REASON_570 response if Cloud Monitoring is enabled on the target Server.
 - **Modify Server (name)** can return a REASON_56 response if Cloud Monitoring is enabled on the target Server and Cloud Monitoring is in maintenance.

1. Introduction

1.1. Overview

This document is intended as a high level overview for developers wishing to automate the provisioning and management of Cloud resources. It provides an overall picture of the Cloud REST v0.9 API interface along with enough detail to begin to develop application integration code against it.

Seven groups of v0.9 REST operations are provided at present: Account Information, Server Images, Servers, Cloud Backup, Networks, VIPs and Files.

The **Account** API is primarily an enabler for accessing the other operations. In order to use the Cloud API, you will need to know your Organization ID, which is provided by the MyAccount API.

Server Image operations provide a means of querying the default OS Windows and Linux server templates as well as customer images – i.e. templates that you have created by cloning VMs. Additionally, it is possible to delete customer images via this API set.

The **Import & Export Customer Image** API provides a set of functions for importing valid OVF packages as new Customer Images, exporting existing Customer Images to new OVF packages, a historic record of Customer Image exports performed and the ability to list the OVF Packages detected on an organization's staging location. Also included are functions related to copying Customer Images between locations and Geographic Regions.

Server operations enable the deployment, starting, stopping, deleting, adding storage to and changing CPU/RAM specification of VMs. Additionally, the server API set provides the mean to clone your existing VMs into Customer Images for later deployment.

Cloud Backup operations enable scheduling of backup services for deployed Servers.

The **Network** API supports creating and deleting networks as well as applying and removing ACL rules and NAT rules in specific network.

The **VIP** API supports all of the elements of VIP creation, deletion, and modification, including Real Servers, Probes, Server Farms, and VIP's.

The **Files Accounts** API supports creating and deleting Cloud Files accounts. Note that a separate API is required to API to actually interact with the Files accounts. That API is described in the separate **Cloud Files API Documentation**.

The **Reports** API provides a series of functions for returning historical system data in Comma Separated Value (CSV) format. The Summary Usage Report, Detailed Usage Report and Software Units Usage Report provide in information of an organization's billable use of the system. The Administrator Log Report is a key analysis tool providing a historic record of an organization's interaction with the system. For example; each Server deployed, each Customer Image created and so on.

1.2. MCP Location Identification and Support in API 0.9

1.2.1. MCP 2.0

As of March 2015, new data center locations with new network architectures and functionality were introduced into some Geographic Regions and Cloud Service Providers. These locations are being defined as "MCP 2.0" architecture vs. the current MCP 1.0 architecture. MCP 2.0 locations use a completely different networking architecture and therefore require different functions to control the networking aspects of the service. For more details, see the Community article here:

[Understanding MCP 1.0 vs. MCP 2.0 Data Center Locations](#)

1.2.2. API 2.0 and Subsequent Versions

In conjunction with the release of MCP 2.0, Cloud API 2.0 was released. Cloud API 2.0 and subsequent API 2 version provide support for MCP 2.0 functions. Please refer to the current API 2 documentation for specifics of those API functions.

Over time, we will update the API 2 version to provide **all of the non-deprecated functionality** provided by API 0.9, with support for both MCP 1.0 and MCP 2.0 architectures.

The initial releases of API 2 focus solely on providing functions needed to support unique MCP 2.0 functionality. Therefore, in the meantime, API integrations wanting to take advantage of MCP 2.0 locations will need to use a mix of API 0.9 and API 2 functions.

In API 0.9, you can identify which type of MCP architecture is associated with a data center through the **List Data Centers (with Parameters) – Maintenance** function. **It is important for API 0.9 users to identify the type of MCP location because many of the functions described in this API 0.9 document do not work with MCP 2.0 locations.** This means that existing API 0.9 integrations which expect to work with any data center location listed in the API may need to be updated to either identify and ignore new MCP 2.0 locations or use the appropriate API 2 functions for MCP 2.0 locations.

At a high level, the key API 0.9 functions that work only on MCP 1.0 locations are the functions related to list information about servers, server deployment and all of the Network and VIP / Load-Balancing functions. More specifically, each function in this document has been updated to identify whether or not MCP 2.0 locations are supported by the function.

Below the “Request Type” we have added a new “Supported For” row that will list one of three possible values as shown below:

Request Type	HTTP GET, HTTP POST, etc.
Supported for	N/A – Function does not relate to assets within locations MCP 1.0 and MCP 2.0 – Function will work with both types of locations MCP 1.0 – Function will only work with MCP 1.0 data center locations.

1.3. Division of API functions within this Documentation.

The API function definitions within this document are divided in three specific sets.

1.3.1. API Functions available only in API 0.9

These API functions should be used until replaced in the future by an API 2 equivalent (described in the previous section).

1.3.2. API Functions replaced by API 2

These are 0.9 API functions that have already been replaced by an API 2 equivalent. You should migrate from the 0.9 API function to the API 2 equivalent.

1.3.3. Deprecated API Functions

Towards the end of the documentation there are a number of sections describing deprecated API functions. You should not be using **any** API function from within in these sections. Instead use either the corresponding available 0.9 API function described in this document or the API 2 equivalent as appropriate.

1.4. Cloud API URL Structure

Cloud API URLs vary depending on your Cloud vendor and with which Geographic Region you are attempting to interface. A list of the available API's associated with each Cloud vendor is included below. Note that not all Cloud implementations operate in all geographic regions.

Substitute the appropriate URL for the Geographic Region and Cloud product you wish to work with into each documented REST API URL pattern as required. For example, if you are using the Dimension Data Public CaaS implementation and want to use the MyAccount API in the North America Geographic Region, the substitution would be as follows:

<https://<Cloud API URL>/oec/0.9/myaccount>

becomes:

<https://api-na.dimensiondata.com/oec/0.9/myaccount>

Dimension Data Public CaaS (including legacy OpSource and Bluefire customers)	
North America (NA)	api-na.dimensiondata.com
Europe (EU)	api-eu.dimensiondata.com
Australia (AU)	api-au.dimensiondata.com
Africa (AF)	api-mea.dimensiondata.com
Asia Pacific (AP)	api-ap.dimensiondata.com
South America (SA)	api-latam.dimensiondata.com

Canada (CA)	api-canada.dimensiondata.com
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Dimension Data's Government Community Cloud	
Canberra (CANBERRA)	api-canberra.dimensiondata.com

IS Public Cloud	
North America (NA)	usapi.cloud.is.co.za
Europe (EU)	euapi.cloud.is.co.za
Australia (AU)	auapi.cloud.is.co.za
Africa (AF)	meaapi.cloud.is.co.za
Asia Pacific (AP)	apapi.cloud.is.co.za
South America (SA)	latamapi.cloud.is.co.za
Canada (CA)	canadaapi.cloud.is.co.za

NTTA Cloud	
North America (NA)	cloudapi.nttamerica.com
Europe (EU)	eucloudapi.nttamerica.com
Australia (AU)	aucloudapi.nttamerica.com
Africa (AF)	saccloudapi.nttamerica.com
Asia Pacific (AP)	hkcloudapi.nttamerica.com

Cisco	
North America (NA)	iaas-api-na.cisco-ccs.com
Europe (EU)	iaas-api-eu.cisco-ccs.com
Australia (AU)	iaas-api-au.cisco-ccs.com
Africa (AF)	iaas-api-mea.cisco-ccs.com
Asia Pacific (AP)	iaas-api-ap.cisco-ccs.com
South America (SA)	iaas-api-sa.cisco-ccs.com
Canada (CA)	iaas-api-ca.cisco-ccs.com

Med-1	
Israel (IL)	api.cloud.med-1.com
North America (NA)	api-na.cloud.med-1.com
Europe (EU)	api-eu.cloud.med-1.com
Australia (AU)	api-au.cloud.med-1.com
Africa (AF)	api-af.cloud.med-1.com
Asia Pacific (AP)	api-ap.cloud.med-1.com
South America (SA)	api-sa.cloud.med-1.com
Canada (CA)	api-ca.cloud.med-1.com

Indosat Cloud	
Indonesia (ID)	iaas-api.indosat.com
North America (NA)	iaas-usapi.indosat.com
Europe (EU)	iaas-euapi.indosat.com
Australia (AU)	iaas-auapi.indosat.com
Africa (AF)	iaas-afapi.indosat.com

BSNL IDC	
India (IN)	api.bsnlcloud.com
North America (NA)	usapi.bsnlcloud.com
Europe (EU)	euapi.bsnlcloud.com

Australia (AU)	auapi.bsnlcloud.com
Africa (AF)	afapi.bsnlcloud.com

RootAccess Cloud	
North America (NA)	api.rootaccesscloud.com

Tenzing Everest Cloud	
North America (NA)	api.cloud.tenzing.com

PWW Cloud Connect	
North America (NA)	api.pwwcloudconnect.net

1.5. General Approach

The general approach that the Cloud REST API adopts is as follows:

- APIs relating to the creation of resources (Servers, Networks, ACLs, etc) are typically implemented as HTTP POST operations, which accept an XML body of content (with **Content-type** set to **application/xml**) and return a response format indicating success or failure.
- APIs that modify details of resources are implemented as HTTP POST requests which expect the identifier of the resource to be included with the URL and the attributes to be modified as POST parameters (with **Content-type** set to **application/x-www-form-urlencoded**). If multiple parameters are being set, each should be separated by a "&". These APIs return a response format indicating success or failure.
- APIs that retrieve details of individual resources or lists of resources are typically implemented as HTTP GET requests which expect the identifier of the resource to be included in the URL. These APIs return their responses as XML.

1.5.1. Authentication

The Cloud REST API is authenticated using a standard, pre-emptive HTTP BASIC authentication request header.

All API requests are authenticated using either the Primary Administrator account credentials or those for Sub-Administrator accounts that have been created by the Primary Administrator.

API requests using Sub-Administrator account credentials are subject to the roles applied to that Sub-Administrator account when created or last updated. A request using Sub-Administrator credentials must have the requisite roles or an HTTP 403 response will be returned, as documented in the Common API Responses section below.

1.5.2. Response Format

The general response format which is used to indicate successful responses for creation/modification APIs and failure conditions (faults) across all APIs is outlined below:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ... >
  <ns6:operation>Delete Server Image</ns6:operation>
  <ns6:result>ERROR</ns6:result>
  <ns6:resultDetail>Could not find server image for ID </ns6:resultDetail>
  <ns6:resultCode>REASON_390</ns6:resultCode>
</ns6:Status>
```

Throughout the document, examples are provided of valid inputs for each of the APIs along with the set of fault codes that can be triggered by each of the operations.

1.5.3. Common API Responses

There are a number of responses that all API functions can return. These include the HTTP 200 response indicating a successful API request and a number of error situations as detailed in the table below:

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully.
401 (Unauthorized)	-	Invalid request credentials.
503 (Service Unavailable)	REASON_5	<p>System is down for scheduled maintenance.</p> <p>The introduction of REASON_5 fundamentally changes the behavior of the system during maintenance. Prior to its introduction, the system returned an HTML response to requests on any URL during maintenance window with an HTTP 200 (OK) response code.</p> <p>Following the introduction of REASON_5, the system now returns a structured XML <Status .. > response, similar to the example shown in the Response Format section above.</p> <p>The XML is returned with an HTTP 503 (Service Unavailable) response code and applies to <i>all API URLs</i>.</p>

		<p>This response remains in place for the duration of the scheduled maintenance window.</p> <p>REASON_5 is applicable when the entire system is in maintenance.</p>
400 (Service Unavailable)	REASON_51	<p>The target Cloud data center is down for scheduled maintenance.</p> <p>REASON_51 was introduced to allow specific data centers to be maintained without requiring the entire system to be brought down.</p> <p>For example if data center location "NA3" is in maintenance, attempts to interact with Cloud Servers or Images at "NA3" (e.g. Start Server) will result in a REASON_51 response until the maintenance cycle is complete. However, interactions with any other data center in the same geographic region, e.g. "NA1" will continue to function as normal.</p> <p>Notes:</p> <ul style="list-style-type: none"> The introduction of REASON_51 does not alter the impact of a full maintenance window covered by REASON_5. This type of maintenance does not affect other resources such as Networks; only interactions with Cloud Servers or Images are impacted.
400 (Error)	REASON_60	Unexpected content in the message payload caused an XML unmarshalling error.
403 (Forbidden)	REASON_140	Invalid role or {org-id} invalid (does not match credentials).
400 (Error)	REASON_420	<p>An operation failed because an unexpected error occurred.</p> <p>This is a catch-all error code and is most frequently caused by invalid XML in a request payload where a particular structure is expected for the API function being called.</p> <p>If the XML request payload appears to be correct when checked against the API documentation for the relevant function and a REASON_420 continues to be returned, please open a Support Case to address the issue.</p>

Note that v3.42 of this document removes each of the common codes from the individual API function definitions where they were previously duplicated. They are listed above as the single point of reference going forward.

1.6. Namespaces

For readability, the complete set of namespaces referenced by each of the response messages have *not* been included in the document - being replaced instead by ellipses (for example: `<ns3:Account xmlns:ns2="http://oec.api.opsources.net/schemas/organization" .. >`).

Please note that the Cloud API is namespaced according to resource type (Server, Account, Network, Files, etc) and that full details of the namespaces can be determined using a utility such as WizTools.org's REST Client (see: <http://rest-client.googlecode.com>) and directly querying the API in question.

Caution: In coding against the Cloud API, do **NOT** hardcode references to the namespace prefix. For example, in the XML below, the prefix for the [organization](#) resource is **ns2**.

```
xmlns:ns2="http://oec.api.opsources.net/schemas/organization"
```

However, this ns2 prefix is not guaranteed to be associated with organization over time. Specifically, as new releases of the Cloud platform are deployed to introduce new functionality, there is a reasonable probability that the ns2 prefix (for instance) could be associated with one of the other resources such as [server](#) or [network](#).

This is a recognized feature of SOAP / REST and third party libraries such as JAXB and JIBX are aware of the transient nature of namespace prefixes. Therefore, we would strongly recommend integrating using mechanisms such as these.

If you decide to proceed with a more fluid integration such as XPath or RegEx, then please keep in mind the need to be tolerant of these transient prefixes.

1.7. Content Type

As a general rule, `Content-type` for most API request should be set to `application/xml`. However, for any of the *modification* APIs – i.e. those that accept name-value params – the content type must be set to `application/x-www-form-urlencoded`.

1.8. Multi-Location Data Centers

NOTE: For an overview of the Multi-Location Data Centers concept, see the Community article [Introduction to Multiple Data Center Locations in the same Geographic Region](#).

A given Geographic Region may have one or more data centers available, all of which can be managed through the API for that geographic Region. The list of available data centers can be identified using the **List Data Centers (with Parameters) - Maintenance** function.

When a Cloud Network is deployed, it is deployed into a specific data center as specified in the inputs to the **Create Network in Location** function. Cloud Servers, OS Images, and Customer Images are all data center-specific objects. All Cloud Server deployed on a Cloud Network will therefore be located in the data center in which the Cloud Network was deployed and must be deployed from an OS Image or Customer Image located in that data center.

When a Customer Image is created from a server, it will be located in the same data center and can only be used for deployments within that data center. Cloud Networks and Cloud Servers can never be moved between different data centers. However, Customer Images can be copied between data centers in the same geographic region using the **Copy Customer Image to Data Center** function.

There are a series of deprecated API functions that pre-date the introduction of multiple locations in Version 2.60 of the documentation. These functions do not provide for the necessary data center location input. For these functions, each customer is assigned a “default” data center location which can be identified programmatically using the **List Data Centers (with Parameters) - Maintenance** function. When calling these API functions that are not location aware, the function will be assigned to the default data center location.

Obviously, since the “Not Location Aware” functions are deprecated, we strongly recommend customers do not use them. However, for reference sake, the corresponding deprecated functions are:

Deprecated “Not Location Aware” Functions (will use Default Data Center)	Location-Aware Function
List OS Server Images	List OS Server Images with Software Labels in Location
List Deployed Customer Images	List Deployed Customer Images with Software Labels in Location
List Pending Deployment Customer Images	List Pending Deployment Customer Images in Location
List Networks	List Networks with Location List Networks in Location
Create Network	Create Network in Location

1.9. Multi-Geography Regions

NOTE: For an overview of the Multi-Geography Regions concept, see the Community article [Introduction to Multi-Geography Regions](#).

Multi-Geography Regions leverage the same API structure but use a different API URL to control Cloud Networks and Cloud Servers in all data center locations in that Geographic Region. The same authentication details are used across all Geographic data centers, meaning the same username and password will function for each Geographic API URL that has been enabled on the account.

Currently, customers cannot programmatically enable Geographic Regions. Instead, the method varies depending on the Cloud vendor:

- Some Cloud providers allow the Primary Administrator to enable Geographic Regions through the Cloud UI as described in the community article [How to Sign Up for an Additional Geographic Region Using the Administrative UI](#).
- Other Cloud providers enable Geographic Regions on the “back end” and require you to contact your sales representative for assistance.

Different Cloud providers also offer different Geographic Regions. A complete list of the available regions is available associated with a given provider can be found in the **Cloud API URL Structure** section of this

document. Again, note that the API for a given Geographic Region is only available if the relevant region has been enabled for your Cloud account.

Other than using a different URL for control of assets deployed in that region, other functionality remains the same. Like multiple data center locations, Cloud Servers, OS Images, and Customer Images are all data center-specific. However, the API for a given Geographic region will only provide information and control about assets in that region. So when calling the Europe API, the system will only respond with information about data center locations and assets available in Europe. There are no API functions that provide a “global” view across multiple geographic regions. Instead each geographic API is the “hub” that provides information and control over data center locations within that region.

Customer Images cannot be directly copied between different Geographic Regions. However, there are a series of related functions that support copying an exported Customer Image between Geographic Regions. These API functions include **Copy OVF Package from Remote Geo**, **List Remote OVF Package Copying in Progress**, and **List Remote OVF Package Copy History**. Please see the Community article [How to Copy a Customer Image between Different Geographic Regions](#) for an overview of the process.

Each account also has a “Home” Geographic Region. All functions related to the creation, modification, or deletion of administrators are only available within the Home Geographic Region. These functions include the **Add/Update/Delete Sub-Administrator Account** functions and the **Designate Primary Administrator** function.

Also note that functions related to Cloud Files are not available in all Geographic regions as Cloud Files is currently available only in the North America geographic region. Even within that region, Cloud Files is not available through all Cloud service providers.

1.10. Paging and Filtering for List API Functions

v3.60 of this document introduces a *Paging and Filtering* approach to API functions that can return large numbers of results.

These features are designed to reduce the size of the XML response for quicker processing by both the Cloud software and client applications. The approach involves adding new paging and filtering parameters allowing clients to consume “List” HTTP GET APIs in small chunks that match criteria defined by the customer.

List Servers (with Parameters) - Backup, *List Server Anti-Affinity Rules*, *List Remote OVF Package Copying In Progress* and *List Remote OVF Package Copy History* are the first API functions based on the new features. Each inherits the common behavior outlined below and the documented definition of each API details the specifics for that function.

As more API functions returning lists of resources are developed and released, they will be based on the new platform and will offer common paging and filtering behavior promoting easier integration.

The common traits of the new structure of API function are explained below. Note that each API function will identify in its documentation that it offers paging and filtering behaviour where applicable.

1.10.1. Paging and Filtering Overview

Paging is the act of splitting a large list of results into consumable chunks as a means of improving performance and general manageability.

Filtering is a means of list size reduction by applying request criteria to narrow the matched set of results.

The following general rules apply across all APIs developed with the paging and filtering approach:

- Paging and filtering behaviour is applied through the use of optional parameters.
- Each API has documented *default* behavior as a fallback when no parameters are supplied.
- Parameters can be supplied in *any* order.
- Inter-dependencies between parameters will be avoided and are documented on the rare occasions they arise.
- Parameters are treated as *case-insensitive*.
- Parameter names and some parameter values are based on keywords and fieldNames, which will be published in the API documentation.
 - A fieldName corresponds to a property of the type of resource being requested. For example the deployment date of a virtual server; *created*.

- A keyword can be an operator or other indication of desired behavior. Keywords are common across all API functions (within a major release) but are not necessarily supported by all functions. For example indicating that servers should be listed in descending order of deployment; *created.DESCEENDING*
 - Keywords are also case insensitive; *created.DESCEENDING* and *created.descending* are equally correct.
- Filters are applied through the supply of a number of parameters, with keyword comparative operators and keyword values on the API request.
- The set of fieldNames and filters for a given API function can be enhanced over time with the publication of new values. For example, an addition to the List Servers API to limit the results by the number of CPUs on each server returned.
- Dates are defined in XSD format but can be passed in full (including time) or short (date only) format. For example; "20120901T00:00:00Z" and "20120901" equate to the same value and time zone.

Paging

Request

Paging is supported with the introduction of three optional request parameters.

Parameter	Usage	Example
pageSize	Optional. May only be specified once. Must be a positive integer between 1 and a maximum value documented for each API function.	pageSize=50 <i>Means "return 50 per page".</i>
pageNumber	Optional. May only be specified once. Must be a positive integer. If the value supplied exceeds the number of pages for the request, the last page will be returned.	pageNumber=3 <i>Means "return the 3rd page".</i> <i>If pageSize is 50, then return records 101-through-150.</i>
orderBy	Optional. May only be specified once. Comma separated list of <i>fieldNames</i> , each with an optional, directional <i>keyword</i> . By default each <i>fieldName</i> will be in ascending order unless otherwise documented.	orderBy=location,created.DESCEENDING <i>Means "sort first by location ascending, then by created descending".</i>

Response

The containing XML element for the list of items returned in response to a paged query always includes the following common attributes:

Attribute Name	Attribute Details	Description
totalCount	Non-negative Integer	The total number of result records matching request criteria.

pageCount	Non-negative Integer	The number of result records in this page.
pageNumber	Non-negative Integer	The page number requested by the user or the default page (1) if none supplied.
pageSize	Non-negative Integer	The page size used; either specified in the request or the default for the API function being requested.

Filtering and Operators

The documentation for each API will include the filtering criteria that it supports. The filter criteria affect only the number of rows being returned, the XML structure (or columns) returned is not affected by the filter criteria.

The usage of filters is shown below. "EQUALS" (single value) and "IN" (multiple value) queries are supported as shown below:

Usage	Examples
<fieldName>[.comparativeOperator]=<value>	<p>EQUALS: &location=NA1</p> <p><i>Means return only Servers in datacenter "NA1"</i></p> <p>IN: &location=NA1&location=NA2</p> <p><i>A multivalued example including a comparator, meaning in location "NA1" or in location "NA2".</i></p>
"*"	<p>The "*" wildcard character can be used within a <value> to match against 0 or more characters for specific operators. Each operator supporting wildcard states that it supports wildcard within its own definition.</p>
LIKE (uses wildcard)	<p>&name.LIKE=*Win*ows*</p> <p>An API definition can declare filters compatible with the LIKE operator.</p> <p>The example above uses three wildcards to indicate that the string is to be matched anywhere within the "name" filter field.</p> <p>Without the leading wildcard, the string would be treated as a "starts with" comparison.</p> <p>Similarly, without the trailing wildcard, the string would be treated as an "ends with" comparison.</p>
GREATER_THAN or GT	<p>An API definition can declare filters compatible with the GT operator. GT is synonymous with GREATER_THAN.</p> <p>&created.GT=20130901T00:00:00Z</p> <p><i>means with date after 2013-09-01 00:00:00</i></p>
LESS_THAN or LT	<p>An API definition can declare filters compatible with the LT operator. LT is synonymous with LESS_THAN.</p> <p>&created.LT=20130901T00:00:00Z</p> <p><i>means with date before 2013-09-01 00:00:00</i></p>

1.10.2. Paging and Filtering Common API Responses

The following responses can be returned by any API offering paging and filtering functionality.

HTTP Code	Reason Code	Description
400 (Error)	REASON_70	Unsupported Parameter on request
400 (Error)	REASON_71	A supplied value for any paging parameter is outside of accepted value set. E.g. a negative or non-numeric pageSize or pageNumber, pageSize too large, an invalid orderBy value or more than one value was supplied for a given paging parameter.
400 (Error)	REASON_72	user supplies more than 10 values for a filter parameter
400 (Error)	REASON_73	Returned if an invalid comparative operator is used with a filter field. For example, MIN and MAX will typically not be allowed with String fields.
400 (Error)	REASON_320	A filter was specified with an invalid value.

1.10.3. Sample request URLs

The following selection of sample request URLs use the **List Servers (with Parameters) - Backup** API function to demonstrate some the concepts outlined in the previous sections.

URL	Description
https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup	Default API call with no parameters. Lists the first 250 servers belonging to the specified {org-id}, ordered by date of deployment ("created") ascending.
https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup?pageSize=100&pageNumber=2	Indicates a page size of 100 and requests the second page of results. I.e. from 101 to 200 inclusive) belonging to the specified {org-id}, ordered by date of deployment ascending (default).
https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup?pageNumber=2&orderBy=location.DECENDING,name	Requests the second page of results, relying on the default value of 250 for page size. I.e. from 251 to 500 inclusive) belonging to the specified {org-id}, ordered by location; descending, and then by name ascending (default).
https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup?orderBy=name&deployed=false&location=NA1	Lists the first 250 servers that are pending deployment, belonging to the specified {org-id}, in location NA1, ordered by name ascending (default).
https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup?deployed=true&networkId=c01cfe97-00c7-11e2-b29c-001517c4643e	Lists the first 250 servers that have completed deployment, belonging to the specified {org-id}, resident on the network identified by networkId and ordered by date of deployment ascending (default).

2. API Functions available only in API 0.9

2.1. Account API

Before you can begin using the range of Server, Network and Image APIs, you will need to first obtain your organization details. The *My Account* function accepts your any administrator credentials and returns the user's details, including their Organization ID. As the Primary Administrator, retrieving the Organization ID this is the first step for building an API integration.

2.1.1. Get My Account Details

Description

Returns, amongst other things, your Organization ID that will be used as the basis for subsequent API interactions.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/myaccount">https://<Cloud API URL>/oec/0.9/myaccount
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:Account xmlns:ns3="http://oec.api.opsource.net/schemas/directory" .. >
  <ns3:userName>rdyer</ns3:userName>
  <ns3:fullName>Joe Public</ns3:fullName>
  <ns3:firstName>Joe</ns3:firstName>
  <ns3:lastName>Public</ns3:lastName>
  <ns3:emailAddress>jpublic24583@example.com</ns3:emailAddress>
  <ns3:orgId>1831c1a9-9c03-44df-a5a4-f2a4662d6bde</ns3:orgId>
  <ns3:roles>
    <ns3:role>
      <ns3:name>primary administrator</ns3:name>
    </ns3:role>
  </ns3:roles>
</ns3:Account>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_110	Could not find user account.

2.1.2. Get Administrator Account (with Phone Number)

Description

Used to retrieve full details of an Administrator account associated with the Organization identified by {org-id}.

If Primary Administrator credentials are used this function returns details of **any** Administrator ({username}) associated with the Organization ({ord-id}).

However, the function can also be used with Sub-Administrator credentials to retrieve details of their **own user account**, in which case {username} must match the Sub-Administrator credentials supplied.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/accountWithPhoneNumber/{username}</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<AccountWithPhoneNumber xmlns="http://oec.api.opsource.net/schemas/directory">
  <userName>staylor</userName>
  <fullName>Steve Taylor</fullName>
  <firstName>Steve</firstName>
  <lastName>Taylor</lastName>
  <emailAddress>staylor@example.com</emailAddress>
  <phoneCountryCode>1</phoneCountryCode>
  <phoneNumber>20232322232</phoneNumber>
  <department>Research and Development</department>
  <customDefined1></customDefined1>
  <customDefined2></customDefined2>
  <orgId>657e0d5c-61ca-48ed-a6a3-c50ba75ebced</orgId>
  <roles>
    <role>
      <name>server</name>
    </role>
    <role>
      <name>create image</name>
    </role>
    <role>
      <name>storage</name>
    </role>
    <role>
      <name>primary administrator</name>
    </role>
    <role>
      <name>reports</name>
    </role>
    <role>
      <name>network</name>
    </role>
  </roles>
</AccountWithPhoneNumber>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_110	Could not find user account.

2.1.3. Add Sub-Administrator Account (with Phone Number)

Description

This function deprecates *Add Sub-Administrator Account* by adding the ability to set phone details for the new Sub-Administrator.

Adds a new Sub-Administrator Account to the organization.

The account is created with a set of roles defining the level of access to the organization's Cloud resources or the account can be created as "read only", restricted to just viewing Cloud resources and unable to generate Cloud Reports.

Notes on roles:

- The `<roles>` element is not required. If `<roles>` is not included on a request the resulting account will be treated as "read only".
- If a "read only" named `<role>` is supplied, no other role should be included. The resulting account will be treated as "read only".
- `<roles>` can include any or multiple roles as listed below. Please see the sample request for exact usage:
 - `network`
 - `server`
 - `backup`
 - `create image`
 - `storage`
 - `reports`
 -
 - OR
 - `read only`

Notes on validation:

- The value of the `<orgId>` element must match the {org-id} on the request URL or a REASON_320 error will be returned.
- Passwords must comply with the following restrictions:
 - Minimum length of 8 characters
 - Maximum length of 75 characters
 - Must contain at least one upper case letter
 - Must contain at least one lower case letter
 - Must contain at least one number
 - Must not have leading or trailing spaces
 - Inner content can include spaces
 - Must contain at least one non-alphanumeric character.
- If **Two Factor Authentication** is enabled for Cloud UI access for the organization, valid phone details for the user must be supplied. The phone supplied must be capable of receiving SMS. For further information refer to the Community:

[How to Enable or Disable Two Factor Authentication Using SMS for your Organization](#)

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/accountWithPhoneNumber</code>
Request Type	HTTP POST
Supported for	N/A

Request Data

```
<AccountWithPhoneNumber xmlns="http://oec.api.opsources.net/schemas/directory">
  <!-- required, string, max 32 characters, valid characters A-Z, a-z, 0-9,
  ".", "-" and "_". First character cannot be "-" -->
  <userName>smorris</userName>
  <!-- required, string, max 75 characters -->
  <fullName>Stuart Morris</fullName>
  <!-- required, string, max 75 characters -->
  <firstName>Stuart</firstName>
  <!-- required, string, max 75 characters -->
  <lastName>Morris</lastName>
  <!-- required, string, see above for restrictions -->
  <password>GdP$@$w2rd</password>
  <!-- required, string, max 75 characters, valid email address -->
  <emailAddress>smorris@example.com</emailAddress>
  <phoneCountryCode>1</phoneCountryCode>
  <phoneNumber>20232322232</phoneNumber>
  <!-- optional, string, max 255 characters -->
  <department>Research and Development</department>
  <!-- optional, string, max 255 characters -->
  <customDefined1></customDefined1>
  <!-- optional, string, max 255 characters -->
  <customDefined2></customDefined2>
  <!-- required, string, must match the orgId on the request URL -->
  <orgId>657e0d5c-61ca-48ed-a6a3-c50ba75ebced</orgId>
  <!-- optional, none or "read only" creates a user with read only access-->
  <!-- include any of the following to give the user the given role -->
  <roles>
    <role>
      <!-- enables the user to create, manage & remove network resources -->
      <name>network</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove server resources -->
      <name>server</name>
    </role>
    <role>
      <!-- enables the user to enable, manage & disable backup services-->
      <name>backup</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove customer image -->
      <name>create image</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove Cloud Files accounts
-->
      <name>storage</name>
    </role>
    <role>
      <!-- enables the user to view Reports -->
      <name>reports</name>
    </role>
  </roles>
</AccountWithPhoneNumber>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Add Account</operation>
  <result>SUCCESS</result>
  <resultDetail>Account smorris created</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_120	Username already exists (must be unique).
400 (Error)	REASON_121	Invalid Username (check allowed characters).
400 (Error)	REASON_122	Invalid Password.
400 (Error)	REASON_123	Invalid Roles (check rules above).
400 (Error)	REASON_320	<orgId> in request body does not match {org-id} on URL.

2.1.4. Update Administrator Account

Description

This function updates an existing Administrator Account.

Notes:

- It is not possible to add or remove the Primary Administrator role with this function.
- When authenticated with the Primary Administrator credentials, this function can be used to update any property of the Primary Administrator or any Sub-Administrator with the exception of *userName*, which is an immutable property.
- When authenticated with Sub-Administrator credentials the *userName* supplied must match the credentials used and only the *password* can be updated.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/account/{userName}</code>
Request Type	HTTP POST
Supported for	N/A

Parameter Request Data (include only fields being changed with "&" separating each parameter)	
password	Optional. Passwords must comply with the following restrictions: <ul style="list-style-type: none">• Minimum length of 8 characters• Maximum length of 75 characters• Must contain at least one upper case letter• Must contain at least one lower case letter• Must contain at least one number• Must not have leading or trailing spaces<ul style="list-style-type: none">◦ Inner content can include spaces• Must contain at least one non-alphanumeric character.
emailAddress	Optional. Max length 75 characters.
fullName	Optional. Max length 75 characters.
firstName	Optional. Max length 75 characters.
lastName	Optional. Max length 75 characters.
department	Optional. Max length 75 characters.
customDefined1	Optional. Max length 255 characters.
customDefined2	Optional. Max length 255 characters.
role	Optional. Multiple values are accepted; e.g. "role=create image&role=server". Note that "primary administrator" is not accepted. See "Add Sub-Administrator Account" for full list of roles.
phoneCountryCode	Optional. Numeric ISO-3166-1 country code. Must be present if phoneNumber is being updated.
phoneNumber	Optional. Numeric phone number. Must be capable of receiving SMS. Must be present if phoneCountryCode is being updated.

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <Status> <operation>Edit Account</operation> <result>SUCCESS</result> <resultDetail>Account {userName} updated</resultDetail> <resultCode>REASON_0</resultCode> </Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_122	Invalid Password.
400 (Error)	REASON_123	Invalid Roles (check rules above).
400 (Error)	REASON_320	Input data validation failure.

2.1.5. Delete Sub-Administrator Account

Description

Deletes a Sub-Administrator Account belonging to the organization, identified by {username}.

An attempt to delete the Primary Administrator will result in an error being returned. Use the **Designate Primary Administrator** function to change a Sub-Administrator to be the Primary Administrator. The “old” Primary Administrator can then be deleted.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/account/{username}?delete">https://<Cloud API URL>/oec/0.9/{org-id}/account/{username}?delete
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Delete Account</operation>
  <result>SUCCESS</result>
  <resultDetail>Delete Account jpublic submitted</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_110	Could not find user account.
400 (Error)	REASON_130	Cannot delete Primary Administrator.
400 (Error)	REASON_421	Operation cannot be performed at this geography. Sub-Administrator Accounts can only be deleted using the home geography API URL of the organization {org-id}. See Multi-Geography Regions .

2.1.6. Designate Primary Administrator

Description

Allows the current Primary Administrator user to designate a Sub-Administrator user belonging to the same organization ({org-id}) to **become** the Primary Administrator for the organization.

The Sub-Administrator is identified by their {username}.

IMPORTANT NOTES:

1. When this function is executed, the Primary Administrator as was, will **no longer be** the Primary Administrator for the organization. The Sub-Administrator that was the target of the query will become the Primary Administrator for the organization with full access to all functions and user interface views.
2. For customers using on-line payments, control of the online payment method will be transferred to the new Primary Administrator. However, billing invoices and emails are NOT automatically transferred to the new Primary Administrator. Please contact your account manager with any queries.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/account/{username}?primary</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Designate Primary Admin Account</operation>
  <result>SUCCESS</result>
  <resultDetail>Designate Primary Admin Account {username}
submitted</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Could not designate username {username} as Primary Admin..
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_110	Could not find user account {username}.
400 (Error)	REASON_125	There is another operation in progress for the account.
400 (Error)	REASON_601	There is another operation in progress for the organization.

2.1.7. List Accounts (with Phone Number)

Description

Lists the Accounts belonging to the Organization identified by {org-id}. The list will include all Sub-Administrator accounts and the Primary Administrator account. The Primary Administrator is unique and is identified by the "primary administrator" role.

This function deprecates the previous *List Accounts* function by adding phone number information to the response.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/accountWithPhoneNumber</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<AccountsWithPhoneNumber xmlns="http://oec.api.opsource.net/schemas/directory"
... >
  <AccountWithPhoneNumber>
    <userName>staylor</userName>
    <fullName>Steve Taylor</fullName>
    <firstName>Steve</firstName>
    <lastName>Taylor</lastName>
    <emailAddress>staylor@example.com</emailAddress>
    <phoneCountryCode>1</phoneCountryCode>
    <phoneNumber>20232322232</phoneNumber>
    <department>R&D</department>
    <customDefined1></customDefined1>
    <customDefined2></customDefined2>
    <orgId>657e0d5c-61ca-48ed-a6a3-c50ba75ebced</orgId>
    <roles>
      <role>
        <name>storage</name>
      </role>
      <role>
        <name>create image</name>
      </role>
      <role>
        <name>server</name>
      </role>
      <role>
        <name>network</name>
      </role>
      <role>
        <name>reports</name>
      </role>
      <role>
        <name>primary administrator</name>
      </role>
    </roles>
  </AccountWithPhoneNumber>
  <AccountWithPhoneNumber>
    <userName>MikeL</userName>
    <fullName>Mike Langley</fullName>
    <firstName>Mike</firstName>
    <lastName>Langley</lastName>
    <emailAddress>ml@example.com</emailAddress>
    <phoneCountryCode>1</phoneCountryCode>
    <phoneNumber>20232322232</phoneNumber>
    <department>Sales</department>
    <customDefined1></customDefined1>
    <customDefined2></customDefined2>
    <orgId>657e0d5c-61ca-48ed-a6a3-c50ba75ebced</orgId>
```

```
<roles>
  <role>
    <name>backup</name>
  </role>
</roles>
</AccountWithPhoneNumber>
</AccountsWithPhoneNumber>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error - Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.1.8. List Multi-Geography Regions With Key

Description

Returns a list of the Multi-Geography Regions available for the supplied *{org-id}*.

