

Cloud REST API

v0.9

Last Updated:	March 21, 2013
Document Version:	3.71

Contents

0. Recent Documentation Revisions.....	7
0.1. Changes Introduced in Version 3.71 (this document)	7
0.2. Changes Introduced in Version 3.70	7
0.3. Changes Introduced in Version 3.61	7
0.4. Changes Introduced in Version 3.60	7
0.5. Changes Introduced in Version 3.56	8
1. Introduction	9
1.1. Overview.....	9
1.2. General Approach	10
1.3. Namespaces	12
1.4. Content Type.....	12
1.5. Multi-Location Data Centers	12
1.6. Multi-Geographic Data Centers.....	13
1.7. Paging and Filtering for List API Functions	13
2. Account API.....	17
2.1. Get My Account Details.....	17
2.2. Add Sub-Administrator Account.....	18
2.3. Update Administrator Account.....	20
2.4. Delete Sub-Administrator Account.....	21
2.5. List Accounts	22
2.6. List Data Centers (With Parameters).....	24
2.7. List Multi-Geography Data Centers With Key.....	26
2.8. List Software Labels	27
3. Server Image API.....	28
3.1. List OS Server Images	28
3.2. List OS Server Images with Software Labels in Location	29
3.3. List Deployed Customer Images.....	30
3.4. List Deployed Customer Images with Software Labels in Location.....	32
3.5. List Pending Deployment Customer Images	34
3.6. List Pending Deployment Customer Images in Location	36
3.7. Does Image Name Exist?.....	37
3.8. Get Server Image.....	38
3.9. Delete Customer Server Image.....	40
3.10. Modify Customer Server Image.....	41
3.11. Clean Failed Customer Image.....	42
4. Import & Export Customer Image API.....	43
4.1. List OVF Packages.....	43
4.2. Import Customer Image.....	45

4.3.	<i>List Customer Image Imports in Progress</i>	49
4.4.	<i>Export Customer Image</i>	51
4.5.	<i>List Customer Image Exports in Progress</i>	53
4.6.	<i>List Customer Image Export History</i>	55
4.7.	<i>Copy Customer Image to Data Center</i>	57
4.8.	<i>List Customer Image Copying in Progress</i>	60
4.9.	<i>Copy OVF Package from Remote Geo</i>	62
4.10.	<i>List Remote OVF Package Copying in Progress</i>	64
4.11.	<i>List Remote OVF Package Copy History</i>	66
5.	Server API	68
5.1.	<i>List Servers (With Parameters)</i>	68
5.2.	<i>Clean Failed Server Deployment</i>	71
5.3.	<i>Deploy Server</i>	72
5.4.	<i>Delete Server</i>	73
5.5.	<i>Modify Server</i>	74
5.6.	<i>Start Server</i>	75
5.7.	<i>Shutdown Server (Graceful Stop)</i>	76
5.8.	<i>Power Off Server</i>	77
5.9.	<i>Reboot Server</i>	78
5.10.	<i>Reset Server</i>	79
5.11.	<i>Update VMware Tools</i>	80
5.12.	<i>Add Storage to Server</i>	81
5.13.	<i>Remove Storage from Server</i>	82
5.14.	<i>Change Server Disk Speed</i>	83
5.15.	<i>Clone Server to Create Customer Image</i>	84
5.16.	<i>Create Server Anti-Affinity Rule</i>	85
5.17.	<i>List Server Anti-Affinity Rules</i>	86
5.18.	<i>Delete Server Anti-Affinity Rule</i>	88
6.	Network API	89
6.1.	<i>List Networks</i>	89
6.2.	<i>List Networks with Location</i>	90
6.3.	<i>List Networks in Location</i>	91
6.4.	<i>Get Network Details</i>	92
6.5.	<i>Create Network</i>	93
6.6.	<i>Create Network with Location</i>	94
6.7.	<i>Delete Network</i>	95
6.8.	<i>Modify Network</i>	97
6.9.	<i>List Deployed Servers on Network with Disks</i>	98
6.10.	<i>List Pending Deployment Servers on Network with Disks</i>	101
6.11.	<i>List ACL Rules</i>	103

6.12.	<i>Create ACL Rule</i>	105
6.13.	<i>List NAT Rules</i>	107
6.14.	<i>Create NAT rule</i>	108
6.15.	<i>Delete NAT rule</i>	109
6.16.	<i>Get Network Configuration</i>	110
6.17.	<i>Get Network Configuration with Location</i>	112
6.18.	<i>Reserve Public IP Block with Size</i>	114
6.19.	<i>Release Public IP Block</i>	115
6.20.	<i>Set Server to VIP connectivity for Public IP Block</i>	116
6.21.	<i>Multicast</i>	117
7.	VIP / Load-Balancing API.....	118
7.1.	<i>List Real Servers</i>	118
7.2.	<i>Create Real Server</i>	119
7.3.	<i>Delete Real Server</i>	120
7.4.	<i>Modify Real Server</i>	121
7.5.	<i>List Probes</i>	122
7.6.	<i>Create Probe</i>	123
7.7.	<i>Modify Probe</i>	125
7.8.	<i>Delete Probe</i>	126
7.9.	<i>List Server Farms</i>	127
7.10.	<i>Get Server Farm Details</i>	128
7.11.	<i>Create Server Farm</i>	129
7.12.	<i>Delete Server Farm</i>	130
7.13.	<i>Add Real Server to Server Farm</i>	131
7.14.	<i>Remove Real Server from Server Farm</i>	132
7.15.	<i>Add Probe to Server Farm</i>	133
7.16.	<i>Remove Probe from Server Farm</i>	134
7.17.	<i>Modify Server Farm Predictor</i>	135
7.18.	<i>List Persistence Profiles</i>	136
7.19.	<i>Create Persistence Profile</i>	137
7.20.	<i>Delete Persistence Profile</i>	139
7.21.	<i>List VIPs</i>	140
7.22.	<i>Create VIP</i>	141
7.23.	<i>Delete VIP</i>	143
7.24.	<i>Modify VIP</i>	144
8.	Files Account API.....	145
8.1.	<i>Create Files Account</i>	145
8.2.	<i>List Files Accounts</i>	146
8.3.	<i>Delete Files Account</i>	147
8.4.	<i>Modify Files Account</i>	148

9. Reports API	149
9.1. Summary Usage Report	149
9.2. Detailed Usage Report	150
9.3. Software Units Report	152
9.4. Audit Log Report	153
10. Deprecated Functions	154
10.1. List Data Centers with Limits	154
10.2. List Multi-Geography Data Centers	155
10.3. Get Server Details	156
10.4. List Deployed Servers	157
10.5. List Pending Deployment Servers	159
10.6. Reserve Public IP Block	161
10.7. List Deployed Servers on Network with Software Labels	162
10.8. List Pending Deployment Servers on Network	164
10.9. List Deployed Customer Images in Location	166
10.10. List OS Server Images in Location	168
10.11. List Deployed Servers on Network with Status	169
10.12. Restart Server	171
10.13. List Deployed Servers on Network	172
10.14. List Data Centers	174
10.15. List Web/DB Server Images	175
10.16. List Customer Server Images	176
10.17. List Partner Server Images	177
10.18. List Servers	178
10.19. Stop Server	179
10.20. List Servers on Network	180
11. Older Documentation Revisions	181
11.1. Changes Introduced in Version 3.55	181
11.2. Changes Introduced in Version 3.54	181
11.3. Changes Introduced in Version 3.53	181
11.4. Changes Introduced in Version 3.52	181
11.5. Changes Introduced in Version 3.51	181
11.6. Changes Introduced in Version 3.50	181
11.7. Changes Introduced in Version 3.49	182
11.8. Changes Introduced in Version 3.48	182
11.9. Changes Introduced in Version 3.47	182
11.10. Changes Introduced in Version 3.46	182
11.11. Changes Introduced in Version 3.45	182
11.12. Changes Introduced in Version 3.44	182
11.13. Changes Introduced in Version 3.43	182

