1. RESTful Web Services
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RESTful Web Services

CA Unified Infrastructure Management (CA UIM) has responded to rising customer demand for a Representational State Transfer (RESTful) web service interface for CA UIM. This interface offers customers the functionality to access their UIM installation using REST-based web service calls.

Note: The RESTful web services package may update outside major CA UIM releases. Check this topic to view information about new releases as they occur. If you need user documentation for a prior version of the RESTful web services, click the version number in the Update History table.

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- Update History
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Update History

This section outlines important changes introduced with each new release of the interface.

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<tr>
<td>• Remove Account Computer Systems</td>
<td></td>
</tr>
<tr>
<td>• Remove Account Configuration Items</td>
<td></td>
</tr>
</tbody>
</table>
v2.13
- Added calls for maintenance mode.
- Added Get QoS Constraint IDs for an SLO.
- Added calls for custom properties.

v2.12
- Corrected return codes for ACLs and Accounts (on Deletes and Updates).
- Add and Remove Origins on accounts added.
- Defect fixes.

v2.11
- Add support for posted content in JSON format.

v2.10
- Added calls for CI (ConfigurationItem) data retrieval.

v2.01
- Added callback2 (invokeMethod2).

v2.0
- Merged SOAP and RESTful service into one functional base.

v1.7
- Corrected a problem where ACL calls would fail if the wasp is not running on a hub machine.

v1.6
- Corrected a problem using the forward-slash in URLs ("/").

v1.5
- Corrected a problem in the usage of the database pools.

v1.4
- Added calls to create, modify and delete ACLs

v1.3
- The dates for started/restarted date in probe information requests are now correctly calculated.
- The contact password reset now works as documented i.e. that the contact id is not required in the supplied data structure but only in the url.
- The alarm filter supplied to alarm calls can now also be filtered by alarm id.
- A call with the DELETE-method is now available to remove probe configuration keys.
- Calls to fetch all origins and the mapping between origins and accounts have been introduced.
- Calls to retrieve information about SLAs, their definitions, past compliances, current calculation jobs, their SLOs and SLO-compliances have been introduced. They are available under the resource /sla.
- Calls to retrieve information about SLOs, their definitions, compliance, the underlying QoS constraints and the constraint compliances have been introduced. They are available under the resource /slo.
- The call to retrieve hubs and to retrieve robots have been modified to support the optional GET query parameters maxrows and offset to support paging.

v1.2
- The Account and Contact transfer structures were modified. The Models AccountDocument, AccountDocumentList, ContactDocument and ContactDocumentList were discontinued and replaced by Account, AccountList, Contact and ContactList.
- A problem where an account could be created with the same name as an existing Account was fixed.
- A problem where the list of QoS Sources contained all available sources not limited to the supplied QoS Name was fixed.

**Known Issues**

- RESTful web services v2.19 supports UIM 8.31 and earlier. RESTful web services v8.40 requires the wasp version included with UMP 8.4.
- Versions of UMP prior to 8.2 do not display origins that the UIM system is unaware of. If webservices_rest 2.17 is installed with an UMP version prior to 8.2, an account can be created with an origin that does not exist elsewhere in UIM. UMP will display this account as if it does not have any origins. To view the origins that UMP is unaware of, use the REST API call for Get All Accounts. The REST API call Remove Origin from Account can be used to remove account-created origins if they will not be defined in UIM.
- The call to get alarms has been fixed to return the correct set of alarms. The new implementation can slow the performance down to some extent.
- When invoking a callback, communication errors can occur. This is because the REST call is not performing a retry if a communication error occurs in the background, for example, when a tunnel connection is unstable. This will be modified in the future.
- In rare situations, consuming the alarm list from a Java client can result in DeMarshallingExceptions due to non-UTF characters being present in the datastream. Other programming languages are not affected.
- Due to a defect in a subroutine of the QoS-Constraint call in the SLO resource, an account contact user could see qos values from other origins than the ones associated with its own account.
- Paging functionality is planned for all list structures being returned by the REST API.

**Set Up RESTful Webservices**

RESTful web services are not available for CA UIM by default. This article details the full process for implementing RESTful web services.