A *<geo>* element is returned for each available Geographic Region.

The *<isHome>* element will be true for one *<geo>* element on the list. The *home* geography is the geography at which the organization represented by *{org-id}* was initially set up. The value of *<isHome>* will be false for every geography subsequently set up for the organization.

Note: this API deprecates the previous Multi-Geography Regions function by the addition of the *<geoKey>* element.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/multigeo">https://<Cloud API URL>/oec/0.9/{org-id}/multigeo
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Geos xmlns=http://oec.api.opsource.net/schemas/multigeo ... >
  <geo>
    <id>lk76kf30-2cb3-1791-5476-231567-09gt87</id>
    <geoKey>northamerica</geoKey>
    <name>North America</name>
    <cloudUiUrl>https://admin.opsourcecloud.net</cloudUiUrl>
    <cloudApiUrl>https://api.opsourcecloud.net/oec/0.9</cloudApiUrl>
    <isHome>true</isHome>
    <productKey>OBPK-PRD-7f5e343hg6-dahb-4fe8-835a-d5465gt01b</productKey>
    <pricingUrl>http://www.opsource.net/pricing</pricingUrl>
    <state>ENABLED</state>
  </geo>
  <geo>
    <id>bf43kf30-2c83-11e1-9963-001517-45hj54</id>
    <geoKey>europe</geoKey>
    <name>Europe</name>
    <cloudUiUrl>https://eu.opsourcecloud.net</cloudUiUrl>
    <cloudApiUrl>https://euapi.opsourcecloud.net/oec/0.9</cloudApiUrl>
    <isHome>false</isHome>
    <productKey>OBPK-PRD-7f5eahg6-daeb-4ee8-835a-a1034fb0de</productKey>
    <pricingUrl>http://www.opsource.net/pricing</pricingUrl>
    <state>ENABLED</state>
  </geo>
</Geos>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_714	Multigeography access is not permitted for the supplied organization {org-id}.

2.1.9. List Software Labels

Description

This function returns the catalog of Priced Software preinstalled (individually or in combinations) on some OS Server Images and Customer Images. For details on Priced Software please review the Community article [Introduction to Priced Software](#).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/softwarelabel</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<SoftwareLabels xmlns="...server">
  <softwareLabel id="MSSQLE2008"> (mandatory attribute, this is the PK in
the database, and a unique identifier for the label)
    <displayName>MS Sql Server 2008</displayName> (mandatory element)
    <description>Microsoft SQL Server 2008 Enterprise</description>
(mandatory element)
    <pricedPer>CPU</pricedPer> (enum; SERVER or CPU, mandatory element)
    <runningUnits>660</runningUnits> (mandatory element, int)
    <stoppedUnits>660</stoppedUnits> (mandatory element, int)
  </softwareLabel>
  <softwareLabel id="SOFTWAREPACKAGEA">
    ...
  </softwareLabel>
</SoftwareLabels>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.1.10. Get Two Factor Authentication Status

Description

This function returns the status of Two Factor Authentication enablement for access to the Cloud UI.

- “true” indicates that Two Factor Authentication is enabled.
- “false” indicates that Two Factor Authentication is not enabled.

For further details, please refer to the Community:

[How to Enable or Disable Two Factor Authentication Using SMS for your Organization](#)

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/twoFactorAuth</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<TwoFactorAuthentication
xmlns="http://oec.api.opsource.net/schemas/organization" ...
>false</TwoFactorAuthentication>
```

Fault Codes

Common API Response codes only.

2.1.11. Set Two Factor Authentication Status

Description

This function sets Two Factor Authentication enablement for the Cloud UI.

- “true” indicates that Two Factor Authentication should be enabled.
- “false” indicates that Two Factor Authentication should be disabled.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/twoFactorAuth</code>
Request Type	HTTP POST
Supported for	N/A

Parameter Request Data

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<TwoFactorAuthentication
xmlns="http://oec.api.opssource.net/schemas/organization">true</TwoFactorAuthen
tication>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
<operation>Set Two Factor Authentication</operation>
<result>SUCCESS</result>
<resultDetail>Set Two Factor Authentication processed
successfully</resultDetail>
<resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_105	Administrator {userName} does not have a phone number. This user must be updated to have a phone number capable of receiving SMS.
400 (Error)	REASON_421	Operation cannot be performed at this geography. See Multi-Geography Regions .
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.2. Server Image API

The Server Image API functions provide a set of operations for interacting with server images. Note that some fundamental Server Image API functions have been replaced by API 2 equivalents (refer to the table of contents), including *List Server Images (with Parameters)* for retrieving server images of all types.

This section also includes various management API functions for operating on server images.

2.2.1. Does Image Name Exist?

Description

Customer Image names are required to be unique within a single data center for your organization ID. This function allows programmatic checking of whether or not a potential Customer Image name already exists within the target data center location.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/nameExists">https://<Cloud API URL>/oec/0.9/{org-id}/image/nameExists
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ImageNameExists xmlns="http://oec.api.opsource.net/schemas/server">
  <!-- string, datacenter id -->
  <location>NA1</location>
  <!-- string -->
  <imageName>My New Customer Image</imageName>
</ImageNameExists>
```

Response Details

The response is a single *<Exists>* element containing either the string value “true”, if the Customer Image name already exists at the target location for the supplied organization ID, or “false” if not.

If the response is “true” then a different Customer Image name will need to be supplied when subsequently calling any functions that result in a new Customer Image being created at the same location, such as *Import Customer Image*.

```
<!-- (boolean, mandatory, true or false) -->
<Exists xmlns="http://oec.api.opsource.net/schemas/general">true</Exists>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.2.2. Delete Customer Server Image

Description

Used for deleting a Server Image created by a customer. This API requires your organization ID *and* the ID of the image to be deleted.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization".. >
  <ns6:operation>Delete Server Image</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server image deleted</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_390	Could not locate Server Image for {org-id}.
400 (Error)	REASON_601	Operation in progress.

2.2.3. Clean Failed Customer Image

Description

Removes a failed Customer Image from any List Customer Images list. Requires your organization ID and the ID of the target image.

If the attempt to remove the failed server with the Clean Failed Customer Image function fails, you will need to contact Support to remove the image from the list.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}?clean</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
  <Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization"... >
    <operation>Clean Failed Image</operation>
    <result>SUCCESS</result>
    <resultDetail>Successfully submitted clean failed image request for image
id: {image-id}</resultDetail>
    <resultCode>REASON_0</resultCode>
  </Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_40	Invalid State Transition. Returned if an attempt is made to call this function for an image which is not in a failed state.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_390	Could not find image for {image-id} for {org-id}.
400 (Error)	REASON_601	{image-id} has another operation in progress and cannot be removed.

2.3. Import & Export Customer Image API

Provides a set of operations to enable an organization to programmatically import OVF Packages as new Customer Images and to export existing Customer Images as new OVF Packages.

See the Community article [How to access your Customer Image Import and Export OVF Package staging folder](#) for details on the staging folder for OVF Packages which is used for all of the Import and Export functions. There is a separate staging folder for each Geographic Region.

2.3.1. List OVF Packages

Description

The List OVF Packages function returns the OVF Packages that have been uploaded to the FTPS account for the supplied organization ID. An empty list will be returned if no OVF Packages have been uploaded by the organization.

An OVF Package is defined as the set of files constituting a single Customer Image to Import. An OVF Package includes:

- One “.mf” manifest file.
- One “.ovf” definition file.
- At least one “.vmdk” disk file. The mandatory disk represents the operating system boot disk. Each subsequent VMDK is a disk of additional storage.

The list of entries returned is determined only by the package manifest (“.mf”) files on the FTPS account. This function does not take into account any validation of the OVF and VMDK referenced within each manifest. However, the “.mf” in each case is *expected* to define a full OVF Package when used as an input to the *Import Customer Image* function.

For details of OVF Package guidelines, see the prerequisites in the Community article [How to Import an OVF package as a Customer Image Using the Administrative UI](#).

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/ovfPackage">https://<Cloud API URL>/oec/0.9/{org-id}/ovfPackage
Request Type	HTTP GET
Supported for	N/A

Response Details

The response is a list of **<ovfPackage>** elements with the following mandatory attributes:

- *name*: full name of the manifest file.
- *timestamp*: creation timestamp of the file.
- *expiry*: timestamp for when all the files within the OVF Package will be deleted by the system.
- *status*: “VALID” or “EXPIRED”. An “EXPIRED” package has reached its *expiry* date but has not been deleted by the system yet. It cannot be imported and a REASON_432 error response is returned if an import is attempted. A “VALID” package can be imported. This range of values should not be considered static and may increase over time.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<OvfPackages xmlns="http://oec.api.opsource.net/schemas/server">
  <ovfPackage name="MyCustomerImage.mf" timestamp="2012-05-11T12:30:01.000Z"
expiry="2012-05-25T12:30:01.000Z" status="VALID"/>
</OvfPackages>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error - Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.
-------------	------------	---

2.3.2. Import Customer Image

Description

Starts the process of importing an OVF Package to become a new Customer Image for the supplied organization ID.

This function takes the full name (including the “.mf” file suffix) of the manifest file identifying the OVF Package to import as a new Customer Image.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/imageImport">https://<Cloud API URL>/oec/0.9/{org-id}/imageImport
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request

```
<NewImageImport xmlns="http://oec.api.opsource.net/schemas/server">
  <ovfPackage>MyCustomerImage.mf</ovfPackage>
  <location>NA1</location>
  <name>My New Customer Image</name>
  <description>Image for producing web servers.</description>
</NewImageImport>
```

ovfPackage	Required; references a manifest identifying an OVF Package on the organization's FTPS account. Maximum length 75 characters. The permitted character set is (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is not permitted.
location	Required; identifies the target data center location for the Customer Image. The target data center must reside within the same Geographic Region.
name	Required; 1-75 characters in length. The permitted character set is (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is permitted.
description	Optional; 0-255 characters in length.

Response Details (descriptive – includes all optional)

A positive (HTTP 200) response indicates that initial validation has been passed and the Customer Image Import will proceed. A single **<ServerImageWithState>** element is returned, in common with *Get Server Image* and *List Customer Image Imports in Progress*.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImageWithState>
  <!-- string, unique image id -->
  <id>c325fe04-7711-4968-962e-c88784eb2xyz</id>
  <!-- string, data center id -->
  <location>NA1</location>
  <!-- string -->
  <name>My New Customer Image</name>
  <!-- string -->
  <description>Image for producing web servers.</description>
  <operatingSystem>
    <!-- string -->
    <type>WINDOWS</type>
    <!-- string -->
    <displayName>WIN2008E/64</displayName>
  </operatingSystem>
  <!-- int -->
  <cpuCount>2</cpuCount>
  <!-- int -->
  <memoryMb>4096</memoryMb>
  <!-- int -->
  <osStorageGb>50</osStorageGb>
```



```

<!-- 0-to-many -->
<additionalDisk>
  <!-- string, unique disk id -->
  <id>ef49974c-87d0-400f-aa32-ee43559fdb1b</id>
  <!-- string -->
  <scsiId>1</scsiId>
  <!-- int -->
  <diskSizeGb>40</diskSizeGb>
  <!-- string -->
  <state>NORMAL</state>
</additionalDisk>
<!-- 0-to-many, string -->
<softwareLabel>MSSQL2008R2E</softwareLabel>
<!-- optional -->
<source type="IMPORT">
  <!-- 0-to-many, type and value required, date optional -->
  <artifact type="MF" value="MyCustomerImage.mf" date="2008-09-
29T02:49:45"/>
  <artifact type="OVF" value="MyCustomerImage.ovf" date="2008-09-
29T02:49:45"/>
  <artifact type="VMDK" value="MyCustomerImage-disk1.vmdk" date="2008-
09-29T02:49:45"/>
  <artifact type="VMDK" value="MyCustomerImage-disk2.vmdk" date="2008-
09-29T02:49:45"/>
</source>
<!-- string -->
<state>NORMAL</state>
<!-- optional timestamp, only present if Image is deployed -->
<deployedTime>2012-05-25T12:59:10.110Z</deployedTime>
<!-- optional same meaning as for Server, cannot be guaranteed for Images
and is considered purely informational -->
<machineStatus name="vmwareToolsApiVersion">
  <value>8295</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsVersionStatus">
  <value>CURRENT</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsRunningStatus">
  <value>RUNNING</value>
</machineStatus>
<!-- optional, as above -->
<status>
  <!-- string -->
  <action>IMAGE_IMPORT</action>
  <!-- timestamp -->
  <requestTime>2012-05-25T23:10:36.000Z</requestTime>
  <!-- string -->
  <userName>theUser</userName>
  <!-- optional, int -->
  <numberOfSteps>3</numberOfSteps>
  <!-- optional, timestamp -->
  <updateTime>2012-05-25T23:11:32.000Z</updateTime>
  <!-- 0-to-many -->
  <step>
    <!-- string -->
    <name>WAIT_FOR_OPERATION</name>
    <!-- int -->
    <number>3</number>
    <!-- optional int -->
    <percentComplete>50</percentComplete>
  </step>
  <!-- optional string, only present if operation has failed -->
  <failureReason>Operation timed out.</failureReason>
</status>
</ServerImageWithState>

```

Fault Codes

Most fault codes indicate a specific error as described in the table below. However, three specific response codes (REASON_432, REASON_441, and REASON_442) can include multiple error messages related to the import attempt, each of which is described by an **<additionalInformation>** element. The “name” attribute of each **<additionalInformation>** element describes the content of its single <value> child element.

Notes:

- Particularly relevant to REASON_441; see the OVF prerequisites in the Community article [How to Import an OVF package as a Customer Image Using the Administrative UI](#).
- The set of codes that include **<additionalInformation>** elements should not be considered static. The set can increase at any time.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Image Import</operation>
  <result>ERROR</result>
  <resultDetail>OVF Package content is invalid</resultDetail>
  <resultCode>RESULT_441</resultCode>
  <additionalInformation name="error.imageImport.networkCount">
    <value>Only one network element is supported.</value>
  </additionalInformation>
  <additionalInformation name="error.imageImport.cpuCount">
    <value>Number of CPUs is invalid - must be between 1 and 8</value>
  </additionalInformation>
</Status>
```

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	Mandatory field not supplied or missing value.
400 (Error)	REASON_320	{name} has invalid value and/or {description} has invalid value.
400 (Error)	REASON_320	OVF validation error occurred.
400 (Error)	REASON_391	{name} must be unique within the supplied data center ({location}) for {org-id}.
400 (Error)	REASON_430	Maximum number of allowed simultaneous Customer Image Imports in Progress has already been reached for {org-id}.
400 (Error)	REASON_431	The manifest file {ovfPackage} does not exist on the FTPS account for {org-id}.
400 (Error)	REASON_432	The manifest file {ovfPackage}, and/or its related OVF file, and/or its related *VMDK file(s) is beyond its expiration date and is due for deletion.
400 (Error)	REASON_433	The manifest file {ovfPackage} is too large to be accepted.
400 (Error)	REASON_434	The manifest file {ovfPackage} cannot be read.
400 (Error)	REASON_435	The manifest file {ovfPackage} is invalid. The manifest must reference a single OVF file and a minimum of one and maximum of thirteen VMDK files.
400 (Error)	REASON_436	The manifest file {ovfPackage} references an OVF file that does not exist on the FTPS account.
400 (Error)	REASON_437	The manifest file {ovfPackage} references an OVF file that is too large to be accepted.
400 (Error)	REASON_438	The manifest file {ovfPackage} references an OVF file that cannot be read.
400 (Error)	REASON_439	The manifest file {ovfPackage} contains a hash that does not match the hash for its referenced OVF file.
400 (Error)	REASON_440	The manifest file {ovfPackage} references an OVF file that cannot be parsed as XML.
400 (Error)	REASON_441	The manifest file {ovfPackage} references an OVF file that does not conform to the required criteria.

400 (Error)	REASON_442	The manifest file {ovfPackage} references one of more VMDK files that cannot be found.
400 (Error)	REASON_443	VMDK {vmdk} in {ovfPackage} is too large to be imported.
400 (Error)	REASON_444	The manifest file {ovfPackage} references a VMDK {vmdk} file that cannot be read.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

2.3.3. List Customer Image Imports in Progress

Description

This function identifies the Customer Image Imports that are in progress for the supplied organization ID.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/imageImport">https://<Cloud API URL>/oec/0.9/{org-id}/imageImport
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

The response is a single **<ServerImagesWithState>** element containing a **<serverImageWithState>** element for each Customer Image Import in progress.

The **<serverImageWithState>** element has the same structure as that used in response to a *Customer Image Import* POST request and a *Get Server Image* GET request.

Note: The number of simultaneous image imports permitted is reflected by the maximum amount of **<serverImageWithState>** elements that can be returned by this function at any time. I.e. if the maximum amount of Customer Image Imports permitted simultaneously is 2; then the maximum amount of **<serverImageWithState>** elements that can be returned by this function at any time is also 2.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImagesWithState>
  <serverImageWithState>
    <!-- string, unique image id -->
    <id>c325fe04-7711-4968-962e-c88784eb2xyz</id>
    <!-- string, data center id -->
    <location>NA1</location>
    <!-- string -->
    <name>My New Customer Image</name>
    <!-- string -->
    <description>Image for producing web servers.</description>
    <operatingSystem>
      <!-- string -->
      <type>WINDOWS</type>
      <!-- string -->
      <displayName>WIN2008E/64</displayName>
    </operatingSystem>
    <!-- int -->
    <cpuCount>2</cpuCount>
    <!-- int -->
    <memoryMb>4096</memoryMb>
    <!-- int -->
    <osStorageGb>50</osStorageGb>
    <!-- 0-to-many -->
    <additionalDisk>
      <!-- string, unique disk id -->
      <id>ef49974c-87d0-400f-aa32-ee43559fdb1b</id>
      <!-- string -->
      <scsiId>1</scsiId>
      <!-- int -->
      <diskSizeGb>40</diskSizeGb>
      <!-- string -->
      <state>NORMAL</state>
    </additionalDisk>
    <!-- 0-to-many, string -->
    <softwareLabel>MSSQL2008R2E</softwareLabel>
    <!-- optional -->
    <source type="IMPORT">
      <!-- 0-to-many, type and value required, date optional -->
      <artifact type="MF" value="MyCustomerImage.mf" date="2008-09-29T02:49:45"/>
      <artifact type="OVF" value="MyCustomerImage.ovf" date="2008-09-
```

```

29T02:49:45"/>
    <artifact type="VMDK" value="MyCustomerImage-disk1.vmdk"
date="2008-09-29T02:49:45"/>
    <artifact type="VMDK" value="MyCustomerImage-disk2.vmdk"
date="2008-09-29T02:49:45"/>
</source>
<!-- string -->
<state>NORMAL</state>
<!-- optional timestamp, only present if Image is deployed -->
<deployedTime>2012-05-25T12:59:10.110Z</deployedTime>
<!-- optional same meaning as for Server, cannot be guaranteed for
Images and is considered purely informational -->
<machineStatus name="vmwareToolsApiVersion">
    <value>8295</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsVersionStatus">
    <value>CURRENT</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsRunningStatus">
    <value>RUNNING</value>
</machineStatus>
<!-- optional, as above -->
<status>
    <!-- string -->
    <action>IMAGE_IMPORT</action>
    <!-- timestamp -->
    <requestTime>2012-05-25T23:10:36.000Z</requestTime>
    <!-- string -->
    <userName>theUser</userName>
    <!-- optional, int -->
    <numberOfSteps>3</numberOfSteps>
    <!-- optional, timestamp -->
    <updateTime>2012-05-25T23:11:32.000Z</updateTime>
    <!-- 0-to-many -->
    <step>
        <!-- string -->
        <name>WAIT_FOR_OPERATION</name>
        <!-- int -->
        <number>3</number>
        <!-- optional int -->
        <percentComplete>50</percentComplete>
    </step>
    <!-- optional string, only present if operation has failed -->
    <failureReason>Operation timed out.</failureReason>
</status>
</serverImageWithState>
<serverImageWithState>
    ...
</serverImageWithState>
<serverImageWithState>
    ...
</serverImageWithState>
</ServerImagesWithState>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.3.4. Export Customer Image

Description

Starts the process of exporting a Customer Image for the supplied organization ID to an OVF Package on the organization's FTPS account.

This function takes the ID of the Customer Image to be exported and a prefix which is used to name each file within the resulting OVF Package.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/imageExport">https://<Cloud API URL>/oec/0.9/{org-id}/imageExport
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request

```
<NewImageExport xmlns="http://oec.api.opssource.net/schemas/server">
  <!-- string, image id -->
  <imageId>a28cab07-1234-4024-b894-2alcea39bd61</imageId>
  <!-- string, 1-90 characters in length -->
  <ovfPackagePrefix>MyCustomerImageExport</ovfPackagePrefix>
</NewImageExport>
```

imageId	Required; Identifies the Customer Image to be exported.
ovfPackagePrefix	Required; 1-90 characters in length. Used to name each of the constituent files of the resulting OVF Package. The permitted character set is (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is not permitted.

Response Details (descriptive – includes all optional)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<!-- id; string. ovfPackagePrefix; string. startDate; dateTime -->
<ImageExport id="43df-34trgh-54fr-v55f-65tgh768uf3-cd45"
  ovfPackagePrefix="MyCustomerImageExport"
  startDate="2012-02-15T23:10:36.000Z">
  <!--id string, image id -->
  <image id="e8ebc3cb-cced-4d63-865b-c514e19d6502">
    <!-- string, image name -->
    <name>my-image-name</name>
    <!--optional, string, image description -->
    <description>image description</description>
    <!-- string, data center id -->
    <location>NA1</location>
    <!-- string, OS display name -->
    <operatingSystem>REDHAT5/64</operatingSystem>
    <!-- int -->
    <cpuCount>1</cpuCount>
    <!-- int -->
    <memoryMb>4096</memoryMb>
    <!-- int -->
    <osStorageGb>10</osStorageGb>
    <!-- 0-to-many; scsiId; int. sizeGb; int -->
    <additionalDisk scsiId="1" sizeGb="52"/>
    <additionalDisk scsiId="4" sizeGb="200"/>
  </image>
  <status>
    <!-- string -->
    <action>IMAGE_EXPORT</action>
    <!-- timestamp -->
    <requestTime>2012-02-15T23:10:36.000Z</requestTime>
    <!-- string -->
    <userName>me</userName>
    <!-- optional, int -->
```

```

    <numberOfSteps>3</numberOfSteps>
    <!-- optional, timestamp -->
    <updateTime>2012-02-15T23:11:32.000Z</updateTime>
    <!-- 0-to-many -->
    <step>
    <!-- string -->
    <name>VMWARE_TASK_IN_OPERATION</name>
    <!-- int -->
    <number>3</number>
    <!-- optional, int -->
    <percentComplete>50</percentComplete>
    </step>
  </status>
</ImageExport>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	A required field is missing or does not contain a value.
400 (Error)	REASON_320	{ovfPackagePrefix} is invalid.
400 (Error)	REASON_390	Could not find image for ID for {org-id}.
400 (Error)	REASON_430	Maximum number of allowed simultaneous Customer Image Exports in Progress has already been reached for {org-id}.
400 (Error)	REASON_460	{ovfPackagePrefix} is likely to cause a file name conflict with an existing file or another export in progress.
400 (Error)	REASON_601	{image-id} has another operation in progress and cannot be exported until that operation is complete.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.3.5. List Customer Image Exports in Progress

Description

This function identifies the Customer Image Exports that are in progress for the supplied organization ID.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/imageExport</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ImageExports>
  <!-- id; string. ovfPackagePrefix; string. startDate; dateTime -->
  <ImageExport id="43df-34trgh-54fr-v55f-65tgh768uf3-cd45"
    ovfPackagePrefix="MyCustomerImageExport"
    startDate="2012-02-15T23:10:36.000Z">
    <!--id string, image id -->
    <image id="e8ebc3cb-cced-4d63-865b-c514e19d6502">
      <!-- string, image name -->
      <name>my-image-name</name>
      <!--optional, string, image description -->
      <description>image description</description>
      <!-- string, data center id -->
      <location>NA1</location>
      <!-- string, OS display name -->
      <operatingSystem>REDHAT5/64</operatingSystem>
      <!-- int -->
      <cpuCount>1</cpuCount>
      <!-- int -->
      <memoryMb>4096</memoryMb>
      <!-- int -->
      <osStorageGb>10</osStorageGb>
      <!-- 0-to-many; scsiId; int. sizeGb; int -->
      <additionalDisk scsiId="1" sizeGb="52"/>
      <additionalDisk scsiId="4" sizeGb="200"/>
    </image>
    <status>
      <!-- string -->
      <action>IMAGE_EXPORT</action>
      <!-- timestamp -->
      <requestTime>2012-02-15T23:10:36.000Z</requestTime>
      <!-- string -->
      <userName>me</userName>
      <!-- optional, int -->
      <numberOfSteps>3</numberOfSteps>
      <!-- optional, timestamp -->
      <updateTime>2012-02-15T23:11:32.000Z</updateTime>
      <!-- 0-to-many -->
      <step>
        <!-- string -->
        <name>VMWARE_TASK_IN_OPERATION</name>
        <!-- int -->
        <number>3</number>
        <!-- optional, int -->
        <percentComplete>50</percentComplete>
      </step>
    </status>
  </ImageExport>
  <ImageExport>
    ...
  </ImageExport>
</ImageExports>
```


Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.3.6. List Customer Image Export History

Description

This function will return a list describing the Customer Image Export History of the supplied organization ID.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/imageExportHistory?count=n</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Parameter Request Data

count=n	Optional; "n" is an integer with a default (and maximum) value of 100.
---------	--

Response Details

The response is a list of *<ImageExportRecord>* items in order of most recent first. The number of records returned can be limited with the "count" parameter.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ImageExportHistory>
  <!-- id; string. ovfPackagePrefix; string. startDate; dateTime -->
  <imageExportRecord
    id="e8ebc3cb-cced-4d63-865b-abdcdefg44"
    ovfPackagePrefix="export-my-customer-image"
    startDate="2012-04-30 10:26:04">
    <!-- string, user that initiated the export -->
    <userName>jsmith</userName>
    <!-- string, image id -->
    <image id="e8ebc3cb-cced-4d63-865b-c514e19d6502">
      <!-- string, image name -->
      <name>My Customer Image</name>
      <!-- string, optional, image description -->
      <description>Web server image template</description>
      <!-- string, image datacenter id -->
      <location>NA1</location>
      <!-- string, OS display name -->
      <operatingSystem>REDHAT5/64</operatingSystem>
      <!-- int -->
      <cpuCount>1</cpuCount>
      <!-- int -->
      <memoryMb>4096</memoryMb>
      <!-- int -->
      <osStorageGb>10</osStorageGb>
      <!-- 0-to-many; scsiId; int. sizeGb; int -->
      <additionalDisk scsiId="1" sizeGb="52"/>
      <additionalDisk scsiId="4" sizeGb="200"/>
    </image>
    <!-- dateTime -->
    <endDate>2012-04-30 12:06:43</endDate>
    <!-- string, "ERROR" or "SUCCESS" -->
    <result>SUCCESS</result>
    <!-- string -->
    <resultDetail>Image export successful</resultDetail>
    <!-- string -->
    <resultCode>OK</resultCode>
    <!-- 0-to-many; error case will have 0, success case will have at
least 3 -->
    <outputFile type="MF" name="MyCustomerImage.mf" date="2012-04-30
12:00:34" expiryDate="2012-05-14 12:00:34" sizeBytes="123"/>
  </imageExportRecord>
</ImageExportHistory>
```

```
<outputFile type="OVF" name="MyCustomerImage.ovf" date="2012-04-30
12:00:34" expiryDate="2012-05-14 12:00:34" sizeBytes="30123"/>
  <outputFile type="VMDK" name="MyCustomerImage-disk1.vmdk" date="2012-
04-30 12:04:22" expiryDate="2012-05-14 12:04:22" sizeBytes="1514523"/>
  <outputFile type="VMDK" name="MyCustomerImage-disk2.vmdk" date="2012-
04-30 12:06:12" expiryDate="2012-05-14 12:06:12" sizeBytes="2543373"/>
</imageExportRecord>
</ImageExportHistory>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.3.7. Copy Customer Image to Data Center

Description

Starts the process of copying a Customer Image to another data center in the same geographic region for the supplied organization.

This function takes the `sourceImageId` of the Customer Image to be copied, the target Customer Image name, an optional description, the target data center where the new image is to be created and an optional `ovfPackagePrefix`.

If an `ovfPackagePrefix` is provided, the system will place an OVF Package of the copied image in the organization's FTPS account folder. The OVF Package will not appear until the copying process is complete.

Meta data describing the disks attached to the Customer Image will be included in the copy created at the target data center. This might include disk speed definitions not available at the target data center. The *Deploy Server with Disk Speed* function can be used to set appropriate disk speeds at deployment time or the *Modify Customer Server Image* function can be used to update the disk speed definitions on the Customer Image.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request

```
<NewImageCopy xmlns="http://oec.api.opsource.net/schemas/server">
  <!-- Required, String, UUID of image to be copied -->
  <sourceImageId>5a18d6f0-eaca-11e1-8340-d93da27669ab </sourceImageId>
  <!-- Required, String, max 1-75 characters -->
  <targetImageName>My New Customer Image</targetImageName>
  <!-- Optional, String, max 1-255 characters -->
  <targetImageDescription>To be used as the template for all production web
servers.</targetImageDescription>
  <!-- Required, String, UUID of destination data center-->
  <targetLocation>NA3</targetLocation>
  <!-- Optional, String, 1-90 characters -->
  <ovfPackagePrefix>basicLampImage</ovfPackagePrefix>
</NewImageCopy>
```

<code>sourceImageId</code>	Required; UUID of the Customer Image to be copied.
<code>targetImageName</code>	Required; 1-75 characters, for display purposes. Permitted characters are (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is permitted.
<code>targetImageDescription</code>	Optional; 1-255 characters, for descriptive information.
<code>targetLocation</code>	Required; the ID of the data center where the new image will be created.
<code>ovfPackagePrefix</code>	Required; 1-90 characters in length. Used to name each of the constituent files of the resulting OVF Package. The permitted character set is (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is not permitted.

Response Details (descriptive – includes all optional)

```
<ImageCopy imageCopyId="5272e328-eaca-11e1-8340-d93da27669ab"
  sourceLocation="NA3"
  sourceImageId="5a18d6f0-eaca-11e1-8340-d93da27669ab"
  sourceImageName="BASIC LAMP Image"
  ovfPackagePrefix="basicLampImage"
  xmlns="http://oec.api.opsource.net/schemas/server">
  <targetImage>
    <!-- string, unique image id -->
    <id>c325fe04-7711-4968-962e-c88784eb2xyz</id>
```

```

<!-- string, data center id -->
<location>NA1</location>
<!-- string -->
<name>My New Customer Image</name>
<!-- string, optional -->
<description>Image for producing web servers.</description>
<operatingSystem>
  <!-- string -->
  <type>LINUX</type>
  <!-- string -->
  <displayName>REDHATES5/64</displayName>
</operatingSystem>
<!-- int -->
<cpuCount>2</cpuCount>
<!-- int -->
<memoryMb>4096</memoryMb>
<!-- int -->
<osStorageGb>50</osStorageGb>
<!-- 0-to-many -->
<additionalDisk>
  <!-- string, unique disk id -->
  <id>ef49974c-87d0-400f-aa32-ee43559fdb1b</id>
  <!-- string -->
  <scsiId>1</scsiId>
  <!-- int -->
  <diskSizeGb>40</diskSizeGb>
  <!-- string -->
  <state>NORMAL</state>
</additionalDisk>
<!-- 0-to-many, string -->
<softwareLabel>REDHAT5ES64</softwareLabel>
<!-- optional -->
<source type="COPY">
  <!-- 0-to-many, type and value required, date optional -->
  <artifact type="SERVER_IMAGE_ID" value="xb632974c-87d0-400f-aa32-
hb43559flk765" date="2008-09-29T02:49:45"/>
</source>
  <!-- string; e.g. 'NORMAL', 'FAILED_ADD', 'PENDING_CHANGE' -->
  <state>PENDING_CHANGE</state>
  <!-- optional timestamp, only present if Image is deployed -->
  <deployedTime>2012-05-25T12:59:10.110Z</deployedTime>
  <!-- optional same meaning as for Server, cannot be guaranteed for
Images and is considered purely informational -->
  <machineStatus name="vmwareToolsApiVersion">
    <value>8295</value>
  </machineStatus>
  <!-- optional, as above -->
  <machineStatus name="vmwareToolsVersionStatus">
    <value>CURRENT</value>
  </machineStatus>
  <!-- optional, as above -->
  <machineStatus name="vmwareToolsRunningStatus">
    <value>NOT_RUNNING</value>
  </machineStatus>
  <!-- optional, only present when an operation is in progress -->
  <status>
    <!-- string -->
    <action>COPY_CUSTOMER_IMAGE</action>
    <!-- timestamp -->
    <requestTime>2012-05-25T23:10:36.000Z</requestTime>
    <!-- string -->
    <userName>theUser</userName>
    <!-- optional, int -->
    <numberOfSteps>3</numberOfSteps>
    <!-- optional, timestamp -->
    <updateTime>2012-05-25T23:11:32.000Z</updateTime>
    <!-- 0-to-many -->
    <step>
      <!-- string -->

```

```

        <name>WAIT_FOR_OPERATION</name>
        <!-- int -->
        <number>3</number>
        <!-- optional int -->
        <percentComplete>50</percentComplete>
    </step>
    <!-- optional string, only present if operation has failed -->
    <failureReason>Operation timed out.</failureReason>
</status>
</targetImage>
</ImageCopy>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_11	Potentially Recoverable Failure. The call can be retried - contact support if the failure persists more than a couple of times.
400 (Error)	REASON_12	Insufficient data storage available to copy {sourcelmageld}.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	A required field is missing or does not contain a value.
400 (Error)	REASON_320	A required field contains an invalid value.
400 (Error)	REASON_390	Could not find image {sourcelmageld} for organization {org-id}.
400 (Error)	REASON_391	{targetImageName} must be unique for organization {org-id} and {targetLocation}.
400 (Error)	REASON_430	Maximum number of allowed simultaneous Customer Image Copies has already been reached for {org-id}.
400 (Error)	REASON_451	One or more of the OVF or VMDK files is missing or inaccessible.
400 (Error)	REASON_453	Unexpected VMware error during copy process.
400 (Error)	REASON_460	{ovfPackagePrefix} is likely to cause a file name conflict with an existing OVF Package or another Customer Image copying process in progress.
400 (Error)	REASON_601	{sourcelmageld} has another operation in progress and cannot be copied until that operation is complete.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.
400 (Error)	REASON_770	{targetLocation} is invalid, is unavailable to {org-id} or is the location where {sourcelmageld} resides.
400 (Error)	REASON_771	{targetLocation} data center has a value for MAX_TOTAL_IMAGE_STORAGE_GB (see List Data Centers (with Parameters) - Maintenance), which is less than the storage consumed by the source Customer Image {sourcelmageld}.
400 (Error)	REASON_820	VMware tools not installed on the {sourcelmageld}.
400 (Error)	REASON_821	VMware tools was not running when the {sourcelmageld} was started.
400 (Error)	REASON_822	The version of VMware Tools installed on {sourcelmageld} is not supported.

2.3.8. List Customer Image Copying in Progress

Description

This function will return a list describing the status of any images being copied between locations for the supplied organization {org-id}.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

The response is a list of *<imageCopy>* elements contained in an *<ImageCopies>* element. The size of the list is limited by the maximum number of copies that are permitted in progress at one time for the organization. Initially; limited to two.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ImageCopies xmlns="http://oec.api.opssource.net/schemas/server">
  <!--Zero or more repetitions-->
  <imageCopy imageCopyId="5272e328-eaca-11e1-8340-d93da27669ab"
    sourceLocation="NA3"
    sourceImageId="5a18d6f0-eaca-11e1-8340-d93da27669ab"
    sourceImageName="BASIC LAMP Image"
    ovfPackagePrefix="basicLampImage">
    <targetImage>
      <!-- string, unique image id -->
      <id>c325fe04-7711-4968-962e-c88784eb2xyz</id>
      <!-- string, data center id -->
      <location>NA1</location>
      <!-- string -->
      <name>My New Customer Image</name>
      <!-- string, optional -->
      <description>Image for producing web servers.</description>
      <operatingSystem>
        <!-- string -->
        <type>LINUX</type>
        <!-- string -->
        <displayName>REDHATES5/64</displayName>
      </operatingSystem>
      <!-- int -->
      <cpuCount>2</cpuCount>
      <!-- int -->
      <memoryMb>4096</memoryMb>
      <!-- int -->
      <osStorageGb>50</osStorageGb>
      <!-- 0-to-many -->
      <additionalDisk>
        <!-- string, unique disk id -->
        <id>ef49974c-87d0-400f-aa32-ee43559fdb1b</id>
        <!-- string -->
        <scsiId>1</scsiId>
        <!-- int -->
        <diskSizeGb>40</diskSizeGb>
        <!-- string -->
        <state>NORMAL</state>
      </additionalDisk>
      <!-- 0-to-many, string -->
      <softwareLabel>REDHAT5ES64</softwareLabel>
      <!-- optional -->
      <source type="COPY">
        <!-- 0-to-many, type and value required, date optional -->
        <artifact type="SERVER_IMAGE_ID" value="xb632974c-87d0-400f-aa32-hb43559flk765" date="2008-09-29T02:49:45"/>
      </source>
    </targetImage>
  </imageCopy>
</ImageCopies>
```

```

</source>
<!-- string; e.g. 'NORMAL', 'FAILED_ADD', 'PENDING_CHANGE' -->
<state>PENDING_CHANGE</state>
<!-- optional timestamp, only present if Image is deployed -->
<deployedTime>2012-05-25T12:59:10.110Z</deployedTime>
<!-- optional same meaning as for Server, cannot be guaranteed for
Images and is considered purely informational -->
<machineStatus name="vmwareToolsApiVersion">
  <value>8295</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsVersionStatus">
  <value>CURRENT</value>
</machineStatus>
<!-- optional, as above -->
<machineStatus name="vmwareToolsRunningStatus">
  <value>NOT_RUNNING</value>
</machineStatus>
<!-- optional, only present when an operation is in progress -->
<status>
  <!-- string -->
  <action>COPY_CUSTOMER_IMAGE</action>
  <!-- timestamp -->
  <requestTime>2012-05-25T23:10:36.000Z</requestTime>
  <!-- string -->
  <userName>theUser</userName>
  <!-- optional, int -->
  <numberOfSteps>3</numberOfSteps>
  <!-- optional, timestamp -->
  <updateTime>2012-05-25T23:11:32.000Z</updateTime>
  <!-- 0-to-many -->
  <step>
    <!-- string -->
    <name>WAIT_FOR_OPERATION</name>
    <!-- int -->
    <number>3</number>
    <!-- optional int -->
    <percentComplete>50</percentComplete>
  </step>
  <!-- optional string, only present if operation has failed -->
  <failureReason>Operation timed out.</failureReason>
</status>
</targetImage>
</imageCopy>
</ImageCopies>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.3.9. Copy OVF Package from Remote Geo

Description

Starts the process of copying an OVF Package resident on the FTPS account of the organization *{org-id}*, at a particular geographic region to another geographic region. From there it can be imported to a data center at that region as a new Customer Image (see *Import Customer Image*).

This API function can only be called by the Primary Administrator user or a user with the "Create Image" role.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/remoteOvfPackageCopy">https://<Cloud API URL>/oec/0.9/{org-id}/remoteOvfPackageCopy
Request Type	HTTP POST
Supported for	N/A

Request