11.14.	<i>Changes Introduced in Version 3.42</i>	182
11.15.	<i>Changes Introduced in Version 3.41</i>	183
11.16.	<i>Changes Introduced in Version 3.40</i>	183
11.17.	<i>Changes Introduced in Version 3.31</i>	183
11.18.	<i>Changes Introduced in Version 3.30</i>	183
11.19.	<i>Changes Introduced in Version 3.25</i>	184
11.20.	<i>Changes Introduced in Version 3.24</i>	184
11.21.	<i>Changes Introduced in Version 3.23</i>	184
11.22.	<i>Changes Introduced in Version 3.22</i>	184
11.23.	<i>Changes Introduced in Version 3.21</i>	184
11.24.	<i>Changes Introduced in Version 3.20</i>	184
11.25.	<i>Changes Introduced in Version 3.12</i>	185
11.26.	<i>Changes Introduced in Version 3.11</i>	185
11.27.	<i>Changes Introduced in Version 3.10</i>	185
11.28.	<i>Changes Introduced in Version 3.01</i>	185
11.29.	<i>Changes Introduced in Version 3.00</i>	185
11.30.	<i>Changes Introduced in Version 2.90</i>	185
11.31.	<i>Changes Introduced in Version 2.80</i>	185
11.32.	<i>Changes Introduced in Version 2.70</i>	186
11.33.	<i>Changes Introduced in Version 2.62</i>	186
11.34.	<i>Changes Introduced in Version 2.61</i>	186
11.35.	<i>Changes Introduced in Version 2.60</i>	186
11.36.	<i>Changes Introduced in Version 2.52</i>	186
11.37.	<i>Changes Introduced in Version 2.51</i>	186
11.38.	<i>Changes Introduced in Version 2.50</i>	187
11.39.	<i>Changes Introduced in Version 2.26</i>	187
11.40.	<i>Changes Introduced in Version 2.25</i>	187

0. Recent Documentation Revisions

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

0.1. Changes Introduced in Version 3.71 (this document)

Introduces the following changes:

- Updates *Add Storage to Server* description to note the size of allowed local disk now varies by Geographic Region

0.2. 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*.

0.3. 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.

0.4. 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*.

0.5. 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*.

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 API interface along with enough detail to begin to develop application integration code against it.

Six groups of REST operations are provided at present: Account Information, Server Images, Servers, 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.

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.

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 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.

Cloud API URLs vary depending on your Cloud implementation and which geographic region you wish to work with. Note that not all Cloud implementations operate in all geographic regions.

OpSource Cloud	
North America (US)	api.opsourcecloud.net
Europe (EU)	euapi.opsourcecloud.net
Australia (AU)	auapi.opsourcecloud.net
Africa (AF)	afapi.opsourcecloud.net

Dimension Data Public CaaS	
North America (US)	api-na.dimensiondata.com
Europe (EU)	api-eu.dimensiondata.com
Australia (AU)	api-au.dimensiondata.com
Africa (AF)	api-mea.dimensiondata.com

BlueFire Cloud Servers	
North America (US)	usapi.bluefirecloud.com.au
Europe (EU)	euapi.bluefirecloud.com.au
Australia (AU)	auapi.bluefirecloud.com.au
Africa (AF)	afapi.bluefirecloud.com.au

NTTA Cloud	
------------	--

North America (US)	cloudapi.nttamerica.com
Europe (EU)	eucloudapi.nttamerica.com
Australia (AU)	aucloudapi.nttamerica.com
Africa (AF)	sacloudapi.nttamerica.com

NTTE Cloud	
North America (US)	ntteapi.opsourcecloud.net
Europe (EU)	euapi.opsourcecloud.net
Australia (AU)	auapi.opsourcecloud.net
Africa (AF)	afapi.opsourcecloud.net

IS Public Cloud	
North America (US)	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

The following Cloud implementations are active only in the North America geographic regions:

Vendor	North America (US)
Concentric Cloud Solutions	api.concentric.com
RootAccess Cloud	api.rootaccesscloud.com
Tenzing Everest Cloud	api.cloud.tenzing.com
PWW Cloud Connect	api.pwwcloudconnect.net
Alvea IAAS	iaasapi.alvea-services.com
OPTIMO Cloud Solutions	api.optimo-cloud.com

Substitute the appropriate URL into each documented REST API URL pattern as required. For example, if you are using the OpSource Cloud implementation and want to use the MyAccount API, the substitution would be as follows:

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

becomes:

`https://api.opsourcecloud.net/oec/0.9/myaccount`

1.2. 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.

1.2.1. 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 that doesn't not have the requisite roles will result in an HTTP 403 response as documented in the Common API Responses section below.

1.2.2. 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.opsources.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.

1.2.3. 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 <code><Status .. ></code> 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 in is 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.

		<ul style="list-style-type: none"> 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.

1.3. 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.

1.4. 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`.

1.5. Multi-Location Data Centers

Version 2.60 of the API documentation introduces support for deployments across multiple data centers in the same geographic region. When a Cloud Network is deployed, it is deployed to a specific data center. Virtual Servers, OS Images, and Customer Images are all data center-specific. All virtual servers deployed on a Cloud Network will 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 can never be moved between data centers. Currently, there is no direct functionality to move Cloud Servers or Images between data centers in the same geographic region. However, you can indirectly accomplish this by using the Export function to export a Customer Image from a specific data

center into OVF Format, and then use the Import function to import it into another data center. However, these functions must be done through the Administrative UI.

Each customer is assigned a “default” data center location, which can be identified programmatically using the **List Data Centers (With Parameters)** function or through the Administrative UI by identifying the data center first displayed when clicking on the “Clouds” tab. When calling API functions that are not location aware, the function will be assigned to the default data center location. The corresponding functions are:

Not Location Aware (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

1.6. Multi-Geographic Data Centers

Version 3.12 of this document introduces Multi-Geographic data centers. Multi-Geographic data centers leverage the same API structure but use a different URL to control Cloud Networks and Cloud Servers in that data center. The same authentication details are used as those of the home API for the account. I.e. each user name and password will function for each Geographuc API URL assuming that region has been enabled. However, note that functions related to Cloud Files are not available in all Geographic regions as Cloud Files is not available in all regions.

This enhancement means that some Cloud implementations will have more than one API URL listed in the table in section 1.1. There will be one API URL per geographic region, each is labeled with the region it relates to, e.g. “Europe”. Note that a Multi-Geographic API is only available if the relevant service 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.

1.7. 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), *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.

1.7.1. 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". 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.DESCENDING <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

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>	EQUALS: &location=NA1 <i>Means return only Servers in datacenter “NA1”</i> IN: &location=NA1&location=NA2 <i>A multivalued example including a comparator, meaning in location “NA1” or in location “NA2”.</i>

1.7.2. 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.
403 (Forbidden)	REASON_320	A filter was specified with an invalid value.