**Contents**

- Verify Prerequisites
• Deploy the webservices_rest Package
• (Optional) Enable Forward-Slash Characters
• Test the Deployment

### Verify Prerequisites

Ensure that you meet the following minimum requirements:

**UIM Server**
- Nimsoft Server v5.1 or later.
- Infrastructure Manager v3.84.2 or later.

**Unified Management Portal (UMP)**
- UMP v2.5.1 or later.

### Deploy the webservices_rest Package

Follow these steps:

1. Download the `webservices_rest` package.
2. Drag and drop the `webservices_rest` package from your archive to a robot running the WASP probe.
3. Restart the wasp probe.

### (Optional) Enable Forward-Slash Characters

The default configuration of the Tomcat server that serves as the platform for UMP does not allow encoded forward-slash characters ("/") in URLs. To avoid problems (for example, when requesting QoS metrics that contain a forward slash in the name), you will have to add an extra Java startup object to the wasp probe.

Follow these steps:

1. Open the wasp configuration GUI.
2. Click the `wasp` node.
3. Enter the following argument in the **Extra JVM arguments** field.

   ```
   -Dorg.apache.tomcat.util.buf.UDecoder.ALLOW_ENCODED_SLASH=true
   ```

**Tip:** The parameters in the **Extra JVM arguments** field are separated by spaces. The screen capture below shows what the **Extra JVM arguments** field looks like when more than one parameter is defined:

<table>
<thead>
<tr>
<th>Java Startup Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Initial Memory (MB) **</td>
</tr>
<tr>
<td>**Maximum Memory (MB) **</td>
</tr>
<tr>
<td><strong>Extra JVM arguments</strong></td>
</tr>
</tbody>
</table>

The wasp probe restarts after you save your configuration.

### Test the Deployment

Browse to the following address:

```
http://<your_UMP_address>/rest/version-info
```
If the web services are running correctly, you should see version information for the web services:

Nimsoft RESTful web services interface version x.x

Note: Some browsers (such as Google Chrome) do not directly display this text, but instead show an error message such as Empty Document. To see the text, right-click the page and select Show Page Source.

Call Reference

Contents

- URL Structure
- Authentication Header
- WADL Description
- General Information on Paging

URL Structure

All URLs mentioned are relative to the REST web services base URL which is:

http(s)://<your_UMP_address>:<your_UMP_port>/rest

Authentication Header

The CA UIM REST web services use HTTP basic access authentication.

Important! We recommend using SSL/TLS for your REST connection. See the article Configure HTTPS in UMP on the CA UIM Documentation Space for more information.

In the sample HTTP-Requests and HTTP-Responses, certain header information (such as authentication headers) is omitted. This means that the listed requests will not work if sent directly to the interface. The purpose of those samples is to illustrate the data structure that used when invoking the calls.

WADL Description

The RESTful web services interface offers an automatically generated web application description file that specifies all exposed service calls and structures.

This file is available on your UMP at:

http://<your_UMP_address>/rest/application.wadl

General Information on Paging

Many calls to retrieve list information support paging. On those that do, it is indicated in the URL of the call within the optional parameter setting:

?maxrows=X&offset=Y

The parameter maxrows defines how many rows the result should contain in maximum (maxrows=5 returns 5 entries maximum). If the list contains a lesser number of rows, all rows are returned.

The second parameter offset can only be used if maxrows is also set. Offset defines from where to fetch the number of entries defined in
maxrows. For example, if the list contains 20 entries in total, then

```
?maxrows=5&offset=10
```

returns entries numbered 10 through 15 in the list.

```
http(s)://<your_UMP_address>:<your_UMP_port>/rest
```

**More information:**

- Account Calls
- ACL Calls
- Alarm Calls
- Computer System Calls
- Configuration Item (CI) Data Retrieval Calls
- Contact Calls
- Custom Property Calls
- Dashboard Calls
- Group Resource Calls
- Maintenance Calls
- Origin Calls
- Probe Calls
- QoS Calls
- UIM Infrastructure Calls
- Updated Calls for Multiple Account Support
- Variable Calls

---

**Account Calls**

**Contents**

- Add an Account
- Add Account Origins
- Get Accounts (All)
- Get Account (Single)
- Get Account Contacts
- Update an Account
- Delete an Account (Single)
- Delete an Account Origin

---

**Add an Account**

The UIM system is not aware of origins immediately after installation. For this reason, and to allow accounts to be created immediately after installation, there is no check that an origin exists in the system. Users associated to an account with an origin that is not defined in the system can log into UMP and Admin Console. However, they will not see any infrastructure until the origin is defined in the system. Origins defined in the REST create account call but not defined elsewhere in the system, will be displayed in UMP for selection when creating accounts.