```
<NewRemoteOvfCopy xmlns="http://oec.api.opsource.net/schemas/server">
  <sourceGeoId>4503ed6e-2e44-11e2-81d1-4b7e977ca8d3</sourceGeoId>
  <sourceOvfPackage>myOvfPackage.mf</sourceOvfPackage>
</NewRemoteOvfCopy>
```

sourceGeoId	Required; UUID of the geographic location where the <sourceOvfPackage> is resident. <sourceGeoId> corresponds to the value of the <i><id></i> child element of a <i><geo></i> element returned by the <i>List Multi-Geography Regions with Key</i> API function.
sourceOvfPackage	<p>Required; <sourceOvfPackage> is the full name of the manifest file describing the contents of the OVF Package, including the ".mf" extension.</p> <p><sourceOvfPackage> is case insensitive.</p> <p>Note: The list of OVF Packages available at the source geography can be determined by the <i>List OVF Packages</i> API function using the appropriate <i><Cloud API URL></i> for that geography.</p> <p>The value to use for <sourceOvfPackage> on this API is retrieved from the <i>name</i> attribute of each <i><ovfPackage></i> element returned by the <i>List OVF Packages</i> function.</p> <p>All files described by the <sourceOvfPackage> manifest will be copied to the destination geography.</p>

Response Details (descriptive – includes all optional)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsource.net/schemas/server">
  <operation>Copy Remote OVF Package</operation>
  <result>SUCCESS</result>
  <resultDetail>Request to Copy OVF Package "myRedHat564.mf" has been issued
- see additionalInformation for copy id</resultDetail>
  <resultCode>RESULT_0</resultCode>
  <additionalInformation name="remoteOvfPackageCopy.copyId">
    <value>26cafdc4-66ad-11e1-b5d6-0030487e0302</value>
  </additionalInformation>
  <!-- Note this matches geoKey as returned by the List Multi-Geography
Regions with Key function -->
  <additionalInformation name="remoteOvfPackageCopy.sourceGeoKey">
    <value>europe</value>
  </additionalInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_6	The geographic region {sourceGeold} is currently in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_160	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	A required field is missing or does not contain a value.
400 (Error)	REASON_430	Maximum number of allowed simultaneous copies has already been reached for {org-id}.
400 (Error)	REASON_460	{sourceOvfPackage} is likely to cause a file name conflict with an existing OVF Package or another remote copying process in progress.
400 (Error)	REASON_461	OVF package with specified name ({sourceOvfPackage}) does not exist at the source geographic region {sourceGeold}.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.3.10. List Remote OVF Package Copying in Progress

Description

Returns a list describing the status of any OVF Packages being copied from other geographic regions into the geographic region identified by <Cloud API URL> for the organization identified by {org-id}.

This API function provides paging and filtering functionality. For details see **Paging and Filtering for List API Functions**.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/remoteOvfPackageCopy?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <i>Filter Optional Parameters:</i> <code>&id={remoteCopyId}</code> <code>&sourceGeoKey=</code> <code>&startDate=</code> <code>&packageName=</code>
Request Type	HTTP GET
Supported for	N/A

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual copy in progress.	Yes	Yes
startDate	String	Identifies the start date of the copying process.	Yes	Yes
sourceGeoKey	String	Identifies the source geographic region for the OVF Package being copied. See <i>List Multi-Geography Data Centers</i> .	Yes	Yes
packageName	String	Identifies the name of the ".mf" file defining an OVF Package.	Yes	Yes

Response Details

The response is a list of <ovfCopy> elements contained in an <OvfRemoteCopies> element. The size of the list is limited by the maximum number of copies that are permitted in progress at one time for the organization. Initially; limited to two.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<OvfRemoteCopies pageSize="250" totalCount="1" pageCount="1" pageNumber="1"
... >
  <ovfCopy sourceGeoKey="europe" remoteCopyId="5ff0aef4-00d5-434a-a3aa-
5c3456617700">
    <name>myRedHat5640vfPackage.mf</name>
    <state>PENDING_ADD</state>
    <status>
      <action>COPY_REMOTE_OVF_PACKAGE</action>
```

```
<requestTime>2012-11-16T11:59:59.000Z</requestTime>
<userName>staylor</userName>
<numberOfSteps>4</numberOfSteps>
<updateTime>2012-11-16T11:59:59.000Z</updateTime>
<step>
  <name>SCHEDULE_COPY_AT_SOURCE</name>
  <number>1</number>
  <percentComplete>100</percentComplete>
</step>
</status>
</ovfCopy>
</OvfRemoteCopies>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.3.11. List Remote OVF Package Copy History

Description

This function will return a list describing the OVF Packages that have been being copied into the geographic region identified by <Cloud API URL> for the organization identified by {org-id}.

This API function provides paging and filtering functionality. For details see **Paging and Filtering for List API Functions**.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/remoteOvfPackageCopyHistory?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <i>Filter Optional Parameters:</i> <code>&id=</code> <code>&sourceGeoKey=</code> <code>&startDate=</code> <code>&packageName=</code>
Request Type	HTTP GET
Supported for	N/A

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual history record.	Yes	Yes
startDate	String	Identifies the start date of the copying process.	Yes	Yes
sourceGeoKey	String	Identifies the source geographic region for the OVF Package being copied. See <i>List Multi-Geography Data Centers</i> .	Yes	Yes
packageName	String	Identifies the name of the “.mf” file defining an OVF Package.	Yes	Yes

Response Details

The response is a list of <copyRemoteOvfPackageRecord> elements contained in a <CopyRemoteOvfPackageHistory> element.

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <CopyRemoteOvfPackageHistory pageSize="250" totalCount="2" pageCount="2" pageNumber="1" xmlns="http://oec.api.opsource.net/schemas/server" ... > <copyRemoteOvfPackageRecord sourceGeoKey="europe" id="9ce9df00-aa65-4aea- b378-afd6ecef17f"> <mfFile sizeBytes="159" name="myRedHat564OVFPackage-2011-04-22-09-40.mf"/> <ovfFile sizeBytes="6292" name="myRedHat564OVFPackage-2011-04-22-09- 40.ovf"/> </copyRemoteOvfPackageRecord> </CopyRemoteOvfPackageHistory></pre>

```

    <!-- 1 to many repetitions -->
    <vmdkFile sizeBytes="1093238784" name="myRedHat564OVFPackage-2011-04-22-
09-40-disk1.vmdk"/>
    <startDate>2012-11-06T14:12:59.000Z</startDate>
    <endDate>2012-11-06T14:20:00.000Z</endDate>
    <result>SUCCESS</result>
  </copyRemoteOvfPackageRecord>
  <copyRemoteOvfPackageRecord sourceGeoKey="europe" id="42989257-5975-4aae-
bf7b-4edb039e50b6">
    <startDate>2012-11-08T10:51:52.000Z</startDate>
    <endDate>2012-11-08T11:00:00.000Z</endDate>
    <result>ERROR</result>
  </copyRemoteOvfPackageRecord>
</CopyRemoteOvfPackageHistory>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_163	If <i>sourceGeoKey</i> was specified in a filter, the value provided does not exist.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.4. Server API

Provides a set of operations to interact with customers' server VMs – including APIs for deploying, starting, stopping, modifying, deleting and cloning servers.

2.4.1. Modify Server

Description

Changes the Name, Description, CPU or RAM profile of an existing deployed server. Requires your organization ID and the ID of the target server. The proposed total number of processors and total amount of RAM (in MBs) is supplied.

For the possible CPU and RAM values that can be deployed at each data center, see the Community article [What is the Maximum CPU and RAM I can allocate to a Cloud Server?](#)

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Parameter Request Data (include only fields being changed with "&" separating each parameter)

name=	Name of the server (max. 75 char)
description=	Description of the server (max. 255 char). Note: a "description" parameter supplied without a corresponding value result in an empty server description being set.
cpuCount=	Number of virtual CPU's (e.g. 1, 2, 4 etc.)
memory=	Memory (in MB). Value must be represent a GB integer (e.g. 1024,, 2048, 3072, 4096, etc.)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Edit Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server edited</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_56	Monitoring for data center {0} is in a maintenance state. <i>Note that this response will only be returned if Cloud Monitoring is enabled on the Server and "name" is included in the payload.</i>
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	Invalid input data: name, if specified, exceeds 75 chars description, if specified, exceeds 255 chars cpuCount, if specified, not a valid number memory, if specified, not a valid number or not in (configurable) range
400 (Error)	REASON_392	Operation in progress on Server {server-id}
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}
400 (Error)	REASON_819	cpuCount ({0}) requires the Server to have Virtual Hardware version {version} or greater.

		memoryMb ({0}) exceeds maximum allowed value ({maximum permitted}) supported by the Servers Virtual Hardware version.
--	--	---

2.4.2. Add Storage to Server

Description

Creates an additional disk/volume of storage for an existing deployed server. Requires your organization ID and the ID of the target server. The amount of storage to be added is specified in gigabytes and must be an integer within the range allowed in the Geographic Region. The maximum number of additional disks that can be added to a Cloud Server (besides the OS disk) is 13.

The range of storage allowed in a Geographic Region is not currently available programmatically, but it will be added in a future release. In the meantime, the current allowable ranges are described in the Community article [Introduction to Cloud Server Disks and Disk Speeds \(Tiered Storage\)](#).

Some data centers offer multiple disk speeds which are also described in the introduction article. The speeds supported by a data center are described by **diskSpeed** elements in the response to the **List Data Centers (with Parameters)** function. The **Add Storage to Server** function supports an optional **speed** parameter, which must be a valid speed for the data center the server belongs to. Use the value of the **diskSpeed** element **id** attribute in the **List Data Centers (with Parameters)** response for that data center, to populate the optional **speed** parameter.

When a request to add storage to a server is processed, the **resultDetail** response now includes the SCSI ID that will be assigned to the new volume when it is available. The **Deployed Servers on Network with Disks** function allows you to examine the state of each disk on the server. When the state is NORMAL, the volume is ready for use.

On occasion a downstream failure can occur during the asynchronous phase of adding storage to a Server. Such failures are automatically cleaned up and logged by the system. In this case the failure will be visible as an entry in the *Administrator Logs Report*, and the *Add Storage to Server* request can be repeated safely.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?addLocalStorage&amount=10</code> <i>Optional Parameters:</i> <code>&speed=<diskSpeed.id> (defaults to STANDARD)</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (includes sample values)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Add Local Storage</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>10 GB of local storage is being added to server "Another test server" on SCSI ID 2</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_11	Potentially Recoverable Failure at Server - supporting retry.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_320	Additional local storage amount {amount} is not in range for data center.
400 (Error)	REASON_320	You may only add a maximum of 13 additional storage drives.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_800	Applies only to data centers of the VMware hypervisor type. VMware Tools be installed on the Server for this operation to be executed.

400 (Error)	REASON_826	The requested disk speed is not available on the data center.
-------------	------------	---

Notes:

- REASON_10 indicates a non-recoverable failure occurred when attempting to add the disk. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, you may not take any further actions against the server.
- REASON_11 indicates a potentially recoverable failure occurred when attempting to add storage to the server. For example; a blocking operation already in progress on the server. Upon receiving this response, the system will "reset" the server back to normal, allowing you to attempt the storage addition again. Open a Support Case if repeated attempts are unsuccessful.

In both cases; details of the failure are available in the Audit Log Report.

2.4.3. Remove Storage from Server

Description

Removes a previously added volume of storage from an existing deployed server. Requires your organization ID, the ID of the target server and the ID of the target disk.

The **Deployed Servers on Network with Disks** function allows you to examine the disks on the server to ascertain the ID of the disk you wish to remove.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/disk/{disk-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (includes sample values)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Delete Local Storage</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Disk Delete" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION – Disk is not in expected state.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_392	Operation in progress on Server with Id <SERVER_ID>.
400 (Error)	REASON_394	Disk, {disk-id} does not exist.
400 (Error)	REASON_395	Could not find server, {server-id} for {org-id}.
400 (Error)	REASON_696	Cannot delete operating system disk which is located on SCSI Id 0.

2.4.4. Change Server Disk Speed

Description

This function changes the speed of a disk ({disk-id}) attached to a deployed server ({server-id}). The disk can be the OS volume or any additionally added volume. {disk-id} is the UUID of the disk in question rather than the SCSI ID of the disk.

The standard Status response will indicate whether or not the request to change the disk speed of the identified disk has been successful. Change Disk Speed is an asynchronous operation, should it fail the disk will return to its previous state and an error will be logged in the Administrator Log Report.

Note: refer to List Data Centers (with Parameters) for further information on disk speeds.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/disk/{disk-id}/changeSpeed</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<ChangeDiskSpeed xmlns="http://oec.api.opsource.net/schemas/server">
<!-- Disk speed values from List Data Centers (with Parameters) -->
  <speed>STANDARD</speed>
</ChangeDiskSpeed>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Change Server Disk Speed</operation>
  <result>SUCCESS</result>
  <resultDetail>Change Server Disk Speed Issued</resultDetail>
  <resultCode>RESULT_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	<speed> is invalid or missing.
400 (Error)	REASON_392	Operation in progress on Server, {server-id}.
400 (Error)	REASON_394	Disk, {disk-id} does not exist.
400 (Error)	REASON_395	Could not find server, {server-id} for {org-id}.
400 (Error)	REASON_826	Requested speed, <speed> is not available for use. Note: the reason for a disk speed not being available is visible on the <i>List Data Centers (with Parameters)</i> function.

2.4.5. Change Server Disk Size

Description

This function allows the user to **increase** the size of a disk ({disk-id}) attached to a deployed server ({server-id}). The disk can be the OS volume or any additionally added volume. {disk-id} is the UUID of the disk in question rather than the SCSI ID of the disk.

The standard Status response will indicate whether or not the request to change the size of the identified disk has been successful. Change Server Disk Size is an asynchronous operation, should it fail the disk will return to its previous state and an error will be logged in the Administrator Log Report.

Disk size **reduction** is not supported.

Important note for Servers deployed on Hyper-V based Private Cloud data centers. Hyper-V requires the server to be stopped for this operation. The system will shutdown the server as part of the process if the user has not already done so. In this case, the server will be restarted on completion.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/disk/{disk-id}/changeSize</code>
Request Type	HTTP POST
Roles	Primary Administrator and Server
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<ChangeDiskSize xmlns="http://oec.api.opsource.net/schemas/server">
  <!-- Required, Positive Integer -->
  <newSizeGb>125</newSizeGb>
</ChangeDiskSize>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Change Server Disk Size</operation>
  <result>SUCCESS</result>
  <resultDetail>Server 'Change Server Disk Size' Issued</resultDetail>
  <resultCode>RESULT_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_40	Invalid State Transition – Server {server-id} must be in a NORMAL state.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	<speed> is invalid or missing.
400 (Error)	REASON_392	Operation in progress on Server, {server-id}.
400 (Error)	REASON_394	Disk, {disk-id} does not exist.
400 (Error)	REASON_395	Could not find server, {server-id} for {org-id}.

2.4.6. Clone Server to Create Customer Image

Description

Initiates a clone of a server to create a Customer Image. Note that the Customer Image name is required to be unique in a given data center. The **Does Image Name Exist?** function is available to identify whether a proposed name is unique. REASON_391 will be returned if the name is not unique.

Note that it is not possible to perform this action on a server if:

- The server does not have VMware Tools installed and running. The **List Servers (with Parameters) - Backup** function can be used to identify the server's state.
- The total amount of storage on the server exceeds the value permitted for the data center as specified by the *MAX_TOTAL_IMAGE_STORAGE_GB* property of the **List Data Centers (with Parameters) - Maintenance** function.
- This function can be executed for Cloud Servers with Cloud Backup enabled.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?clone={newImageName}&desc={newImageDescription}</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Parameter Request Data (include only fields being changed with "&" separating each parameter)

newImageName=	Name is a mandatory field and can't be empty Name must not be more than 75 characters in length. Name must be at least 1 characters in length. Permitted characters are (within and excluding the quotes): "a-zA-Z0-9_+=#.,;()-". Note that the "space" character is permitted.
newImageDescription=	Optional. Description must be 255 characters or less.

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns9:Status xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..> <ns9:operation>Clone Server</ns9:operation> <ns9:result>SUCCESS</ns9:result> <ns9:resultDetail>Server "Clone" issued</ns9:resultDetail> <ns9:resultCode>REASON_0</ns9:resultCode> </ns9:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_320	Invalid data input. Name/Description content or length.
400 (Error)	REASON_377	Hyper-V data centers only. Server with Id {serverId} is started. Server cannot be started.
400 (Error)	REASON_379	Server {server-id} cannot be cloned because the following disks are in some pending state: {SCSI ID}. Server {server-id} cannot be cloned because the following disks are in some failed state:{SCSI ID}.
400 (Error)	REASON_391	{datacenterId}: Server or Server Image name "{imageName}" is already taken.
400 (Error)	REASON_392	Operation in progress on Server with Id {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_697	The Server cannot be cloned because its total storage ({number})

		GB) exceeds the maximum allowed total image storage ({number} GB). See note above about <i>MAX_TOTAL_IMAGE_STORAGE_GB</i> .
400 (Error)	REASON_800	VMWare Tools are not installed on the source Server.

2.4.7. Create Server Anti-Affinity Rule

Description

Creates a new Server Anti-Affinity Rule between **two** servers on the same Cloud Network (MCP 1.0) or Network Domain (MCP 2.0).

The rule ensures that the two servers will not reside on the same VMware ESX host. The order in which the servers are specified has no bearing on the behavior and is not guaranteed to be maintained on the **List Server Anti-Affinity Rules** API response.

Although the Cloud Network (MCP 1.0) or Network Domain (MCP 2.0) is not specified on the request, it is derived from and checked against both servers and an error code will be returned if the servers supplied are not on the same Cloud Network or Network Domain.

Note (MCP 2.0 only) that Server Anti-Affinity Rules is an ADVANCED Network Domain feature. See REASON_546.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/antiAffinityRule">https://<Cloud API URL>/oec/0.9/{org-id}/antiAffinityRule
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<NewAntiAffinityRule xmlns="http://oec.api.opsource.net/schemas/server">
  <serverId>40285f24-300f-11e2-b574-1a6dd6e90d84</serverId>
  <serverId>45912c48-90fe-j4fu-14ds-43kj5675sfg</serverId>
</NewAntiAffinityRule>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Create Anti Affinity Rule</operation>
  <result>SUCCESS</result>
  <resultDetail>Success message</resultDetail>
  <resultCode>RESULT_0</resultCode>
  <additionalInformation name="antiaffinityrule.id">
    <value>20ce6bee-a4ed-11e1-a91c-0030487e0302</value>
  </additionalInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	{server-id} value missing or invalid.
400 (Error)	REASON_392	One or both of the supplied servers is in an invalid state. Valid states are "NORMAL" and "PENDING_CHANGE". The state of a server can be checked using the List Servers (with Parameters) - Backup function.
400 (Error)	REASON_395	One of both of the supplied servers does not belong to {org-id}.
400 (Error)	REASON_546	Anti-Affinity Rules may only be created on ADVANCED Network Domains.
400 (Error)	REASON_691	MCP 1.0: All Servers in an MCP 1.0 Anti-Affinity Rule must be deployed in the same Network. MCP 2.0: All Servers in an MCP 2.0 Anti-Affinity Rule must be deployed in the same Network Domain.
400 (Error)	REASON_692	A server can only exist in one server anti-affinity rule.
400 (Error)	REASON_694	Anti-affinity rules are not enabled on the appropriate infrastructure.

		This error should never be returned in normal usage. Please open a support case if it does occur.
--	--	---

2.4.8. Delete Server Anti-Affinity Rule

Description

Completely removes the server anti-affinity rule identified by {rule-id} from the system for the organization; {org-id}. This API function can be used for MCP 1.0 and MCP 2.0 data centers.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/antiAffinityRule/{rule-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Delete Anti Affinity Rule</operation>
  <result>SUCCESS</result>
  <resultDetail>Success message</resultDetail>
  <resultCode>RESULT_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_40	The rule is in a state that does not support deletion. Note that the <i>state</i> of a rule can be determined with the List Server Anti-Affinity Rules function.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_693	The server anti-affinity rule identified by {rule-id} does not belong to organisation; {org-id}.

2.5. Cloud Backup API

Provides a set of operations to manage Backup services for deployed Servers – including APIs for enabling/disabling Backup for a Server, and deploying and managing different types of Backup Clients for the Server.

Please see the following Community article for details of the Cloud Backup service, including Service Plan definitions: [Cloud Backup – Service Introduction](#)

2.5.1. Enable Backup for a Server

Enables the Backup service for a deployed Server. Requires the Organization ID, Server ID and the Service Plan being enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<!-- servicePlan is mandatory. One of "Essentials", "Advanced" or "Enterprise" -->
<NewBackup xmlns="http://oec.api.opssource.net/schemas/backup"
servicePlan="Advanced"/>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Enable Backup for Server</operation>
  <result>SUCCESS</result>
  <resultDetail>Backup enabled for Server - see additionalInformation for Asset ID</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	{servicePlan} attribute is missing or invalid.
400 (Error)	REASON_378	Server {server-id} is in an incompatible state for Backup to be enabled. It is recommended to only enable Backup on servers in a NORMAL state.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_542	Backup is in the process of being enabled for {server-id}.
400 (Error)	REASON_550	Backup is already enabled for {server-id}.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.5.2. Disable Backup for a Server

Disables the Backup service for a deployed Server. Requires the Organization ID and the Server ID for the server. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup?disable">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup?disable
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <Status> <operation>Disable Backup</operation> <result>SUCCESS</result> <resultDetail>Backup disabled for Server</resultDetail> <resultCode>REASON_0</resultCode> </Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION – Server {server-id} must be in a NORMAL state.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_548	All Backup Clients must be removed from {server-id} before the Backup service can be disabled for the Server.

2.5.3. Change Backup Service Plan

Changes the Service Plan for a Backup enabled Server. Requires the Organization ID, Server ID and new Service Plan. The user must be the Primary Administrator or a Sub-Administrator with the "backup" role.

Important note: the Service Plan may not be changed (downgraded) from Enterprise if any non-File System Backup Clients have been added to the Server.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/modify</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<!-- servicePlan is mandatory. One of "Essentials", "Advanced" or "Enterprise" -->
-->
<ModifyBackup xmlns="http://oec.api.opsource.net/schemas/backup"
servicePlan="Advanced"/>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Change Backup Service Plan</operation>
  <result>SUCCESS</result>
  <resultDetail>Backup Service Plan changed</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	{servicePlan} attribute is missing or invalid.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.
400 (Error)	REASON_546	The Service Plan may not be changed to {servicePlan} if any non-File System Backup Clients have been added to the Server. Remove all non-File System Backup Clients and then try again.

2.5.4. Get Backup Client Types

Returns the list of Backup Client types available for a deployed Server. Requires the Organization ID and the Server ID for the Server, and that the Server has already been enabled for Backup. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/type</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<BackupClientTypes xmlns="http://oec.api.opsource.net/schemas/backup">
  <!--Zero or more repetitions, all attributes mandatory -->
  <backupClientType type="FA.Linux" isFileSystem="true" description="Linux
File system"/>
</BackupClientTypes>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.

2.5.5. Get Storage Policies

Returns the list of Storage Policies available for the Backup service on a deployed Server. Requires the Organization ID and the Server ID for the server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/storagePolicy</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <BackupStoragePolicies xmlns="http://oec.api.opsources.net/schemas/backup"> <!-- One or more repetitions. Attribute secondaryLocation is optional, all others mandatory --> <storagePolicy retentionPeriodInDays="30" name="30 Day Storage Policy + Secondary Copy" secondaryLocation="Primary"/> </BackupStoragePolicies></pre>

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.

2.5.6. Get Schedule Policies

Returns the list of Schedule Policies available for the Backup service on a deployed Server. Requires the Organization ID and the Server ID for the server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/schedulePolicy</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<BackupSchedulePolicies xmlns="http://oec.api.opsource.net/schemas/backup">
  <!--One or more repetitions, all attributes mandatory -->
  <schedulePolicy name="12AM - 6AM" description="Daily backup will start
between 12AM - 6AM"/>
</BackupSchedulePolicies>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.

2.5.7. Add Backup Client

Provisions a new Backup Client for a deployed Server. Requires the Organization ID, the Server ID for the server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the "backup" role.

Additionally the following fields are required:

- Backup Client type; see the **Get Backup Client Types** function.
- Storage Policy name; see the **Get Storage Policies** function.
- Schedule Policy name; see the **Get Schedule Policies** function.

Optionally, *alerting* can be added. If the *alerting* element is included *trigger* and at least one *emailAddress* are mandatory. See the sample request below.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<NewBackupClient xmlns="http://oec.api.opsource.net/schemas/backup">
  <!-- String; mandatory. -->
  <type>FA.Linux</type>
  <!-- String; mandatory. -->
  <storagePolicyName>30 Day Storage Policy + Secondary Copy
</storagePolicyName>
  <!-- String; mandatory. -->
  <schedulePolicyName>6PM - 12AM</schedulePolicyName>
  <!-- Optional -->
  <alerting>
    <!-- One of ON_FAILURE / ON_SUCCESS / ON_SUCCESS_OR_FAILURE -->
    <trigger>ON_SUCCESS</trigger>
    <!-- 1 or more distinct occurrences -->
    <emailAddress>monitoring@example.com</emailAddress>
  </alerting>
</NewBackupClient>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsource.net/schemas/general">
  <operation>Add Backup Client</operation>
  <result>SUCCESS</result>
  <resultDetail>Backup client added</resultDetail>
  <resultCode>REASON_0</resultCode>
  <additionalInformation name="backupClient.id"><value>2f357232-bc95-4508-
a491-d75b5682e925</value></additionalInformation>
  <additionalInformation
name="backupClient.downloadUrl"><value>https://ftp.example.com/PCS/BackupClien
tInstallerDownload/7786ecd024ed47900a068f27e7867a08049d6d8c</value></additiona
lInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.

400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	<i>type</i> must contain a valid Backup Client type.
400 (Error)	REASON_320	<i>storagePolicyName</i> must contain a valid Storage Policy name.
400 (Error)	REASON_320	<i>schedulePolicyName</i> must contain a valid Schedule Policy name.
400 (Error)	REASON_320	The optional field <i>alerting</i> , must contain <i>trigger</i> and <i>at least one emailAddress</i> element if provided.
400 (Error)	REASON_320	<i>Each emailAddress</i> element must contain a single valid email address.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_542	Backup service is in the process of being enabled for {server-id}.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.

2.5.8. Remove Backup Client

Removes a Backup Client for the Backup service on a deployed Server. Requires the Organization ID, Server ID and Backup Client ID for the relevant Backup Client and Server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Note that the Backup Client ID is available from the *backupClient.id additionalInformation* element in the response received when the Backup Client was originally added. See **Add Backup Client** for details.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}?remove</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <Status> <operation>Remove Backup Client</operation> <result>SUCCESS</result> <resultDetail>Backup Client removed</resultDetail> <resultCode>REASON_0</resultCode> </Status></pre>

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.
400 (Error)	REASON_545	Backup Client {backup-client-id} for server {server-id} does not exist.
400 (Error)	REASON_547	Backup Client {backup-client-id} cannot be removed because it has a job in progress.

2.5.9. Modify Backup Client

Modifies the settings of an existing Backup Client for a deployed Server.

Requires the Organization ID, the Server ID for the server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

Note that the Backup Client type cannot be changed.

The following fields are required:

- Storage Policy name; see the **Get Storage Policies** function.
- Schedule Policy name; see the **Get Schedule Policies** function.

Optionally, *alerting* can be added or modified. If the *alerting* element is included *trigger* and at least one *emailAddress* are mandatory. See the sample request below.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}/modify</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<ModifyBackupClient xmlns="http://oec.api.opsource.net/schemas/backup">
  <!-- String; mandatory. -->
  <storagePolicyName>30 Day Storage Policy + Secondary Copy
</storagePolicyName>
  <!-- String; mandatory. -->
  <schedulePolicyName> 6PM - 12AM</schedulePolicyName>
  <!-- Optional -->
  <alerting>
    <!-- One of ON_FAILURE / ON_SUCCESS / ON_SUCCESS_OR_FAILURE -->
    <trigger>ON_SUCCESS</trigger>
    <!-- 1 or more distinct occurrences -->
    <emailAddress>monitoring@example.com</emailAddress>
  </alerting>
</ModifyBackupClient>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsource.net/schemas/general">
  <operation>Modify Backup Client</operation>
  <result>SUCCESS</result>
  <resultDetail>Backup Client modified</resultDetail>
  <resultCode>REASON_0</resultCode>
  <additionalInformation name="backupClient.id"><value>2f357232-bc95-4508-
a491-d75b5682e925</value></additionalInformation>
  <additionalInformation
name="backupClient.downloadUrl"><value>https://ftp.example.com/PCS/BackupClien
tInstallerDownload/7786ecd024ed47900a068f27e7867a08049d6d8c</value></additiona
lInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.

400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	<i>storagePolicyName</i> must contain a valid Storage Policy name.
400 (Error)	REASON_320	<i>schedulePolicyName</i> must contain a valid Schedule Policy name.
400 (Error)	REASON_320	The optional field <i>alerting</i> , must contain <i>trigger</i> and <i>at least one emailAddress</i> element if provided.
400 (Error)	REASON_320	<i>Each emailAddress</i> element must contain a single valid email address.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.
400 (Error)	REASON_545	Backup Client {backup-client-id} for server {server-id} does not exist.
400 (Error)	REASON_547	Backup Client {backup-client-id} has a job in progress.

2.5.10. Cancel Jobs for Backup Client

Cancels any running jobs associated with a Backup Client deployed on a Backup enabled Cloud Server.

Requires the Organization ID, Server ID for the Server and the ID of the Backup Client. The user must be the Primary Administrator or a Sub-Administrator with the "backup" role.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}/cancelJob</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsources.net/schemas/general">
  <operation>Cancel all Jobs</operation>
  <result>SUCCESS</result>
  <resultDetail>Cancellation of all jobs for a Backup client for this server
has been initiated</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Backup service is not in a NORMAL state for {server-id}.
400 (Error)	REASON_545	Backup Client {backup-client-id} does not exist for Server {server-id}.

2.5.11. Get Backup Details for Server

Retrieves complete details of how the Backup service is configured for a specific deployed Server.

Requires the Organization ID and Server ID for the Server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the "backup" role.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

Note that action needs to be taken if a *status* value of "Unconfigured" is received for a Backup Client. Please refer to the Community for details of the possible Backup Client *status* values:

[How to View and Manage the Backup service for a Cloud Server](#)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<BackupDetails assetId="30fea016-db07-4935-919d-bfd18caaae62"
servicePlan="Enterprise" state="NORMAL">
<!-- Zero to many. "status" can be one of "Offline", "Unregistered",
"Unconfigured" or "Active". -->
  <backupClient id="f1921082-94bc-491d-9136-0e7072df4823" type="FA.Linux"
isFileSystem="true" status="Active">
    <description>Linux File Agent</description>
    <schedulePolicyName>12AM - 6AM</schedulePolicyName>
    <storagePolicyName>14 Day Storage Policy + Secondary
Copy</storagePolicyName>
    <alerting trigger="ON_SUCCESS">
        <emailAddress>backup@example.com</emailAddress>
    </alerting>
    <times lastBackup="2013-11-07T14:42:56" nextBackup="2013-11-
08T06:00:00"/>
    <totalBackupSizeGb>0</totalBackupSizeGb>
    <downloadUrl>http://10.161.212.55:8081/PCS/BackupClientInstallerDownload/7786e
cd024ed47900a068f27e7867a08049d6d8c</downloadUrl>
  </backupClient>
</BackupDetails>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_542	Backup is in the process of being enabled for {server-id}.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.

2.5.12.Restore File System Backup (In Place)

Restores a Backup for a deployed Server to the Server from which the Backup originated.

Requires the Organization ID, the Server ID for the Server being restored and the Backup Client ID for the File System type Backup Client being restored from. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

A date can be supplied (*asAtDate*), which represents the date of the backed up version of the Server to be restored. The date will be processed in the timezone of the geography where the Server resides. If a date is not supplied, the most recent successful backup will be used.

The response includes an *additionalInformation* element named “*backupClient.restoreJobId*”. The Job identified by the *backupClient.restoreJobId* will be included on the **Get Backup Details for Server** response for its duration and its progress can be monitored using that API function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}/restore</code>
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<RestoreBackup xmlns="http://oec.api.opsource.net/schemas/backup">
  <!-- optional, dateTime -->
  <asAtDate>2013-07-02T12:00:00Z</asAtDate>
</RestoreBackup>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsource.net/schemas/general">
  <operation>Restore File System Backup</operation>
  <result>SUCCESS</result>
  <resultDetail>Restore File System Backup initiated</resultDetail>
  <resultCode>REASON_0</resultCode>
  <additionalInformation name="backupClient.restoreJobId"><value>2f357232-
bc95-4508-a491-d75b5682e925</value></additionalInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_377	The Server must be powered on for an In Place Restore.
400 (Error)	REASON_392	The Server must be in a NORMAL state.
400 (Error)	REASON_395	Could not find Server {server-id} for {org-id}.
400 (Error)	REASON_520	<i>asAtDate</i> supplied predates the earliest Backup.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.

400 (Error)	REASON_545	Backup Client {backup-client-id} for server {server-id} does not exist.
400 (Error)	REASON_547	Backup Client {backup-client-id} has a job in progress.
400 (Error)	REASON_551	No Backup data associated with Backup Client {backup-client-id}
400 (Error)	REASON_555	The Restore File System Backup function is not supported for the “Essentials” Service Plan. Refer to the Community to restore from Essentials Service Plan Backup Clients.
400 (Error)	REASON_556	Non-File System Backup Clients do not support restoration via the API. Refer to the Community to restore from a Non-File System Backup Client.

2.5.13. Get Servers for Out of Place File System Restore

Retrieves a list of compatible target Servers for an Out of Place given a specific deployed Server and Backup Client Type as input.