1.7.3. Sample request URLs

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

URL	Description
<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState</code>	Default API call with no parameters. Lists the first 250 servers belonging to the specified {org-id}, ordered by date of deployment ("created") ascending.
<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?pageSize=100&pageNumber=2</code>	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).
<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?pageNumber=2&orderBy=location.DECENDING,name</code>	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).
<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?orderBy=name&deployed=false&location=NA1</code>	Lists the first 250 servers that are pending deployment, belonging to the specified {org-id}, in location NA1, ordered by name ascending (default).
<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?deployed=true&networkId=c01cfe97-00c7-11e2-b29c-001517c4643e</code>	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. 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. Get My Account Details

2.1.1. Description

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

2.1.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/myaccount</code>
Request Type	HTTP GET

2.1.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns3:Account xmlns:ns3="http://oec.api.opssource.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>
```

2.1.4. Fault Codes

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

2.2. Add Sub-Administrator Account

2.2.1. 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`
 - `create image`
 - `storage`
 - `reports`

OR

 - `read only`

Note: the value of the `<orgId>` element must match the {org-id} on the request URL or a REASON_320 error will be returned.

2.2.2. 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.opsource.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, min 8 chars, max 75 characters -->
  <password>321321321</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 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>

```

2.2.3. 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>

```

2.2.4. 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.

2.3. Update Administrator Account

2.3.1. 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.

2.3.2. Request Details

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

Parameter Request Data (include only fields being changed with "&" separating each parameter)	
<code>password</code>	Optional. Min 8 length characters. Max length 75 characters.
<code>emailAddress</code>	Optional. Max length 75 characters.
<code>fullName</code>	Optional. Max length 75 characters.
<code>firstName</code>	Optional. Max length 75 characters.
<code>lastName</code>	Optional. Max length 75 characters.
<code>department</code>	Optional. Max length 75 characters.
<code>customDefined1</code>	Optional. Max length 255 characters.
<code>customDefined2</code>	Optional. Max length 255 characters.
<code>role</code>	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.

2.3.3. 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>
--

2.3.4. 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).

2.4. Delete Sub-Administrator Account

2.4.1. 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. Please see the community for details on how to update a Sub-Administrator to be the Primary Administrator:

<https://community.opsourcecloud.net/View.jsp?proclid=20438e95d91752518a75b7ac81b390ab>

2.4.2. 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

2.4.3. 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>
```

2.4.4. 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.

2.5. List Accounts

2.5.1. 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.

2.5.2. 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

2.5.3. 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>
```

2.5.4. 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).

2.6. List Data Centers (With Parameters)

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**.

2.6.1. 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 documentation at:

<https://community.opsourcecloud.net/View.jsp?proclid=97314c7b7a6830019a28713ffbd82e>

2.6.2. 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

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

2.6.3. Response Details

```
<?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>
    <city>Ashburn</city>
    <state>Virginia</state>
    <country>US</country>
    <vpnUrl>https://vpnnal.opsourcecloud.net/na1</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>

```

2.6.4. 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).

2.7. List Multi-Geography Data Centers With Key

2.7.1. Description

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

A *<geo>* element is returned for each available Multi-Geography Data Center.

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 Data Centers function by the addition of the *<geoKey>* element.

2.7.2. 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

2.7.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Geos xmlns=http://oec.api.opsource.net/schemas/multigeo ... >
  <geo>
    <id>1k76kf30-2cb3-1791-5476-231567-09gt87</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-dae8-4ee8-835a-a1034fb0de</productKey>
    <pricingUrl>http://www.opsource.net/pricing</pricingUrl>
    <state>ENABLED</state>
  </geo>
</Geos>
```

2.7.4. 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}.

2.8. List Software Labels

2.8.1. 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 documentation at:

<https://community.opsourcecloud.net/View.jsp?proclId=ef8001607cfb4c4e7669e5f34754f938>

2.8.2. Request Details

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

2.8.3. 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>
```

2.8.4. Fault Codes

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

3. Server Image API

The Server Image API functions provide a set of operations for interacting with server images – including APIs for retrieving default Operating System server images and APIs for retrieving or deleting customer-specific images created via the cloning process.

3.1. List OS Server Images

3.1.1. Description

Used for retrieving the default set of OS Server Images from which servers may be deployed.

3.1.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/base/image</code>
Request Type	HTTP GET

3.1.3. 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>
```

3.1.4. 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.

3.2. List OS Server Images with Software Labels in Location

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.

3.2.1. 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

3.2.2. 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>MSSQL2008</softwareLabel>
  </DeployedImageWithSoftwareLabels>
  <DeployedImageWithSoftwareLabels>
    :
  </DeployedImageWithSoftwareLabels>
  <DeployedImageWithSoftwareLabels>
    :
  </DeployedImageWithSoftwareLabels>
</DeployedImagesWithSoftwareLabels>
```

3.2.3. 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 Limits).

3.3. List Deployed Customer Images

3.3.1. Description

This function provides a list of all currently deployed Customer Images. It replaces the deprecated **List Customer Server Images** function and includes two changes from that previous function:

- Replaces the **<ResourcePath>** and **<sourceResourcePath>** elements of the existing call with the **<Id>** and **<sourceServerId>** elements
- Adds an optional **<status>** section that is populated if there is an ongoing operation affecting the image, such as the image is being exported or deleted. Images in such a state cannot have other actions performed against the image until the action is complete. The **<action>** element identifies what is taking place, including the **<requestTime>** and what **<username>** requested it. The optional **<step>** information will eventually provide progress information for exporting a Customer Image, although that data is not currently being populated,
- The **<failureReason>** element is populated if a previous action taken against the image (such as delete image) failed and left the image in an unrecoverable state. This state would indicate that the image is locked from further changes - you will need to contact Support to address the problem.

3.3.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed">https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed
Request Type	HTTP GET

3.3.3. 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>
```

3.3.4. Fault Codes

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

3.4. List Deployed Customer Images with Software Labels in Location

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.

3.4.1. 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

3.4.2. 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>MSSQL2008</softwareLabel>
  </DeployedImageWithSoftwareLabels>
</DeployedImagesWithSoftwareLabels>
```

3.4.3. 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 Limits).

3.5. List Pending Deployment Customer Images

3.5.1. 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.

3.5.2. 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

3.5.3. 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>
    </status>
  </PendingDeployImage>
</PendingDeployImages>
```

```
and left the image in a locked state) -->
    <failureReason>text - e.g. Insufficient space on
datastore.</failureReason>
    </status>
  </PendingDeployImage>
</PendingDeployImages>
```

3.5.4. Fault Codes

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

3.6. List Pending Deployment Customer Images in Location

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.

3.6.1. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/pendingDeploy/{location-id}</code>
Request Type	HTTP GET

3.6.2. 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>
```

3.6.3. 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 Limits).

3.7. Does Image Name Exist?

3.7.1. 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.

3.7.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/nameExists</code>
Request Type	HTTP POST

Parameter Request Data

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

3.7.3. 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.opsources.net/schemas/general">true</Exists>
```

3.7.4. Fault Codes

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

3.8. Get Server Image

3.8.1. 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 is 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.

3.8.2. 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

3.8.3. 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>l</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"/>
  </source>
</ServerImageWithState>
```

```

    <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>

```

3.8.4. 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}.

3.9. Delete Customer Server Image

3.9.1. 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.

3.9.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}?delete</code>
Request Type	HTTP GET

3.9.3. 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>
```

3.9.4. 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.

3.10. Modify Customer Server Image

3.10.1. 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.

3.10.2. 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

Parameter Request Data (include only fields being changed with & separating each parameter)	
description=	Description of the image (max. 255 char)

3.10.3. Response Details

<pre><?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></pre>
--

3.10.4. 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.

3.11. Clean Failed Customer Image

3.11.1. 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.

3.11.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/image/{image-id}?clean</code>
Request Type	HTTP GET

3.11.3. 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>
```

3.11.4. 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.

4. 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 <community link to FTPS folder article>, for details on how to access your staging folder for OVF Packages.

4.1. List OVF Packages

4.1.1. 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 and how to access the FTPS account for your organization, please see the Community at:

<https://community.opsourcecloud.net/View.jsp?proclid=2f3d8cf2337ce520f376a3c4889e2bdd>

4.1.2. 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

4.1.3. 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>
```

4.1.4. 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 has insufficient trust level.
-------------	------------	--

4.2. Import Customer Image

4.2.1. 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.

4.2.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/imageImport</code>
Request Type	HTTP POST

Request

```
<NewImageImport xmlns="http://oec.api.opssource.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.

4.2.3. 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>

```

4.2.4. 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 community for details of OVF requirements: <https://community.opsourcecloud.net/View.jsp?proclId=afd079cdeda379c8e2dfb1d392d67d01>
- 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_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 has insufficient trust level.
400 (Error)	REASON_770	Supplied data center ({location}) is invalid or is not enabled for {org-id}.