Multiple origins can be associated to the account by enclosing the origin in the <origin> tag for XML, or by using “origin”:“originName” for JSON.

**URL**

```
/accounts
```

**Method**

```
POST
```

**Inputs**
Returns

- 200 OK & AccountDocument XML/JSON
- 401 Unauthorized
- 404 Not Found
- 409 Resource Conflict (if the Account already exists)

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
POST /rest/accounts HTTP/1.1
Accept: application/json
Content-Type: application/json

{
    "accountId":"0",
    "address":"Teststreet 42",
    "city":"Testcity",
    "country":"TestCountry",
    "description":"Test Description",
    "fax":"Test Fax no 4711",
    "name":"REST Services Test Account",
    "origin":"primaryhub",
    "origin;anotherOrigin",
    "phone":"Test phone 0815",
    "postalCode":"123456",
    "state":"Teststate",
    "webSite":"www.testrest.com"
}
```

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
{
  "accountId":"36",
  "address":"Teststreet 42",
  "city":"Testcity",
  "country":"TestCountry",
  "creationDate":"2011-11-22T13:23:05.870+01:00",
  "description":"Test Description",
  "fax":"Test Fax no 4711",
  "name":"REST Services Test Account",
  "origin":"primaryhub",
  "origin":"anotherOrigin",
  "phone":"Test phone 0815",
  "postalCode":"123456",
  "state":"Teststate",
  "webSite":"www.testrest.com"
}

XML

Sample Request

POST /rest/accounts HTTP/1.1
Accept: application/xml
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<account>
  <address>Teststreet 42</address>
  <city>Testcity</city>
  <country>TestCountry</country>
  <description>Test Description</description>
  <fax>Test Fax no 4711</fax>
  <name>REST Services Test Account</name>
  <origin>primaryhub</origin>
  <origin>anotherOrigin</origin>
  <phone>Test phone 0815</phone>
  <postalCode>123456</postalCode>
  <state>Teststate</state>
  <webSite>www.testrest.com</webSite>
</account>

Sample Reply
Add Account Origins

**URL**
/accounts/{account_id}/origins

**Method**
POST

**Inputs**
- Origins to add.

**Returns**
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

**Valid Users**
- Bus users

**Required Permissions**
- Account Administration
- Web Service
JSON

Sample Request

```json
POST /rest/accounts/54/origins HTTP/1.1
Content-Type: application/json
{
  "origin": ["Origin1", "Origin2"]
}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```xml
POST /rest/accounts/54/origins HTTP/1.1
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<origins>
  <origin>Origin1</origin>
  <origin>Origin2</origin>
</origins>
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Get Accounts (All)

URL

/accounts

Method

GET

Returns

- 200 OK & AccountList structure XML/JSON
- 401 Unauthorized
- 404 Not Found
Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
GET /rest/accounts HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "account": [
        {
            "accountId": "3",
            "address": "",
            "city": "",
            "country": "",
            "creationDate": "2011-10-11T09:42:42+02:00",
            "description": "",
            "fax": "",
            "name": "companyA",
            "origin": "primaryhub",
            "origin": "anotherOrigin",
            "phone": "",
            "postalCode": "",
            "state": "",
            "webSite": ""
        }
    ],
}
```

XML

Sample Request