Requires the Organization ID and Server ID for the Server and that the Server already has the Backup service enabled. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

An empty list will be returned if no other Backup Clients of the same type as {backup-client-id} could be found on the same network as {server-id}.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-type}/systemRestoreTarget</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<RestoreTargetServers xmlns="http://oec.api.opsource.net/schemas/backup">
  <!--Zero or more repetitions:-->
  <server id="fb363682-6968-4f08-909f-013e7d742458" location="NA1">
    <name>My Server Name</name>
    <!--Optional:-->
    <description>my server description</description>
    <operatingSystem id="REDHAT664" displayName="REDHAT6/64" type="UNIX"/>
    <cpuCount>2</cpuCount>
    <memoryMb>2048</memoryMb>
    <!--1 or more repetitions:-->
    <disk id="ac341082-94bc-491d-9136-0e7072dfcd74" scsiId="0" sizeGb="10"
speed="STANDARD" state="NORMAL"/>
    <disk id="4df1082-94bc-491d-9136-0e7072df81cd" scsiId="3" sizeGb="50"
speed="PERFORMANCE" state="NORMAL"/>
    <sourceImageId>f1921082-94bc-491d-9136-0e7072df4823</sourceImageId>
    <!--Zero or more repetitions:-->
    <softwareLabel>CCSREDHATOS</softwareLabel>
    <networkId>string</networkId>
    <machineName>10-157-1-11</machineName>
    <privateIp>10.157.1.11</privateIp>
    <created>20013-09-29T02:49:45Z</created>
    <backup assetId="a651082-94bc-491d-9136-0e70754df81"
servicePlan="Enterprise"/>
  </server>
</RestoreTargetServers>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	{backup-client-type} is invalid or does not match any Backup Client in the system.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.

400 (Error)	REASON_542	Backup is in the process of being enabled for {server-id}.
-------------	------------	--

2.5.14. Restore File System Backup (Out of Place)

Restores a Backup for a deployed Server to a different Server from which the Backup originated.

This function is almost identical in usage to the **Restore File System Backup (In Place)** function and shares a common URL.

Requires the Organization ID, the Server ID for the server being restored the Backup Client ID for the File System type Backup Client being restored from. The user must be the Primary Administrator or a Sub-Administrator with the “backup” role.

A target Server ID (*targetServerId*) should be supplied when doing an Out of Place restore. The *targetServerId* is the Server ID representing the Server to which the Backup will be restored; a **different** Server from which the Backup originated. Compatible Servers for the *targetServerId* are retrieved using the **Get Servers for Out of Place File System Restore** function.

The source and target Server must have compatible operating systems.

The source Server should be powered off before attempting an Out of Place restore.

A date can be supplied (*asAtDate*), which represents the date of the backed up version of the Server to be restored. The date will be processed in the timezone of the geography where the Server resides. If a date is not supplied, the most recent successful backup will be used.

The response includes an *additionalInformation* element named “*backupClient.restoreJobId*”. The Job identified by the *backupClient.restoreJobId* will be included on the **Get Backup Details for Server** response for its duration and its progress can be monitored using that API function.

Important Notes:

- The *targetServerId* is optional and if not supplied an **In Place** restore will take place.
- If the Operating System of the Server is Linux, a follow up call to *Notify System of Private IP Address Change* will be required to ensure that the IP address set at the Server level matches that set in the hypervisor layer.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}/restore">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}/backup/client/{backup-client-id}/restore
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<RestoreBackup xmlns="http://oec.api.opssource.net/schemas/backup">
  <!-- optional, dateTime -->
  <asAtDate>2013-07-02T12:00:00Z</asAtDate>
  <!-- optional, string, Server ID of the Server being restored to -->
  <targetServerId>2b657232-bc95-4508-a491-d75b5682d925</targetServerId>
</RestoreBackup>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opssource.net/schemas/general">
  <operation>Restore File System Backup</operation>
  <result>SUCCESS</result>
  <resultDetail>Restore File System Backup initiated</resultDetail>
  <resultCode>REASON_0</resultCode>
  <additionalInformation name="backupClient.restoreJobId"><value>2f357232-
bc95-4508-a491-d75b5682e925</value></additionalInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.

400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	{server-id} and <i>targetServerId</i> cannot be the same.
400 (Error)	REASON_377	Server <i>targetServerId</i> must be powered on for an Out of Place Restore.
400 (Error)	REASON_392	The Server must be in a NORMAL state.
400 (Error)	REASON_395	Could not find Server {server-id} for {org-id}.
400 (Error)	REASON_520	<i>asAtDate</i> supplied predates the earliest Backup.
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where server {server-id} resides.
400 (Error)	REASON_543	Backup service is not enabled for {server-id}.
400 (Error)	REASON_544	Server {server-id} Backup service must be in a <i>NORMAL</i> state. See the Get Backup Details for Server function for the <i>state</i> attribute.
400 (Error)	REASON_545	Backup Client {backup-client-id} for server {server-id} does not exist.
400 (Error)	REASON_547	Backup Client {backup-client-id} has a job in progress.
400 (Error)	REASON_551	No Backup data associated with Backup Client {backup-client-id}.
400 (Error)	REASON_552	Target Server <i>targetServerId</i> must have a Backup Client of the same type as that being restored from ({backup-client-id}).
400 (Error)	REASON_553	Target Server <i>targetServerId</i> must have a File System Backup Client with a status of "Active".
400 (Error)	REASON_554	The source Server {server-id} and target Server <i>targetServerId</i> Operating Systems are incompatible for an Out of Place restore.
400 (Error)	REASON_555	The Restore File System Backup function is not supported for the "Essentials" Service Plan. Refer to the Community to restore from Essentials Service Plan Backup Clients.
400 (Error)	REASON_556	Non-File System Backup Clients do not support restoration via the API. Refer to the Community to restore from a Non-File System Backup Client.

2.6. Network API

Provides a set of operations for interacting with Networks – including APIs for creating, deleting and configuring ACL and NAT rules.

List Networks with Location

Lists the Networks deployed across all data center locations for the supplied organization. The response includes the data center location of each network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8"?>
<ns4:NetworkWithLocations
xmlns:ns4="http://oec.api.opsource.net/schemas/network" ..>
  <ns4:network>
    <ns4:id>2f7460d4-6516-4c45-a3c8-591e70b4ec54</ns4:id>
    <ns4:name>Network B</ns4:name>
    <ns4:description>Network B description</ns4:description>
    <ns4:location>NA1</ns4:location>
    <ns4:privateNet>10.157.10.0</ns4:privateNet>
    <ns4:multicast>false</ns4:multicast>
  </ns4:network>
  <ns4:network>
    :
  </ns4:network>
</ns4:NetworkWithLocations>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

2.6.1. List Networks in Location

Lists the Networks deployed in a given data center location.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation/{location-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8"?>
<ns4:NetworkWithLocations
xmlns:ns4="http://oec.api.opssource.net/schemas/network" ..>
  <ns4:network>
    <ns4:id>2f7460d4-6516-4c45-a3c8-591e70b4ec54</ns4:id>
    <ns4:name>Network B</ns4:name>
    <ns4:description>Network B description</ns4:description>
    <ns4:location>NA1</ns4:location>
    <ns4:privateNet>10.157.10.0</ns4:privateNet>
    <ns4:multicast>false</ns4:multicast>
  </ns4:network>
  <ns4:network>
    :
  </ns4:network>
  <ns4:network>
    :
  </ns4:network>
</ns4:NetworkWithLocations>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

2.6.2. Get Network Details

Description

Retrieves the details of a specific network owned by a customer. This API requires your organization ID and the ID of the target network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:Network xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns4:id>84ac-4e7b</ns4:id>
  <ns4:resourcePath>/oec/2b15-4eaf/network/84ac-4e7b</ns4:resourcePath>
  <ns4:name>network z rc</ns4:name>
  <ns4:description>network z description</ns4:description>
  <ns4:multicast>false</ns4:multicast>
</ns4:Network>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.6.3. Create Network with Location

Deploys a new network in a designated data center location. The designated data center must be chosen from your available data centers list (See “List Data Centers (with Parameters)”). The “location” property of the data center is used to identify it for network creation. The “name” property must be unique within your organization. Note that this operation cannot be performed concurrently with a *Delete Network* operation.

There are some important notes about these error responses:

- REASON_10 indicates a non-recoverable failure occurred when attempting to create the network. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.
- REASON_20 indicates a non-recoverable timeout failure. Since Create Network is a synchronous function, there is a “timeout” limit set giving a limited amount of time for a network to successfully be created. This fault code indicated that for some reason the attempt to create the network didn’t succeed within the time allotted to complete. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<NewNetworkWithLocation xmlns="http://oec.api.opsource.net/schemas/network">
  <name>Network B</name>
  <!--Optional:-->
  <description>Description of Network B</description>
  <location>NA1</location>
</NewNetworkWithLocation>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <ns6:operation>Add Network</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Network added</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network. <i>Unrecoverable</i> .
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_210	Network name is not unique.
400 (Error)	REASON_220	No available networks.
400 (Error)	REASON_320	Invalid Data – name (max. 75 chars) or description (max. 255 chars) exceed maximum length.
400 (Error)	REASON_601	Operation in progress: a <i>Create Network</i> , <i>Create Network with Location</i> or <i>Delete Network</i> operation is already in progress for the organization.
400 (Error)	REASON_751	Organization Deploy (Network Domains or Cloud Network) Limit Exceeded for {org-id} and datacenter with id {location}.
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

2.6.4. Delete Network

Description

Deletes a specific network from an organization's account.

Note that this operation cannot be performed concurrently with a *Create Network with Location* operation.

This API requires the organization ID and the ID of the target network. There are some important notes about these error responses:

- REASON_10 indicates a non-recoverable failure occurred when attempting to delete the network. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.
- REASON_11 indicates a potentially recoverable failure occurred when attempting to delete the network. Upon receiving this response, the system will “reset” the network back to normal again, allowing you to attempt the delete again. This situation normally occurs if the Cisco switch is too busy to handle the request to make changes necessary to delete the server. However, there are some rare cases where the system might continue to fail to delete a network... so your code needs to limit the attempts to retry deleting the network. Open a Support Case if repeated attempts to delete the network are unsuccessful.
- REASON_20 indicates a non-recoverable timeout failure. Since Delete Network is a synchronous function, there is a “timeout” limit set giving a limited amount of time for a network to successfully delete. This fault code indicated that for some reason the attempt to delete the network didn't succeed within the time allotted to complete. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Delete Network</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Network deleted successfully</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_11	Potentially Recoverable Failure at Network - supporting retry.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network .
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_371	Network is in Multicast mode.
400 (Error)	REASON_380	Cannot delete Network network because it still contains resources: Server(s).
400 (Error)	REASON_381	Cannot delete Network network because it still contains resources: Pending Deployment Server(s).
400 (Error)	REASON_382	Cannot delete Network network because it still contains resources: NAT Rule(s).
400 (Error)	REASON_383	Cannot delete Network network because it still contains resources:

		NAT Rule(s) with an operation in progress.
400 (Error)	REASON_384	Cannot delete Network network because it still contains resources: IP Block(s).
400 (Error)	REASON_385	Cannot delete Network network because it still contains resources: IP Block(s) with an operation in progress.
400 (Error)	REASON_386	Cannot delete Network network because it has another operation in progress.
400 (Error)	REASON_387	Cannot delete Network network because it still contains resources: Real Server(s).
400 (Error)	REASON_388	Cannot delete Network network because it still contains resources: Server Farm(s).
400 (Error)	REASON_389	Cannot delete Network network because it still contains resources: VIP(s).
400 (Error)	REASON_397	Cannot delete Network network because it still contains resources: Persistence Profile(s).
400 (Error)	REASON_398	Cannot delete Network network because it still contains resources: Real Server(s) with an operation in progress.
400 (Error)	REASON_601	Operation in progress: a <i>Create Network, Create Network with Location, Delete Network operation</i> is already in progress for the organization or another network operation is in progress for Network {network-id}.
400 (Error)	REASON_640	Cannot delete Network network because it still contains resources: Server Farms(s) with an operation in progress.
400 (Error)	REASON_641	Cannot delete Network network because it still contains resources: Persistence Profiles(s) with an operation in progress.
400 (Error)	REASON_660	Cannot delete Network network because it still contains resources: VIP(s) with an operation in progress.

2.6.5. Modify Network

Description

Changes the Name or Description of an existing network. Requires your organization ID and the ID of the target network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data (include only fields being changed with "&" separating each parameter)

name=	Name of the server (max. 75 char, must be unique)
description=	Description of the server (max. 255 char)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Edit Network</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Network edited</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_210	Network name already taken within organization.
400 (Error)	REASON_250	Could not find network for ID for {org-id}.
400 (Error)	REASON_320	Invalid input data: name, if specified, exceeds 75 chars description, if specified, exceeds 255 chars.
400 (Error)	REASON_601	Operation in progress on Network {network-id}.

2.6.6. List ACL Rules

Description

Retrieves the list of ACL rules associated with a network. This API requires your organization ID and the ID of the target network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/aclrule</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:AclRuleList xmlns:ns2="http://oec.api.opsource.net/schemas/organization"
.. >
  <ns4:name>ALL_ACL</ns4:name>
  <ns4:AclRule>
    <ns4:id>1f0311d0-b874-413e-9c6d-18d35f62ca4d</ns4:id>
    <ns4:name>default-98</ns4:name>
    <ns4:status>NORMAL</ns4:status>
    <ns4:position>98</ns4:position>
    <ns4:action>DENY</ns4:action>
    <ns4:protocol>TCP</ns4:protocol>
    <ns4:sourceIpRange/>
    <ns4:destinationIpRange/>
    <ns4:portRange>
      <ns4:type>EQUAL_T0</ns4:type>
      <ns4:port1>587</ns4:port1>
    </ns4:portRange>
    <ns4:type>INSIDE_ACL</ns4:type>
  </ns4:AclRule>
  :
</ns4:AclRule>
<ns4:AclRule>
  <ns4:id>e4d9-4249 </ns4:id>
  <ns4:name>default-102</ns4:name>
  <ns4:status>NORMAL</ns4:status>
  <ns4:position>102</ns4:position>
  <ns4:action>PERMIT</ns4:action>
  <ns4:protocol>TCP</ns4:protocol>
  <ns4:sourceIpRange/>
  <ns4:destinationIpRange/>
  <ns4:portRange>
    <ns4:type>EQUAL_T0</ns4:type>
    <ns4:port1>443</ns4:port1>
  </ns4:portRange>
  <ns4:type>OUTSIDE_ACL</ns4:type>
</ns4:AclRule>
</ns4:AclRuleList>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.6.7. Delete ACL Rule

Description

Deletes a specified ACL rule. This API requires your organization ID, the ID of the target network and the ID of the rule.

Note: If the Cisco hardware is under heavy load when a Delete ACL Rule request is processed it is possible for a timeout to occur. In this situation the ACL rule deletion usually completes successfully but an error code REASON_292 will be returned to indicate that the ACL rule is in a pending state and a support case should be opened for it to be removed.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/aclrule/{acl-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <ns6:operation>Delete Acl Rule</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>ACL Rule deleted</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_280	ACL Rule does not exist.
400 (Error)	REASON_292	ACL Rule is in a pending state.
400 (Error)	REASON_601	Operation in progress on Network {network-id}. <i>(occurs if Network is in process of being added or deleted)</i>
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.6.8. Create ACL Rule

Description

Creates a new ACL rule at a specified line using your organization ID and the ID of the target network. It is possible to create both inbound (OUTSIDE_ACL) and outbound (INSIDE_ACL) rule types. For more details, please review the Community article [How to Manage ACL firewall rules for a Network Using the Administrative UI](#).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/aclrule</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Notes for both, **<sourceIpRange>** and **<destinationIpRange>**:

- If no **<ipAddress>** is supplied the assumption is that any IP address is allowed.
- If an **<ipAddress>** is supplied and a **<netmask>** is not supplied, **<ipAddress>** must represent a single host.
- If an **<ipAddress>** is supplied and a **<netmask>** is supplied, **<ipAddress>** must be the CIDR boundary for the network.

Request Data

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<AclRule xmlns="http://oec.api.opsources.net/schemas/network">
  <!-- mandatory, string, cannot exceed 60 chars in length -->
  <name>MyAclRuleName</name>
  <!-- mandatory, integer, valid range is 100-500 inclusive -->
  <position>110</position>
  <!-- mandatory, string, one of (PERMIT,DENY) -->
  <action>PERMIT_or_DENY_mandatory</action>
  <!-- mandatory, string, one of (IP,ICMP,TCP,UDP) -->
  <protocol>IP</protocol>
  <sourceIpRange>
    <!-- optional, string, IPv4 dot decimal format. -->
    <!-- either an host IP Address or the valid CIDR boundary when a
netmask is also specified below. -->
    <ipAddress>192.168.3.0</ipAddress>
    <!-- optional, string, IPv4 dot decimal format -->
    <netmask>255.255.255.0</netmask>
  </sourceIpRange>
  <destinationIpRange>
    <!-- optional, string, IPv4 dot decimal format -->
    <!-- either an host IP Address or the valid CIDR boundary when a
netmask is also specified below. -->
    <ipAddress>192.168.3.0</ipAddress>
    <!-- optional, string, IPv4 dot decimal format -->
    <netmask>255.255.255.0</netmask>
  </destinationIpRange>
  <portRange>
    <!-- mandatory, string, one of
(ALL,EQUAL_TO,RANGE,GREATER_THAN,LESS_THAN) -->
    <type>RANGE</type>
    <!-- optional, integer, 1-65535 -->
    <port1>9090</port1>
    <!-- optional, integer, 1-65535 -->
    <port2>9099</port2>
  </portRange>
  <!-- optional, one of (OUTSIDE_ACL,INSIDE_ACL). Default if not specified
is OUTSIDE_ACL -->
  <type>OUTSIDE_ACL</type>
</AclRule>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:AclRule xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns4:id>e0b97377-9deb-4237-8abe-d68c48f390e4</ns4:id>
  <ns4:name>default-102</ns4:name>
  <ns4:status>NORMAL</ns4:status>
  <ns4:position>102</ns4:position>
  <ns4:action>PERMIT</ns4:action>
  <ns4:protocol>TCP</ns4:protocol>
  <ns4:sourceIpRange/>
  <ns4:destinationIpRange/>
  <ns4:portRange>
    <ns4:type>EQUAL_TO</ns4:type>
    <ns4:port1>443</ns4:port1>
  </ns4:portRange>
  <type>OUTSIDE_ACL</type>
</ns4:AclRule>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_290	A rule is already configured for the specified line.
400 (Error)	REASON_291	Invalid Port specified.
400 (Error)	REASON_293	ACL Rule already exists.
400 (Error)	REASON_294	Invalid ACL Rule position.
400 (Error)	REASON_320	Invalid Input Data.
400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

2.6.9. List NAT Rules

Description

Retrieves a list of NAT rules for a specified network. This API requires your organization ID and the ID of the target network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/natrule</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:NatRules xmlns:ns2="http://oec.api.opsource.net/schemas/organization"
xmlns="http://oec.api.opsource.net/schemas/server" .. >
  <ns4:NatRule>
    <ns4:id>4514-a25a</ns4:id>
    <ns4:name>10.147.15.11</ns4:name>
    <ns4:natIp>63.88.83.145</ns4:natIp>
    <ns4:sourceIp>10.147.15.11</ns4:sourceIp>
  </ns4:NatRule>
  :
  <ns4:NatRule>
    <ns4:id>0958-419e</ns4:id>
    <ns4:name>10.147.15.12</ns4:name>
    <ns4:natIp>63.88.83.147</ns4:natIp>
    <ns4:sourceIp>10.147.15.12</ns4:sourceIp>
  </ns4:NatRule>
</ns4:NatRules>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.6.10.Create NAT rule

Description

Creates a new NAT rule for a specified network. This API requires your organization ID and the ID of the target network.

The XML structured request requires a **<name>** element describing the NAT Rule and a **<sourceIp>** which is the underlying private IP address that the public IP address (**<natIp>**) returned in the response will be assigned to.

Note that IP addresses *.0 through *.10 are reserved and cannot be used as **<sourceIp>** values. The available range is *.11 to *.254. For example "10.147.15.11" in the sample request below. An attempt to specify one of the reserved addresses as the **<sourceIp>** will result in a REASON_240 reason code being returned.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/natrule</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<NatRule xmlns="http://oec.api.opsource.net/schemas/network">
  <name>10.147.15.11</name>
  <sourceIp>10.147.15.11</sourceIp>
</NatRule>
```

Response Details

```
?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:NatRule xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns4:id>738442d9-5cc8-4bac-98bd-b7df9230f91c</ns4:id>
  <ns4:name>10.147.15.11</ns4:name>
  <ns4:natIp>63.88.83.151</ns4:natIp>
  <ns4:sourceIp>10.147.15.11</ns4:sourceIp>
</ns4:NatRule>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_11	Potentially Recoverable Failure. The call can be retried - contact support if the failure persists more than a couple of times.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network.
400 (Error)	REASON_240	Private IP is not in network.
400 (Error)	REASON_241	The IP address {0} is already reserved.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_272	There is already a NAT in place on source IP.
400 (Error)	REASON_310	No Public IP addresses available for network.
400 (Error)	REASON_320	Invalid Input Data - SourceIP: {<sourceIp>} must be a valid IPv4 address.
400 (Error)	REASON_601	Operation in progress on network {network-id}.

2.6.11.Delete NAT rule

Description

Deletes an existing NAT rule for a specified network. This API requires your organization ID, the ID of the target network and the ID of the NAT rule to be deleted.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/natrule/{natrule-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <ns6:operation>Delete Nat Rule</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>NAT Rule deleted</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unrecoverable failure at Network.
400 (Error)	REASON_11	Potentially Recoverable Failure. The call can be retried - contact support if the failure persists more than a couple of times.
400 (Error)	REASON_20	Unrecoverable timeout failure at Network.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_260	NAT Rule does not exist.
400 (Error)	REASON_270	Could not find NAT rule {natrule-id} in Network {network-id}.
400 (Error)	REASON_271	Operation already in progress on this NAT Rule.
400 (Error)	REASON_601	Operation is in progress on Network {network-id}.

2.6.12. Get Network Configuration

Description

Lists configuration information for the specified network, including public IP blocks and private IPs in use.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/config</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:NetworkConfiguration
xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns4:network>
    <ns4:id>72419350-9684-40dc-984e-94187b636b5a</ns4:id>
    <ns4:resourcePath>/oec/4e8b-88d1/network/40dc-984e</ns4:resourcePath>
    <ns4:name>A Network</ns4:name>
    <ns4:description>This is a network</ns4:description>
    <ns4:multicast>>false</ns4:multicast>
  </ns4:network>
  <ns4:hostName>c12ap2aglash01</ns4:hostName>
  <ns4:agg>1</ns4:agg>
  <ns4:location>ash01</ns4:location>
  <ns4:context>12</ns4:context>
  <ns4:acePair>2</ns4:acePair>
  <ns4:intVlan>612</ns4:intVlan>
  <ns4:outVlan>212</ns4:outVlan>
  <ns4:publicSnat>168.143.81.112</ns4:publicSnat>
  <ns4:privateSnat>10.163.245.112</ns4:privateSnat>
  <ns4:privateNet>10.162.112.0</ns4:privateNet>
  <ns4:publicIps>
    <ns4:IpBlock>
      <ns4:id>e8b11d7f-02c3-4234-a8e6-377a7300d581</ns4:id>
      <ns4:baseIp>168.143.85.32</ns4:baseIp>
      <ns4:subnetSize>8</ns4:subnetSize>
      <ns4:networkDefault>>true</ns4:networkDefault>
    </ns4:IpBlock>
    <ns4:IpBlock>
      <ns4:id>883a72cd-21b0-49f1-a6eb-e5c2fcd7bbc7</ns4:id>
      <ns4:baseIp>168.143.90.32</ns4:baseIp>
      <ns4:subnetSize>8</ns4:subnetSize>
      <ns4:networkDefault>>false</ns4:networkDefault>
    </ns4:IpBlock>
    <ns4:IpBlock>
      <ns4:id>ac915085-d5ea-48ee-b102-e32998de1487</ns4:id>
      <ns4:baseIp>168.143.90.248</ns4:baseIp>
      <ns4:subnetSize>8</ns4:subnetSize>
      <ns4:networkDefault>>false</ns4:networkDefault>
    </ns4:IpBlock>
  </ns4:publicIps>
  <ns4:privateIps>
    <ns4:subnetSize>255</ns4:subnetSize>
    <ns4:Ip>10.162.112.10</ns4:Ip>
    <ns4:Ip>10.162.112.11</ns4:Ip>
  </ns4:privateIps>
</ns4:NetworkConfiguration>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.6.13. Get Network Configuration with Location

Lists configuration information for the specified network. Includes the data center location of the network, public IP blocks and all private IPs in use.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation/{network-id}/config</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8"?>
<ns4:NetworkConfigurationWithLocation
xmlns:ns4="http://oec.api.opssource.net/schemas/network" .. >
  <ns4:id>2f7460d4-6516-4c45-a3c8-591e70b4ec54</ns4:id>
  <ns4:name>Network B</ns4:name>
  <ns4:description>Network B Description</ns4:description>
  <ns4:location>NA1</ns4:location>
  <ns4:privateNet>10.157.10.0</ns4:privateNet>
  <ns4:multicast>false</ns4:multicast>
  <ns4:privateSnat>10.156.245.10</ns4:privateSnat>
  <ns4:publicSnat>169.143.92.10</ns4:publicSnat>
  <ns4:publicIps>
    <ns4:IpBlock>
      <ns4:id>2b8b10f7-d67e-46bc-9677-76a64bc736cd</ns4:id>
      <ns4:baseIp>169.143.92.104</ns4:baseIp>
      <ns4:subnetSize>8</ns4:subnetSize>
      <ns4:networkDefault>true</ns4:networkDefault>
    <ns4:serverToVipConnectivity>false</ns4:serverToVipConnectivity>
    </ns4:IpBlock>
  </ns4:publicIps>
  <ns4:privateIps>
    <ns4:subnetSize>255</ns4:subnetSize>
    <ns4:Ip>10.157.10.1</ns4:Ip>
    <ns4:Ip>10.157.10.2</ns4:Ip>
    <ns4:Ip>10.157.10.3</ns4:Ip>
    <ns4:Ip>10.157.10.4</ns4:Ip>
    <ns4:Ip>10.157.10.5</ns4:Ip>
    <ns4:Ip>10.157.10.6</ns4:Ip>
    <ns4:Ip>10.157.10.7</ns4:Ip>
    <ns4:Ip>10.157.10.8</ns4:Ip>
    <ns4:Ip>10.157.10.9</ns4:Ip>
    <ns4:Ip>10.157.10.10</ns4:Ip>
    <ns4:Ip>10.157.10.11</ns4:Ip>
    <ns4:Ip>10.157.10.12</ns4:Ip>
    <ns4:Ip>10.157.10.13</ns4:Ip>
    <ns4:Ip>10.157.10.14</ns4:Ip>
    <ns4:Ip>10.157.10.15</ns4:Ip>
    <ns4:Ip>10.157.10.16</ns4:Ip>
    <ns4:Ip>10.157.10.17</ns4:Ip>
    <ns4:Ip>10.157.10.18</ns4:Ip>
    <ns4:Ip>10.157.10.19</ns4:Ip>
    <ns4:Ip>10.157.10.20</ns4:Ip>
    <ns4:Ip>10.157.10.21</ns4:Ip>
    <ns4:Ip>10.157.10.22</ns4:Ip>
    <ns4:Ip>10.157.10.25</ns4:Ip>
    <ns4:Ip>10.157.10.29</ns4:Ip>
    <ns4:Ip>10.157.10.0</ns4:Ip>
    <ns4:Ip>10.157.10.255</ns4:Ip>
  </ns4:privateIps>
</ns4:NetworkConfigurationWithLocation>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.6.14. Reserve Public IP Block with Size

Description

Obtains an additional Public IP block and assigns it to the referenced network.

This function deprecates the previous *Reserve Public IP Block* function by including a number of **<additionalInformation>** elements defining the newly reserved public IP block, described in the Response Details below.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip?reserveNewWithSize</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

The “name” attribute of each **<additionalInformation>** element describes the content of its single **<value>** child element.

Initially the response will include **<additionalInformation>** elements with the following values for their “name” attributes:

- ipBlock.id (the UUID within the system of the newly reserved IP block)
- ipBlock.baseIp
- ipBlock.size

The sample response below shows an ipBlock.size of “2” with an ipBlock.baseIp of “168.43.20.64”; indicating that the reserved block consists of the IP addresses:

- 168.43.20.64
- 168.43.20.65

Note that the number of **<additionalInformation>** elements returned may increase in a later release.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns="http://oec.api.opsource.net/schemas/general">
  <operation>Reserve New Public IP Block</operation>
  <result>SUCCESS</result>
  <resultDetail>Public IP block with base IP 168.43.20.64 is
reserved</resultDetail>
  <resultCode>REASON_0</resultCode>
  <!-- UUID of the newly reserved IP block -->
  <additionalInformation name="ipBlock.id"><value>26cafdc4-66ad-11e1-b5d6-
0030487e0302</value></additionalInformation>
  <additionalInformation
name="ipBlock.baseIp"><value>168.43.20.64</value></additionalInformation>
  <additionalInformation
name="ipBlock.size"><value>2</value></additionalInformation>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_330	No IP blocks are available. Location: {NETWORK_LOCATION}, Agg: {NETWORK_AGG}.
400 (Error)	REASON_601	Operation in progress on IP Block {ipblock-id} or Network {network-

		id}.
--	--	------

2.6.15. Release Public IP Block

Description

Returns a Public IP block to the pool. Note that you can not return the default IP block that was originally supplied with the network. The id of an IP block can be obtained using the Get Network Configuration API.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip/{ipblock-id}?release</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..> <ns8:operation>Release Public IP Block</ns8:operation> <ns8:result>SUCCESS</ns8:result> <ns8:resultDetail>Public IP block 21b0-49f1 is released</ns8:resultDetail> <ns8:resultCode>REASON_0</ns8:resultCode> </ns8:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_350	Cannot Release Default IP Block.
400 (Error)	REASON_360	IPs still in use in IP block {IP_BLOCK_LIST}.
400 (Error)	REASON_370	Could not find IP block {ipblock-id} in Network {network-id}.
400 (Error)	REASON_601	Operation in progress IP Block {ipblock-id} or Network {network-id}.

2.6.16. Set Server to VIP connectivity for Public IP Block

Description

Sets the Server to VIP status for a Public IP block. Server to VIP connectivity is turned off ("false") by default for each Public IP Block.

Note: there is a restriction on the number of Public IP blocks that can have Server to VIP connectivity enabled. If an attempt is made to enable Server to VIP connectivity on a Public IP Block when the maximum allowed has already been reached, a code REASON_342 response will be returned as described in the Fault Codes section below.

For details please see the community article [How to Manage Public IP Addresses associated with an Existing Network Using the Administrative UI](#).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip/{ipblock-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data (include only the field below)

<code>serverToVipConnectivity=</code>	"true" or "false"
---------------------------------------	-------------------

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns9:Status xmlns:ns9="http://oec.api.opsource.net/schemas/general" .. > <ns9:operation>Set Server To Vip Connectivity flag on Public IP Block</ns9:operation> <ns9:result>SUCCESS</ns9:result> <ns9:resultDetail>Server To Vip Connectivity flag set on Public IP Block</ns9:resultDetail> <ns9:resultCode>REASON_0</ns9:resultCode> </ns9:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Request parameter 'serverToVipConnectivity' is mandatory and should be set to <i>true</i> or <i>false</i> .
400 (Error)	REASON_341	Server To Vip Connectivity flag on Public IP Block {ipblock-id} is already set to {true false}.
400 (Error)	REASON_342	Maximum number of Public IP Blocks with Server To Vip Connectivity reached.
400 (Error)	REASON_370	Could not find IP block {ipblock-id} in Network {network-id}.
400 (Error)	REASON_601	Operation in progress on IP Block {ipblock-id} or Network {network-id}.

2.6.17. Multicast

Description

Enables or disables Multicast on a Network by posting a parameter with a value of true (Multicast enabled) or false (Multicast disabled).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/multicast</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data

enabled=	May be set to "true" or "false"
-----------------	---------------------------------

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Remove Probe from Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Probe removed from Server-Farm</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid value for {Enabled}. Missing; or not one of (true false).
400 (Error)	REASON_372	Attempt to set multicast flag to its existing value.
400 (Error)	REASON_601	Network currently in some PENDING state.

2.7. VIP / Load-Balancing API

The VIP / Load Balancing API provides the ability to set up a VIP that applies to one or more servers. Establishing a VIP requires multiple steps and uses Cisco nomenclature. For more details, please review the Community article [What is a VIP?](#) which provides an overview with links to the related functions.

2.7.1. List Real Servers

Description

Retrieves the set of real servers on a network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/realServer</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:RealServers xmlns:ns2="http://oec.api.opsource.net/schemas/organization">
  <ns5:realServer>
    <ns5:id>89ed-d74766c0dee1</ns5:id>
    <ns5:name>RealServer1</ns5:name>
    <ns5:serverId>ab49-2f96f8695345</ns5:serverId>
    <ns5:serverName>rhel-0121-test-4</ns5:serverName>
    <ns5:serverIp>10.162.103.13</ns5:serverIp>
    <ns5:inService>true</ns5:inService>
  </ns5:realServer>
  <ns5:realServer>
    <ns5:id>ab82-97ed0cdcb9f1</ns5:id>
    <ns5:name>RealServer2</ns5:name>
    <ns5:serverId>8375-5dcf52636cc5</ns5:serverId>
    <ns5:serverName>rhel-0121-test-3</ns5:serverName>
    <ns5:serverIp>10.162.103.12</ns5:serverIp>
    <ns5:inService>true</ns5:inService>
  </ns5:realServer>
</ns5:RealServers>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.7.2. Create Real Server

Description

Cisco ACE configuration requires a Real Server (or rserver) to be defined for each physical server to be included in a load-balanced server farm.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/realServer</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<NewRealServer xmlns='http://oec.api.opsource.net/schemas/vip'>
  <name>RealServer1</name>
  <serverId>415a7f70-1008-42a3-8375-5dcf52636cc5</serverId>
  <inService>true</inService>
</NewRealServer>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ... >
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Real-Server (id:bla3aea6-37) created</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid input data - Invalid rserver name (max 64-char, no spaces, alpha-numeric) - Name not unique within network - Invalid value for inService (not true or false) - Any missing element.
400 (Error)	REASON_393	<serverId> is already associated with a Real Server.
400 (Error)	REASON_395	<serverId> does not correspond to a deployed server within this network.
400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_602	Network already has maximum allowed number of Real Servers.

2.7.3. Delete Real Server

Description

Deletes only the real-server view of the server. The underlying VM remains.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/realServer/{rserver-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns8:operation>Delete Real-Server</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Real-Server (id: bfda-654d2) deleted</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_601	An operation is in progress on Real Server {rserver-id} or on Network {network-id}.
400 (Error)	REASON_610	{rserver-id} does not exist for {network-id}.
400 (Error)	REASON_615	{rserver-id} is associated with one or more Server Farms

2.7.4. Modify Real Server

Description

Provides support for changing the Real Server's inService setting.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/realServer/{rserver-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data

inService=	May be set to true or false
------------	-----------------------------

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Real-Server (id:f010-4505) modified</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid value for {inService} (must be one of "true" or "false").
400 (Error)	REASON_601	{rserver-id} is in a PENDING state.
400 (Error)	REASON_610	{rserver-id} does not exist for {network-id}.

2.7.5. List Probes

Description

Lists the server probes that are currently available for managing VIPs.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/probe</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Probes xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns5:Probe>
    <ns5:id>4a7310a1-a4b9-4d8d-8498-295257b8d2b7</ns5:id>
    <ns5:name>tcp</ns5:name>
    <ns5:type>TCP</ns5:type>
    <ns5:probeIntervalSeconds>120</ns5:probeIntervalSeconds>
    <ns5:errorCountBeforeServerFail>3</ns5:errorCountBeforeServerFail>
    <ns5:successCountBeforeServerEnable>3
    </ns5:successCountBeforeServerEnable>
    <ns5:failedProbeIntervalSeconds>300</ns5:failedProbeIntervalSeconds>
    <ns5:maxReplyWaitSeconds>10</ns5:maxReplyWaitSeconds>
  </ns5:Probe>
  <ns5:Probe>
    <ns5:id>e36b6ad4-f3a1-45f1-aeb5-63d6e58d8b6b</ns5:id>
    <ns5:name>udp</ns5:name>
    <ns5:type>UDP</ns5:type>
    <ns5:probeIntervalSeconds>120</ns5:probeIntervalSeconds>
    <ns5:errorCountBeforeServerFail>3</ns5:errorCountBeforeServerFail>
    <ns5:successCountBeforeServerEnable>3
    </ns5:successCountBeforeServerEnable>
    <ns5:failedProbeIntervalSeconds>300</ns5:failedProbeIntervalSeconds>
    <ns5:maxReplyWaitSeconds>10</ns5:maxReplyWaitSeconds>
  </ns5:Probe>
</ns5:Probes>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.7.6. Create Probe

Description

Create a new server probe for use with Server Farms on a given network context.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/probe</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<NewProbe xmlns="http://oec.api.opsource.net/schemas/vip">
  <!-- Alphanumeric, no spaces, unique in network -->
  <name>string</name>
  <!-- One of (TCP, UDP, HTTP, HTTPS, ICMP) -->
  <type>TCP</type>
  <!-- Integer 15-65535 -->
  <probeIntervalSeconds>integer</probeIntervalSeconds>
  <!-- Integer 1-65535 -->
  <errorCountBeforeServerFail>integer</errorCountBeforeServerFail>
  <!-- Integer 1-65535 -->
  <successCountBeforeServerEnable>integer</successCountBeforeServerEnable>
  <!-- Integer 15-65535 -->
  <failedProbeIntervalSeconds>integer</failedProbeIntervalSeconds>
  <!-- Integer 2-65535 -->
  <maxReplyWaitSeconds>integer</maxReplyWaitSeconds>
  <!--Optional: mandatory if type is HTTP/HTTPS, Integer 0-999 for each of
lowerBound and upperBound -->
  <statusCodeRange>
    <lowerBound>integer</lowerBound>
    <upperBound>integer</upperBound>
  </statusCodeRange>
  <!--Optional: mandatory if type is HTTP/HTTPS, one of (GET, HEAD) -->
  <requestMethod>GET</requestMethod>
  <!--Optional: only relevant if type is HTTP/HTTPS, Integer 1-65535-->
  <port>integer</port>
  <!--Optional: only relevant if type is HTTP/HTTPS, String, 255 chars max, no
spaces -->
  <requestUrl>string</requestUrl>
  <!--Optional: only relevant if type is HTTP/HTTPS, String, 255 chars max,
alphanumeric, spaces permitted -->
  <matchContent>string</matchContent>
</NewProbe>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Status xmlns:ns5="http://oec.api.opsource.net/schemas/general" ... >
  <ns5:result>SUCCESS</ns5:result>
  <ns5:resultDetail>Probe (id:bla3aea6-37) created</ns5:resultDetail>
  <ns5:resultCode>REASON_0</ns5:resultCode>
</ns5:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}
400 (Error)	REASON_320	Invalid input data.