4.3. List Customer Image Imports in Progress

4.3.1. Description

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

4.3.2. 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

4.3.3. 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"/>
    </source>
  </serverImageWithState>
</ServerImagesWithState>
```

```

        <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>

```

4.3.4. Fault Codes

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

4.4. Export Customer Image

4.4.1. 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.

4.4.2. 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

Request

```
<NewImageExport xmlns="http://oec.api.opssource.net/schemas/server">
  <!-- string, image id -->
  <imageId>a28cab07-1234-4024-b894-2a1cea39bd61</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.

4.4.3. 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>

```

4.4.4. 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_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 has insufficient trust level.

4.5. List Customer Image Exports in Progress

4.5.1. Description

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

4.5.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/imageExport</code>
Request Type	HTTP GET

4.5.3. 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>
```

4.5.4. Fault Codes

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

4.6. List Customer Image Export History

4.6.1. Description

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

4.6.2. Request Details

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

Parameter Request Data

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

4.6.3. 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"/>
    <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>
```

4.6.4. Fault Codes

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

4.7. Copy Customer Image to Data Center

4.7.1. 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.

4.7.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage">https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage
Request Type	HTTP POST

Request
<pre><NewImageCopy xmlns="http://oec.api.opsources.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></pre>

sourceImageId	Required; UUID of the Customer Image to be copied.
targetImageName	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.
targetImageDescription	Optional; 1-255 characters, for descriptive information.
targetLocation	Required; the ID of the data center where the new image will be created.
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.

4.7.3. Response Details (descriptive – includes all optional)

<pre><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.opsources.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></pre>

```

<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>
  </status>

```

```

        <!-- optional string, only present if operation has failed -->
        <failureReason>Operation timed out.</failureReason>
    </status>
</targetImage>
</ImageCopy>

```

4.7.4. 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 {sourceImageId}.
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 {sourceImageId} 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	{sourceImageId} has another operation in progress and cannot be copied until that operation is complete.
400 (Error)	REASON_750	Organization has insufficient trust level.
400 (Error)	REASON_770	{targetLocation} is invalid, is unavailable to {org-id} or is the location where {sourceImageId} resides.
400 (Error)	REASON_820	VMware tools not installed on the {sourceImageId}.
400 (Error)	REASON_821	VMware tools was not running when the {sourceImageId} was started.
400 (Error)	REASON_822	The version of VMware Tools installed on {sourceImageId} is not supported.

4.8. List Customer Image Copying in Progress

4.8.1. Description

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

4.8.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage">https://<Cloud API URL>/oec/0.9/{org-id}/copyCustomerImage
Request Type	HTTP GET

4.8.3. 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>

```

4.8.4. Fault Codes

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

4.9. Copy OVF Package from Remote Geo

4.9.1. 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.

4.9.2. 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

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 Data Centers</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. <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>

4.9.3. 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 Data
Centers function -->
  <additionalInformation name="remoteOvfPackageCopy.sourceGeoKey">
    <value>europe</value>
  </additionalInformation>
</Status>
```

4.9.4. 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.

4.10. List Remote OVF Package Copying in Progress

4.10.1. 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**.

4.10.2. 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>
Request Type	HTTP GET

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

4.10.3. 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>myRedHat564OvfPackage.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>
```

4.10.4. Fault Codes

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

4.11. List Remote OVF Package Copy History

4.11.1. 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**.

4.11.2. 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>
Request Type	HTTP GET

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

4.11.3. 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.opsources.net/schemas/server" ... > <copyRemoteOvfPackageRecord sourceGeoKey="europe" id="9ce9df00-aa65-4aea- b378-afd6ecef17f"> <mfile sizeBytes="159" name="myRedHat564OVFPackage-2011-04-22-09-40.mf"/> <ovfFile sizeBytes="6292" name="myRedHat564OVFPackage-2011-04-22-09- 40.ovf"/> <!-- 1 to many repetitions --> <vmDiskFile 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></pre>
--

```

    <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>

```

4.11.4. 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 has insufficient trust level.

5. Server API

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

5.1. List Servers (With Parameters)

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**.

5.1.1. 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.

5.1.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/serverWithState?</code> <code>Paging/Ordering Optional Parameters:</code> <code>&pageSize=</code> <code>&pageNumber=</code> <code>&orderBy=</code> <code>Filter Optional Parameters:</code> <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

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	Yes
sourceImageId	uuid (String)	Identifies a server image used to create servers.	Yes	Yes
deployed	boolean	Identifies whether or not servers have	Yes	Yes

		completed the deployment process.		
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

5.1.3. 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-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>
  </serverWithState>

```

```

<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>

```

5.1.4. 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.

5.2. Clean Failed Server Deployment

5.2.1. 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.

5.2.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?clean">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?clean
Request Type	HTTP GET

5.2.3. 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>
```

5.2.4. 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 for ID for {org-id}
400 (Error)	REASON_392	Operation in progress on Server with Id <SERVER_ID>

5.3. Deploy Server

5.3.1. 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.

5.3.2. Request Details

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

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/{net-id}</vlanResourcePath>
  <imageResourcePath>/oec/base/image/{image-id}</imageResourcePath>
  <administratorPassword>zyxw4321</administratorPassword>
  <isStarted>true</isStarted>
</Server>
```

5.3.3. 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>
```

5.3.4. 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.
400 (Error)	REASON_751	Daily Deployment Limit Exceeded.

5.4. Delete Server

5.4.1. Description

Powers off and completely removes an existing deployed server. Requires your organization ID and the ID of the target server.

5.4.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?delete</code>
Request Type	HTTP GET

5.4.3. 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>
```

5.4.4. 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 for ID for {org-id}.
400 (Error)	REASON_692	Server {server-id} is associated with a Sever Anti-Affinity Rule and cannot be deleted unless the rule is removed.

5.5. Modify Server

5.5.1. 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.

Please see the Community for the possible CPU and RAM values at each data center:

<https://community.opssourcecloud.net/View.jsp?proclD=909df8497a17a1d580e6e58e2037ad01>

5.5.2. Request Details

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

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. 1028,. 2048, 3064, 4096, etc.)

5.5.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opssource.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>
```

5.5.4. 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_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 with Id <SERVER_ID>
400 (Error)	REASON_395	Could not find server for ID for {org-id}

5.6. Start Server

5.6.1. Description

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

5.6.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?start</code>
Request Type	HTTP GET

5.6.3. 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>
```

5.6.4. 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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.

5.7. Shutdown Server (Graceful Stop)

5.7.1. 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.

5.7.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?shutdown</code>
Request Type	HTTP GET

5.7.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsources.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>
```

5.7.4. 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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.
400 (Error)	REASON_800	Operation is not permitted - VMware Tools are not running on the Server.

5.8. Power Off Server

5.8.1. 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.

5.8.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?poweroff</code>
Request Type	HTTP GET

5.8.3. 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>
```

5.8.4. 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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.

5.9. Reboot Server

5.9.1. 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.

5.9.2. 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

5.9.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opssource.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>
```

5.9.4. 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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.
400 (Error)	REASON_800	VMware Tools are not running on the Server.

5.10. Reset Server

5.10.1.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.

5.10.2.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?reset</code>
Request Type	HTTP GET

5.10.3.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>
```

5.10.4.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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.

5.11. Update VMware Tools

5.11.1.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.

5.11.2.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?updateVMwareTools</code>
Request Type	HTTP GET

5.11.3.Response Details

<pre><?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></pre>
--

5.11.4.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 with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for 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.

5.12. Add Storage to Server

5.12.1. 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.

NOTE: 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 in this article:

<https://community.opsourcecloud.net/View.jsp?proclid=97314c7b7a6830019a28713ffbd8e82e>

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.

5.12.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?addLocalStorage&amount=10</code>
Request Type	HTTP GET

5.12.3. 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>
```

5.12.4. 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 xxx is not in range for Geographic Region
400 (Error)	REASON_320	You may only add a maximum of 13 additional storage drives.
400 (Error)	REASON_392	Operation in progress on Server with Id <SERVER_ID>.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.