```
GET /rest/accounts HTTP/1.1
Accept: application/xml
```

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<accountlist>
  <account>
    <address></address>
    <city></city>
    <country></country>
    <creationDate>2011-10-11T09:42:42+02:00</creationDate>
    <description></description>
    <fax></fax>
    <id>3</id>
    <name>companyA</name>
    <origin>primaryhub</origin>
    <origin>anotherOrigin</origin>
    <phone></phone>
    <postalCode></postalCode>
    <state></state>
    <website></website>
  </account>
</accountlist>

Get Account (Single)

URL
/accounts/{account_id}

Method
GET

Returns
- 200 OK & AccountDocument XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

JSON

Sample Request
Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "accountId":"3",
   "address":"",
   "city":"",
   "country":"",
   "creationDate":"2011-10-11T09:42:42+02:00",
   "description":"",
   "fax":"",
   "name":"companyA",
   "origin":"primaryhub",
   "origin":"anotherOrigin",
   "phone":"",
   "postalCode":"",
   "state":"",
   "webSite":""
}

Sample Request

GET /rest/accounts/9 HTTP/1.1
Accept: application/json

Sample Reply

Sample Request

GET /rest/accounts/9 HTTP/1.1
Accept: application/xml

Sample Reply
Get Account Contacts

This call can be used to retrieve the contacts associated with the Account

URL

/accounts/{account_id}/contacts

Method

GET

Returns

- 200 OK – ContactList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON
Sample Request

GET /rest/accounts/3/contacts HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
    "contact": [
        {
            "accountId": "3",
            "acl": "AccountOp",
            "contactId": "2",
            "creationDate": "2011-10-11T09:42:42+02:00",
            "department": "",
            "description": "",
            "email": "chris@lala.com",
            "firstName": "",
            "lastName": "",
            "loginName": "chris",
            "mobile": "",
            "password": "osfPlF9dQcjKj66HmL8pg==",
            "phone": "",
            "title": ""
        },
        {
            "accountId": "3",
            "acl": "AccountOp",
            "contactId": "3",
            "creationDate": "2011-10-11T09:51:38+02:00",
            "department": "",
            "description": "",
            "email": "",
            "firstName": "",
            "lastName": "",
            "loginName": "remko",
            "mobile": "",
            "password": "MNLlsYsagL8G9FjJJkPsKw==",
            "phone": "",
            "title": ""
        },
        {
            "accountId": "3",
            "acl": "AccountOp",
            "contactId": "",
            "creationDate": "",
            "department": "",
            "description": "",
            "email": "",
            "firstName": "",
            "lastName": "",
            "loginName": "",
            "mobile": "",
            "password": "",
            "phone": "",
            "title": ""
        }
    ]
}
Sample Request

GET /rest/accounts/3/contacts HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contactlist>
  <contact>
    <accountId>3</accountId>
    <acl>Guest</acl>
    <contactId>4</contactId>
    <creationDate>2011-10-28T16:45:18+02:00</creationDate>
    <department></department>
    <description></description>
    <email></email>
    <firstName></firstName>
    <lastName></lastName>
    <loginName>contact</loginName>
    <mobile></mobile>
    <password>a9Ki6Vu+O6S56vAZHXK95Q==</password>
    <phone></phone>
    <title></title>
  </contact>
  <contact>
    <accountId>3</accountId>
    <acl>Administrator</acl>
    <contactId>5</contactId>
    <creationDate>2011-10-28T16:45:18+02:00</creationDate>
    <department></department>
    <description></description>
    <email></email>
    <firstName></firstName>
    <lastName></lastName>
    <loginName>contactadmin</loginName>
    <mobile></mobile>
    <password>a9Ki6Vu+O6S56vAZHXK95Q==</password>
    <phone></phone>
    <title></title>
  </contact>
</contactlist>

Update an Account

Note: Specifying one or more origins when updating an Account does not replace the existing origins. It only adds additional origins. Use the Remove Origin from Account call to remove origins. Empty tags (<origin></origin>), tags with white space (<origin> </origin>),
URL
/accounts/{account_id}

Method
PUT

Inputs
- AccountDocument

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Account Administration
- Web Service

JSON

Sample Request