400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_602	Network already has maximum amount of Probes.

2.7.7. Modify Probe

Description

Modify an existing server probe on a given network context. Not all fields originally specified when creating a probe can be modified. The fields available for update are displayed below, each is optional and any subset of them may be supplied on the HTTP request as request parameters.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/probe/{probe-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data (include only fields being changed with "&" separating each parameter)

<code>probeIntervalSeconds=</code>	Optional, Integer 15-65535
<code>errorCountBeforeServerFail=</code>	Optional, Integer 1-65535
<code>successCountBeforeServerEnable =</code>	Optional, Integer 1-65535
<code>failedProbeIntervalSeconds =</code>	Optional, Integer 15-65535
<code>maxReplyWaitSeconds=</code>	Optional, Integer 2-65535

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns5:Status xmlns:ns5="http://oec.api.opsources.net/schemas/vips" ... > <ns5:result>SUCCESS</ns8:result> <ns5:resultDetail>Probe (id:bla3aea6-37) modified</ns8:resultDetail> <ns5:resultCode>REASON_0</ns8:resultCode> </ns5:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	At least one optional parameter must be supplied.
400 (Error)	REASON_320	Invalid input data – parameter data invalid.
400 (Error)	REASON_601	Operation in progress on Probe {probe-id} or Network {network-id}.
400 (Error)	REASON_620	{probe-id} does not exist within Network.

2.7.8. Delete Probe

Description

Delete a server probe from a given network context. Note it is not possible to delete a probe that is still associated with a given Server Farm, first the probe must be removed from the Server Farm using the Remove Probe from Server Farm API.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/probe/{probe-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Status xmlns:ns5="http://oec.api.opsource.net/schemas/vips" ... >
  <ns5:result>SUCCESS</ns5:result>
  <ns5:resultDetail>Probe (id:bla3aea6-37) deleted</ns5:resultDetail>
  <ns5:resultCode>REASON_0</ns5:resultCode>
</ns5:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}
400 (Error)	REASON_601	Operation in progress on Probe {probe-id} or Network {network-id}.
400 (Error)	REASON_620	{probe-id} does not exist within Network.
400 (Error)	REASON_625	{probe-id} is still associated with a Server Farm.

2.7.9. List Server Farms

Description

Lists Server Farms for a given network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:ServerFarms xmlns:ns2="http://oec.api.opsource.net/schemas/organization">
  <ns5:serverFarm>
    <ns5:id>c97530ba-bc65-413d-bb39-a28b355e717b</ns5:id>
    <ns5:name>MySecondServerFarm</ns5:name>
    <ns5:predictor>LEAST_CONNECTIONS</ns5:predictor>
  </ns5:serverFarm>
  <ns5:serverFarm>
    <ns5:id>419ea541-8eb9-4d13-b21c-57476217c8ba</ns5:id>
    <ns5:name>MyServerFarm</ns5:name>
    <ns5:predictor>LEAST_CONNECTIONS</ns5:predictor>
  </ns5:serverFarm>
</ns5:ServerFarms>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.7.10. Get Server Farm Details

Description

Lists the Probes and Real Servers associated with a Server Farm.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:ServerFarm xmlns:ns2="http://oec.api.opsource.net/schemas/organization"
..>
  <ns5:id>c97530ba-bc65-413d-bb39-a28b355e717b</ns5:id>
  <ns5:name>MySecondServerFarm</ns5:name>
  <ns5:predictor>LEAST_CONNECTIONS</ns5:predictor>
  <ns5:probe>
    <ns5:id>4a7310a1-a4b9-4d8d-8498-295257b8d2b7</ns5:id>
    <ns5:name>tcp</ns5:name>
    <ns5:type>TCP</ns5:type>
    <ns5:probeIntervalSeconds>120</ns5:probeIntervalSeconds>
  </ns5:probe>
  <ns5:realServer>
    <ns5:id>b2526632-e1dd-4511-9beb-78eb41c143d0</ns5:id>
    <ns5:name>RealServer2</ns5:name>
    <ns5:ipAddress>10.162.103.12</ns5:ipAddress>
    <ns5:port>80</ns5:port>
    <ns5:inService>true</ns5:inService>
  </ns5:realServer>
</ns5:ServerFarm>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_630	Could not find Server Farm for {server-farm-id}.

2.7.11.Create Server Farm

Description

Cisco ACE configuration requires a Server Farm to be defined to support load-balancing of Real Servers.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<NewServerFarm xmlns='http://oec.api.opsource.net/schemas/vip'>
  <name>klodge2-ServerFarm1</name>
  <probeId>4a7310a1-a4b9-4d8d-8498-295257b8d2b7</probeId>
  <predictor>LEAST_CONNECTIONS</predictor>
  <realServer>
    <id>59bf107d-5ca5-4dac-89ed-d74766c0dee1</id>
    <port>80</port>
  </realServer>
</NewServerFarm>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Create Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Server-Farm (id: 2cef-4ab4) created</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Data: input xml does not conform to schema.
400 (Error)	REASON_320	Invalid Data: {name} cannot be "serverfarm" or "default" (case insensitive).
400 (Error)	REASON_320	Invalid Data: name does not conform to criteria (alphanumeric, 64-char max, no spaces).
400 (Error)	REASON_320	Invalid Data: name not unique within network.
400 (Error)	REASON_320	Invalid Data: predictor value invalid.
400 (Error)	REASON_320	Invalid Data: port value not an integer 1-65535.
400 (Error)	REASON_320	Invalid Data: non-unique realServer/port combination (only relevant if multiple Real Servers are specified in XML).
400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_602	Network already has maximum allowed number Server Farms.
400 (Error)	REASON_610	Real Server {id} invalid (does not exist within network).
400 (Error)	REASON_620	{probeld} invalid (does not exist within network).

2.7.12.Delete Server Farm

Description

Deletes only the Server Farm. The associated Real Servers remain.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Delete Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Deleted Server-Farm (id:d21-8aec-822)</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_601	Operation is in progress on Server Farm {server-farm-id} or Network {network-id}.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.
400 (Error)	REASON_635	Server Farm {server-farm-id} is associated with a VIP
400 (Error)	REASON_636	Server Farm {server-farm-id} is associated with a Persistence Profile
400 (Error)	REASON_637	Server Farm {server-farm-id} is associated with a Real Server or Probe

2.7.13.Add Real Server to Server Farm

Description

This is effectively a *modify Server Farm* API and therefore accepts its data as POST parameters. The Server Farm is modified to include the additional Real Server.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}/addRealServer</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
realServerId=<real-server-id-to-be-added>
realServerPort=realServer-port (optional - not present maps to "any")
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Add Real-Server to Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Real Server added to Server Farm</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Data: {realServerId} must be supplied.
400 (Error)	REASON_320	Invalid Data: {realServerPort}, if specified must be in range 1-65535.
400 (Error)	REASON_320	Invalid Data: Real-Server {realServerId} has already been added to Server-Farm {server-farm-id}.
400 (Error)	REASON_601	An operation is in progress on the target Server Farm {server-farm-id} or Network {network-id}.
400 (Error)	REASON_610	{realServerId} does not exist in network.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.

2.7.14.Remove Real Server from Server Farm

Description

This is effectively a *modify Server Farm* API and therefore accepts its data as POST parameters. The Server Farm is modified to remove the Real Server. The Real Server itself remains available.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}/removeRealServer</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Note that *realServerPort* parameter can be optional depending on how the relationship between the Real Server and Server Farm was originally defined. See *Add Real Server to Server Farm* for details.

Request Data

```
realServerId=<real-server-id-to-be-removed>
realServerPort=<real-server-port-to-be-removed>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Remove Real-Server from Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Real-Server removed from Server-Farm</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Input Data: The realServerId parameter must be supplied.
400 (Error)	REASON_320	Invalid Input Data: The realServerPort parameter must be a valid port number.
400 (Error)	REASON_320	Invalid Input Data: The realServerPort parameter must be between 1 and 65535.
400 (Error)	REASON_320	Invalid Input Data: The {realServerId}, {realServerPort} combination supplied does not match to any combination currently associated with the Server Farm {server-farm-id}.
400 (Error)	REASON_601	An operation is in progress on Server Farm {server-farm-id} or Network {network-id}.
400 (Error)	REASON_610	{realServerId} does not exist in network.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.

2.7.15.Add Probe to Server Farm

Description

This is effectively a *modify Server Farm* API and therefore accepts its data as POST parameters. The Server Farm is modified to include the referenced probe. Note that you will need to call the *List Probes* API to obtain the IDs of all possible probes associated with the network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}/addProbe</code>
Request Type	HTTP POST

Request Data

<code>probeId=<id-of-probe-to-be-added></code>
--

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..> <ns8:operation>Add Probe to Server-Farm</ns8:operation> <ns8:result>SUCCESS</ns8:result> <ns8:resultDetail>Probe added to Server Farm</ns8:resultDetail> <ns8:resultCode>REASON_0</ns8:resultCode> </ns8:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Input Data: {probeId} must be supplied. Invalid Input Data: {server-farm-id} already uses {probeId}.
400 (Error)	REASON_601	An operation is in progress on the target Server Farm {server-farm-id} or Network {network-id}.
400 (Error)	REASON_620	Invalid Data: {probeId} is not a valid Probe in this {network-id}.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.

2.7.16.Remove Probe from Server Farm

Description

This is effectively a *modify Server Farm* API and therefore accepts its data as POST parameters. The Server Farm is modified to remove the referenced probe.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}/removeProbe</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
probeId=<id-of-probe-to-be-removed>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Remove Probe from Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Probe removed from Server-Farm</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Input Data: a Probe ID must be supplied.
400 (Error)	REASON_601	An operation is in progress on Server Farm {server-farm-id} or Network {network-id}.
400 (Error)	REASON_620	Invalid Data: {probeId} is not a valid Probe in this {network-id}.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.

2.7.17. Modify Server Farm Predictor

Description

Provides the means to change the load-balancing behavior of the server farm. As a *modify* API, this accepts its input as POST parameters.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/serverFarm/{server-farm-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

<code>predictor=(LEAST_CONNECTIONS ROUND_ROBIN)</code>
--

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..> <ns8:operation>Modify Server-Farm</ns8:operation> <ns8:result>SUCCESS</ns8:result> <ns8:resultDetail>Modified Server-Farm</ns8:resultDetail> <ns8:resultCode>REASON_0</ns8:resultCode> </ns8:Status></pre>
--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid {predictor} value.
400 (Error)	REASON_601	Server Farm {server-farm-id} currently in some PENDING state.
400 (Error)	REASON_630	Server Farm {server-farm-id} does not exist in network {network-id}.

2.7.18. List Persistence Profiles

Description

Lists all Persistence Profiles on a network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/persistenceProfile</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<PersistenceProfiles xmlns="http://oec.api.opsource.net/schemas/vip">
  <PersistenceProfile>
    <id>976f43d6-b725-4732-9c05-a746ad21ba03</id>
    <state>NORMAL</state>
    <name>PersistenceProfile1</name>
    <serverFarmId>5b9e84d9-010e-4b9e-b9f6-a101af62a010</serverFarmId>
    <serverFarmName>MyFirstServerFarm</serverFarmName>
    <timeout>60</timeout>
    <type>HTTP_COOKIE</type>
    <cookieName>Cookie1</cookieName>
    <cookieType>COOKIE_INSERT_BROWSER_EXPIRE</cookieType>
  </PersistenceProfile>
  <PersistenceProfile>
    ...
    <type>IP_NETMASK</type>
    <direction>BOTH</direction>
    <netmask>255.255.255.0</netmask>
  </PersistenceProfile>
</PersistenceProfiles>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.7.19.Create Persistence Profile

Description

Creates a new Persistence Profile on a network (there is a maximum of twenty five Persistence Profiles per network).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/persistenceProfile</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

1. IP Netmask (IP_NETMASK):

```
<NewPersistenceProfile xmlns='http://oec.api.opsource.net/schemas/vip'>
  <!-- mandatory, unique in network -->
  <name>persistenceProfileName</name>
  <!-- mandatory, id of server farm deployed on network -->
  <serverFarmId>server1-id</serverFarmId>
  <timeoutMinutes>30</timeoutMinutes>
  <!-- mandatory, one of HTTP_COOKIE, IP_NETMASK -->
  <type>IP_NETMASK</type>
  <!-- mandatory if type is IP_NETMASK, one of SOURCE, DESTINATION, BOTH -->
  <direction>BOTH</direction>
  <!-- mandatory if type is IP_NETMASK, valid cidr notation netmask -->
  <netmask>255.255.255.0</netmask>
</NewPersistenceProfile>
```

2. HTTP Cookie (HTTP_COOKIE):

```
<NewPersistenceProfile xmlns='http://oec.api.opsource.net/schemas/vip'>
  <!-- mandatory, unique in network -->
  <name>persistenceProfileName</name>
  <!-- mandatory, id of server farm deployed on network -->
  <serverFarmId>server1-id</serverFarmId>
  <timeoutMinutes>30</timeoutMinutes>
  <!-- mandatory, one of HTTP_COOKIE, IP_NETMASK -->
  <type>HTTP_COOKIE</type>
  <!-- mandatory if type is HTTP_COOKIE, 64-char max -->
  <cookieName>mycookieName</cookieName>
  <!-- mandatory if type is HTTP_COOKIE, one of
    COOKIE_INSERT,
    COOKIE_INSERT_BROWSER_EXPIRE,
    NO_COOKIE_INSERT-->
  <cookieType>COOKIE_INSERT</cookieType>
</NewPersistenceProfile>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns11:Status xmlns:ns11="http://oec.api.opsource.net/schemas/general">
  <ns11:operation>Create Persistence-Profile</ns11:operation>
  <ns11:result>SUCCESS</ns11:result>
  <ns11:resultDetail>Persistence Profile (id:4bad8999-e0e3-476f-be20-44faf06bbbaa) created</ns11:resultDetail>
  <ns11:resultCode>REASON_0</ns11:resultCode>
</ns11:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
-----------	-------------	-------------

400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Data: Xml does not conform to schema (e.g. missing elements).
400 (Error)	REASON_320	Invalid Data: name does not conform to requirements (alphanumeric, 64-char max, no spaces).
400 (Error)	REASON_320	Invalid Data: name not unique in network.
400 (Error)	REASON_320	Invalid Data: Supplied Server Farm has insufficient (<2) RealServers.
400 (Error)	REASON_320	Invalid Data: timeoutMinutes is required in minutes (1-480).
400 (Error)	REASON_320	Invalid Data: type mandatory and must be one of IP_NETMASK, HTTP_COOKIE.
400 (Error)	REASON_320	Invalid Data: direction: must be specified if type is IP_NETMASK, and one of SOURCE, DESTINATION or BOTH.
400 (Error)	REASON_320	Invalid Data: netmask: must be specified if type is IP_NETMASK, and be a valid CIDR notation netmask.
400 (Error)	REASON_320	Invalid Data: cookieName: must be specified if type is HTTP_COOKIE, 64-char max, no spaces.
400 (Error)	REASON_320	Invalid Data: cookieType: must be specified if type is HTTP_COOKIE, one of COOKIE_INSERT, COOKIE_INSERT_BROWSER_EXPIRE, NO_COOKIE_INSERT.
400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_602	Network already has maximum allowed number of 25 Persistence Profiles.
400 (Error)	REASON_630	The supplied {serverFarmId} does not exist (for network).

2.7.20.Delete Persistence Profile

Description

Deletes a Persistence Profile on a network.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/persistenceProfile/{persistence-profile-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns11:Status xmlns:ns11="http://oec.api.opsource.net/schemas/general">
  <ns11:operation>Delete Persistence Profile</ns11:operation>
  <ns11:result>SUCCESS</ns11:result>
  <ns11:resultDetail>Persistence Profile (id:9cc5528b-2436-4cdf-85ed-
b9179444e968) deleted</ns11:resultDetail>
  <ns11:resultCode>REASON_0</ns11:resultCode>
</ns11:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_601	Operation is in progress on Persistence Profile {persistence-profile-id} or Network {network-id}.
400 (Error)	REASON_670	Persistence Profile does not exist (for network).
400 (Error)	REASON_675	Persistence Profile currently associated with one or more VIPS.

2.7.21. List VIPs

Description

Lists all VIPs in a network

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/vip</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Vips xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns5:vip>
    <ns5:id>7d580733-6ead-4882-be84-4e27686a6e60</ns5:id>
    <ns5:name>MyVIP</ns5:name>
    <ns5:ipAddress>168.143.84.217</ns5:ipAddress>
    <ns5:port>80</ns5:port>
    <ns5:protocol>TCP</ns5:protocol>
    <ns5:vipTargetType>SERVER_FARM</ns5:vipTargetType>
    <ns5:vipTargetId>c97530ba-bc65-4b</ns5:vipTargetId>
    <ns5:vipTargetName>MyServerFarm</ns5:vipTargetName>
    <ns5:replyToIcmp>false</ns5:replyToIcmp>
    <ns5:inService>true</ns5:inService>
  </ns5:vip>
</ns5:Vips>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_250	Network does not exist for {org-id}.

2.7.22. Create VIP

Description

In CISCO technology, VIP is the final resource required to complete a valid load-balancing configuration. As a *create* API, this operation requires input to be provided as XML. The current API supports VIP targets of type "SERVER_FARM" or "PERSISTENCE_PROFILE" and requires the vipTargetId to be a valid serverFarmId or persistenceProfileId.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/vip">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/vip
Request Type	HTTP POST
Supported for	MCP 1.0

Note that <ipAddress> is optional. Uniqueness is defined by the combination of the IP address, port number and protocol, so if an IP address is being supplied; the combination of protocol and/or port with the IP address must differ from any VIPs already defined using the same IP address. If you do not supply an IP address, the next available public IP address from your network's public IP block(s) will be assigned.

Request Data

```
<NewVip xmlns="http://oec.api.opsources.net/schemas/vip">
  <name>MyVIP</name>
  <ipAddress>206.80.41.190</ipAddress>
  <port>80</port>
  <protocol>TCP</protocol>
  <vipTargetType>SERVER_FARM</vipTargetType>
  <vipTargetId>c97530ba-a28b355e717b</vipTargetId>
  <replyToIcmp>true</replyToIcmp>
  <inService>true</inService>
</NewVip>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsources.net/schemas/organization" ..>
  <ns8:operation>Create VIP</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>VIP (id:7d580733-6ead) created</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_310	No public IP address available.
400 (Error)	REASON_320	Invalid Data: Input XML does not conform to schema.
400 (Error)	REASON_320	Invalid Data: invalid name alphanumeric, 64-char max, no spaces.
400 (Error)	REASON_320	Invalid Data: name not unique in network.
400 (Error)	REASON_320	Invalid Data: ipAddress if specified, must be a valid IP address within this network.
400 (Error)	REASON_320	Invalid Data: port must be in range 1-65535, and must not be used by another VIP (in any state) using the same IP and protocol.
400 (Error)	REASON_320	Invalid Data: protocol must be one of TCP, UDP.
400 (Error)	REASON_320	Invalid Data: replyToIcmp must be true or false.
400 (Error)	REASON_320	Invalid Data: vipTargetType must be one of SERVER_FARM or PERSISTENCE_PROFILE.

400 (Error)	REASON_320	Invalid Data: inService value must be true or false.
400 (Error)	REASON_601	Operation in progress on Network {network-id}.
400 (Error)	REASON_602	Network already has maximum allowed number of VIPs.
400 (Error)	REASON_630	{vipTargetId} invalid: if {vipTargetType} is SERVER_FARM.
400 (Error)	REASON_670	{vipTargetId} invalid: if {vipTargetType} is PERSISTENCE_PROFILE.

2.7.23.Delete VIP

Description

Deletes a specified VIP

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/vip/{vip-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Delete VIP</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Deleted VIP (id: 6ead-4882-be84-e60)</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_601	Operation in progress on VIP {vip-id} or Network {network-id}.
400 (Error)	REASON_650	VIP does not exist within network.

2.7.24. Modify VIP

Description

Provides the means to modify the behavior of a VIP – Either bringing it in and out of service or whether it responds to ping.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/vip/{vip-id}</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
inService=(true|false)
replyToIcmp=(true|false)
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Modify VIP</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Modified VIP</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	At least one of the parameters {inService} or {replyToIcmp} must be set.
400 (Error)	REASON_320	Parameter value should be either "true" or "false".
400 (Error)	REASON_601	Operation is in progress on VIP {vip-id} or Network {network-id}.
400 (Error)	REASON_650	VIP {vip-id} does not exist within network.

2.8. Files Account API

Provides a set of operations for creating, managing, and deleting Cloud Files accounts. Note that use of a separate API is required to API to actually interact with the Files accounts. That API is described in the separate **Cloud Files API Documentation**.

2.8.1. Create Files Account

Description

Creates a Cloud Files storage account. This API requires your organization ID. Both the **userName** and the **email** fields must be unique across all storage accounts. In addition, the **email** field must be populated with a valid email format (i.e. username@domain.com, username@domain.net, etc.). If these conditions are not met, the system will return a REASON_320 error.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/storageAccount">https://<Cloud API URL>/oec/0.9/{org-id}/storageAccount
Request Type	HTTP POST
Supported for	N/A

Request Data

```
<NewStorageAccount xmlns="http://oec.api.opsource.net/schemas/storage">
  <userName>storage1</userName>
  <password>abc12345678</password>
  <!-- email must be unique per storage account -->
  <email>storage1@example.com</email>
  <allocatedStorageMb>20480</allocatedStorageMb>
  <displayName>Storage Account 1</displayName>
  <description>Storage Account 1 Description</description>
  <subAdminUserName>user-1</subAdminUserName>
  <subAdminUserName>user-2</subAdminUserName>
  ...
  <subAdminUserName>user-n</subAdminUserName>
</NewStorageAccount>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <ns8:operation>Create Storage-Account</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Storage-Account (username:storage1)
created</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_110	Sub-Administrative User was not found.
400 (Error)	REASON_320	Invalid Input Data.
400 (Error)	REASON_681	Cloud Files is not available.

2.8.2. List Files Accounts

Description

Lists the Cloud Files storage accounts belonging to your organization. This API requires your organization ID.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/storageAccount</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <StorageAccounts xmlns="http://oec.api.opsource.net/schemas/storage"> <storageAccount> (0-to-many of these) <userName>storageAccount1-userName</userName> (mandatory, unique) <password>storageAccount1-password</password> (mandatory) <allocatedStorageMb>11264</allocatedStorageMb> (mandatory) <displayName>storageAccount1-displayName</displayName> (mandatory, unique in org) <description>My Storage Account 1 Description</description> (optional) <subAdminUserName>username1</subAdminUserName> (optional) <subAdminUserName>username2</subAdminUserName> (optional) <subAdminUserName>username3</subAdminUserName> (optional) </storageAccount> <storageAccount> <userName>storageAccount2-userName</userName> ... </storageAccount> <storageAccount> <userName>storageAccount3-userName</userName> ... </storageAccount> </StorageAccounts></pre>	
--	--

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_681	Cloud Files is not available.

2.8.3. Delete Files Account

Description

Deletes a Cloud Files storage account. This API requires your organization ID and the username of the Cloud Files storage account you're deleting.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/storageAccount/<files-account-username>?delete</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
<ns8:operation>Delete Storage-Account</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Storage-Account (username:storage1)
deleted</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_601	Storage account currently in some PENDING state.
400 (Error)	REASON_680	Storage account does not exist/does not exist within for {org-id}.
400 (Error)	REASON_681	Cloud Files is not available.

2.8.4. Modify Files Account

Description

Modifies a Cloud Files storage account. This API requires your organization ID and the username of the Cloud Files storage account you're deleting.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/storageAccount/<files-account-username></code>
Request Type	HTTP POST
Supported for	N/A

Parameter Request Data (include only fields being changed with & separating each parameter)	
displayName=	Name (metadata) of the Cloud Files Account
description=	Description (metadata) of the Cloud Files Account
email=	Email address corresponding to the Cloud Files Account. The email address must be unique per Cloud Files Account and be valid email address format.
password=	Password of the Cloud Files Account. max 75 char, min 8 chars, contains both upper and lower case characters, has digits and punctuation characters as well as letters e.g., 0-9, !@#\$%^&()_+ ~-=\`{}[]:;'",./))
allocatedStorageMb=	Storage quota for the Cloud Files account. Value must be greated than 10 * 1024 (10 GB) and kless than 10 * 1024 * 1024 (10TB)
subAdminUserName=	Defines Sub-Administrators able to manage storage account. Note that using the subAdminUserName parameter results in defining a new list of subadministrators of the storage account, every other subadmin will be excluded. In order to clear all subAdmins access to a storage account, send parameter subAdminUsername with blank value.

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsources.net/schemas/organization" .. >
<ns11:operation>Modify Storage-Account</ns11:operation>
  <ns11:result>SUCCESS</ns11:result>
  <ns11:resultDetail>Storage-Account (username:newusername)
modified</ns11:resultDetail>
  <ns11:resultCode>REASON_0</ns11:resultCode>
</ns11:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_110	Sub-Administrative User was not found.
400 (Error)	REASON_320	Invalid Input Data.
400 (Error)	REASON_601	Storage account currently in some PENDING state.
400 (Error)	REASON_680	Storage account does not exist/does not exist within for {org-id}.
400 (Error)	REASON_681	Cloud Files is not available.

2.9. Reports API

Provides a set of operations for generating reports out of the Cloud system. Two important notes about these functions:

- 1) Note all Report API calls are currently restricted to the Primary Administrator
- 2) Response is pure CSV (i.e. not the CSV wrapped in an xml element)

2.9.1. Summary Usage Report

Description

Provides a CSV-formatted daily usage report of the sum total usage across the account. **Note the function will return a maximum of 31 days of data.** If the end date exceeds 31 days from the start date, the system simply provides 31 days of data.

Important Note: an organization may have up to twenty concurrent requests in progress for the Summary Usage Report. If the limit is exceeded an HTTP 429 – “Too Many Requests” response is returned. The response body includes a “Status” XML payload, described in the *Response Format* section of this document, with a REASON_529 error code.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/report/usage?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

DAY,Location,CPU Hours,RAM Hours,Storage Hours,Performance Storage Hours,Bandwidth In,Bandwidth Out,Sub-Admin Hours,Network Hours,Public IP Hours,Cloud Files Account Hours,Cloud Files (GB Days),Software Units,Essentials Client Days,Advanced Client Days,Enterprise Client Days,Essentials Backups (GB),Advanced Backups (GB),Enterprise Backups (GB)
01/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
02/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
03/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
04/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
05/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
06/01/2013,NA1,172,344,3958,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
07/01/2013,NA1,205,410,4783,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0
08/01/2013,NA1,216,432,5136,264,0,0,72,24,0,0,0,0,0,0,0,0,0,0,0,0

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_520	Invalid Input Date(s).
429 (Too Many Requests)	REASON_529	Concurrent request limit has been reached.

2.9.2. Detailed Usage Report

Description

Provides a CSV-formatted daily usage report identifying the specifics of all usage across the account, including stop/start of servers and creation/deletion of objects. **Note the function will return a maximum of 31 days of data.** If the end date exceeds 31 days from the start date, an error will be returned.

Note the April 19th, 2012 release added Public IP Hours information to the response.

Further information is available in the Community article [How to View a Detailed Usage Report Using the Administrative UI](#).

Important Note: an organization may have a single request in progress for the Detailed Usage Report at one time. Concurrent requests are not supported. An HTTP 429 – “Too Many Requests” response is returned if an overlapping request is received. The response body includes a “Status” XML payload as described in the *Response Format* section of this document, with a REASON_529 error code.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/report/usageDetailed?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

Name,Type,Location,Private IP Address,Status,Start Time,End Time,Duration (Hours),CPU Count,RAM (GB),Storage (GB),Performance Storage (GB),CPU Hours,RAM Hours,Storage Hours,Performance Storage Hours,Bandwidth-In (GB),Bandwidth-Out (GB),Subadmin Hours,Network Hours,Public IP Hours,Cloud Files Account Hours,Cloud Storage (GB)
jay test 1,Server,NA1,10.157.110.12,Running,01/01/2013 00:00,02/01/2013 00:00,24,1,2,16,0,24,48,384,0,0,0,0,0,0,0,0,0,0
openswanvpngw,Server,NA1,10.157.110.13,Running,01/01/2013 00:00,02/01/2013 00:00,24,1,2,10,0,24,48,240,0,0,0,0,0,0,0,0,0,0
test windows 2008,Server,NA1,10.157.110.14,Running,01/01/2013 00:00,02/01/2013 00:00,24,2,4,32,160,48,96,768,24,0,0,0,0,0,0,0,0,0,0
Network: network_1 IP Block:
168.143.92.136(4),IpBlock,NA1,,Reserved,01/01/2013 11:47,02/01/2013 00:00,12,2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,48.82,0,0
Windows 2008 32 bit test,Server,NA1,10.157.110.14,Running,01/01/2013 00:00,02/01/2013 00:00,24,2,4,32,0,48,96,768,0,0,0,0,0,0,0,0,0,0
RedHat Enterprise 4 32 bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,10,0,0,0,240,0,0,0,0,0,0,0,0,0,0
RedHat Enterprise 4 64 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,10,0,0,0,240,0,0,0,0,0,0,0,0,0,0
CentOS5 32 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,10,0,0,0,240,0,0,0,0,0,0,0,0,0,0
CentOS5 64 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,10,0,0,0,240,0,0,0,0,0,0,0,0,0,0
clone_00372,Image,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,10,0,0,0,240,0,0,0,0,0,0,0,0,0,0
sub_admin_1,Sub-Administrator,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,0,0,0,0,0,0,0,0,24,0,0,0,0
network_1,Network,NA1,,Running,01/01/2013 00:00,02/01/2013 00:00,24,0,0,0,0,0,0,0,0,0,0,24,0,0,0
TOTAL for 2013-01-01,,,,,01/01/2013 00:00,02/01/2013 00:00,24,0,0,0,0,144,288,3360,24,0,0,24,24,48.82,0,0

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

400 (Error)	REASON_520	Invalid Input Date(s).
429 (Too Many Requests)	REASON_529	Concurrent request limit has been reached.

2.9.3. Software Units Usage Report

Description

Provides a CSV-formatted report identifying the software unit calculation specifics for any Priced Software on virtual servers across the account. See the **List Software Labels** function for further information. **Note the function will return a maximum of 31 days of data.** If the end date exceeds 31 days from the start date, an error will be returned.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/report/usageSoftwareUnits?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD">https://<Cloud API URL>/oec/0.9/{org-id}/report/usageSoftwareUnits?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD
Request Type	HTTP GET
Supported for	N/A

Response Details

Date, Location, Server, Server ID, CPU Count, Software, Units when Started, Units when Stopped, Per, Running Hours, Stopped Hours, Software Units
30-Jun-2007, NA1, Server2, 422879a6-alc3-4f2c-a579-21268243e34d, 2, Linux, 10, 0, CPU, 5, 5, 100
30-Jun-2007, NA1, Server2, 422879a6-alc3-4f2c-a579-21268243e34d, 2, Oracle, 25, 15, SERVER, 5, 5, 200
30-Jun-2007, NA1, Server2, 422879a6-alc3-4f2c-a579-21268243e34d, 3, Linux, 10, 0, CPU, 13, 1, 390
30-Jun-2007, NA1, Server2, 422879a6-alc3-4f2c-a579-21268243e34d, 3, Oracle, 25, 15, SERVER, 13, 1, 340
30-Jun-2007, NA1, Server1, a1d343dc-861f-4cc6-abdf-af69e6e72eff, 2, Linux, 10, 0, CPU, 24, 0, 480

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_520	Invalid Input Date(s).

2.9.4. Backup Usage Report

Description

Provides a CSV-formatted usage report identifying the specifics of all Backup usage across the account identified by {org-id} for the designated period. **Note the function will return a maximum of 31 days of data.** If the end date exceeds 31 days from the start date, only 31 days from the start date will be returned.

Further information is available in the Community article [How to View a Backup Usage Report Using the Administrative UI](#).

The mandatory *datacenterId* parameter takes the value of the *location* attribute on a <datacenter> element returned from the **List Data Centers (with Parameters) - Maintenance** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/backup/detailedUsageReport?datacenterId={datacenterId}&fromDate=YYYY-MM-DD&toDate=YYYY-MM-DD</code>
Request Type	HTTP GET
Supported for	N/A

Response Details

BackupClientID, BackupClientType, BackupPlan, BackupSize, CustomerAssetID, Date, EndTime, Location, PreviousBackupPlan, PreviousSchedulePolicy, PreviousStoragePolicy, RestoreSize, SchedulePolicy, ServerID, ServerName, StartTime, StoragePolicy, TotalBackupSize, UsageType dd9244f1-df4d-476f-ba4c-634041c09335,FA.Win,Advanced,0,b123255f-fca2-44c2-9693-63599bbf6463,25/10/2013,09:24:04,AU,Advanced,12AM - 6AM Windows File System,14 Day Storage Policy Essentials,0,12AM - 6AM Windows File System,35635560-f8f2-4f77-92af-1bb65fd085b4,Win2012BC2,09:24:04,14 Day Storage Policy Essentials,0,CLIENT_ADDED dd9244f1-df4d-476f-ba4c-634041c09335,FA.Win,Advanced,9,b123255f-fca2-44c2-9693-63599bbf6463,26/10/2013,19:10:50,AU,Advanced,12AM - 6AM Windows File System,14 Day Storage Policy Essentials,0,12AM - 6AM Windows File System,35635560-f8f2-4f77-92af-1bb65fd085b4,Win2012BC2,19:10:50,14 Day Storage Policy Essentials,11,SCHEDULED_BACKUP dd9244f1-df4d-476f-ba4c-634041c09335,FA.Win,Advanced,10,b123255f-fca2-44c2-9693-63599bbf6463,27/10/2013,19:10:50,AU,Advanced,12AM - 6AM Windows File System,14 Day Storage Policy Essentials,0,12AM - 6AM Windows File System,35635560-f8f2-4f77-92af-1bb65fd085b4,Win2012BC2,19:10:50,14 Day Storage Policy Essentials,11,SCHEDULED_BACKUP dd9244f1-df4d-476f-ba4c-634041c09335,FA.Win,Advanced,10,b123255f-fca2-44c2-9693-63599bbf6463,28/10/2013,19:10:59,AU,Advanced,12AM - 6AM Windows File System,14 Day Storage Policy Essentials,0,12AM - 6AM Windows File System,35635560-f8f2-4f77-92af-1bb65fd085b4,Win2012BC2,19:10:59,14 Day Storage Policy Essentials,11,SCHEDULED_BACKUP

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_13	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_53	Backup is not available at the datacenter where the server is located, or is not enabled by your Cloud vendor.
400 (Error)	REASON_54	Backup service is not available because the datacenter is in maintenance.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	Mandatory parameter is missing or invalid.
400 (Error)	REASON_520	Invalid Input Dates
400 (Error)	REASON_540	Backup service is not enabled for {org-id}.
400 (Error)	REASON_541	Backup service is not enabled for {org-id} at the datacenter where

		server {server-id} resides.
400 (Error)	REASON_542	Backup service is in the process of being enabled for {org-id}.
400 (Error)	REASON_770	Invalid location {datacenterId}. See List Data Centers (with Parameters) - Maintenance.

2.9.5. Administrator Logs Report

Renamed from **Audit Log Report** to match the Cloud Administrative UI.

Description

Provides a CSV-formatted daily usage report of administrative actions taken across the account. **Note the function will return a maximum of 30 days of data.** If the end date exceeds 30 days from the start date, an “invalid input data” error will be returned.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/auditlog?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD">https://<Cloud API URL>/oec/0.9/{org-id}/auditlog?startDate=YYYY-MM-DD&endDate=YYYY-MM-DD
Request Type	HTTP GET
Supported for	N/A

Response Details

A sample response is shown below. Note that long running actions on networks and servers are logged with two rows. The first indicating initiation of the action; “ATTEMPT: <details>”, followed (not necessarily sequentially) by a second entry logging the success or failure of the action.