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.

5.13. Remove Storage from Server

5.13.1. 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.

5.13.2. 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

5.13.3. 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>
```

5.13.4. 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.

5.14. Change Server Disk Speed

5.14.1. 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.

5.14.2. 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

Request Data

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

5.14.3. 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>
```

5.14.4. 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.

5.15. Clone Server to Create Customer Image

5.15.1.Description

Initiates a clone of a server to create a Customer Image. Note that the Customer Image name is required to be unique across the entire Infrastructure (i.e. across all customers). There's currently no query to identify if a name is in use, so your code should be prepared to deal with REASON_391 by trying again with a different name (i.e. append a number to the end of the name and try again).

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**.

5.15.2.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

Parameter Request Data (include only fields being changed with "&" separating each parameter)	
newImageName=	Name of the image. Max. 75 char, must be unique, permitted characters are (within and excluding the quotes): "a-zA-Z0-9_+=# .,:;()-". Note that the "space" character is permitted.
newImageDescription=	Description of the image. Max. 255 char.

5.15.3.Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns9:Status xmlns:ns2="http://oec.api.opsources.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>
```

5.15.4.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 – image name and description must be less than 256 characters in length.
400 (Error)	REASON_379	An operation is in progress on a disk attached to {server-id}.
400 (Error)	REASON_391	Image Name is Already in Use.
400 (Error)	REASON_392	Operation in progress on Server with Id {server-id}.
400 (Error)	REASON_395	Could not find server for ID for {org-id}.
400 (Error)	REASON_800	VMWare Tools are not installed on the source Server.

5.16. Create Server Anti-Affinity Rule

5.16.1. Description

Creates a new Server Anti-Affinity Rule between **two** servers on the same Cloud network. 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 the behavior.

Note: the network 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 network.

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

Request Data

```
<NewAntiAffinityRule xmlns="http://oec.api.opsource.net/schemas/server">
  <serverId>40285f24-300f-11e2-b574-1a6dd6e90d84</serverId>
  <serverId>45912c48-90fe-j4fu-14ds-43kjh5675sfg</serverId>
</NewAntiAffinityRule>
```

5.16.2. 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>
```

5.16.3. 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) function.
400 (Error)	REASON_395	One of both of the supplied servers does not belong to {org-id}.
400 (Error)	REASON_691	Servers must be on the same network.
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.

5.17. List Server Anti-Affinity Rules

5.17.1. Description

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**.

5.17.2. Request Details

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

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

5.17.3. 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>

```

5.17.4. 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}.

5.18. Delete Server Anti-Affinity Rule

5.18.1. Description

Completely removes the server anti-affinity rule identified by {rule-id} from the system for the organization; {org-id}.

5.18.2. Request Details

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

5.18.3. 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>
```

5.18.4. Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_40	The rule is in an 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}.

6. Network API

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

6.1. List Networks

6.1.1. 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. This API requires your organization ID. Please see the related APIs “List Networks with Location” and “List Networks in Location”.

6.1.2. 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

6.1.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:Networks xmlns:ns2="http://oec.api.opsource.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>
```

6.1.4. Fault Codes

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

6.2. 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.

6.2.1. Request Details

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

6.2.2. 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>
```

6.2.3. 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).

6.3. List Networks in Location

Lists the Networks deployed in a given data center location.

6.3.1. Request Details

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

6.3.2. 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:network>
    :
  </ns4:network>
</ns4:NetworkWithLocations>
```

6.3.3. 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)).

6.4. Get Network Details

6.4.1. 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.

6.4.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}">https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}
Request Type	HTTP GET

6.4.3. 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>
```

6.4.4. 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}.

6.5. Create Network

6.5.1. Description

Deploys a new network to your default data center location (see the List Data Centers (With Parameters)). 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.

6.5.2. Request Details

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

Request Data

```
<Network xmlns='http://oec.api.opsource.net/schemas/network'>
  <name>network w</name>
  <description>network w description</description>
</Network>
```

6.5.3. 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>
```

6.5.4. Fault Codes

HTTP Code	Reason Code	Description
400 (Error)	REASON_10	Failure at Network – internal error occurred.Try again.
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.

6.6. 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.

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.

6.6.1. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation">https://<Cloud API URL>/oec/0.9/{org-id}/networkWithLocation
Request Type	HTTP POST

6.6.2. 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>
```

6.6.3. 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>
```

6.6.4. 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_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 operation</i> is already in progress for the organization
400 (Error)	REASON_770	Invalid location (see List Data Centers (With Parameters))

6.7. Delete Network

6.7.1. 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. 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.

6.7.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}?delete">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}?delete
Request Type	HTTP GET

6.7.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsources.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>
```

6.7.4. 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.

6.8. Modify Network

6.8.1. Description

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

6.8.2. Request Details

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

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)

6.8.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsources.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>
```

6.8.4. 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}.

6.9. List Deployed Servers on Network with Disks

6.9.1. Description

This function provides a list of all currently deployed Customer Servers located on a specific network.

It deprecates the previous **List Deployed Servers on Network with Software Labels** function by including detailed information on any additional storage that has been added to the server using the *Add Storage to Server* function.

Storage information is provided as a set of <additionalDisk> elements:

- Each <additionalDisk> element has four child elements; a unique <id>, a <scsilid> element reflecting the position of the disk on the SCSI bus, <diskSizeGb> giving the gigabyte size of the volume and <state>.
- <state> will be NORMAL during the operational life of the disk but will have other values when the disk is in a transitional state like being added to or removed from the server.

Priced Software information is provided as an optional set of <softwareLabel> elements:

- Each <softwareLabel> element contains a single, string key uniquely identifying an item on the **List Software Labels** function.
- Only servers deployed from an OS Image or Customer Image with Priced Software installed will have any <softwareLabel> elements present.

Each virtual server returned by this function can include additional information regarding the status of VMware Tools. VMware Tools status information is provided as an optional set of <machineStatus> elements.

- Each <machineStatus> element has a name attribute defining the status item. For example: name="vmwareToolsRunningStatus".
- Each <machineStatus> element contains a single <value> child element, itself containing a text value defining the status for the provided name attribute. For example: <value>STARTING</value> could be returned for the "vmwareToolsRunningStatus" status item.

The following items define the initial set of machineStatus items that could be returned for a given machine:

Machine Status Item Name	Description
vmwareToolsVersionStatus	Indicates if VMware tools is installed. If installed this property indicates whether or not the version is up-to-date.
vmwareToolsRunningStatus	Indicates if VMware tools are running, started, stopped or that the running status is unknown.
vmwareToolsApiVersion	The API version of VMware Tools. e.g. 8195. Note this machine status item can be returned with a value of "0". A "0" is explicitly returned by VMware meaning that the VMware Tools API version on the target server could not be determined by VMware. The API version can also be returned directly as "Unknown" if VMware returned no value for this status item. Both scenarios can be interpreted as VMware being unable to determine the exact VMware Tools API version.

Note it is not possible to execute the **Clone Server to Create Customer Image**, **Shutdown Server (Graceful Stop)** or **Reboot Server** functions if it is detected that VMware Tools is not installed on the target server. VMware Tools must be installed.

6.9.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithDisks">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithDisks
Request Type	HTTP GET

6.9.3. 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>
<!--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>
```

6.9.4. 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}.

6.10. List Pending Deployment Servers on Network with Disks

6.10.1. Description

This function identifies servers that are in the process of deployment (i.e. in the process of being cloned from an image) on a particular network and status of each server deployment in progress. The response is similar to the **List Pending Deployment Servers** function but also includes detailed information on the any additional storage attached to the server.