```json
PUT /rest/accounts/8 HTTP/1.1
Content-Type: application/json
{
   "accountId":"8",
   "address":"Teststreet 42",
   "city":"Testcity",
   "country":"TestCountry",
   "description":"Test Description",
   "fax":"Test Fax no 4711",
   "name":"REST Services Test Account",
   "origin":"primaryhub",
   "phone":"Test phone 0815",
   "postalCode":"123456",
   "state":"Teststate",
   "webSite":"www.testrest.com"
}
```

Sample Reply
Delete an Account (Single)

URL

/accounts/{account_id}

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Account Administrations
- Web Service

Sample Request

DELETE /rest/accounts/14 HTTP/1.1

Sample Reply

HTTP/1.1 204 No Content

Delete an Account Origin

Note: Accounts must always have an origin. The origin cannot be Deleted if it is the last origin associated with the account.

URL

/accounts/{account_id}/origin/{origin name}

Method

DELETE

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

Sample Request

POST /rest/accounts/54/origin/Origin1
HTTP/1.1

Sample Reply
ACL Calls

Contents

- Add an ACL
- Add an ACL by Copying an Existing ACL
- Get ACL List (All)
- Get ACL (Current User)
- Get ACL (Using the ACL Name)
- Update an ACL
- Delete an ACL
- Structure for ACL Data

Add an ACL

URL

/acls/{acl-name}

Method

POST

Inputs

- ACL structure

Returns

- 202 No Content - OK
- 401 Unauthorized
- 404 Not Found
- 409 Resource Conflict (if the ACL already exists)

Valid Users

- Bus Users

Required Permissions

- Manage ACL
- Web Service

JSON

Sample Request
POST /rest/acls/restTestACL HTTP/1.1
Content-Type: application/json
{
  "name":"restTestACL",
  "permission":["Assign","Alarm Summary"]
}

Sample Reply

HTTP/1.1 204 No Content

XML

Sample Request

POST /rest/acls/restTestACL HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<acl>
  <name>restTestACL</name>
  <accountLink>23</accountLink>
  <permission>Assign</permission>
  <permission>Alarm Summary</permission>
</acl>

Sample Reply

HTTP/1.1 204 No Content

Add an ACL by Copying an Existing ACL

URL
/rest/acls/{newACLName}/from/{template-acl-name}

Method
POST

Inputs
- **NewACLName** - The name of the new ACL.
- **Template-acl-name** - The name of the ACL to be copied from
• (Optionally) ACL structure containing ldap-group-name to match the new ACL to.

Returns

• 204 No Content - OK
• 400 Bad Request (if the template does not exist)
• 401 Unauthorized
• 404 Not Found
• 409 Resource Conflict (if the ACL already exists)

Valid Users

• Bus users

Required Permissions

• Manage ACL
• Web Service

JSON

Sample Request

```
POST /rest/acls/newACLName/from/Guest HTTP/1.1
Content-Type: application/json
{
   "name":"newACLName"
   "ldapGroupName":"ldapgroupname"
}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```
POST /rest/acls/newACLName/from/Guest HTTP/1.1
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<acl>
   <name>newACLName</name>
</acl>
```

Sample Reply
Get ACL List (All)

URL
/acls?{maxrows=<int>}{&offset=<int>}

Method
GET

Inputs
- **Offset** - The number of datapoints to offset.
- **maxrows** - The maximum number of datapoints to return (0 returns unlimited rows).
- **inCurrentDomain** - If set to true, the call only returns hubs from the currently authenticated domain.

Returns
- 200 OK - ACLList structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus Users

Required Permissions
- Web Service

JSON

**Sample Request**