UUID,Time,Create User,Department,Customer Defined 1,Customer Defined 2,Type,Name,Action,Details,Response Code
16aa6bd1-6244-4bbe-ad04-295d1965109a,16/11/2011 10:32,koala,,,,NETWORK,Staging Network,Add Network,ATTEMPT: Add Network 'Staging Network',6dec7bb9-352f-4eb5-8cf0-a662222b3c1c,16/11/2011 10:32,koala,,,,NETWORK,Staging Network,Add Network,Add Network 'Staging Network',OK
0b1e8e74-19b5-48b9-a2e9-fe9682173917,16/11/2011 10:33,koala,,,,ACL_RULE,PermitApp,Add Acl Rule,ATTEMPT: Add Acl Rule 'PermitApp',89b0be75-d910-44aa-96e6-dc5e59578b0a,16/11/2011 10:33,koala,,,,ACL_RULE,PermitApp,Add Acl Rule,Add Acl Rule 'PermitApp',OK
6eee972d-cb64-4876-a8fa-f2eb133c225b,16/11/2011 10:36,koala,,,,SERVER,LAMP Web[10-157-9-11],Deploy Server,ATTEMPT: Deploy Server 'LAMP Web[10-157-9-11]',

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_520	Invalid Input Dates

3. API Functions replaced by API 2

3.1. Account API

3.1.1. List Data Centers (with Parameters) - Maintenance

This API function deprecates *List Data Centers (with Parameters)*. This API function provides paging and filtering functionality. For details see ***Paging and Filtering for List API Functions***.

Description

This function identifies the list of data centers available to the organization of the authenticating user. Users with appropriate roles can deploy networks, servers, backup services and images in each available data center location.

Each data center within the list has various details including a unique identifier "location", the appropriate VPN URL corresponding to that location and the default data center for the organization is marked by the boolean "default" attribute. Calling deprecated APIs that are not location aware, such as "Create Network", will result in the default location being used. In each relevant case, a location aware API is now available.

Each data center is identified as using either MCP 1.0 or 2.0 architecture. The architecture is identified in the response within the networking properties by the "type" field as highlighted below.

```
<networking maintenanceStatus="NORMAL" type="1">
  <property value="20" name="MAX_SERVER_TO_VIP_CONNECTIONS"/>
</networking>
```

A type="1" value indicates a MCP 1.0 data center. A type="2" value indicates a MCP 2.0 data center. Identifying the MCP type is important as the 0.9 API version only supports networking functions for MCP 1.0 locations. For more details, see **MCP Location Identification and Support in this API version** in the Overview portion of this document.

Each data center includes a <maxCpu> and <maxRamMb> elements defining the upper ceiling for the number of CPUs and quantity of RAM permitted respectively for Customer Servers deployed at that data center.

Each data center includes a list of <diskSpeed> elements describing the available storage speeds at the data center. Each <diskSpeed> element comprises a <displayName>, <abbreviation> and <description> of the disk speed, all of which are provided for informational purposes. The "id" attribute identifies the disk speed for programmatic use. The default storage speed for the data center is indicated with the boolean "default" attribute. The default storage speed is used when a new server is deployed, or additional storage is added to a server. For further information about disk speeds please review the Community article:

[Introduction to Cloud Server Disks and Disk Speeds \(Tiered Storage\).](#)

There is an important relationship between the two storage properties, *MAX_TOTAL_ADDITIONAL_STORAGE_GB* and *MAX_TOTAL_IMAGE_STORAGE_GB*.

Servers with total storage greater than the value of *MAX_TOTAL_IMAGE_STORAGE_GB* cannot be cloned using the *Clone Server to Create Customer Image* function to create new Customer Images.

MAX_TOTAL_ADDITIONAL_STORAGE_GB defines the maximum amount of storage that can be added to a Server. In most cases it is **greater** than *MAX_TOTAL_IMAGE_STORAGE_GB*, meaning that it is possible to create Servers that cannot be cloned. This is desirable for most users where a small Customer Image is maintained as the source for deploying Servers to which storage is then added.

Request Details

URL	<pre>https://<Cloud API URL>/oec/0.9/{org-id}/datacenterWithMaintenanceStatus?</pre> <p><i>Paging/Ordering Optional Parameters:</i></p> <pre>&pageSize= &pageNumber= &orderBy=</pre> <p><i>Filter Optional Parameters:</i></p> <pre>&location=</pre>
Request Type	HTTP GET

Supported for	N/A (Both MCP 1.0 and 2.0 locations are returned)
----------------------	---

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
location	String	Identifies a data center at which servers and networks are located.	Yes	Yes

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<DatacentersWithMaintenanceStatus
xmlns:ns7="http://oec.api.opsource.net/schemas/datacenter" >
  <!-- 1 to many occurrences -->
  <datacenter location="NA5" default="true">
    <displayName>US - East 2</displayName>
    <city>Ashburn</city>
    <state>Virginia</state>
    <country>US</country>
    <vpnUrl>https://na5.cloud-vpn.net</vpnUrl>
    <networking type="1" maintenanceStatus="NORMAL">
      <property value="20" name="MAX_SERVER_TO_VIP_CONNECTIONS"/>
    </networking>
    <hypervisor maintenanceStatus="NORMAL" type="VMWARE">
      <diskSpeed available="true" default="true" id="STANDARD">
        <displayName>Standard</displayName>
        <abbreviation>STD</abbreviation>
        <description>Standard Disk Speed</description>
      </diskSpeed>
      <diskSpeed available="true" default="false" id="HIGHPERFORMANCE">
        <displayName>High Performance</displayName>
        <abbreviation>HPF</abbreviation>
        <description>Faster than Standard. Uses 15000 RPM disk with
Fast Cache.</description>
      </diskSpeed>
      <diskSpeed available="true" default="false" id="ECONOMY">
        <displayName>Economy</displayName>
        <abbreviation>ECN</abbreviation>
        <description>Slower than Standard. Uses 7200 RPM disk without
Fast Cache.</description>
      </diskSpeed>
      <!-- Optional. Present if datacenter has Backup service enabled-->
      <backup type="COMMVault" maintenanceStatus="NORMAL"/>
      <!-- 0 to many occurrences of property -->
      <property name="MIN_DISK_SIZE_GB" value="10" />
      <property name="MAX_DISK_SIZE_GB" value="1000" />
      <property name="MAX_TOTAL_ADDITIONAL_STORAGE_GB" value="10000"/>
      <property name="MAX_TOTAL_IMAGE_STORAGE_GB" value="2600"/>
      <property name="MAX_CPU_COUNT" value="16" />
      <property name="MIN_MEMORY_MB" value="1024" />
      <property name="MAX_MEMORY_MB" value="131072" />
    </hypervisor>
  </datacenter>
</DatacentersWithMaintenanceStatus>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

3.2. Server API

Provides a set of operations to interact with customers' server VMs – including APIs for deploying, starting, stopping, modifying, deleting and cloning servers.

3.2.1. List Servers (with Parameters) - Backup

This API function deprecates *List Servers (with Parameters)*

This API function provides paging and filtering functionality. For details see **Paging and Filtering for List API Functions**.

Description

Lists the virtual servers belonging to the organization identified by {org-id}. Filters can be specified to limit the set of servers returned. For example; servers residing on a single network, those that are deployed, those pending deployment or restricting the list to a single server using the "&id=<server.id>" filter.

Note: the default pageSize for **List Servers (with Parameters) - Backup** is 250.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithBackup?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <i>Filter Optional Parameters:</i> <code>&created=</code> <code>&deployed=</code> <code>&id=</code> <code>&location=</code> <code>&machineName=</code> <code>&name=</code> <code>&networkId=</code> <code>&privateIp=</code> <code>&sourceImageId=</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual server.	Yes	Yes
location	String	Identifies a data center at which servers and networks are located.	Yes	Yes
networkId	uuid (String)	Identifies a network in which servers are resident.	Yes	No
sourceImageId	uuid (String)	Identifies a server image used to create servers.	Yes	Yes
deployed	boolean	Identifies whether or not servers have completed the deployment process.	Yes	Yes

name	String	Matched against names of servers.	Yes	Yes
created	Date	Identifies the date of creation of servers. Supports MIN and MAX. E.g: &created.MIN=20120901T00:00:00Z <i>means with date on or after</i> 2012-09-01 00:00:00 &created.MAX=20120901T00:00:00Z <i>means with date on or before</i> 2012-09-01 00:00:00	Yes	Yes
state	String	The current status of the server. Case insensitive. The initial possible set of values for Server.state are: "NORMAL", "PENDING_ADD", "PENDING_CHANGE", "PENDING_DELETE", "FAILED_ADD", "FAILED_DELETE", "PENDING_CLEAN" and "REQUIRES_SUPPORT". This set of values should not be assumed to be static and can increase at any time.	No	Yes
started	Date	Identifies when the server was last started.	No	Yes
operatingSystemId	String	Identifies the Operating System of the server. E.g. "REDHAT564"	No	Yes

Response Details (descriptive – includes all optional)

```
<ServersWithBackup
  xmlns="http://oec.api.opsources.net/schemas/server"
  totalCount="320"
  pageCount="250"
  pageNumber="1"
  pageSize="250">
  <!--Zero or more repetitions:-->
  <server id="c325fe04-7711-4968-962e-c88784eb2" location="NA1">
    <name>Production LAMP Server</name>
    <!--Optional:-->
    <description>Main web application server.</description>
    <operatingSystem id="REDHAT564" displayName="REDHAT5/64" type="UNIX"/>
    <cpuCount>2</cpuCount>
    <memoryMb>4096</memoryMb>
    <!-- one or more repetitions:-->
    <disk id="x445fe05-7113-4988-9d2e-cb7t78eb2" scsiId="0" sizeGb="50"
speed="STANDARD" state="NORMAL"/>
    <disk id="ef49974c-87d0-400f-aa32-ee43559fdb1b" scsiId="1" sizeGb="150"
speed="STANDARD" state="NORMAL"/>
    <!--Zero or more repetitions:-->
    <softwareLabel>REDHAT5ES64</softwareLabel>
    <!--Optional:-->
    <sourceImageId>5a18d6f0-eaca-11e1-8340-d93da27669ab</sourceImageId>
    <networkId>xb632974c-87d0-400faa32-hb43559flk765</networkId>
    <machineName>10-157-3-125</machineName>
    <privateIp>10.157.3.125</privateIp>
```

```

<!--Optional:-->
<publicIp>206.80.63.208</publicIp>
<created>2012-07-02T10:43:31.000Z</created>
<isDeployed>true</isDeployed>
<isStarted>false</isStarted>
<state>PENDING_CHANGE</state>
<!--Zero or more repetitions:-->
<machineStatus name="vmwareToolsRunningStatus">
  <value>RUNNING</value>
</machineStatus>
<!--Optional:-->
<status>
  <action>START_SERVER</action>
  <requestTime>2012-09-26T08:36:28</requestTime>
  <userName>btaylor</userName>
  <!--Optional:-->
  <numberOfSteps>3</numberOfSteps>
  <!--Optional:-->
  <updateTime>2012-09-26T08:37:28</updateTime>
  <!--Optional:-->
  <step>
    <name>Waiting for operation</name>
    <number>3</number>
    <!--Optional:-->
    <percentComplete>3</percentComplete>
  </step>
  <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
  <failureReason>Message Value</failureReason>
</status>
<!-- Optional. Present only if the Backup service is in some state of
enablement for the Server. assetId is optional and will only appear when the
Server has been successfully set up with the Backup service. See Enable Backup
for a Server -->
  <backup assetId="30fea016-db07-4935-919d-bfd18caaae62" state="NORMAL"
servicePlan="Essentials"/>
</serverWithBackup>
</ServersWithBackup>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	<i>networkId</i> supplied could not be found for {org-id}.
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

3.2.2. Deploy Server with Disk Speed

This function deprecates the **Deploy Server** function.

Description

Deploys a new Cloud Server from an existing Customer Image or OS Image.

This function requires:

- The organization ID as part of the URL: *{org-id}*.
- A *name* for the new server.
- The ID of the Cloud Network where the server is to be deployed (*networkId*) **or** the private IP address that the Server is to use (*privateIp*). These two parameters are mutually exclusive.
 - If no private IP address is provided, an unreserved private IP address from the range specified on the network identified by *networkId*, will be assigned.
 - If provided, the private IP address must not already be one reserved on the network.
- The ID of the source Image (*imageId*) from which the server is to be created.
- The boolean *start* parameter is required to indicate whether or not the server is to be left in a started state following deployment.
- An *administratorPassword* parameter must be passed:
 - when the *imageId* corresponds to any OS Image.
 - when the *imageId* corresponds to a Windows Customer Image excluding Windows Server 2003.

Notes:

- An *administratorPassword* cannot be passed in for Servers being deployed from Linux based Customer Images.
- The success response message to this API function includes an *<additionalInformation>* element including the ID of the new server being deployed. This ID can be used in any future operations against the server requiring the server's UUID.

Disk Speed

The **Deploy Server with Disk Speed** function introduces the option to define speeds for the various disks attached to the Image - including the operating system disk on SCSI 0 - which will be created on the resulting Server.

A speed is can be supplied for any, some or none of the disks associated with a given source Image using the *<disk>* element shown in the sample payload below. The speed supplied must be valid for the data center in which the server is being deployed and will result in the disk being persisted on the appropriate type of storage when the server is deployed.

Please refer to the related Community introductory article prior to using disk speed options available on this API. The article explains the concept of *Tiered Storage* in the context of Cloud Control and what it means for your Cloud Servers' storage:

[Introduction to Cloud Server Disks and Disk Speeds \(Tiered Storage\)](#)

If a *<disk>* element is not supplied for a particular disk on the source Image there are a couple of possible outcomes:

- If the source image is a Customer Image and was cloned from a Server on which disk speeds have already been configured, the speeds of those disks will have been retained. The retained speed will be used when creating the disk on the new server. Note that if a speed defined on the Image is not available at the target data center a synchronous REASON_826 response will be returned explaining the problem.
- If the source image is an OS Image or has no custom speed information for a given disk, the default disk speed for the data center will be used for the disk.

If a *<disk>* element is provided for a particular disk but the identified speed is not available at the target data center a synchronous REASON_826 response will be returned explaining the problem.

Request Details

URL	https://<Cloud API URL>/oec/0.9/{org-id}/deployServer
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<DeployServer xmlns="http://oec.api.opsource.net/schemas/server">
  <!-- mandatory, string, max 75 chars -->
  <name>My Server</name>
  <!-- optional, string, max 255 chars -->
  <description>This is my server</description>
  <!-- mandatory, string, source image id -->
  <imageId>sourceImageId</imageId>
  <!-- mandatory, "false" or "true" -->
  <start>false</start>
  <!-- optional depending on image and OS type, see above. If supplied must
be at least 8 chars in length and cannot include "<" or ">" -->
  <administratorPassword>M@#GG777eW!</administratorPassword>
  <!-- NB either privateIp or networkId must be provided -->
  <privateIp>10.0.1.5</privateIp>
  <!-- optional, a disk element can be provided for any, some or all disks.
Available disk speeds are listed on the List Data Centers (with Parameters) -
Maintenance function. -->
  <disk scsiId="0" speed="ECONOMY"/>
  <disk scsiId="2" speed="HIGHPERFORMANCE"/>
</DeployServer>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Deploy Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Request "Deploy Server with Disk Speeds"
successful</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
  <additionalInformation name="serverId">
    <value>4b126b80-26f0-11e4-8e2e-552ad09887dc</value>
  </additionalInformation>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_122	Invalid Password. See password rules above.
400 (Error)	REASON_241	A <privateIp> element was supplied on the request but the specified private IP address is not available on the associated Network.
400 (Error)	REASON_250	No network could be found for the supplied <privateIp> value.
400 (Error)	REASON_310	A <networkId> element was supplied on the request but there are no IP addresses available on the network.
400 (Error)	REASON_320	Invalid data supplied on the request. Could be caused by: <ul style="list-style-type: none"> Invalid value for a <i>speed</i> definition on a <disk> element <i>administratorPassword</i> being omitted for a mandatory OS <i>administratorPassword</i> being provided for an OS that does not support it. <i>privateIp</i> outside the valid range (.11 - .254).
400 (Error)	REASON_390	Could not find image for <i>imageId</i> .
400 (Error)	REASON_394	<i>scsiId</i> attribute on a <disk> element does not exist on the image identified by <i>imageId</i> .

400 (Error)	REASON_601	Operation in progress on the target Network. <i>(Occurs if target Network is in the process of being added, edited, or deleted)</i>
400 (Error)	REASON_690	The Image is identified by imageId has an operation in progress and cannot be used to deploy servers until the operation is complete. <i>Note that an Image Export in progress will not cause this response to be returned.</i>
400 (Error)	REASON_751	Daily Deployment Limit Exceeded.
400 (Error)	REASON_826	One of the requested disk speeds is not available at the data center.

3.2.3. Delete Server

Description

Requires your organization ID and the ID of the target server. Note that a Server must be stopped before it can be deleted.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?delete</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Delete Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Delete" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is not currently in a stopped state. Servers must be stopped to be deleted.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_392	Operation in progress on Server with Id {server-id}.
400 (Error)	REASON_393	Server {server-id} is associated with a Real Server.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_550	Server {server-id} cannot be deleted until the Backup service has been disabled. See Disable Backup for a Server .
400 (Error)	REASON_570	Server <server_id> cannot be deleted because it is enabled for Monitoring.
400 (Error)	REASON_692	Server {server-id} is associated with a Server Anti-Affinity Rule and cannot be deleted unless the rule is removed.

3.2.4. Start Server

Description

Powers on an existing deployed server. Requires your organization ID and the ID of the target server.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?start</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Start Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Start" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is already running.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.

3.2.5. Shutdown Server (Graceful Stop)

Description

This function will attempt to “gracefully” stop a server by initiating a shutdown sequence within the guest operating system. A successful response on this function means the system has successfully passed the request into the operating system. The running state of the server is updated once the shutdown has been successfully completed. If the shutdown does not succeed within 15 minutes, the system will note a failure in the Administrative Logs.

Note it is not possible to perform this action on a server if the server has not got VMware Tools installed. See **List Deployed Servers on Network with Disks** for more details.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?shutdown</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns12:operation>Graceful Shutdown Server</ns12:operation>
  <ns12:result>SUCCESS</ns12:result>
  <ns12:resultDetail>Server "Graceful Shutdown" issued</ns12:resultDetail>
  <ns12:resultCode>REASON_0</ns12:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is already in a stopped state.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_800	Operation is not permitted - VMware Tools are not running on the Server.

3.2.6. Power Off Server

Description

This function works exactly like the existing **Stop Server** function (i.e. "{server-id}?stop"), but has a different name. It represents the abrupt powering off of the virtual server. Unlike "graceful stop", success ensures the virtual server will stop, but some O/S and application configurations may be affected by the equivalent of pulling the power plug out of the machine.

The existing **Stop Server** would continue to exist in 0.9, but would be removed from the documentation to eliminate confusion and would eventually be deprecated in a future API version.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?poweroff</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Power Off Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Power Off" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is already stopped.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_800	VMware Tools are not running on {server-id}.

3.2.7. Reboot Server

Description

This API requests the guest operating system of an existing deployed server to perform a “graceful” reboot. For example, this is the equivalent of clicking “Start” on a Windows server and selecting the “Restart” option. Requires your organization ID and the ID of the target server.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?reboot">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?reboot
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Graceful Reboot Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Graceful Reboot" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is not currently in a started state. Servers must be started to be rebooted.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_800	VMware Tools are not running on the Server.

3.2.8. Reset Server

Description

Power cycles an existing deployed server. This is the equivalent of pulling and replacing the power cord for a physical server. Requires your organization ID and the ID of the target server.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?reset</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Reset Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Reset" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is not currently in a started state. Servers must be started to be reset.
400 (Error)	REASON_392	Operation in progress on Server {server-id}
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.

3.2.9. Update VMware Tools

Description

Triggers an update of the VMware Tools software running on the guest OS of a virtual server. VMware Tools will only be updated if it is reported as out of date by VMware.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?updateVMwareTools</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Update VMware Tools</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "update vmware tools" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_820	VMware Tools does not need to be upgraded.
400 (Error)	REASON_821	VMware Tools cannot be updated.

3.2.10.Clean Failed Server Deployment

Description

Removes a failed server deployment from the List Pending Deployed Servers lists. Requires your organization ID and the ID of the target server.

If the attempt to remove the failed server with the **Clean Failed Server Deployment** function fails, you will need to contact Support to remove the server from the list and free up the associated private IP address.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?clean</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Clean Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Successfully submitted clean failed server request for
server id: {server-id}, private IP address {private-ip-
address}</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}
400 (Error)	REASON_392	Operation in progress on Server {server-id}

3.2.11. Notify System of Private IP Address Change

Description

On occasion manual intervention on a deployed Server or a *Restore Backup for Server (Out of Place)* operation can require that its private IP address changes from the one assigned when it was originally deployed to a different IP address **within the same network** range. This API function updates the Cloud record to match the value set on the deploy Server.

This function shares the same URL and request type as *Modify Server* but is documented separately to highlight its importance and because its single parameter is mutually exclusive to all of the parameter options for *Modify Server*.

Manually network intervention on a Server and this API function should be used with **extreme care** because it is possible to disrupt network traffic to the Server or cause an IP conflict on the Network the Server is deployed on.

Note for Servers deployed on Hyper-V based Private Cloud data centers, Hyper-V requires the server to be stopped.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}
Request Type	HTTP POST
Supported for	MCP 1.0

Parameter Request Data (include only fields being changed with "&" separating each parameter)

privatelp=	privatelp address must be a valid private IP address on the subnet of the Network for the Server privatelp cannot be in the restricted range (i.e. x.x.x.0 - x.x.x.10) privatelp cannot currently be assigned to another Server on the Network
------------	--

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Edit Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server edited</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_240	{privatelp} does not belong to the correct Network.
400 (Error)	REASON_241	{privatelp} is already reserved.
400 (Error)	REASON_320	{privatelp} is not a valid IPv4 address.
400 (Error)	REASON_392	Operation in progress on Server {server-id}.
400 (Error)	REASON_393	{server-id} is associated with a Real Server. This association must be removed before an IP address change.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.
400 (Error)	REASON_750	Organization {org-id} has insufficient trust level.

3.3. Server Image API

The Server Image API functions provide a set of operations for interacting with server images – including the fundamental API *List Server Images (with Parameters)* for retrieving server images of all types. This section also includes various management API functions for operating on server images.

3.3.1. List Server Images (with Parameters)

Deprecates the following functions:

- *List OS Server Images with Software Labels in Location*
- *List Deployed Customer Images with Software Labels in Location*
- *List Pending Deployment Customer Images in Location.*

This multi-functional API allows the user to retrieve lists of Server Images by filtering across various options. This is a Paged and Filtered API function and exposes all of the common functionality described in the **Paging and Filtering for List API Functions** overview earlier in this document.

This function can be used to list the available OS Server Images or Customer Images at a particular Location and in both cases includes optional <softwareLabel> elements, listing the Priced Software packages installed on the Server Image.

Notes:

- The default (and maximum) pageSize for this function is 250.
- **base** is used in the URL to indicate that OS Server Images should be returned and **{org-id}** is used to indicate that Customer Images should be returned.

Request Details

URL	<i>OS Server Images:</i> <code>https://<Cloud API URL>/oec/0.9/base/imageWithDiskSpeed?</code> <i>Customer Server Images:</i> <code>https://<Cloud API URL>/oec/0.9/{org-id}/imageWithDiskSpeed?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize= &pageNumber= &orderBy=</code> <i>Filter Optional Parameters:</i> <code>&id= &location= &name= &created= &state= &operatingSystemId= &operatingSystemFamily=</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual server image.	Yes	Yes
location	String	Identifies a data center at which the server images are located.	Yes	Yes

name	String	<p>Matched against names of server images.</p> <p>Supports the use of the LIKE comparator defined in the Paging and Filtering for List API Functions overview.</p>	Yes	Yes
created	Date	<p>Identifies the date of creation of server images.</p> <p>Supports MIN and MAX. E.g:</p> <p>&created.MIN=20130901T00:00:00Z means with date on or after 2013-09-01 00:00:00</p> <p>&created.MAX=20130901T00:00:00Z means with date on or before 2013-09-01 00:00:00</p> <p>Supports GREATER_THAN/GT and LESS_THAN/LT. E.g:</p> <p>&created.GT=20130901T00:00:00Z means with date after 2013-09-01 00:00:00</p> <p>&created.LT=20130901T00:00:00Z means with date before 2013-09-01 00:00:00</p>	Yes	Yes
state	String	<p>The current status of the server image.</p> <p>Case insensitive.</p> <p>The expectation is that an OS Server Image will always have the state "NORMAL".</p> <p>For Customer Images a broader set of states can be presented:</p> <p>"NORMAL", "PENDING_ADD", "PENDING_CHANGE", "PENDING_DELETE", "FAILED_ADD", "FAILED_DELETE", "PENDING_CLEAN" and "REQUIRES_SUPPORT".</p> <p>In both cases, the set of values should not be assumed to be static and can change at any time.</p>	Yes	Yes
operatingSystemId	String	Identifies the specific Operating System of the server image. E.g. "WIN2012DC64"	Yes	Yes
operatingSystemFamily	String	"WINDOWS" or "LINUX".	Yes	Yes

Specific Request Examples

All OS Server Images	<a href="https://<Cloud API URL>/oec/0.9/base/imageWithDiskSpeed">https://<Cloud API URL>/oec/0.9/base/imageWithDiskSpeed
----------------------	---

All Linux OS Server Images	<a href="https://<Cloud API URL>/oec/0.9/<base>/imageWithDiskSpeed?operatingSystemFamily=LINUX">https://<Cloud API URL>/oec/0.9/<base>/imageWithDiskSpeed?operatingSystemFamily=LINUX
All Deployed Customer Images	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/imageWithDiskSpeed?state=NORMAL&state=PENDING_CHANGE&state=PENDING_DELETE&state=FAILED_CHANGE&state=FAILED_DELETE">https://<Cloud API URL>/oec/0.9/{org-id}/imageWithDiskSpeed?state=NORMAL&state=PENDING_CHANGE&state=PENDING_DELETE&state=FAILED_CHANGE&state=FAILED_DELETE
All Pending Deployment Customer Images	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/imageWithDiskSpeed?state=PENDING_ADD&state=FAILED_ADD&state=PENDING_CLEAN&state=REQUIRES_SUPPORT">https://<Cloud API URL>/oec/0.9/{org-id}/imageWithDiskSpeed?state=PENDING_ADD&state=FAILED_ADD&state=PENDING_CLEAN&state=REQUIRES_SUPPORT

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
  <ImagesWithDiskSpeed pageNumber="1" pageCount="6" totalCount="6"
  pageSize="250" xmlns="http://oec.api.opsource.net/schemas/server" .. >
    <image id="30c001af-3729-4b06-a1bf-eb9273283" location="LAB01_NA3">
      <name>Production Image</name>
      <description></description>
      <operatingSystem id="WIN2012DC64" displayName="WIN2012DC/64"
      type="WINDOWS"/>
      <cpuCount>2</cpuCount>
      <memoryMb>4096</memoryMb>
      <disk id="0e33637b-352b-411b-80ae-f3ddb1dbaf4e" scsiId="0" sizeGb="20"
      speed="STANDARD" state="NORMAL"/>
      <disk id="a85a004b-e098-475e-981b-4988d4b6b41d" scsiId="1" sizeGb="10"
      speed="HIGHPERFORMANCE" state="NORMAL"/>
      <disk id="a445ef71-ad50-42ed-93e9-8feb2b77c845" scsiId="2" sizeGb="10"
      speed="STANDARD" state="NORMAL"/>
      <source type="CLONE">
        <artifact type="SERVER_ID" value="c5b93b15-10af-421d-b917-
633a2942a97f"/>
      </source>
      <created>2014-07-03T15:07:15.000Z</created>
      <state>NORMAL</state>
    </image>
  </ImagesWithDiskSpeed>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_320	<p>A filter value is invalid, either because it is an invalid format, or is not one of the valid set.</p> <p>Relevant to:</p> <ul style="list-style-type: none"> id: must correspond to a valid Server Image ID location: must correspond to a valid data center ID; e.g. EU1 created: must be a valid XSD-format dateTime state: must be a valid value for state operatingSystemId: must be an existing OperatingSystemId operatingSystemFamily: must be WINDOWS or LINUX.
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

3.3.2. Get Server Image

Description

This function returns a full description of the Server Image identified by the supplied Server Image ID ({image-id}). The Server Image identified can be any OS Image, Cloud Software Image or Customer Image.

The response contains a single **<ServerImageWithState>** element including status information if there is an operation in progress for the image, which means this function can be used to track progress of an operation on a specific image.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}">https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

<ServerImageWithState> is common to *Get Server Image*, *List Customer Image Imports in Progress* and *Customer Image Import*.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImageWithState>
  <!-- string, unique image id -->
  <id>c325fe04-7711-4968-962e-c88784eb2xyz</id>
  <!-- string, data center id -->
  <location>NAL</location>
  <!-- string -->
  <name>My New Customer Image</name>
  <!-- string, optional -->
  <description>Image for producing web servers.</description>
  <operatingSystem>
    <!-- string -->
    <type>WINDOWS</type>
    <!-- string -->
    <displayName>WIN2008E/64</displayName>
  </operatingSystem>
  <!-- int -->
  <cpuCount>2</cpuCount>
  <!-- int -->
  <memoryMb>4096</memoryMb>
  <!-- int -->
  <osStorageGb>50</osStorageGb>
  <!-- 0-to-many -->
  <additionalDisk>
    <!-- string, unique disk id -->
    <id>ef49974c-87d0-400f-aa32-ee43559fdb1b</id>
    <!-- string -->
    <scsiId>1</scsiId>
    <!-- int -->
    <diskSizeGb>40</diskSizeGb>
    <!-- string -->
    <state>NORMAL</state>
  </additionalDisk>
  <!-- 0-to-many, string -->
  <softwareLabel>MSSQL2008R2E</softwareLabel>
  <!-- optional -->
  <source type="IMPORT">
    <!-- 0-to-many, type and value required, date optional -->
    <artifact type="MF" value="MyCustomerImage.mf" date="2008-09-29T02:49:45"/>
    <artifact type="OVF" value="MyCustomerImage.ovf" date="2008-09-29T02:49:45"/>
    <artifact type="VMDK" value="MyCustomerImage-disk1.vmdk" date="2008-
```

```

09-29T02:49:45"/>
    <artifact type="VMDK" value="MyCustomerImage-disk2.vmdk" date="2008-
09-29T02:49:45"/>
    </source>
    <!-- string; e.g. 'NORMAL', "FAILED_ADD", "PENDING_CHANGE" -->
    <state>FAILED_ADD</state>
    <!-- optional timestamp, only present if Image is deployed -->
    <deployedTime>2012-05-25T12:59:10.110Z</deployedTime>
    <!-- optional same meaning as for Server, cannot be guaranteed for Images
and is considered purely informational -->
    <machineStatus name="vmwareToolsApiVersion">
        <value>8295</value>
    </machineStatus>
    <!-- optional, as above -->
    <machineStatus name="vmwareToolsVersionStatus">
        <value>CURRENT</value>
    </machineStatus>
    <!-- optional, as above -->
    <machineStatus name="vmwareToolsRunningStatus">
        <value>RUNNING</value>
    </machineStatus>
    <!-- optional -->
    <status>
        <!-- string -->
        <action>IMAGE_IMPORT</action>
        <!-- timestamp -->
        <requestTime>2012-05-25T23:10:36.000Z</requestTime>
        <!-- string -->
        <userName>theUser</userName>
        <!-- optional, int -->
        <numberOfSteps>3</numberOfSteps>
        <!-- optional, timestamp -->
        <updateTime>2012-05-25T23:11:32.000Z</updateTime>
        <!-- 0-to-many -->
        <step>
            <!-- string -->
            <name>WAIT_FOR_OPERATION</name>
            <!-- int -->
            <number>3</number>
            <!-- optional int -->
            <percentComplete>50</percentComplete>
        </step>
        <!-- optional string, only present if operation has failed -->
        <failureReason>Operation timed out.</failureReason>
    </status>
</ServerImageWithState>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_390	Could not find image for ID for {org-id}.

3.3.3. Modify Customer Server Image with Disk Speed

Deprecates the *Modify Customer Server Image* function.

Description

Changes the Description or Disk Speed meta data associated with an existing deployed Customer Image.

Requires your organization ID, *{org-id}* and the ID of the target image, *{image-id}*.

Note that the name of the Customer Image cannot be changed once deployed.

Disk Speed meta data must be valid within the data center where the Customer Image is located and only becomes relevant when a Server is deployed from the Customer Image. See *Deploy Server with Disk Speed* for details.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}/modify">https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}/modify
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Request Data

```
<ModifyServerImage xmlns="http://oec.api.opsource.net/schemas/server">
  <!-- optional; string 0-255 characters -->
  <description>My New Description</description>
  <!-- zero or more; only specify those being changed, speed must be valid for
the data center -->
  <disk scsiId="0" speed="HIGHPERFORMANCE"/>
  <disk scsiId="4" speed="ECONOMY"/>
</ModifyServerImage>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <operation>Edit Server Image</operation>
  <result>SUCCESS</ns6:result>
  <resultDetail>Server Image edited</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_40	Invalid State. The Customer Image must be in a NORMAL state.
400 (Error)	REASON_320	Invalid input data. Check supplied value for <i>description</i> .
400 (Error)	REASON_390	Could not find image for ID for {org-id}.
400 (Error)	REASON_394	The request includes a <i>scsiId</i> definition which does not exist on the image identified by {image-id}.
400 (Error)	REASON_601	{image-id} has another operation in progress and cannot modified until that operation is complete.
400 (Error)	REASON_826	The request includes a <i>speed</i> definition which is not available at the data center where {image-id} is located.

4. Deprecated API Functions

4.1. Deprecated Account API Functions

These Account API functions continue to operate in the 0.9 version of the API, but have been replaced by newer functions within the same version. The functions will not be included in the next version of the API and may exclude important functionality, so it is strongly recommended that customers update their code to use the replacement function.

4.1.1. Add Sub-Administrator Account

This function is deprecated by *Add Sub-Administrator Account (ith Phone Number)*.

Description

Adds a new Sub-Administrator Account to the organization.

The account is created with a set of roles defining the level of access to the organization's Cloud resources or the account can be created as "read only", restricted to just viewing Cloud resources and unable to generate Cloud Reports.

Notes on roles:

- The `<roles>` element is not required. If `<roles>` is not included on a request the resulting account will be treated as "read only".
- If a "read only" named `<role>` is supplied, no other role should be included. The resulting account will be treated as "read only".
- `<roles>` can include any or multiple roles as listed below. Please see the sample request for exact usage:
 - `network`
 - `server`
 - `backup`
 - `create image`
 - `storage`
 - `reports`
 -
 - OR
 - `read only`

Notes:

- The value of the `<orgId>` element must match the {org-id} on the request URL or a REASON_320 error will be returned.
- Passwords must comply with the following restrictions:
 - Minimum length of 8 characters
 - Maximum length of 75 characters
 - Must contain at least one upper case letter
 - Must contain at least one lower case letter
 - Must contain at least one number
 - Must contain at least one non-alphanumeric character.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/account">https://<Cloud API URL>/oec/0.9/{org-id}/account
Request Type	HTTP POST

Request Data

```

<Account xmlns="http://oec.api.opssource.net/schemas/directory">
  <!-- required, string, max 32 characters, valid characters A-Z, a-z, 0-9,
  ".", "-" and "_". First character cannot be "-" -->
  <userName>jpublic</userName>
  <!-- required, string, see above for restrictions -->
  <password>GdP$@$w2rd</password>
  <!-- required, string, max 75 characters -->
  <fullName>Joe Public</fullName>
  <!-- required, string, max 75 characters -->
  <firstName>Joe</firstName>
  <!-- required, string, max 75 characters -->
  <lastName>Public</lastName>
  <!-- required, string, max 75 characters -->
  <emailAddress>jpublic24583@pop.net</emailAddress>
  <!-- optional, string, max 255 characters -->
  <department>Marketing</department>
  <!-- optional, string, max 255 characters -->
  <customDefined1>This field can be used for any purpose</customDefined1>
  <!-- optional, string, max 255 characters -->
  <customDefined2>This field can be used for any purpose</customDefined2>
  <!-- required, string, must match the orgId on the request URL -->
  <orgId>657e0d5c-61ca-48ed-a6a3-c50ba75ebced</orgId>
  <!-- optional, none or "read only" creates a user with read only access-->
  <!-- include any of the following to give the user the given role -->
  <roles>
    <role>
      <!-- enables the user to create, manage & remove network resources -->
      <name>network</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove server resources -->
      <name>server</name>
    </role>
    <role>
      <!-- enables the user to enable, manage & disable backup services-->
      <name>backup</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove customer image -->
      <name>create image</name>
    </role>
    <role>
      <!-- enables the user to create, manage & remove Cloud Files accounts
-->
      <name>storage</name>
    </role>
    <role>
      <!-- enables the user to view Reports -->
      <name>reports</name>
    </role>
  </roles>
</Account>

```

Response Details

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Status>
  <operation>Add Account</operation>
  <result>SUCCESS</result>
  <resultDetail>Account jpublic created</resultDetail>
  <resultCode>REASON_0</resultCode>
</Status>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_120	Username already exists (must be unique).
400 (Error)	REASON_121	Invalid Username (check allowed characters).
400 (Error)	REASON_122	Invalid Password.
400 (Error)	REASON_123	Invalid Roles (check rules above).
400 (Error)	REASON_320	<orgId> in request body does not match {org-id} on URL.

4.1.2. List Accounts

This API function is deprecated by *List Accounts (with Phone Number)*.