- The mandatory **<status>** section identifies the progress being made on the deployment. The **<action>** element will always identify a pending deployment, 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, guest o/s customization). The **<step>** and **<number of Steps>** elements identify which step the action is in and how many steps need to be performed. **<percentComplete>** identifies how far along the step is, when available. Since these updates will not be in real-time, a **<updateTime>** field identifies the time of the last update.
- The **<failureReason>** element is populated only if the server deployment failed and left the resulting server in an unrecoverable state. The **Clean Failed Server Deployment** API can be used to remove such failed deployments.

Priced Software information is provided as an optional set of **<softwareLabel>** elements:

- Each **<softwareLabel>** element contains a single, string key uniquely identifying an item on the **List Software Labels** function.
- Only servers deployed from an OS Image or Customer Image with Priced Software installed will have any **<softwareLabel>** elements present.

Storage information is provided as a set of **<additionalDisk>** elements:

- Each **<additionalDisk>** element has four child elements; a unique **<id>**, a **<scsild>** element reflecting the position of the disk on the SCSI bus, **<diskSizeGb>** giving the gigabyte size of the volume and **<state>**.
- **<state>** will be NORMAL during the operational life of the disk but will have other values when the disk is in a transitional state like being added to or removed from the server.

6.10.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/pendingDeployWithDisks">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/pendingDeployWithDisks
Request Type	HTTP GET

6.10.3. 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>

```

6.10.4. 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}.

6.11. List ACL Rules

6.11.1. Description

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

6.11.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/aclrule">https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/aclrule
Request Type	HTTP GET

6.11.3. 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_TO</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_TO</ns4:type>
    <ns4:port1>443</ns4:port1>
  </ns4:portRange>
  <ns4:type>OUTSIDE_ACL</ns4:type>
</ns4:AclRule>
</ns4:AclRuleList>
```

6.11.4. Fault Codes

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

6.11.5.Delete ACL Rule

6.11.6.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.

6.11.7.Request Details

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

6.11.8.Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns6:Status xmlns:ns2="http://oec.api.opsources.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>
```

6.11.9.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 ACL Rule {acl-id} or Network {network-id}.
400 (Error)	REASON_750	Organization has insufficient trust level.

6.12. Create ACL Rule

6.12.1. 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 documentation on ACL rules:

<https://community.opsourcecloud.net/View.jsp?procId=8c60a5e435a52f29ecc4944f93e7681d>

6.12.2. Request Details

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

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
<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <AclRule xmlns="http://oec.api.opsource.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></pre>

6.12.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns4:AclRule xmlns:ns2="http://oec.api.opsource.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>
```

6.12.4. 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 has insufficient trust level.

6.13. List NAT Rules

6.13.1. Description

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

6.13.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/natrule">https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/natrule
Request Type	HTTP GET

6.13.3. 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>
```

6.13.4. Fault Codes

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

6.14. Create NAT rule

6.14.1. 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.

6.14.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/natrule">https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/natrule
Request Type	HTTP POST

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>
```

6.14.3. 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>
```

6.14.4. 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}.

6.15. Delete NAT rule

6.15.1. 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.

6.15.2. 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

6.15.3. 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>
```

6.15.4. 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}.

6.16. Get Network Configuration

6.16.1.Description

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

6.16.2.Request Details

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

6.16.3.

6.16.4.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>
```

6.16.5.Fault Codes

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

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

6.17. 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.

6.17.1.Request Details

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

6.17.2.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>
```

6.17.3.Fault Codes

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

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

6.18. Reserve Public IP Block with Size

6.18.1. 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.

6.18.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip?reserveNewWithSize">https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/publicip?reserveNewWithSize
Request Type	HTTP GET

6.18.3. 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>
```

6.18.4. 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}.

6.19. Release Public IP Block

6.19.1. 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.

6.19.2. 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

6.19.3. Response Details

```
<?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>
```

6.19.4. 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}.

6.20. Set Server to VIP connectivity for Public IP Block

6.20.1. 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 documentation at:

<https://community.opsourcecloud.net/View.jsp?proclD=eac7ae92df01c23725fb0129a901c4c8>

6.20.2. Request Details

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

Parameter Request Data (include only the field below)

serverToVipConnectivity=	"true" or "false"
--------------------------	-------------------

6.20.3. Response Details

```
<?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>
```

6.20.4. 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}.

6.21. Multicast

6.21.1. Description

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

6.21.2. Request Details

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

Parameter Request Data

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

6.21.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opssource.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>
```

6.21.4. 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.

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 documentation on VIP:

<https://community.opsourcecloud.net/View.jsp?procId=d901d51f9af11c1fd74a95b2a7647401>

7.1. List Real Servers

7.1.1. Description

Retrieves the set of real servers on a network.

7.1.2. Request Details

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

7.1.3. 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>
```

7.1.4. Fault Codes

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

7.2. Create Real Server

7.2.1. 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.

7.2.2. Request Details

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

Request Data

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

7.2.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opssource.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>
```

7.2.4. 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.

7.3. Delete Real Server

7.3.1. Description

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

7.3.2. 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

7.3.3. 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 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>
```

7.3.4. 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

7.4. Modify Real Server

7.4.1. Description

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

7.4.2. Request Details

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

Parameter Request Data

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

7.4.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsources.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>
```

7.4.4. 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}.

7.5. List Probes

7.5.1. Description

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

7.5.2. Request Details

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

7.5.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Probes xmlns:ns2="http://oec.api.opsource.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>
```

7.5.4. Fault Codes

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

7.6. Create Probe

7.6.1. Description

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

7.6.2. Request Details

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

Request Data

```
<NewProbe xmlns="http://oec.api.opssource.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>
```

7.6.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns5:Status xmlns:ns5="http://oec.api.opssource.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>
```

7.6.4. 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.
-------------	------------	---

7.7. Modify Probe

7.7.1. 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.

7.7.2. Request Details

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

Parameter Request Data (include only fields being changed with "&" separating each parameter)	
probeIntervalSeconds=	Optional, Integer 15-65535
errorCountBeforeServerFail=	Optional, Integer 1-65535
successCountBeforeServerEnable =	Optional, Integer 1-65535
failedProbeIntervalSeconds =	Optional, Integer 15-65535
maxReplyWaitSeconds=	Optional, Integer 2-65535

7.7.3. Response Details

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

7.7.4. 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.

7.8. Delete Probe

7.8.1. 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.

7.8.2. 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

7.8.3. 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>
```

7.8.4. 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.

7.9. List Server Farms

7.9.1. Description

Lists Server Farms for a given network.

7.9.2. Request Details

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

7.9.3. 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>
```

7.9.4. Fault Codes

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

7.10. Get Server Farm Details

7.10.1. Description

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

7.10.2. 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

7.10.3. 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>
```

7.10.4. 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}.

7.11. Create Server Farm

7.11.1. Description

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

7.11.2. Request Details

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

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>
```

7.11.3. 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>
```

7.11.4. 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).

7.12. Delete Server Farm

7.12.1. Description

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

7.12.2. 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

7.12.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsources.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>
```

7.12.4. 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

7.13. Add Real Server to Server Farm

7.13.1. 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.

7.13.2. 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

Request Data

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

7.13.3. 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>
```

7.13.4. 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}.

7.14. Remove Real Server from Server Farm

7.14.1. 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.

7.14.2. 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

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>
```

7.14.3. 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>
```

7.14.4. 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}.

7.15. Add Probe to Server Farm

7.15.1. 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.

7.15.2. 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

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

7.15.3. 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 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>
```

7.15.4. 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}.

7.16. Remove Probe from Server Farm

7.16.1. 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.

7.16.2. 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

Request Data

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

7.16.3. 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>
```

7.16.4. 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}.

7.17. Modify Server Farm Predictor

7.17.1. 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.

7.17.2. 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

Request Data

```
predictor=(LEAST_CONNECTIONS | ROUND_ROBIN)
```

7.17.3. 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 Server-Farm</ns8:operation>
  <ns8:result>SUCCESS</ns8:result>
  <ns8:resultDetail>Modified Server-Farm</ns8:resultDetail>
  <ns8:resultCode>REASON_0</ns8:resultCode>
</ns8:Status>
```

7.17.4. 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}.