```
GET /rest/acls HTTP/1.1
Accept: application/json
```

**Sample Reply**
HTTP/1.1 200 OK
Content-Type: application/json
{
    "acl": [
        {
            "name": "Operator"
        },
        {
            "name": "AccountOp"
        },
        {
            "name": "Guest"
        },
        {
            "name": "Superuser"
        },
        {
            "name": "Administrator"
        },
        {
            "name": "Dashboard Designer"
        }
    ]
}

XML

Sample Request

GET /rest/acls HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<acls>
    <acl><name>AccountOp</name></acl>
    <acl><name>Operator</name></acl>
    <acl><name>Guest</name></acl>
    <acl><name>Superuser</name></acl>
    <acl><name>Administrator</name></acl>
    <acl><name>Dashboard Designer</name></acl>
</acls>

Get ACL (Current User)

Returns the ACL of the user invoking the callback.

URL

/acls/current

Method
GET

Returns

- 200 OK - ACL structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

GET /rest/acls/current HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
    "name":"Superuser",
    "permission":
    [
        "Accept",
        "Account Administration",
        "Acknowledge",
        "Alarm Details",
        "Alarm History",
        "Alarm Management",
        "Alarm Summary",
        "Archive Management",
        "Assign",
        "Basic Management",
        "Change Password",
        "Custom Dashboards",
        "Custom Reports",
        "Dashboard Design",
        "Dashboard Designer",
        "Dashboard Download",
        "Dashboard Publish",
        "Dashboard Upload",
        "Default Customization",
        "Discovery",
    ]
}
"DiscoveryManagement",
"Discovery Pie",
"Distribution",
"Dynamic Views",
"Dynamic Views Dashboards",
"Dynamic Views Reports",
"Dynamic Views States",
"Execution Level 1",
"Execution Level 2",
"Execution Level 3",
"Extended Security",
"Invisible Alarms",
"License Management",
"Manage ACL",
"Manage Profiles",
"Management Tools",
"Modify Profiles",
"Program Options",
"Reassign",
"Report Designer",
"SDP",
"SLM Admin",
"SLM View",
"Unassign",
"Unified Reports",
"User Administration",
"User Customization",
"User Monitoring",
XML

Sample Request

GET /rest/acls/current HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<acl>
  <name>Superuser</name>
  <accountLink>23</accountLink>
  <permission>Accept</permission>
  <permission>Account Administration</permission>
  <permission>Acknowledge</permission>
  <permission>Alarm Details</permission>
  <permission>Alarm History</permission>
  <permission>Alarm Management</permission>
  <permission>Alarm Summary</permission>
  <permission>Archive Management</permission>
  <permission>Assign</permission>
  <permission>Basic Management</permission>
  <permission>Change Password</permission>
  <permission>Custom Dashboards</permission>
  <permission>Custom Reports</permission>
  <permission>Dashboard Design</permission>
  <permission>Dashboard Designer</permission>
  <permission>Dashboard Download</permission>
  <permission>Dashboard Publish</permission>
  <permission>Dashboard Upload</permission>
  <permission>Default Customization</permission>
  <permission>Discovery</permission>
  <permission>Discovery Management</permission>
  <permission>Discovery Pie</permission>
  <permission>Distribution</permission>
  <permission>Dynamic Views</permission>
  <permission>Dynamic Views Dashboards</permission>
  <permission>Dynamic Views Reports</permission>
  <permission>Dynamic Views States</permission>
  <permission>Execution Level 1</permission>
</acl>
<permission>Execution Level 2</permission>
<permission>Execution Level 3</permission>
<permission>Extended Security</permission>
<permission>Invisible Alarms</permission>
<permission>License Management</permission>
<permission>Manage ACL</permission>
<permission>Manage Profiles</permission>
<permission>Management Tools</permission>
<permission>Modify Profiles</permission>
<permission>Program Options</permission>
<permission>Reassign</permission>
<permission>Report Designer</permission>
<permission>SDP</permission>
<permission>SLM Admin</permission>
<permission>SLM View</permission>
<permission>Unassign</permission>
<permission>Unified Reports</permission>
<permission>User Administration</permission>
<permission>User Customization</permission>
<permission>User Monitoring</permission>
Get ACL (Using the ACL Name)

URL
/acls/{acl-name}

Method
GET

Input
- Acl-name - The name of the ACL.

Returns
- 200 OK - ACL structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Manage ACL
- Web Service

JSON

Sample Request

GET /rest/acls/guest HTTP/1.1
Accept: application/json

Sample Reply
XML

Sample Request

GET /rest/acls/guest HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<acl>
  <name>Guest</name>
  <permission>User Customization</permission>
  <permission>Dynamic Views Reports</permission>
  <permission>Alarm Summary</permission>
  <permission>USM Basic</permission>
  <permission>Custom Dashboards</permission>
  <permission>Custom Reports</permission>
  <permission>Alarm Details</permission>
</acl>

Update an ACL

URL

/acls/{acl-name}

Method
PUT

Input

- **acl-name** - ACL structure containing the modified ACL.

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Manage ACL
- Web Service

JSON

Sample Request

```
HTTP/1.1 204 No Content
```

Sample Reply

```
PUT /rest/acls/restTestACL HTTP/1.1
Content-Type: application/json
{
    "name":"restTestACL",
    "permission":["Assign","Alarm Summary"]
}
```

XML

Sample Request

```
HTTP/1.1 204 No Content
```

Sample Reply
Delete an ACL

URL
/acls/{acl-name}

Method
DELETE

Input
- **acl-name** - The name of the ACL you want to delete.

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Manage ACL
- Web Service

Sample Request
DELETE /rest/acls/restTestACL HTTP/1.1

Sample Reply
HTTP/1.1 204 No Content
Structure for ACL Data

ACL-related calls use the following structure:

- **Name** – the name of the ACL
- **(Optional) ldapGroupName** – The name of the LDAP group to link this ACL to. Only if using LDAP authentication.
- **Permission** – String-array of Permissions to assign to the ACL. The necessary Strings can be found in Infrastructure manager.
- **(Read-Only) Permission_level** – The permission level assigned to this ACL.

Alarm Calls

Contents

- Create an Alarm
- Get Alarm Summary
- Get Alarm List (Filtered)
- Get Alarm List (Unfiltered)
- Get Alarm State (All)
- Get Alarm State (Filtered)
- Update an Alarm (Accept)
- Update an Alarm (Acknowledge)
- Update an Alarm (Assign)
- Update an Alarm (Unassign)
- Alarm Filters

Note: All alarm calls are supported by both ems and nas. Alarms originating from the ems probe have one of the following items appended to the end of their alarm IDs:

- `ems 8.41 or later - __ems`
- `ems 8.4 - :ems`

Important! The severity and message fields are required when creating an alarm. The message field sets the alarm message. The severity field indicates the impact or importance of an alarm. The following numeric values are supported:

- 0 – Clear (Indicates that a component has returned to a normal state).
- 1 – Informational
- 2 – Warning
- 3 – Minor
- 4 – Major
- 5 – Critical

URL

/alarms/createAlarm

Method

POST

Returns

- 204 No Content
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Alarm Management
- Web Service

JSON

Sample Request