Description

Lists the Accounts belonging to the Organization identified by {org-id}. The list will include all Sub-Administrator accounts and the Primary Administrator account. The Primary Administrator is unique and is identified by the "primary administrator" role.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/account">https://<Cloud API URL>/oec/0.9/{org-id}/account
Request Type	HTTP GET
Supported for	N/A

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Accounts xmlns="http://oec.api.opsource.net/schemas/directory" ... >
  <Account>
    <userName>subadminuser</userName>
    <fullName>John Taylor</fullName>
    <firstName>John</firstName>
    <lastName>Taylor</lastName>
    <emailAddress>mjtaylor@example.com</emailAddress>
    <department>Sales</department>
    <customDefined1></customDefined1>
    <customDefined2></customDefined2>
    <orgId>bv48bcb3-732c-4ey6-83d1-1chg659146dbb</orgId>
    <roles>
      <role>
        <name>create image</name>
      </role>
      <role>
        <name>server</name>
      </role>
    </roles>
  </Account>
  <Account>
    <userName>primaryadminuser</userName>
    <fullName>Bob Taylor</fullName>
    <firstName>Bob</firstName>
    <lastName>Taylor</lastName>
    <emailAddress>btaylor@example.com</emailAddress>
    <department>IT</department>
    <customDefined1></customDefined1>
    <customDefined2></customDefined2>
    <orgId>bv48bcb3-732c-4ey6-83d1-1chg659146dbb</orgId>
    <roles>
      <role>
        <name>create image</name>
      </role>
      <role>
        <name>server</name>
      </role>
      <role>
        <name>primary administrator</name>
      </role>
      <role>
        <name>network</name>
      </role>
      <role>
        <name>storage</name>
      </role>
      <role>
        <name>reports</name>
      </role>
    </roles>
  </Account>
</Accounts>
```

```
        </role>
      </roles>
    </Account>
  </Accounts>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.1.3. List Data Centers (with Parameters)

This API function is deprecated by *List Data Centers (with Parameters) - Maintenance*.

This API function deprecates *List Data Centers with Limits*.

This API function provides paging and filtering functionality. For details see ***Paging and Filtering for List API Functions***.

NOTE: This deprecated function does not identify the MCP type of data center and may return locations that can not be managed with API 0.9 functions. For details, see ***MCP Location Identification and Support in this API version***.

Description

This function identifies the list of data centers available to the organization of the authenticating user and deprecates the List Data Centers function. Users with appropriate roles can deploy networks, servers and images in each available data center location.

Each data center within the list has various details including a unique identifier "location", the appropriate VPN URL corresponding to that location and the default data center for the organization is marked by the boolean "default" attribute. Calling APIs that are not location aware, such as "Create Network", will result in the default location being used. In each relevant case, a location aware API is now available.

Each data center includes a <maxCpu> and <maxRamMb> elements defining the upper ceiling for the number of CPUs and quantity of RAM permitted respectively for Customer Servers deployed at that data center.

Each data center includes a list of <diskSpeed> elements describing the available storage speeds at the data center. Each <diskSpeed> element comprises a <displayName>, <abbreviation> and <description> of the disk speed, all of which are provided for informational purposes. The "id" attribute identifies the disk speed for programmatic use. The default storage speed for the data center is indicated with the boolean "default" attribute. The default storage speed is used when a new server is deployed, or additional storage is added to a server. For further information about disk speeds please review the Community article [Introduction to Cloud Server Disks and Disk Speeds \(Tiered Storage\)](#).

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/datacenterWithDiskSpeed?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <i>Filter Optional Parameters:</i> <code>&location=</code>
Request Type	HTTP GET
Supported for	N/A (Provides both MCP 1.0 and MCP 2.0 locations but there is no data to differentiate between them)

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
location	String	Identifies a data center at which servers and networks are located.	Yes	Yes

Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <DatacentersWithDiskSpeedDetails xmlns="http://oec.api.opsource.net/schemas/datacenter"> <datacenter default="true" location="NA1"> <displayName>US - East</displayName></pre>

```

    <city>Ashburn</city>
    <state>Virginia</state>
    <country>US</country>
    <vpnUrl>https://vpnnal.opssourcecloud.net/nal</vpnUrl>
    <maxCpu>8</maxCpu>
    <maxRamMb>65536</maxRamMb>
    <diskSpeed available="true" default="true" id="STANDARD">
      <displayName>Standard</displayName>
      <abbreviation>STD</abbreviation>
      <description>Standard Disk Speed</description>
    </diskSpeed>
  </datacenter>
<datacenter>
  :
</datacenter>
<datacenter>
  :
</ datacenter>
</DatacentersWithDiskSpeedDetails>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.1.4. List Servers (with Parameters)

Deprecated by **List Servers (with Parameters) - Backup**

This API function deprecates *List Deployed Servers*, *List Pending Deployment Servers* and *Get Server Details*.

This API function provides paging and filtering functionality. For details see **Paging and Filtering for List API Functions**.

Description

Lists the virtual servers belonging to the organization identified by {org-id}. Filters can be specified to limit the set of servers returned. For example; servers residing on a single network, those that are deployed, those pending deployment or restricting the list to a single server using the "&id=<server.id>" filter.

Note: the default pageSize for List Servers (with Parameters) is 250.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?</code> <i>Paging/Ordering Optional Parameters:</i> &pageSize= &pageNumber= &orderBy= <i>Filter Optional Parameters:</i> &created= &deployed= &id= &location= &machineName= &name= &networkId= &privateIp= &sourceImageId=
Request Type	HTTP GET
Supported for	MCP 1.0

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual server.	Yes	Yes
location	String	Identifies a data center at which servers and networks are located.	Yes	Yes
networkId	uuid (String)	Identifies a network in which servers are resident.	Yes	No
sourceImageId	uuid (String)	Identifies a server image used to create servers.	Yes	Yes
deployed	boolean	Identifies whether or not servers have completed the deployment process.	Yes	Yes
name	String	Matched against names of servers.	Yes	Yes

created	Date	Identifies the date of creation of servers. Supports MIN and MAX. E.g: &created.MIN=20120901T00:00:00Z <i>means with date on or after 2012-09-01 00:00:00</i> &created.MAX=20120901T00:00:00Z <i>means with date on or before 2012-09-01 00:00:00</i>	Yes	Yes
state	String	The current status of the server. Case insensitive. The initial possible set of values for Server.state are: "NORMAL", "PENDING_ADD", "PENDING_CHANGE", "PENDING_DELETE", "FAILED_ADD", "FAILED_DELETE", "PENDING_CLEAN" and "REQUIRES_SUPPORT". This set of values should not be assumed to be static and can increase at any time.	No	Yes
started	Date	Identifies when the server was last started.	No	Yes
operatingSystemId	String	Identifies the Operating System of the server. E.g. "REDHAT564"	No	Yes

Response Details (descriptive – includes all optional)

```
<ServersWithState
  xmlns="http://oec.api.opssource.net/schemas/server"
  totalCount="320"
  pageCount="250"
  pageNumber="1"
  pageSize="250">
  <!--Zero or more repetitions:-->
  <serverWithState id="c325fe04-7711-4968-962e-c88784eb2" location="NA1">
    <name>Production LAMP Server</name>
    <!--Optional:-->
    <description>Main web application server.</description>
    <operatingSystem id="REDHAT564" displayName="REDHAT5/64" type="UNIX"/>
    <cpuCount>2</cpuCount>
    <memoryMb>4096</memoryMb>
    <!-- one or more repetitions:-->
    <disk id="x445fe05-7113-4988-9d2e-cbjt78eb2" scsiId="0" sizeGb="50"
speed="STANDARD" state="NORMAL"/>
    <disk id="ef49974c-87d0-400f-aa32-ee43559fdb1b" scsiId="1" sizeGb="150"
speed="STANDARD" state="NORMAL"/>
    <!--Zero or more repetitions:-->
    <softwareLabel>REDHAT5ES64</softwareLabel>
    <!--Optional:-->
    <sourceImageId>5a18d6f0-eaca-11e1-8340-d93da27669ab</sourceImageId>
    <networkId>xb632974c-87d0-400faa32-hb43559flk765</networkId>
    <machineName>10-157-3-125</machineName>
    <privateIp>10.157.3.125</privateIp>
    <!--Optional:-->
    <publicIp>206.80.63.208</publicIp>
    <created>2012-07-02T10:43:31.000Z</created>
```



```

<isStarted>false</isStarted>
<isDeployed>true</isDeployed>
<state>PENDING_CHANGE</state>
<!--Zero or more repetitions:-->
<machineStatus name="vmwareToolsRunningStatus">
  <value>RUNNING</value>
</machineStatus>
<!--Optional:-->
<status>
  <action>START_SERVER</action>
  <requestTime>2012-09-26T08:36:28</requestTime>
  <userName>btaylor</userName>
  <!--Optional:-->
  <numberOfSteps>3</numberOfSteps>
  <!--Optional:-->
  <updateTime>2012-09-26T08:37:28</updateTime>
  <!--Optional:-->
  <step>
    <name>Waiting for operation</name>
    <number>3</number>
    <!--Optional:-->
    <percentComplete>3</percentComplete>
  </step>
  <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
  <failureReason>Message Value</failureReason>
</status>
</serverWithState>
</ServersWithState>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	<i>networkId</i> supplied could not be found for {org-id}.
400 (Error)	REASON_770	<i>location</i> supplied is either unavailable or invalid.

4.1.5. List Data Centers with Limits

Deprecated by **List Data Centers (with Parameters)**

NOTE: This deprecated function does not identify the MCP type of data center and may return locations that can not be managed with API 0.9 functions. For details, see **MCP Location Identification and Support in this API version**.

Description

This function deprecated the previous **List Data Centers** function and included additional data, but it does not contain all of the details included in the current **List Data Centers (with Parameters)** call.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/datacenterWithLimits</code>
Request Type	HTTP GET
Supported for	N/A (Provides both MCP 1.0 and MCP 2.0 locations but there is no data to differentiate between them)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Datacenters xmlns:ns8="http://oec.api.opsource.net/schemas/datacenter" ..
>
  <ns8:datacenter>
    <ns8:location>NA1</ns8:location>
    <ns8:displayName>North America - East</ns8:displayName>
    <ns8:city>Ashburn</ns8:city>
    <ns8:state>Virginia</ns8:state>
    <ns8:country>US</ns8:country>
    <ns8:vpnUrl>https://vpnnal1.opsourcecloud.net/na1</ns8:vpnUrl>
    <ns8:default>true</ns8:default>
    <ns8:maxCpu>8</ns8:maxCpu>
    <ns8:maxRamMb>65536</ns8:maxRamMb>
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
</ns8:Datacenters>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.1.6. List Multi-Geography Data Centers

Deprecated by *List Multi-Geography Data Centers with Key*

NOTE: This deprecated function does not identify the MCP type of data center and may return locations that can not be managed with API 0.9 functions. For details, see *MCP Location Identification and Support in this API version*.

Description

Returns a list of the Multi-Geography Data Centers available for the supplied {org-id} but does not include the key included in the current *List Multi-Geography Data Centers with Key* function.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/geo">https://<Cloud API URL>/oec/0.9/{org-id}/geo
Request Type	HTTP GET
Supported for	N/A (Provides both MCP 1.0 and MCP 2.0 locations but there is no data to differentiate between them)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Geos xmlns=http://oec.api.opsource.net/schemas/multigeo ... >
  <geo>
    <id>lk76kf30-2cb3-1791-5476-231567-09gt87</id>
    <name>North America</name>
    <cloudUiUrl>https://admin.opsourcecloud.net</cloudUiUrl>
    <cloudApiUrl>https://api.opsourcecloud.net/oec/0.9</cloudApiUrl>
    <isHome>true</isHome>
    <productKey>OBPK-PRD-7f5e343hg6-dahb-4fe8-835a-d5465gt01b</productKey>
    <pricingUrl>http://www.opsource.net/pricing</pricingUrl>
    <state>ENABLED</state>
  </geo>
  <geo>
    <id>bf43kf30-2c83-11e1-9963-001517-45hj54</id>
    <name>Europe</name>
    <cloudUiUrl>https://eu.opsourcecloud.net</cloudUiUrl>
    <cloudApiUrl>https://euapi.opsourcecloud.net/oec/0.9</cloudApiUrl>
    <isHome>false</isHome>
    <productKey>OBPK-PRD-7f5eahg6-daeb-4ee8-835a-a1034fb0de</productKey>
    <pricingUrl>http://www.opsource.net/pricing</pricingUrl>
    <state>ENABLED</state>
  </geo>
</Geos>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_714	Multigeography access is not permitted for the supplied organization {org-id}.

4.1.1.7. List Data Centers

Deprecated by **List Data Centers (with Parameters)**

NOTE: This deprecated function does not identify the MCP type of data center and may return locations that can not be managed with API 0.9 functions. For details, see **MCP Location Identification and Support in this API version**.

Description

This function identifies the list of data centers available to the organization of the authenticating user, but does not contain all of the details included in the current **List Data Centers (with Parameters)** call.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/datacenter</code>
Request Type	HTTP GET
Supported for	N/A (Provides both MCP 1.0 and MCP 2.0 locations but there is no data to differentiate between them)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Datacenters xmlns:ns8="http://oec.api.opsource.net/schemas/datacenter" ..
>
  <ns8:datacenter>
    <ns8:location>NA1</ns8:location>
    <ns8:displayName>North America - East</ns8:displayName>
    <ns8:city>Ashburn</ns8:city>
    <ns8:state>Virginia</ns8:state>
    <ns8:country>US</ns8:country>
    <ns8:vpnUrl>https://vpnnal1.opsourcecloud.net/na1</ns8:vpnUrl>
    <ns8:default>true</ns8:default>
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
</ns8:Datacenters>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
403 (Forbidden)	REASON_140	Invalid role or {org-id} invalid (does not match credentials)
400 (Error)	REASON_10	Failure at network

4.2. Deprecated Server Image API Functions

These Server Image API functions continue to operate in the 0.9 version of the API, but have been replaced by newer functions within the same version. The functions will not be included in the next version of the API and may exclude important functionality, so it is strongly recommended that customers update their code to use the replacement function.

4.2.1. Modify Customer Server Image

Deprecated by *Modify Customer Server Image with Disk Speed*.

Description

Changes the Description of an existing deployed Customer Image. Requires your organization ID and the ID of the target image. Note that the Name of the Image cannot be changed once deployed.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}">https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}
Request Type	HTTP POST
Supported for	MCP 1.0 and MCP 2.0

Parameter Request Data (include only fields being changed with & separating each parameter)

description=	Description of the image (max. 255 char)
--------------	--

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns11:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns11:operation>Edit Server Image k</ns6:operation>
  <ns11:result>SUCCESS</ns6:result>
  <ns11:resultDetail>Server Image edited</ns6:resultDetail>
  <ns11:resultCode>REASON_0</ns6:resultCode>
</ns11:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_320	Invalid input data. Check supplied value for <i>description</i> .
400 (Error)	REASON_390	Could not find image for ID for {org-id}.
400 (Error)	REASON_601	{image-id} has another operation in progress and cannot modified until that operation is complete.

4.2.2. List OS Server Images with Software Labels in Location

Deprecated by **List Images (with Parameters)**.

This function lists the available OS Server Images at a particular Location. The response adds to the deprecated **List OS Server Images in Location** function with the addition of zero to many, optional <softwareLabel> elements, listing the Priced Software packages installed on the OS Server Image.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/base/image/deployedWithSoftwareLabels/{location-id}">https://<Cloud API URL>/oec/0.9/base/image/deployedWithSoftwareLabels/{location-id}
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8"?>
<DeployedImagesWithSoftwareLabels
xmlns=http://oec.api.opsource.net/schemas/server .. >
  <DeployedImageWithSoftwareLabels>
    <id>f084e5c0-87d6-4214-8803-18096c14d573</id>
    <name>Microsoft Windows Server 2003</name>
    <description>Windows Server 2003 (32-bit), 1 CPU, 2 GB RAM, 16 GB
Storage</description>
    <machineSpecification>
      <cpuCount>1</cpuCount>
      <memoryMb>2048</memoryMb>
      <osStorageGb>16</osStorageGb>
      <additionalLocalStorageGb>0</additionalLocalStorageGb>
      <operatingSystem>
        <type>WINDOWS</type>
        <displayName>WIN2003E/32</displayName>
      </operatingSystem>
    </machineSpecification>
    <deployedTime>1970-01-15T15:08:19.891Z</deployedTime>
    <location>LAB02_NA1</location>
    <softwareLabel>MSSQLE2008</softwareLabel>
  </DeployedImageWithSoftwareLabels>
  <DeployedImageWithSoftwareLabels>
    :
  </DeployedImageWithSoftwareLabels>
  <DeployedImageWithSoftwareLabels>
    :
  </DeployedImageWithSoftwareLabels>
</DeployedImagesWithSoftwareLabels>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

4.2.3. List Deployed Customer Images with Software Labels in Location

Deprecated by **List Images (with Parameters)**.

This function lists the available Customer Images at a particular Location for the provided org-id. The response adds to the deprecated **List Deployed Customer Images in Location** function with the addition of zero to many, optional <softwareLabel> elements, listing the Priced Software packages installed on the Customer Image.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/deployedWithSoftwareLabels/{location-id}">https://<Cloud API URL>/oec/0.9/{org-id}/image/deployedWithSoftwareLabels/{location-id}
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

```
<DeployedImagesWithSoftwareLabels>
  <!--Zero or more repetitions:-->
  <DeployedImageWithSoftwareLabels>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <!--Optional:-->
    <sourceServerId>string</sourceServerId>
    <!--Optional:-->
    <deployedTime>2008-09-29T02:49:45</deployedTime>
    <!--Optional:-->
    <location>NA1</location>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2014-09-19T00:18:33</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2006-08-19T18:27:14+01:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the image in a locked state) -->
      <failureReason>text - e.g. Image export failed
because...</failureReason>
    </status>
    <softwareLabel>MSSQLE2008</softwareLabel>
  </DeployedImageWithSoftwareLabels>
</DeployedImagesWithSoftwareLabels>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

4.2.4. List Pending Deployment Customer Images in Location

Deprecated by **List Images (with Parameters)**.

Similar to *List Pending Deployment Customer Images*, this function identifies images that are in the process of deployment. However this API limits the list of images to those being deployed at a particular data center location.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/pendingDeploy/{location-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

```
<PendingDeployImages>
  <!--Zero or more repetitions:-->
  <PendingDeployImage>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>3</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <!--Optional:-->
    <sourceServerId>string</sourceServerId>
    <!--Optional:-->
    <location>NA1</location>
    <status>
      <action>string</action>
      <requestTime>2008-09-29T02:49:45</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2014-09-19T00:18:33</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the clone server/import image failed
and left the image in a locked state) -->
      <failureReason>text - e.g. Insufficient space on
datastore.</failureReason>
    </status>
  </PendingDeployImage>
</PendingDeployImages>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at network.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.

400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_770	Invalid location. See List Data Centers (with Parameters) - Maintenance.

4.2.5. List OS Server Images

Deprecated by **List OS Server Images with Software Labels in Location**

Description

Used for retrieving the default set of OS Server Images from which servers may be deployed in ALL locations. It does not include the data center location input or software label output included in the current **List OS Server Images with Software Labels in Location** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/base/image</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImages xmlns:ns2="http://oec.api.opsource.net/schemas/organization".. >
  <ServerImage>
    <id>f084e5c0-87d6-4214-8803-18096c14d573</id>
    <resourcePath>/oec/base/image/f084e5c0-87d6-4214-8803-18096c14d573</resourcePath>
    <name>Win2008 Std 32-bit 2 CPU</name>
    <description>Windows 2008 Standard SP2 32-bit</description>
    <operatingSystem>
      <type>WINDOWS</type>
      <displayName>WIN2008S/32</displayName>
    </operatingSystem>
    <location></location>
    <cpuCount>2</cpuCount>
    <memory>4096</memory>
    <osStorage>50</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <created>2009-01-15T12:12:12.385Z</created>
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
</ServerImages>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_110	Could not find user account.

4.2.6. List Deployed Customer Images

Deprecated by **List Deployed Customer Images with Software Labels in Location**

Description

This function replaced the previous **List Customer Server Images** function but does not include the data center location input or software label results included in the current **List Deployed Customer Images with Software Labels in Location** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed</code>
Request Type	HTTP GET
Supported for	N/A (returns data for both MCP 1.0 and MCP 2.0 locations)

Response Details (descriptive – includes all optional)

```
<DeployedImages>
  <!--Zero or more repetitions:-->
  <DeployedImage>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <!--Optional:-->
    <sourceServerId>string</sourceServerId>
    <!--Optional:-->
    <deployedTime>2008-09-29T02:49:45</deployedTime>
    <!--Optional:-->
    <location>NA1</location>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2014-09-19T00:18:33</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2006-08-19T18:27:14+01:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the image in a locked state) -->
      <failureReason>text - e.g. Image export failed
because...</failureReason>
    </status>
  </DeployedImage>
</DeployedImages>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.2.7. List Pending Deployment Customer Images

Deprecated by *List Pending Deployment Customer Images in Location*

Description

This function identifies images that are in the process of deployment (i.e. in the process of being cloned from a server) and their status:

- The **<status>** section provides information as to the status of the image. The **<action>** element identifies a pending image, including the **<requestTime>** and what **<username>** requested it. The optional **<step>** information provides progress information on each step in the deployment (i.e. queue, clone) with the optional **<step>** and **<number of Steps>** elements identifying which step the clone is in and how many steps need to be performed. **<percentComplete>** identifies how far along the step is, when available. Since these updates occur periodically rather than in real-time, the **<updateTime>** field identifies the time of the last update.
- The **<failureReason>** element is populated only if the operation creating the image (clone/import) failed and left the image in an unrecoverable state. This state would indicate that image creation failed – depending on the reason, you may be able to try to create the image again. However, you will need to contact Support to address the failed image.
- Note the same status information will also be available for the parent server when using the **List Deployed Servers** and **List Deployed Servers on Network** calls.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/pendingDeploy">https://<Cloud API URL>/oec/0.9/{org-id}/image/pendingDeploy
Request Type	HTTP GET
Supported for	N/A (returns data for both MCP 1.0 and MCP 2.0 locations)

Response Details (descriptive – includes all optional)

```
<PendingDeployImages>
  <!--Zero or more repetitions:-->
  <PendingDeployImage>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>3</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <!--Optional:-->
    <sourceServerId>string</sourceServerId>
    <!--Optional:-->
    <location>NA1</location>
    <status>
      <action>string</action>
      <requestTime>2008-09-29T02:49:45</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2014-09-19T00:18:33</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
```

```
        </step>
        <!--Optional: (present only if the clone server/import image failed
and left the image in a locked state) -->
        <failureReason>text - e.g. Insufficient space on
datastore.</failureReason>
    </status>
</PendingDeployImage>
</PendingDeployImages>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.2.8. List Deployed Customer Images in Location

Deprecated by **List Deployed Customer Images with Software Labels in Location**.

Description

This function provides a list of Deployed Customer Images in a given location but does not include the software label results included in the current **List Deployed Customer Images with Software Labels in Location** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed/{location-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details (descriptive – includes all optional)

```
<DeployedImages>
  <!--Zero or more repetitions:-->
  <DeployedImage>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <!--Optional:-->
    <sourceServerId>string</sourceServerId>
    <!--Optional:-->
    <deployedTime>2008-09-29T02:49:45</deployedTime>
    <!--Optional:-->
    <location>NA1</location>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2014-09-19T00:18:33</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2006-08-19T18:27:14+01:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the image in a locked state) -->
      <failureReason>text - e.g. Image export failed
because...</failureReason>
    </status>
  </DeployedImage>
</DeployedImages>
```


Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_10	Failure at network
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_770	Invalid location (see List Data Centers with Limits)

4.2.9. List OS Server Images in Location

Deprecated by **List OS Server Images with Software Labels in Location**.

Description

This function provides a list of Deployed Customer Images in a given location but does not include the software label results included in the current **List OS Server Images with Software Labels in Location** function.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/base/image/{location-id}">https://<Cloud API URL>/oec/0.9/base/image/{location-id}
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8"?>
<ServerImages xmlns=http://oec.api.opsource.net/schemas/server .. >
  <ServerImage>
    <id>f084e5c0-87d6-4214-8803-18096c14d573</id>
    <resourcePath>/oec/base/image/f084e5c0-87d6-4214-8803-18096c14d573</resourcePath>
    <name>Microsoft Windows Server 2003</name>
    <description>Windows Server 2003 (32-bit), 1 CPU, 2 GB RAM, 16 GB Storage</description>
    <operatingSystem>
      <type>WINDOWS</type>
      <displayName>WIN2003E/32</displayName>
    </operatingSystem>
    <location>NA1</location>
    <cpuCount>1</cpuCount>
    <memory>2048</memory>
    <osStorage>16</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <created>1970-01-15T15:08:19.891Z</created>
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
</ServerImages>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_10	Failure at network
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_770	Invalid location (see List Data Centers with Limits)

4.2.10. List Web/DB Server Images

Deprecated by **List OS Server Images with Software Labels in Location**.

Description

This function lists OS images but does not include the software label response information included in the current **List OS Server Images with Software Labels in Location** function. Note that “<Image Provider>” in the URLs below will accept any of the following values (without quotes): “opsource”, “ntta”, “ntte” and “partner”.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/<Image Provider>/image/web">https://<Cloud API URL>/oec/0.9/<Image Provider>/image/web <a href="https://<Cloud API URL>/oec/0.9/<Image Provider>/image/db">https://<Cloud API URL>/oec/0.9/<Image Provider>/image/db
Request Type	HTTP GET
Supported for	N/A (returns data for both MCP 1.0 and MCP 2.0 locations)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImages xmlns:ns2="http://oec.api.opsource.net/schemas/organization".. >
  <ServerImage>
    <id>c055e1df-6282</id>
    <resourcePath>/oec/opsource/image/c055e1df-6282</resourcePath>
    <name>Microsoft Windows Server 2008</name>
    <description>Windows Server 2008, 2 CPU, 4 GB RAM, 62 GB</description>
    <operatingSystem>
      <type>WINDOWS</type>
      <displayName>WIN2008/32</displayName>
    </operatingSystem>
    <location></location>
    <cpuCount>2</cpuCount>
    <memory>4096</memory>
    <osStorage>62</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <created>2009-01-15T12:12:12.385Z</created>
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
</ServerImages>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

4.2.11. List Customer Server Images

Deprecated by **List Deployed Customer Images with Software Labels in Location**.

Description

Lists only deployed Customer Server Images in the customer's default data center but does not include location or software label information.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image">https://<Cloud API URL>/oec/0.9/{org-id}/image
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImages xmlns:ns2="http://oec.api.opssource.net/schemas/organization".. >
  <ServerImage>
    <id>e391e96d-7481</id>
    <resourcePath>/oec/1831c1a9-9c03/image/e391e96d-7481</resourcePath>
    <name>InvoicingServer</name>
    <description>Invoicing Server Image</description>
    <operatingSystem>
      <type>UNIX</type>
      <displayName>REDHAT5</displayName>
    </operatingSystem>
    <location></location>
    <sourceResourcePath>/oec/1831c1a9-9c03/server/376/sourceResourcePath>
    <cpuCount>1</cpuCount>
    <memory>2048</memory>
    <osStorage>30</osStorage>
    <additionalLocalStorage>30</additionalLocalStorage>
    <created>2009-09-25T10:49:28.569Z</created>
  </ServerImage>
</ServerImages>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

4.2.12. List Partner Server Images

Description

Used for retrieving Partner Images from which servers may be deployed. No Partner Images were ever actually added to the environment, so this function is being removed.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/partner/image</code>
Request Type	HTTP GET
Supported for	N/A (returns data for both MCP 1.0 and MCP 2.0 locations)

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ServerImages xmlns:ns2="http://oec.api.opsource.net/schemas/organization".. >
  <ServerImage>
    <id>c055e1df-6282</id>
    <resourcePath>/oec/partner/image/c055e1df-6282</resourcePath>
    <name>ACME Microsoft Windows Server 2008</name>
    <description>Windows Server 2008 with ACME Software</description>
    <operatingSystem>
      <type>WINDOWS</type>
      <displayName>WIN2008S/32</displayName>
    </operatingSystem>
    <location></location>
    <cpuCount>2</cpuCount>
    <memory>4096</memory>
    <osStorage>100</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <created>2009-01-15T12:12:12.385Z</created>
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
  <ServerImage>
    :
  </ServerImage>
</ServerImages>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

4.3. Deprecated Server API Functions

These Server API functions continue to operate in the 0.9 version of the API, but have been replaced by newer functions within the same version. The functions will not be included in the next version of the API and may exclude important functionality, so it is strongly recommended that customers update their code to use the replacement function.

Many of these functions have been replaced by the **List Servers (with Parameters)** function which offers filters to provide the same type of information that previously required separate calls. The text included in each of these functions describes the specific filters to apply to replicate the information, but please note that additional server-related information is included with the new functionality.

A few of these functions are not “location aware” and apply only against a “default location”. See the **Multi-Location Data Centers** section in the Introduction for more details.

4.3.1. List Server Anti-Affinity Rules

Description

*Deprecated by **List Server Anti-Affinity Rules** in the **API 2.0 Cloud Control** documentation.*

Returns a list of the Server Anti-Affinity Rules belonging to the organization identified by {org-id}. Generally this API function is used with the *location* and *networkId* parameters in place to limit the number of responses returned. To retrieve a single rule use the *id* parameter.

This API function provides paging and filtering functionality. For details see **Paging and Filtering for List API Functions**.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/antiAffinityRule?</code> <i>Paging/Ordering Optional Parameters:</i> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <i>Filter Optional Parameters:</i> <code>&id=</code> <code>&location=</code> <code>&networkId=</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Field Name and Filter Parameters

fieldName	Type	Description	Filter Parameter	orderBy Parameter
id	uuid (String)	Identifies an individual server anti-affinity rule by its <i>id</i> .	Yes	Yes
location	String	Restricts the rules returned to those in the provided location parameter(s).	Yes	Yes
networkId	String	Restricts the rules returned to a particular network.	Yes	Yes
created	Date	The date of creation of the rule.	No	Yes

Response Details

The response is a list of zero or more *<antiAffinityRule>* elements contained within an *<AntiAffinityRules>* element.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<AntiAffinityRules pageSize="250" totalCount="1" pageCount="1" pageNumber="1"
  xmlns="http://oec.api.opsource.net/schemas/server" ... >
  <antiAffinityRule location="NA1" created="2012-11-02T13:57:01.000Z"
state="NORMAL" id="4ba40fb1-55db-4d20-8afd-5db9f1b5a339">
    <serverSummary id="60b949dc-25eb-46f7-9da2-3b4bd8740e7b">
        <name>LAMP Production Server 1</name>
        <description>Main public facing SaaS server.</description>
        <privateIp>10.157.110.12</privateIp>
        <networkId>cefae7a4-4a69-11e0-b7ea-0030487e0302</networkId>
        <networkName>Production Network</networkName>
    </serverSummary>
    <serverSummary id="651cdb10-9eff-47f4-ae26-acc62a3281ff">
        <name>LAMP Production Server 2</name>
        <description>Main public facing SaaS server mirror.</description>
        <privateIp>10.157.110.11</privateIp>
        <networkId>cefae7a4-4a69-11e0-b7ea-0030487e0302</networkId>
        <networkName>Production Network</networkName>
    </serverSummary>
  </antiAffinityRule>
</AntiAffinityRules>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	If a <i>networkId</i> filter is specified, either the network does not exist or is not owned by the specified {org-id}.
400 (Error)	REASON_770	If a <i>location</i> filter is specified, the location does not exist or is not available to {org-id}.

4.3.2. Deploy Server

Deprecated by **Deploy Server With Disk Speeds**.

Description

Deploys a new VM based on an existing OS, Partner or Customer Image. Requires your organization ID, the ID of the network where the server is to be deployed and the ID of image from which the server is to be created.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server</code>
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<Server xmlns='http://oec.api.opsource.net/schemas/server'>
  <name>My Server</name>
  <description>My Server Description</description>
  <vlanResourcePath>oec/{org-id}/network/{network-id}</vlanResourcePath>
  <imageResourcePath>oec/base/image/{image-id}</imageResourcePath>
  <administratorPassword>zyxw4321</administratorPassword>
  <isStarted>true</isStarted>
</Server>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Deploy Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Deploy" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Unexpected Error – Integration.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Could not find network for ID.
400 (Error)	REASON_310	No IP addresses available.
400 (Error)	REASON_320	Invalid Data.
400 (Error)	REASON_390	Could not find server image for ID.
400 (Error)	REASON_601	Operation in progress on the target Network. (<i>Occurs if target Network is in the process of being added, edited, or deleted</i>)
400 (Error)	REASON_751	Daily Deployment Limit Exceeded.

4.3.3. Get Server Details

Deprecated by **List Servers (with Parameters)** used with the `&id=` filter.

Description

Retrieves the details of a specific server. Requires your organization ID and the ID of the target server. Does not include all of the information available with the current **List Servers (with Parameters)** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

Note that during an update to **<additionalLocalStorage>** on a server the value returned for that property will not change until the update in progress is recognized as being complete and successful.

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Server xmlns:ns2="http://oec.api.opsource.net/schemas/organization" .. >
  <id>37605271-d650-4d8e-a0b0-ad46b25d0952</id>
  <name>10-147-16-11</name>
  <description>ApiDocTest</description>
  <vlanResourcePath>/oec/1831cla9-9c03/network/923a-6d4c</vlanResourcePath>
  <imageResourcePath></imageResourcePath>
  <operatingSystem>
    <type>UNIX</type>
    <displayName>REDHAT5</displayName>
  </operatingSystem>
  <cpuCount>1</cpuCount>
  <memory>2048</memory>
  <osStorage>30</osStorage>
  <additionalLocalStorage>0</additionalLocalStorage>
  <privateIPAddress>10.147.16.11</privateIPAddress>
  <isDeployed>true</isDeployed>
  <isStarted>false</isStarted>
  <created>2009-09-25T10:43:22.105Z</created>
</Server>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}.

4.3.4. List Deployed Servers

Deprecated by **List Servers (with Parameters)** used with the `deployed=true` filter.

Description

This function is not “location aware”. It provides a list of all currently deployed Servers only in the customer’s default data center and does not include all of the information available with the current **List Servers (with Parameters)** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/deployed</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<DeployedServers>
  <!--Zero or more repetitions:-->
  <DeployedServer>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <!--Optional:-->
    <publicIpAddress>string</publicIpAddress>
    <machineName>string</machineName>
    <isStarted>false</isStarted>
    <!--Optional:-->
    <deployedTime>2007-10-26T07:36:28</deployedTime>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2004-02-14T18:44:14</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2018-11-01T05:36:46+00:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
      <failureReason>text - e.g. Additional local storage could not be
added because...</failureReason>
    </status>
  </DeployedServer>
</DeployedServers>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.3.5. List Pending Deployment Servers

Deprecated by **List Servers (with Parameters)** used with the `&deployed=false` filter.

Description

This function is not “location aware”. It provides a list of all pending deployment Servers only in the customer’s default data center and does not include all of the information available with the current **List Servers (with Parameters)** function.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/pendingDeploy</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<PendingDeployServers>
  <!--Zero or more repetitions:-->
  <PendingDeployServer>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <status>
      <action>string</action>
      <requestTime>2008-09-29T02:49:45</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2014-09-19T00:18:33</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the deploy operation failed and
left the server in a locked state) -->
      <failureReason>text - e.g. Guest OS customization
failed</failureReason>
    </status>
  </PendingDeployServer>
</PendingDeployServers>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.3.6. List Deployed Servers on Network with Disks

Deprecated by **List Servers (with Parameters)** function used with the `&networkId=` filter.