7.18. List Persistence Profiles

7.18.1. Description

Lists all Persistence Profiles on a network.

7.18.2. Request Details

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

7.18.3. 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>
```

7.18.4. Fault Codes

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

7.19. Create Persistence Profile

7.19.1. Description

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

7.19.2. Request Details

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

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>
```

7.19.3. 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>
```

7.19.4. 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).

7.20. Delete Persistence Profile

7.20.1. Description

Deletes a Persistence Profile on a network.

7.20.2. 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

7.20.3. 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>
```

7.20.4. 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.

7.21. List VIPs

7.21.1. Description

Lists all VIPs in a network

7.21.2. Request Details

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

7.21.3. 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>
```

7.21.4. Fault Codes

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

7.22. Create VIP

7.22.1. 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.

7.22.2. 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

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.opsource.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>
```

7.22.3. 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 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>
```

7.22.4. 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.

7.23. Delete VIP

7.23.1. Description

Deletes a specified VIP

7.23.2. 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

7.23.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns8:Status xmlns:ns2="http://oec.api.opsources.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>
```

7.23.4. 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.

7.24. Modify VIP

7.24.1. 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.

7.24.2. Request Details

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

Request Data

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

7.24.3. 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>
```

7.24.4. 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.

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**.

8.1. Create Files Account

8.1.1. 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.

8.1.2. 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

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>
```

8.1.3. 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>
```

8.1.4. 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_250	Network does not exist for {org-id}.
400 (Error)	REASON_320	Invalid Input Data.
400 (Error)	REASON_681	Cloud Files is not available.

8.2. List Files Accounts

8.2.1. Description

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

8.2.2. 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 GET

8.2.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<StorageAccounts xmlns="http://oec.api.opsources.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>
```

8.2.4. 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.

8.3. Delete Files Account

8.3.1. 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.

8.3.2. Request Details

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

8.3.3. 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>
```

8.3.4. 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.

8.4. Modify Files Account

8.4.1. 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.

8.4.2. Request Details

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

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.

8.4.3. Response Details

<pre><?xml version="1.0" encoding="UTF-8" standalone="yes"?> <ns6:Status xmlns:ns2="http://oec.api.opssource.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></pre>
--

8.4.4. 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.

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)

9.1. Summary Usage Report

9.1.1. 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.

9.1.2. Request Details

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

9.1.3. 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
01/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0
02/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0
03/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0
04/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0
05/01/2013,NA1,144,288,3360,264,0,0,72,24,0,0,0,0
06/01/2013,NA1,172,344,3958,264,0,0,72,24,0,0,0,0
07/01/2013,NA1,205,410,4783,264,0,0,72,24,0,0,0,0
08/01/2013,NA1,216,432,5136,264,0,0,72,24,0,0,0,0

9.1.4. 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.

9.2. Detailed Usage Report

9.2.1. 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 on the Cloud Community:

<https://community.opsourcecloud.net/View.jsp?proclid=b254b19238be01c40127cd81b420809c>

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.

9.2.2. 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

9.2.3. 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
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
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
Network: network_1 IP Block:
168.143.92.136(4),IpBlock,NA1,,Reserved,01/01/2013 11:47,02/01/2013
00:00,12,2,0,0,0,0,0,0,0,0,0,0,0,0,0,48.82,0,0
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
RedHat Enterprise 4 32 bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,10,0,0,0,0,240,0,0,0,0,0,0,0,0
RedHat Enterprise 4 64 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,10,0,0,0,0,240,0,0,0,0,0,0,0,0
CentOS5 32 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,10,0,0,0,0,240,0,0,0,0,0,0,0,0
CentOS5 64 Bit,Image,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,10,0,0,0,0,240,0,0,0,0,0,0,0,0
clone_00372,Image,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,10,0,0,0,0,240,0,0,0,0,0,0,0,0
sub_admin_1,Sub-Administrator,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,0,0,0,0,0,0,0,0,0,24,0,0,0,0
network_1,Network,NA1,,Running,01/01/2013 00:00,02/01/2013
00:00,24,0,0,0,0,0,0,0,0,0,0,0,24,0,0,0
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

```

9.2.4. 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.

9.3. Software Units Report

9.3.1. 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.

9.3.2. 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

9.3.3. 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, ald343dc-861f-4cc6-abdf-af69e6e72eff, 2, Linux, 10, 0, CPU, 24, 0, 480

9.3.4. 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).

9.4. Audit Log Report

9.4.1. 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.

9.4.2. 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

9.4.3. 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]',
```

9.4.4. 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

10. Deprecated Functions

These 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, so it is recommended that customers update their code to use the replacement function.

10.1. List Data Centers with Limits

Deprecated by *List Data Centers (With Parameters)*

10.1.1. 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” property. 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.

10.1.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/datacenterWithLimits">https://<Cloud API URL>/oec/0.9/{org-id}/datacenterWithLimits
Request Type	HTTP GET

10.1.3. 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://vpna1.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>
```

10.1.4. 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).

10.2. List Multi-Geography Data Centers

Deprecated by *List Multi-Geography Data Centers with Key*

10.2.1. Description

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

A *<geo>* element is returned for each available Multi-Geography Data Center.

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.

10.2.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/geo</code>
Request Type	HTTP GET

10.2.3. 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>
```

10.2.4. 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}.

10.3. Get Server Details

Deprecated by *List Servers (With Parameters)*

10.3.1. Description

Retrieves the details of a specific server. Requires your organization ID and the ID of the target server.

10.3.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}</code>
Request Type	HTTP GET

10.3.3. 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/1831c1a9-9c03/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>
```

10.3.4. 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 for ID for {org-id}.

10.4. List Deployed Servers

Deprecated by *List Servers (With Parameters)*

10.4.1. Description

This function provides a list of all currently deployed Servers. It replaces the deprecated **List Servers** function and includes two changes from that previous function:

- Replacing the **<vlanResourcePath>** and **<imageResourcePath>** elements with the **<networkId>** and **<sourceImageId>** elements
- Adding an optional **<status>** section that is populated if there is an ongoing operation (start, shutdown, reboot, clone, etc.) affecting the server. Servers in such a state cannot have other actions performed against the image until the action is complete. The **<action>** element identifies what is taking place, including the **<requestTime>** and what **<username>** requested it. The optional **<step>** information provides progress information for long-running tasks such as creating a Customer Image for the server and adding local Storage to a server. In these cases, the optional **<step>** and **<number of Steps>** elements identify which step the action is in and how many steps need to be performed. **<percentComplete>** identifies how far along the step is, when available. Since these updates will not be in real-time, a **<updateTime>** field identifies the time of the last update.
- The **<failureReason>** element is populated if a previous action taken against the server (such as add storage or delete server) failed and left the image in an unrecoverable state. This state would indicate that the server is locked from further changes - you will need to contact Support to address the problem.

10.4.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/deployed">https://<Cloud API URL>/oec/0.9/{org-id}/server/deployed
Request Type	HTTP GET

10.4.3. 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>

```

10.4.4. Fault Codes

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

10.5. List Pending Deployment Servers

Deprecated by *List Servers (With Parameters)*

10.5.1. Description

This function identifies servers that are in the process of deployment (i.e. in the process of being cloned from an image) and their status:

- The mandatory **<status>** section identifies the progress being made on the deployment. The **<action>** element will always identify a pending deployment, 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, guest o/s customization). The **<step>** and **<number of Steps>** elements identify which step the action is in and how many steps need to be performed. **<percentComplete>** identifies how far along the step is, when available. Since these updates will not be in real-time, a **<updateTime>** field identifies the time of the last update.
- The **<failureReason>** element is populated only if the server deployment failed and left the resulting server in an unrecoverable state. The **Clean Failed Server Deployment** API can be used to remove such failed deployments.

10.5.2. Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/pendingDeploy">https://<Cloud API URL>/oec/0.9/{org-id}/server/pendingDeploy
Request Type	HTTP GET

10.5.3. 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>
```

10.5.4. Fault Codes

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

10.6. Reserve Public IP Block

Deprecated by *Reserve Public IP Block with Size*

10.6.1. Description

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

10.6.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{net-id}/publicip?reserveNew</code>
Request Type	HTTP GET

10.6.3.