```
POST /rest/alarms/createAlarm HTTP/1.1
Accept: application/JSON
Content-Type: application/JSON
{
    "assignedBy":"",
    "assignedTo":"",
    "custom1":"",
    "devId":"",
    "domain":"w2k8r2-x64-1c_domain",
    "hostname":"w2k8r2-x64-1c",
    "hub":"w2k8r2-x64-1c_hub",
    "level":"1",
    "message":"Testmessage",
    "metId":"",
    "nas":"w2k8r2-x64-1c_hub",
    "origin":"w2k8r2-x64-1c_hub",
    "prevLevel":"0",
    "probe":"",
    "robot":"w2k8r2-x64-1c",
    "severity":"Informational",
    "source":"w2k8r2-x64-1c",
    "subsystem":"Nimsoft",
    "subsystemId":"1",
    "suppressionCount":"0",
    "suppressionKey":"",
    "visible":"true"
}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request
POST /rest/alarms/createAlarm HTTP/1.1
Accept: application/xml
Content-Type: application/xml

<alarm>
  <assignedBy/>
  <assignedTo/>
  <custom1/>
  <custom2/>
  <custom3/>
  <custom4/>
  <custom5/>
  <devId/>
  <domain>w2k8r2-x64-1c_domain</domain>
  <hostname>w2k8r2-x64-1c</hostname>
  <hub>w2k8r2-x64-1c_hub</hub>
  <level>1</level>
  <message>Testmessage</message>
  <metId/>
  <nas>w2k8r2-x64-1c_hub</nas>
  <origin>w2k8r2-x64-1c_hub</origin>
  <prevLevel>0</prevLevel>
  <probe/>
  <robot>w2k8r2-x64-1c</robot>
  <severity>Informational</severity>
  <source>w2k8r2-x64-1c</source>
  <subsystem>Nimsoft</subsystem>
  <subsystemId>1</subsystemId>
  <suppressionCount>0</suppressionCount>
  <suppressionKey/>
  <visible>true</visible>
</alarm>

Sample Reply

HTTP/1.1 204 No Content

Get Alarm Summary

Returns a structure containing alarm counts for the different alarm severities.

URL

/alarms/summary

Method

GET
Returns

- 200 OK & AlarmSummary structure (XML/JSON)
- 401 Unauthorized
- 404 Not Found

Required Permissions

- Bus users
- Account contact users

JSON

Sample Request

```
GET /rest/alarms/summary HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "clear":"0",
  "critical":"7",
  "information":"24",
  "major":"9",
  "minor":"6",
  "warning":"6"
}
```

XML

Sample Request

```
GET /rest/alarms/summary HTTP/1.1
Accept: application/xml
```

Sample Reply
Get Alarm List (Filtered)

This call returns a filtered list of alarms that are visible to the user. For details on the Alarm Filter structure passed to this call, refer to the article [Call Reference](#).