Description

This function provides a list of all currently deployed Servers on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithDisks</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<DeployedServersWithDisks xmlns="http://oec.api.opsource.net/schemas/server">
  <!--Zero or more repetitions:-->
  <DeployedServerWithDisks>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>1</cpuCount>
      <memoryMb>2048</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>11</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <!--Optional:-->
    <publicIpAddress>string</publicIpAddress>
    <machineName>string</machineName>
    <!--true or false -->
    <isStarted>>false</isStarted>
    <!--Optional:-->
    <deployedTime>2012-01-05T16:53:33.182Z</deployedTime>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2004-02-14T18:44:14</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2018-11-01T05:36:46+00:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
      <failureReason>text - e.g. Additional local storage could not be
added because...</failureReason>
    </status>
  </DeployedServerWithDisks>
</DeployedServersWithDisks>
```

```

<!--Optional multi-occurring :-->
<machineStatus name="vmwareToolsVersionStatus">
  <value>CURRENT</value>
</machineStatus>
<machineStatus name="vmwareToolsRunningStatus">
  <value>RUNNING</value>
</machineStatus>
<machineStatus name="vmwareToolsApiVersion">
  <value>8290</value>
</machineStatus>
<!--Optional multi-occurring :-->
<softwareLabel>Software Package A</softwareLabel>
<!--Optional multi-occurring :-->
<additionalDisk>
  <id>string</id>
  <scsiId>2</scsiId>
  <diskSizeGb>10</diskSizeGb>
  <state>NORMAL</state>
</additionalDisk>
<additionalDisk>
  <id>string</id>
  <scsiId>1</scsiId>
  <diskSizeGb>11</diskSizeGb>
  <state>NORMAL</state>
</additionalDisk>
</DeployedServerWithDisks>
</DeployedServersWithDisks>

```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Could not find network for ID for {org-id}.

4.3.7. List Pending Deployment Servers on Network with Disks

Deprecated by **List Servers (with Parameters)** used with the `&deployed=false` and `&networkId=` filters.

Description

This function provides a list of all pending deployment Servers on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/pendingDeployWithDisks</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<PendingDeployServersWithDisks>
  <!--Zero or more repetitions:-->
  <PendingDeployServerWithDisks>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <status>
      <action>string</action>
      <requestTime>2008-09-29T02:49:45</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2014-09-19T00:18:33</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the deploy operation failed and
left the server in a locked state) -->
      <failureReason>text - e.g. Guest OS customization
failed</failureReason>
    </status>
    <!--Zero or more repetitions:-->
    <softwareLabel>string</softwareLabel>
    <!--Zero or more repetitions:-->
    <additionalDisk>
      <id>string</id>
      <scsiId>string</scsiId>
      <diskSizeGb>10</diskSizeGb>
      <state>string</state>
```

```
        </additionalDisk>
    </PendingDeployServerWithDisks>
</PendingDeployServersWithDisks>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_250	Could not find network for ID for {org-id}.

4.3.8. List Deployed Servers on Network with Software Labels

Deprecated by **List Servers (with Parameters)** used with the `&deployed=true` and `&networkId=` filters.

Description

This function provides a list of all currently deployed Servers on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithSoftwareLabels</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<DeployedServersWithSoftwareLabels>
  <!--Zero or more repetitions:-->
  <DeployedServerWithSoftwareLabels>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <!--Optional:-->
    <publicIpAddress>string</publicIpAddress>
    <machineName>string</machineName>
    <isStarted>false</isStarted>
    <!--Optional:-->
    <deployedTime>2007-10-26T07:36:28</deployedTime>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2004-02-14T18:44:14</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2018-11-01T05:36:46+00:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
      <failureReason>text - e.g. Additional local storage could not be
added because...</failureReason>
    </status>
    <!--Optional multi-occurring :-->
```

```

    <machineStatus name="vmwareToolsVersionStatus">
      <value>CURRENT</value>
    </machineStatus>
    <machineStatus name="vmwareToolsRunningStatus">
      <value>RUNNING</value>
    </machineStatus>
    <machineStatus name="vmwareToolsApiVersion">
      <value>8290</value>
    </machineStatus>
    <softwareLabel>MSSQL2008</softwarelabel>    (zero-to-many of these)
  </DeployedServerWithSoftwareLabels>
</DeployedServersWithSoftwareLabels>

```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_100	"org-id" unknown
400 (Error)	REASON_250	Could not find network for ID for {org-id}

4.3.9. List Pending Deployment Servers on Network

Deprecated by **List Servers (with Parameters)** used with the *&deployed=false* and *&networkId=* filters.

Description

This function provides a list of all pending deployment Servers on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/pendingDeploy</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<PendingDeployServers>
  <!--Zero or more repetitions:-->
  <PendingDeployServer>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <status>
      <action>string</action>
      <requestTime>2008-09-29T02:49:45</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2014-09-19T00:18:33</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the deploy operation failed and
left the server in a locked state) -->
      <failureReason>text - e.g. Guest OS customization
failed</failureReason>
    </status>
  </PendingDeployServer>
</PendingDeployServers>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully

401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_250	Could not find network for ID for {org-id}

4.3.10.Restart Server

Description

Deprecated by **Reset Server**.

Power cycles an existing deployed server. Requires your organization ID and the ID of the target server.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?restart</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation> Restart Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Restart" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is not currently in a stopped state. Servers must be stopped to be restarted.
400 (Error)	REASON_392	Operation in progress on Server with Id {server-id}
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}

4.3.11. List Deployed Servers on Network

Deprecated by **List Servers (with Parameters)** used with the `&deployed=true` and `&networkId=` filters.

Description

This function provides a list of all currently deployed Customer Servers located on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the software labels or disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployed</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<DeployedServers>
  <!--Zero or more repetitions:-->
  <DeployedServer>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <!--Optional:-->
    <publicIpAddress>string</publicIpAddress>
    <machineName>string</machineName>
    <isStarted>false</isStarted>
    <!--Optional:-->
    <deployedTime>2007-10-26T07:36:28</deployedTime>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2004-02-14T18:44:14</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2018-11-01T05:36:46+00:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
      <failureReason>text - e.g. Additional local storage could not be
added because...</failureReason>
    </status>
  </DeployedServer>
```

</DeployedServers>

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_250	Could not find network for ID for {org-id}

4.3.12. List Servers

Deprecated by the **List Servers (with Parameters)** function, which provides lots of additional information and filtering.

Description

This function returns all Servers in a Geographic Region. However, it does NOT include the data center location associated with these servers, making the function of limited use in any Geographic Region with more than one data center.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Servers xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <Server>
    <id>37605271-d650-4d8e-a0b0-ad46b25d0952</id>
    <name>10-147-16-11</name>
    <description>ApiDocTest</description>
    <vlanResourcePath>/oec/1831-a33d/network/9dd23-afd3</vlanResourcePath>
    <imageResourcePath></imageResourcePath>
    <operatingSystem>
      <type>UNIX</type>
      <displayName>REDHAT5</displayName>
    </operatingSystem>
    <cpuCount>1</cpuCount>
    <memory>2048</memory>
    <osStorage>30</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <machineName>10-147-17-33</machineName>
    <privateIPAddress>10.147.16.11</privateIPAddress>
    <isDeployed>true</isDeployed>
    <isStarted>false</isStarted>
    <created>2009-09-25T10:43:22.105Z</created>
  </Server>
</Servers>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

4.3.13. Stop Server

Description

Deprecated by the **Power Off** function, which provides the same functionality.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?stop</code>
Request Type	HTTP GET
Supported for	MCP 1.0 and MCP 2.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Stop Server</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Server "Stop" issued</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_40	INVALID_STATE_TRANSITION - Server is already stopped
400 (Error)	REASON_392	Operation in progress on Server with Id {server-id}
400 (Error)	REASON_395	Could not find server {server-id} for {org-id}

4.3.14. List Deployed Servers on Network with Status

Deprecated by **List Servers (with Parameters)** used with the `&deployed=true` and `&networkId=` filters.

Description

This function provides a list of all currently deployed Customer Servers located on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the software labels or disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithStatus</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details (descriptive – includes all optional)

```
<DeployedServers>
  <!--Zero or more repetitions:-->
  <DeployedServer>
    <id>string</id>
    <name>string</name>
    <!--Optional:-->
    <description>string</description>
    <machineSpecification>
      <cpuCount>3</cpuCount>
      <memoryMb>4096</memoryMb>
      <osStorageGb>10</osStorageGb>
      <additionalLocalStorageGb>10</additionalLocalStorageGb>
      <operatingSystem>
        <type>string</type>
        <displayName>string</displayName>
      </operatingSystem>
    </machineSpecification>
    <sourceImageId>string</sourceImageId>
    <networkId>string</networkId>
    <privateIpAddress>string</privateIpAddress>
    <!--Optional:-->
    <publicIpAddress>string</publicIpAddress>
    <machineName>string</machineName>
    <isStarted>>false</isStarted>
    <!--Optional:-->
    <deployedTime>2007-10-26T07:36:28</deployedTime>
    <!--Optional:-->
    <status>
      <action>string</action>
      <requestTime>2004-02-14T18:44:14</requestTime>
      <userName>string</userName>
      <!--Optional:-->
      <numberOfSteps>3</numberOfSteps>
      <!--Optional:-->
      <updateTime>2018-11-01T05:36:46+00:00</updateTime>
      <!--Optional:-->
      <step>
        <name>string</name>
        <number>3</number>
        <!--Optional:-->
        <percentComplete>3</percentComplete>
      </step>
      <!--Optional: (present only if the last operation failed and left
the server in a locked state) -->
      <failureReason>text - e.g. Additional local storage could not be
added because...</failureReason>
    </status>
    <!--Optional multi-occurring :-->
```

```
<machineStatus name="vmwareToolsVersionStatus">
  <value>CURRENT</value>
</machineStatus>
<machineStatus name="vmwareToolsRunningStatus">
  <value>RUNNING</value>
</machineStatus>
<machineStatus name="vmwareToolsApiVersion">
  <value>8290</value>
</machineStatus>
</DeployedServer>
</DeployedServers>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_250	Could not find network for ID for {org-id}

4.3.15. List Servers on Network

Deprecated by the **List Servers (with Parameters)** function used with the `&networkId=` filter

Description

This function provides a list of all currently deployed Customer Servers located on a specific network, but it does not include all of the information available with the current **List Servers (with Parameters)** function, such as the software labels, vmware tools status, or disk speed associated with the disks.

Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server</code>
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Servers xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <Server>
    <id>37605271-d650-4d8e-a0b0-ad46b25d0952</id>
    <name>10-147-16-11</name>
    <description>ApiDocTest</description>
    <vlanResourcePath>/oec/1831-a33d/network/9dd23-afd3</vlanResourcePath>
    <imageResourcePath></imageResourcePath>
    <operatingSystem>
      <type>UNIX</type>
      <displayName>REDHAT5</displayName>
    </operatingSystem>
    <cpuCount>1</cpuCount>
    <memory>2048</memory>
    <osStorage>30</osStorage>
    <additionalLocalStorage>0</additionalLocalStorage>
    <machineName>10-147-17-33</machineName>
    <privateIPAddress>10.147.16.11</privateIPAddress>
    <isDeployed>true</isDeployed>
    <isStarted>false</isStarted>
    <created>2009-09-25T10:43:22.105Z</created>
  </Server>
</Servers>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_250	Could not find network for ID for {org-id}

4.4. Deprecated Network API Functions

These Network API functions continue to operate in the 0.9 version of the API, but have been replaced by newer functions within the same version. The functions will not be included in the next version of the API and may exclude important functionality, so it is strongly recommended that customers update their code to use the replacement function.

A number of these functions are not “location aware” and apply only against a “default location”. See the **Multi-Location Data Centers** section in the Introduction for more details.

4.4.1. List Networks

Deprecated by *List Networks with Location* and *List Networks in Location*

Description

Retrieves the set of networks owned by a customer in their default data center location; note that the “location” is not included in the output.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network">https://<Cloud API URL>/oec/0.9/{org-id}/network
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:Networks xmlns:ns2="http://oec.api.opssource.net/schemas/organization" ..>
  <ns4:Network>
    <ns4:id>4804-b2e4</ns4:id>
    <ns4:resourcePath>/oec/a481-2b15/network/12b1-4804</ns4:resourcePath>
    <ns4:name>network x</ns4:name>
    <ns4:description>network x description</ns4:description>
    <ns4:multicast>>false</ns4:multicast>
  </ns4:Network>
  <ns4:Network>
    <ns4:id>4bdd-8bb7</ns4:id>
    <ns4:resourcePath>/oec/a481-2b15/network/4bdd-8bb7</ns4:resourcePath>
    <ns4:name>network y</ns4:name>
    <ns4:description>network y description</ns4:description>
    <ns4:multicast>>false</ns4:multicast>
  </ns4:Network>
</ns4:Networks>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).

4.4.2. Create Network

Deprecated by **Create Network with Location**

Description

Deploys a new network to your default data center location. There are some important notes about these error responses:

- REASON_10 indicates a non-recoverable failure occurred when attempting to create the network. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.
- REASON_20 indicates a non-recoverable timeout failure. Since Create Network is a synchronous function, there is a "timeout" limit set giving a limited amount of time for a network to successfully be created. This fault code indicated that for some reason the attempt to create the network didn't succeed within the time allotted to complete. If this situation occurs, you must open a Support Case to address the issue. Until the issue is addressed, any additional attempts to add or delete networks will receive a REASON_601 response.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network">https://<Cloud API URL>/oec/0.9/{org-id}/network
Request Type	HTTP POST
Supported for	MCP 1.0

Request Data

```
<Network xmlns='http://oec.api.opsource.net/schemas/network'>
  <name>network w</name>
  <description>network w description</description>
</Network>
```

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns6:operation>Add Network</ns6:operation>
  <ns6:result>SUCCESS</ns6:result>
  <ns6:resultDetail>Network added</ns6:resultDetail>
  <ns6:resultCode>REASON_0</ns6:resultCode>
</ns6:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network – internal error occurred.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_100	{org-id} invalid (does not match credentials).
400 (Error)	REASON_210	Network name is not unique.
400 (Error)	REASON_220	No available networks.
400 (Error)	REASON_320	Invalid Data – name (max. 75 chars) and description (max. 255 chars) exceed maximum length.
400 (Error)	REASON_601	Operation in progress: a <i>Create Network</i> , <i>Create Network with Location</i> or <i>Delete Network operation</i> is already in progress for the organization.

4.4.3. Reserve Public IP Block

Deprecated by **Reserve Public IP Block with Size**

Description

Obtains an additional Public IP block and assigns it to the referenced network.

Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip?reserveNew">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip?reserveNew
Request Type	HTTP GET
Supported for	MCP 1.0

Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsource.net/schemas/organization" ..>
  <ns8:operation>Reserve New Public IP Block</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Public IP block with base IP 168.143.1.1 is
reserved</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials
400 (Error)	REASON_250	Network does not exist for {org-id}
400 (Error)	REASON_330	No IP block available, location: <NETWORK_LOCATION>, agg: <NETWORK_AGG>
400 (Error)	REASON_340	IP Block operation failed.
400 (Error)	REASON_20	Unrecoverable failure cause by a timeout.
400 (Error)	REASON_10	Failure at Network

5. Older Documentation Revisions

5.1. Changes Introduced in Version 4.26

Added APIs for Dimension Data's Government Community Cloud Vendor.

5.2. Changes Introduced in Version 4.25

Clarifies MCP 1.0 vs. MCP 2.0 data center locations in preparation for the March 2015 release:

- Added new **MCP Location Identification and Support in this API Version** section to the Overview section of the documentation
- Added new section to each function that identifies whether it works with MCP 1.0 locations only or both MCP 1.0 and 2.0 locations
- Added additional clarification on how to identify MCP 1.0 vs. MCP 2.0 locations to the **List Data Centers (with Parameters) – Maintenance** function
- Added note in deprecated functions **List Data Centers (with Parameters)**, **List Data Centers with Limits**, **List Multi-Geography Data Centers**, **List Data Centers** that these functions will list MCP 2.0 locations but do not provide the data to differentiate them from MCP 1.0 locations.

5.3. Changes Introduced in Version 4.20

Introduces a new API and a set of minor updates as part of the December 2014 release:

- Adds the *Cancel Backup Jobs for Backup Client* function.
- Adds restriction to the *Create Network with Location* function for unverified Customer Organizations.
- Enables the *Clone Server to create Customer Image* function for Cloud Servers with Cloud Backups enabled.
- Moves documentation revision version notes 3.81 to 4.10 to the *Old Documentation Revisions* section.

5.4. Changes Introduced in Version 4.14

Added APIs for Canada Geographic Region and Cisco Vendor.

5.5. Changes Introduced in Version 4.13

Introduces a minor correction:

- *networkId* cannot be used as an *Order By* parameter on current function *List Servers (with Parameters) - Backup* and deprecated function *List Servers (with Parameters)*.

5.6. Changes Introduced in Version 4.12

Introduces a minor correction:

- *Delete Network* text content has been updated to remove an incorrect reference to Network retrieval.

5.7. Changes Introduced in Version 4.11

Introduces a correction:

- Corrects the API URL for *Deploy Server with Disk Speed*.

5.8. Changes Introduced in Version 4.10

Introduces important new API functions and some minor changes as part of the August 2014 release:

- *Deploy Server with Disk Speed* deprecates *Deploy Server*.
- *List Server Images (with Parameters)* deprecates:
 - *List OS Server Images with Software Labels in Location*

- *List Deployed Customer Images with Software Labels in Location*
 - *List Pending Deployment Customer Images in Location.*
- *Modify Customer Server Image with Disk Speed* deprecates *Modify Customer Server Image*.
- Adds descriptions of *LIKE*, *GREATER_THAN* (GT) and *LESS_THAN* (LT) filters to the *Paging and Filtering for List API functions* section.

Updates the following functions:

- Updates description of *Copy Customer Image to Data Center* to include an explanation of what happens to disk meta data on the source Customer Image.
- Added note to User Account password requirements for:
 - *Add Sub-Administrator Account (With Phone Number)*
 - *Update Sub-Administrator Account.*
- Updated error codes for *Add Storage to Server*.

Documentation corrections:

- Corrects numbering for *Delete ACL Rule* within this document.
- Corrects name from *Software Units Report* to *Software Units Usage Report*.

5.9. Changes Introduced in Version 4.01

Adds South America API URL's and some other API URL changes due to rebranding efforts.

5.10. Changes Introduced in Version 4.00

Introduces a several API functions and some minor changes relating to password validation:

- Updates the restrictions applied to passwords for Users (Primary Administrator and Sub-Administrator); these will be applied to new passwords and changes to existing passwords. Existing passwords will continue to function.
- Introduces the following new API functions:
 - *Change Server Disk Size*
 - *Add Sub-Administrator Account (with Phone Number)* deprecates *Add Sub-Administrator Account*
 - *List Accounts (with Phone Number)* deprecates *List Accounts*
 - *Get Administrator Account (with Phone Number)*
 - *Set Two Factor Authentication Status*
 - *Get Two Factor Authentication Status.*
- Updates the following API functions:
 - *Update Administrator Account* updated to accept two new, optional parameters
 - *Notify System of Private IP Address Change* updated with note regarding Hyper-V based Private Cloud data centers.

5.11. Changes Introduced in Version 3.90

Introduces a minor set of documentation updates:

- *List Data Centers (with Parameters) - Maintenance* updated to include extra information on storage limitations.
 - The following error code updates correspond to the extra information above:
 - Adds REASON_771 to *Copy Customer Image to Data Center*
 - Adds REASON_697 to *Clone Server to Create Customer Image*
- Renames *List Multi-Geography Data Centers with Key* function to *List Multi-Geography Regions*
 - This is a clarifying rename for documentation purposes and does not change the API function in any way.

- Moves documentation revision notes for v3.76 to v3.80 inclusive to the *Old Documentation Revisions* section at the end of the document.

5.12. Changes Introduced in Version 3.81

Minor correction:

- Updated the URL for **Get Servers for Out of Place File System Restore** to require *backup-client-type* instead of *backup-client-id*.

5.13. Changes Introduced in Version 3.80

v3.80 is a *major* documentation revision with the following changes:

- Introduces **Cloud Backup** feature as its own distinct group of API functions, as follows:
 - *Enable Backup for a Server*
 - *Disable Backup for a Server*
 - *Change Backup Service Plan*
 - *Get Backup Client Types*
 - *Get Storage Policies*
 - *Get Schedule Policies*
 - *Add Backup Client*
 - *Remove Backup Client*
 - *Modify Backup Client*
 - *Get Backup Details for Server*
 - *Restore File System Backup (In Place)*
 - *Get Servers for Out of Place File System Restore*
 - *Restore File System Backup (Out of Place)*
- Introduces *List Servers (with Parameters) - Backup* deprecating *List Servers (with Parameters)*.
- Introduces *List Data Centers (with Parameters) - Maintenance* deprecating *List Data Centers (with Parameters)*.
- Introduces *Notify System of Private IP Address Change*.
- Updates the definition of *Create Sub-Administrator Account* to be aware of the new “backup” role.
- Reporting:
 - Adds Cloud Backup specific columns to *Summary Usage Report*
 - Introduces new *Backup Usage Report*.
 - Renames *Audit Log Report* to *Administrator Logs Report* to match the Cloud UI and Community.
- Error code updates:
 - Added REASON_550 to *Clone Server to Create Customer Image* and *Delete Server*
 - Added REASON_421 to *Delete Sub-Administrator Account*.
- Adds “packageName” filter and sort order option to *List Remote OVF Package Copy History* and *List Remote OVF Package Copying in Progress*.
- Moves documentation revision notes for v3.70 to v3.75 inclusive to the *Old Documentation Revisions* section at the end of the document.

5.14. Changes Introduced in Version 3.76

Minor correction to the *Paging and Filtering Common API Responses*:

- REASON_320 response was incorrectly described as corresponding to an HTTP 403 code instead of an HTTP 400 code.

5.15. Changes Introduced in Version 3.75

Introduces the following changes:

- Deprecates all location-unaware API functions including *List OS Server Images*, *List Deployed Customer Images*, *List Pending Deployment Customer Images*, *List Networks* and *Create Network* functions. With the introduction of additional locations into most Geographic Regions either in place or forthcoming in the next few months, we advise against continued use of these functions.
- Deprecates *List Deployed Servers on Network with Disks* and *List Pending Deployment Servers on Network with Disks*. These capabilities are available through the *List Servers (with Parameters)* function.
- Updates the Cloud API URL's and moves them into their own **Cloud API URL Structure** section of the document.
- Rewrite of the **Multi-Location Data Centers** and **Multi-Geography Regions** sections of the document with various corrections and clarifications.
- Reorganized deprecated functions into separate sub-sections and clarified language to describe how to replace use of these functions with current functionality and what additional information may be available with use of the current function.
- Minor updates to various error codes. Affected functions include *Export Customer Image*, *Deploy Server*, *Create Network*, and *Delete ACL Rule*.
- Updated Community article links throughout the document to the most recent relevant article.
- Minor spelling, grammatical, and wording changes throughout the document.

5.16. Changes Introduced in Version 3.74

Introduces the following function:

- *Designate Primary Administrator* which allows the Primary Administrator to transfer the Primary Administrator rights to a Sub-Administrator user of the same organization.

5.17. Changes Introduced in Version 3.73

Corrects the following:

- The descriptive text for *Delete Server* incorrectly stated that the function *powers off the server* prior to deletion. The text has been updated to reflect the correct behaviour.

5.18. Changes Introduced in Version 3.72

Updates the following function:

- *Add Storage to Server* which now accepts a Disk Speed at data centers where multiple disk speeds are available.

5.19. Changes Introduced in Version 3.71

Introduces the following changes:

- Updates *Add Storage to Server* description to note the size of allowed local disk now varies by Geographic Region

5.20. Changes Introduced in Version 3.70

Introduces the following changes:

- Adds the following new functions:
 - *List Data Centers (with Parameters)* which adds disk speed information to a data center and deprecates the previous *List Data Centers With Limits* function.
 - *Change Server Disk Speed*
 - *Update Administrator Account*.

- Updates the following reporting functions to include disk speed data:
 - Summary Usage Report
 - Detailed Usage Report.
- Adds startDate as a filter field to:
 - *List Remote OVF Package Copying in Progress*
 - *List Remote OVF Package Copy History.*
- Adds error code REASON_320 to *Add Sub-Administrator Account*.
- Adds error code REASON_696 to *Remove Storage from Server*.
- Adds error code REASON_11 to *Create NAT Rule* and *Delete NAT Rule*.

5.21. Changes Introduced in Version 3.61

Minor correction to v3.60. For the *List Servers (with Parameters)* function; *state* was listed as a *filter* field where it is currently available only as an *orderBy* field.

5.22. Changes Introduced in Version 3.60

Introduces the following changes:

- Introduces Paging and Filtering for List API functions.
- Adds the following new functions:
 - *List Servers (with Parameters)*
 - *Copy OVF Package from Remote Geo*
 - *List Remote OVF Package Copying In Progress*
 - *List Remote OVF Package Copy History*
 - *Add Server Anti-Affinity Rule*
 - *List Server Anti-Affinity Rules*
 - *Delete Server Anti-Affinity Rule*
 - *List Multi-Geography Data Centers With Key*
 - **deprecates** *List Multi-Geography Data Centers*
- *List Servers (with Parameters)* **deprecates** the following functions:
 - *List Deployed Servers*
 - *List Pending Deployment*
 - *List Servers*
 - *Get Server Details.*
- Adds error code REASON_692 to *Delete Server*.
- Moves document revision descriptions v3.53 through v3.55 to *Older Documentation Revisions*.

5.23. Changes Introduced in Version 3.56

Introduces the following changes:

- Adds four new functions:
 - *Copy Customer Image to Data Center*
 - *List Customer Image Copying in Progress*
 - *List Multi-Geography Data Centers*
 - *List Accounts.*
- Adds a new error code; REASON_51 common to all functions that interact with Cloud Servers and Images, returned when the associated data center location is in maintenance.

- Adds a new error code; REASON_60 common to all functions requiring XML content in the request that is returned when the XML provided is invalid in structure.
- Adds detail to the Detailed Usage Report:
 - Bandwidth is broken out by network rather than being aggregated.
 - The network associated with each additional IP block is added.
- Minor update to the validation criteria for the *Create VIP* function.
- Clarifies the permitted characters in Customer Image Name values and OVF Package Prefix Name values for:
 - *Copy Customer Image to Data Center*
 - *Customer Image Import*
 - *Customer Image Export*
 - *Clone Server to Create Customer Image*
- Other minor validation and error code corrections.
- Moves document revision descriptions v3.50 through v3.52 to *Older Documentation Revisions*.

5.24. Changes Introduced in Version 3.55

Introduces the following changes:

- Minor update to permitted characters in the *OVF Package Prefix Name* for *Customer Image Export*.

5.25. Changes Introduced in Version 3.54

Introduces the following changes:

- Minor correction to permitted *password* characters on the *Modify Files Account* function.
- Moves document revision descriptions v3.48 through v3.50 to *Older Documentation Revisions*.

5.26. Changes Introduced in Version 3.53

Introduces minor corrections to the sample responses for:

- *List Customer Image Imports in Progress*
- *List Customer Image Export History*

5.27. Changes Introduced in Version 3.52

Introduces the following changes:

- Minor corrections to a number of sample responses.

5.28. Changes Introduced in Version 3.51

Introduces the following changes:

- Adds API URLs for the IS Public Cloud product.

5.29. Changes Introduced in Version 3.50

Introduces the following changes:

- Introduces a new family of API functions for Importing and Export Customer Images.
 - *List OVF Packages*
 - *Import Customer Image*
 - *List Customer Image Imports in Progress*
 - *Export Customer Image*
 - *List Customer Image Exports in Progress*
 - *List Customer Image Export History*

- Introduces the following new API functions to the Server Image API section:
 - *Get Server Image*
 - *Does Customer Image Name Exist?*
 - *Clean Failed Customer Image*
- Adds error code REASON_100 and REASON_750 to *Create ACL Rule*.
- Adds error code REASON_379 to *Clone Server to Create Customer Image*.
- Adds error code REASON_241 to *Create NAT Rule*.
- Adds error code REASON_601 to numerous API functions.
- Moves document revision descriptions v3.43 through v3.47 to *Older Documentation Revisions*.

5.30. Changes Introduced in Version 3.49

Introduces the following changes:

- Adds REASON_5 code to *Common API Responses* to identify when the system is in maintenance.

5.31. Changes Introduced in Version 3.48

Introduces the following changes:

- Minor correction to *Modify Network* API description.

5.32. Changes Introduced in Version 3.47

Introduces the following changes:

- Minor correction to notes on *Summary Usage Report* limitations.
- Moved Section 3.42 to *Older Documentation Revisions*.

5.33. Changes Introduced in Version 3.46

Introduces the following changes:

- Adds REASON_529 error code to *Summary Usage Report and Detailed Usage Report*.

5.34. Changes Introduced in Version 3.45

Introduces the following changes:

- Adds REASON_11 error code to *Add Storage to Server*.
- Adds REASON_320 error code to *Remove Probe from Server Farm*.
- Adds link to Community to the *Set Server to VIP Connectivity for Public IP Block* function for details of connectivity allowances by geographic region.
- Minor corrections to sample XML payloads on *Create Probe*.
- Clarifies validation explanations on a number of functions.

5.35. Changes Introduced in Version 3.44

Introduces the following changes:

- Addition of *Modify Server to VIP for a Network* function.
- Updates “inService” parameter on *Modify Real Server* to have the correct case.
- Corrected section numbering for *List Files Accounts*.
- Moved Section 3.41 to *Older Documentation Revisions*.

5.36. Changes Introduced in Version 3.43

Introduces the following changes:

- Moved older documentation updates to a new section at the end of the document
- Added Concentric Cloud Solutions API URL
- Correction made to NTTA Cloud API URL for Africa

5.37. Changes Introduced in Version 3.42

Introduces the following changes:

- Adds *Common API Responses* to Section 1.2 detailing responses that can be returned by any API function (and updates the error codes listed for every operation accordingly).
- Adds *Authentication* to Section 1.2 explaining how Cloud REST API requests are authenticated.
- Adds *Public IP Hours* to the *Summary Usage Report* and *Detailed Usage Report* samples.
- Updates error codes for *Create Nat Rule* and *Create ACL Rule* to include explicit handling of invalid IP address formats with the REASON_320 error code.
- Adds a Community reference to *Modify Server* for specific permitted CPU and RAM values.
- Updates the error codes for *Audit Log Report* to return REASON_520 rather than REASON_320 for invalid date parameters.
- Updates the error codes for *Create Files Account* to add missing REASON_681 code.
- Corrects the following incorrectly documented error codes:
 - REASON_670 was incorrectly documented for *Delete Network*; REASON_371 is the error code to expect when the network is in multicast mode.
 - REASON_640 was incorrectly documented for *Create VIP*; REASON_670 is the error code to expect if the target type is a Persistence Profile and an invalid target id is provided.
- Corrected sample response payload for *Get Server Farm Details*.

5.38. Changes Introduced in Version 3.41

Introduces the following changes:

- Adds a number of new API URLs:
 - OpSource (Africa)
 - Dimension Data (Africa)
 - BlueFire (Africa)
 - NTTA (Africa).
- Replaces “<” with “{” on *Remove Storage from Server* URL example for documentation consistency.

5.39. Changes Introduced in Version 3.40

Introduces the following changes and new functions:

- New *Reserve Public IP Address Block with Size* function deprecates *Reserve Public IP Address Block*. The new function provides details on the size of the Public IP Address block being reserved.
- Correction to validation criteria for the *Add Sub-Administrator Account* function. Added permitted characters for *username* and missing *roles* response code.
- Correction to sample payload for the *List NAT Rules* function and the *Create NAT Rule* function
- Clarification of *additionalLocalStorage* on the *Get Server Details* function
- Note that the Version 3.30 changes incorrectly referenced function names *Create Account* and *Delete Account*. *Add Sub-Administrator Account* and *Delete Sub-Administrator Account* were the correct values.

5.40. Changes Introduced in Version 3.31

Adds a number of new API URLs:

- OpSource (Australia)
- Dimension Data (North America, Europe and Australia)
- BlueFire (North American, Europe and Australia)
- NTTA (Australia)

5.41. Changes Introduced in Version 3.30

Introduces the following changes and functions:

- *Create Account* allows the Primary Administrator user to create new Sub-Administrator accounts
- *Delete Account* allows the Primary Administrator user to delete Sub-Administrator accounts
- Updated error codes for *Delete ACL Rule*

5.42. Changes Introduced in Version 3.25

Introduces the following changes:

- Added details about an additional error code; *REASON_11*, for API failures that support retry. Developers are advised to review the detailed explanation added to the *Delete Network* function regarding the new error codes and behavior.
- Added details about the error codes associated with the *Add Network* and *Add Network with Location* functions.
- Updated response to the *Detailed Usage Report* function to include the Private IP Address
- Fixed references to deprecated functions in some function descriptions

5.43. Changes Introduced in Version 3.24

Introduces the following new API functions and changes:

- *List Pending Deployment Servers on Network with Disks* returns the list of servers currently being deployed on a network with full details of any additional local storage present on each server, and deprecates *List Pending Deployment Servers on Network*.
- A more detailed sample payload for the *Create ACL Rule* function.
- Additional error code; *REASON_601*, for the following functions:
 - *Create Network*
 - *Create Network with Location*
 - *Delete Network*.
- *Detailed Usage Report* now includes the private IP address of each Cloud Server.

5.44. Changes Introduced in Version 3.23

Added URL for NTTA (Europe) API.

5.45. Changes Introduced in Version 3.22

Minor update noting an increase in the amount of Persistence Profiles allowed on a Cloud Network from 5 to 25.

5.46. Changes Introduced in Version 3.21

Minor update to the description of the *Create ACL Rule* function adding in the permitted range of values for the ACL rule *position*.

5.47. Changes Introduced in Version 3.20

Introduces the following new API functions and changes:

- *List Deployed Servers on Network with Disks* returns the list of servers deployed on a network with full details of any additional local storage that has been added, and deprecates *List Deployed Servers on Network with Software Labels*.
- *Remove Storage from Server* allows the removal of specific additional storage disks added to the server by the *Add Storage to Server* function.
- The textual description returned in the resultDetail response of *Add Storage to Server* function now includes the SCSI ID of the storage volume added.
- The *Create ACL Rule* function is no longer restricted to the *Inbound (OUTSIDE_ACL)* rule type, it is now possible to create *Outbound (INSIDE_ACL)* ACL rules. Note this change adds an optional element to the existing API function but does not require any integration changes for existing code. If the optional element is not included, the function will assume that an Inbound (OUTSIDE_ACL) is being created as the function worked prior to Version 3.20.

5.48. Changes Introduced in Version 3.12

Introduces Multi-Geography Regions API overview in section 1.6 and added a related API URL to section 1.1.

5.49. Changes Introduced in Version 3.11

Updates the Audit Report Log with two row reporting of long running network actions.

5.50. Changes Introduced in Version 3.10

Introduces the following new API functions to support Priced Software:

- *List Software Labels* returns the catalog of Priced Software packages that come preinstalled (individually or in combinations) on some OS Server Images and Customer Images.
- *List Deployed Servers on Network with Software Labels* includes any Priced Software associated with each virtual server and deprecates the existing *List Deployed Servers on Network with Status* function.
- *List OS Servers Images with Software Labels in Location* includes any Priced Software associated with each OS Server Image and deprecates the existing *List OS Server Images in Location* function.
- *List Deployed Customer Images with Software Labels in Location* includes any Priced Software associated with each Customer Image and deprecates the existing *List Deployed Customer Images in Location* function.
- *Software Units Report* details the Priced Software usage on servers across your account for the defined period of the report.

And the following new API functions:

- *Update VMware Tools* function triggers an update of the VMware Tools software on a virtual server.
- *Reboot Server* function allows a Guest OS “graceful” reboot of a virtual server.
- *Reset Server* function performs a power cycle, or “hard reset” of the guest OS. This function deprecates the existing *Restart Server* function and operates in an identical manner.
- *Clean Failed Server Deployment* allows the API caller to proactively remove any failed server deployments from the *List Pending Deployed Servers* list.

5.51. Changes Introduced in Version 3.01

Added table with API URL's for all current Cloud Implementations to section 1.1

5.52. Changes Introduced in Version 3.00

Introduces two new API functions:

- *List Deployed Servers on Network with Status* function exposing VMware Tools status information. This function deprecates the existing *List Deployed Servers on Network* function.

- List Data Centers with Limits function exposing Data Center limitations. This function deprecates the existing List Data Centers function.

5.53. Changes Introduced in Version 2.90

Introduces new functions to support management of Persistence Profiles on Networks. The functions include:

- List Persistence Profiles
- Create Persistence Profile
- Delete Persistence Profile

5.54. Changes Introduced in Version 2.80

Introduces the first common API document for use by all partners, customers and resellers.

5.55. Changes Introduced in Version 2.70

Introduces new functions to support management of Probes on Server Farms, where previously it was only possible to use the default Probes. The functions include:

- Create Probe
- Modify Probe
- Delete Probe

Changes to Cloud Files functions:

- Create Files Account now requires an "email" address
- Modify Files Account can optionally update the "email" address for a Cloud Files Account

5.56. Changes Introduced in Version 2.62

Minor correction

- Updated incorrect HTTP method for Audit Log Report from POST to GET.

5.57. Changes Introduced in Version 2.61

Minor corrections

- Updated incorrect HTTP method for Brief Usage Report and Detailed Usage Report from POST to GET.

5.58. Changes Introduced in Version 2.60

Introduces new functions to support Multiple Data Center locations. See "Data Center Locations" section in the Overview for more details. The functions include:

- List Data Centers
- List OS Server Images in Location
- List Deployed Customer Images in Location
- List Pending Deployment Customer Images in Location
- List Networks with Location
- List Networks in Location
- Create Network with Location
- Get Network Configuration with Location

Deprecated the List Partner Images function, which was unused.

5.59. Changes Introduced in Version 2.52

Minor corrections

- Added missing parameter in remove Real Server from Server Farm function
- Added missing optional <ipAddress> field to Create VIP function

5.60. Changes Introduced in Version 2.51

Minor corrections

- Typo in URL for List Pending Deployment Servers on Network
- Updated Error codes for Create Network
- Updated Error codes for Get Network Configuration

5.61. Changes Introduced in Version 2.50

Added new functions

- List Deployed Customer Images
- List Pending Deployment Customer Images
- List Deployed Servers
- List Pending Deployment Servers
- Shutdown Server (Graceful Stop)
- Power Off Server
- List Deployed Servers on Network
- List Pending Deployment Servers on Network

Added new “Deprecated function” section listing existing functions replaced by the new additions:

- List Images
- List Servers
- Stop Server
- List Servers on Network

The “List Web/DB Images” function was previously deprecated back in v1.9 and has been added to this same section.

Minor update to Response Details for List OS Images and List Partner Images calls –documentation examples were out of date. No change to XML structure – just the sample field responses.

5.62. Changes Introduced in Version 2.26

This version of the documentation includes the following changes:

- Corrected “response details” text for sections 3..1, 3..2 to correct resourcePath reference
- Corrected “request data” section to reflect a valid imageResourcePath

5.63. Changes Introduced in Version 2.25

The 2.25 version of the documentation included the following changes:

- Addition of List Servers By Network function