10.6.4. 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>
```

10.6.5. 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

10.7. List Deployed Servers on Network with Software Labels

10.7.1. Description

Deprecated by **List Deployed Servers on Network with Disks**

Deprecates the previous **List Deployed Servers on Network with Status** function by including additional information regarding any Priced Software packages installed on each server (see List Software Labels).

10.7.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithSoftwareLabels</code>
Request Type	HTTP GET

10.7.3. 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>

```

10.7.4. 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}

10.8. List Pending Deployment Servers on Network

10.8.1. Description

Deprecated by **List Pending Deployment Servers on Network with Disks**

This function identifies servers that are in the process of deployment (i.e. in the process of being cloned from an image) and their status. The response is identical to the **List Pending Deployment Servers** function and a detailed explanation is provided with that function's documentation.

10.8.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/pendingDeploy</code>
Request Type	HTTP GET

10.8.3. 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>
```

10.8.4. 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}

10.9. List Deployed Customer Images in Location

Deprecated by **List Deployed Customer Images with Software Labels in Location**.

Like *List Deployed Customer Images*, this function identifies the deployed images belonging to a customer organization. However this API limits the list of images to those deployed at a particular data center location.

10.9.1.Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed/{location-id}">https://<Cloud API URL>/oec/0.9/{org-id}/image/deployed/{location-id}
Request Type	HTTP GET

10.9.2.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>
```

10.9.3.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)

10.10. List OS Server Images in Location

Deprecated by **List OS Server Images with Software Labels in Location**.

Lists the OS Images available at a particular data center location.

10.10.1.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/base/image/{location-id}</code>
Request Type	HTTP GET

10.10.2.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>
```

10.10.3.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)

10.11. List Deployed Servers on Network with Status

10.11.1.Description

Deprecated by **List Deployed Servers on Network with Software Labels**.

Deprecates the **List Deployed Servers on Network** function by including additional, optional information regarding the status of VMware Tools on each server.

10.11.2.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployedWithStatus</code>
Request Type	HTTP GET

10.11.3.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>
```

10.11.4. 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}

10.12. Restart Server

10.12.1. Description

Deprecated by **Reset Server**.

Power cycles an existing deployed server. Requires your organization ID and the ID of the target server.

10.12.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?restart</code>
Request Type	HTTP GET

10.12.3. 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>
```

10.12.4. 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 for ID for {org-id}

10.13. List Deployed Servers on Network

10.13.1.Description

Deprecated by **List Deployed Servers on Network with Status**.

Deprecates **List Servers on Network**.

This function provides a list of all currently deployed Customer Servers located on a specific network. The response is identical to the **List Deployed Servers** function and a detailed explanation is provided with that function's documentation.

10.13.2.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/network/{network-id}/server/deployed</code>
Request Type	HTTP GET

10.13.3.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>
```

```
</DeployedServer>  
</DeployedServers>
```

10.13.4. 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}

10.14. List Data Centers

10.14.1.Description

Deprecated by the **List Data Centers with Limits** function.

This function identifies the list of data centers available to the organization of the authenticating user. 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” property. 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.

10.14.2.Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/datacenter</code>
Request Type	HTTP GET

10.14.3.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://vpnnal.opsourcecloud.net/na1</ns8:vpnUrl>
    <ns8:default>true</ns8:default>
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
  <ns8:datacenter>
    :
  </ns8:datacenter>
</ns8:Datacenters>
```

10.14.4.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

10.15. List Web/DB Server Images

10.15.1.Description

Deprecated by the **List OS Images** function, which provides all images in a single call. Note that “<Image Provider>” in the URLs below will accept any of the following values (without quotes): “opsource”, “ntta”, “ntte” and “partner”.

10.15.2.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

10.15.3.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>
```

10.15.4.Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

10.16. List Customer Server Images

10.16.1.Description

Deprecated by the **List Deployed Customer Images** function, which provides additional status information about an image.

10.16.2.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

10.16.3.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>
```

10.16.4.Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

10.17. List Partner Server Images

10.17.1.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.

10.17.2.Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/partner/image">https://<Cloud API URL>/oec/0.9/partner/image
Request Type	HTTP GET

10.17.3.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>
```

10.17.4.Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

10.18. List Servers

10.18.1. Description

Deprecated by the **List Deployed Servers** function, which provides additional status information about a server.

10.18.2. Request Details

URL	<code>https://<Cloud API URL>/oec/0.9/{org-id}/server</code>
Request Type	HTTP GET

10.18.3. Response Details

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<Servers xmlns:ns2="http://oec.api.opssource.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>
```

10.18.4. Fault Codes

HTTP Code	Reason Code	Description
200 (OK)	-	Request completed successfully
401 (Unauthorized)	-	Invalid request credentials

10.19. Stop Server

10.19.1.Description

Deprecated by the **Power Off** function, which provides the same functionality.

10.19.2.Request Details

URL	<a href="https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?stop">https://<Cloud API URL>/oec/0.9/{org-id}/server/{server-id}?stop
Request Type	HTTP GET

10.19.3.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>
```

10.19.4.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 for ID for {org-id}

10.20. List Servers on Network

10.20.1.Description

Deprecated by the **List Deployed Servers on Network** function, which provides additional status information about a server.

10.20.2.Request Details

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

10.20.3.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>
```

10.20.4.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}

11. Older Documentation Revisions

11.1. 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*.

11.2. 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*.

11.3. 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*

11.4. Changes Introduced in Version 3.52

Introduces the following changes:

- Minor corrections to a number of sample responses.

11.5. Changes Introduced in Version 3.51

Introduces the following changes:

- Adds API URLs for the IS Public Cloud product.

11.6. 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*.

11.7. 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.

11.8. Changes Introduced in Version 3.48

Introduces the following changes:

- Minor correction to *Modify Network* API description.

11.9. 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*.

11.10. Changes Introduced in Version 3.46

Introduces the following changes:

- Adds REASON_529 error code to *Summary Usage Report* and *Detailed Usage Report*.

11.11. 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.

11.12. 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*.

11.13. 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

11.14. 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*.

11.15. 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.

11.16. 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.

11.17. 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)

11.18. 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*

11.19. 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

11.20. 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.

11.21. Changes Introduced in Version 3.23

Added URL for NTTA (Europe) API.

11.22. 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.

11.23. 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*.

11.24. 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.

11.25. Changes Introduced in Version 3.12

Introduces Multi-Geographic Data Center API overview in section 1.6 and added a related API URL to section 1.1.

11.26. Changes Introduced in Version 3.11

Updates the Audit Report Log with two row reporting of long running network actions.

11.27. 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.

11.28. Changes Introduced in Version 3.01

Added table with API URL's for all current Cloud Implementations to section 1.1

11.29. 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.

11.30. 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*

11.31. Changes Introduced in Version 2.80

Introduces the first common API document for use by all partners, customers and resellers.

11.32. 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

11.33. Changes Introduced in Version 2.62

Minor correction

- Updated incorrect HTTP method for Audit Log Report from POST to GET.

11.34. Changes Introduced in Version 2.61

Minor corrections

- Updated incorrect HTTP method for Brief Usage Report and Detailed Usage Report from POST to GET.

11.35. 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.

11.36. 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

11.37. 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

11.38. 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.

11.39. 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

11.40. Changes Introduced in Version 2.25

The 2.25 version of the documentation included the following changes:

- Addition of List Servers By Network function