**URL**

/alarms

**Method**

POST

**Returns**

- 200 OK & AlarmListDocument XML/JSON
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Account contact users
- Bus users

**Required Permissions**

- Alarm Details
- Web Service

**JSON**

*Sample Request*
POST /rest/alarms HTTP/1.1
Accept: application/json
Content-Type: application/json

{
    "assigned_to": "userA",
    "custom1": "lorum",
    "custom2": "ipsum",
    "custom3": "dolor",
    "custom4": "sit",
    "custom5": "amet",
    "domain": "domainA",
    "hostname": "hostA",
    "hub": "hubB",
    "level": "2,3,4,5,6",
    "message": "message text to search for",
    "message_count": ">2",
    "origin": "customerA",
    "probe": "cdm",
    "robot": "robotC",
    "source": "maecenas",
    "subsystem": "cpu",
    "subsystem_id": "1.3.1",
    "timeArrival": "2011-11-22T12:54:35+01:00",
    "timeLast": "2011-11-22T12:54:35+01:00",
    "userTag1": "utag1",
    "userTag2": "utag2",
    "visible": "true"
}

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
Transfer-Encoding: chunked

2000
{"alarm": [
  {
    "assignedBy": "",
    "assignedTo": "",
    "custom1": "",
    "custom2": "",
    "custom3": "",
    "custom4": "",
    "custom5": "",
    "domain": "chris-dev",
    "hostname": "win-cxp6lpt7v6g",
    "hub": "primaryhub",
    "id": "RH99670515-00059",
    "level": "1",
    "message": "USER32(1074 - None): The process C:\Windows\system32\winlogon.exe (WIN-CXP6LPT7V6G) has initiated the power off of computer WIN-CXP6LPT7V6G."
  },
  {
    "assignedBy": "",
    "assignedTo": "",
    ...
  }
]}

XML

Sample Request
POST /rest/alarms HTTP/1.1
Accept: application/xml
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<alarmfilter>
    <level>2,3,4,5</level>
</alarmfilter>
Get Alarm List (Unfiltered)

This call returns all alarms that are visible to the user.
URL
/alarms

Method
GET

Returns
- 200 OK & AlarmListDocument XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Alarm Details
- Web Service

JSON

Sample Request

GET /rest/alarms HTTP/1.1
Accept: application/json

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
Transfer-Encoding: chunked

2000
{"alarm": [
{
    "assignedBy": ",
    "assignedTo": ",
    "custom1": ",
    "custom2": ",
    "custom3": ",
    "custom4": ",
    "custom5": ",
    "domain": "chris-dev",
    "hostname": "win-cxp6lpt7v6g",
    "hub": "primaryhub",
    "id": "RH99670515-00059",
    "level": "1",
    "message": "USER32(1074 - None): The process C:\Windows\system32\winlogon.exe (WIN-CXP6LPT7V6G) has initiated the power off of computer WIN-CXP6LPT7V6G.",
    "nas": "primaryhub",
    "origin": "primaryhub",
    "prevLevel": "0",
    "probe": "ntevl",
    "robot": "win-cxp6lpt7v6g",
    "severity": "Informational",
    "source": "192.168.211.129",
    "subsystem": "System",
    "subsystemId": "1.1.11.1.3",
    "suppressionCount": "0",
    "suppressionKey": "",
    "timeArrival": "2011-11-11T09:51:45+01:00",
    "timeOrigin": "2011-11-11T09:51:43+01:00",
    "timeLast": "2011-11-11T09:51:45+01:00",
    "userTag1": "",
    "userTag2": "",
    "visible": "true"
},
{
    "assignedBy": ",
    "assignedTo": ",
    ...
}
]}

XML

Sample Request
GET /rest/alarms HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarm-list>
    <alarm>
        <assignedBy></assignedBy>
        <assignedTo></assignedTo>
        <custom1></custom1>
        <custom2></custom2>
        <custom3></custom3>
        <custom4></custom4>
        <custom5></custom5>
        <domain>chris-dev</domain>
        <hostname>MFC7840W</hostname>
        <hub>primaryhub</hub>
        <id>DL31165458-84280</id>
        <level>5</level>
        <message>The SNMP agent on '192.168.0.119' is NOT responding.</message>
        <nas>primaryhub</nas>
        <origin>primaryhub</origin>
        <prevLevel>0</prevLevel1>
        <probe>interface_traffic</probe>
        <robot>win-cxp61pt7v6g</robot>
        <severity>Critical</severity>
        <source>MFC7840W</source>
        <subsystem>Network</subsystem>
        <subsystemId>1.1.3</subsystemId>
        <suppressionCount>0</suppressionCount>
        <suppressionKey>NetTfc/state-192.168.0.119</suppressionKey>
        <timeArrival>2011-11-02T11:27:40+01:00</timeArrival>
        <timeOrigin>2011-11-02T11:27:39+01:00</timeOrigin>
        <timeLast>2011-11-02T11:27:40+01:00</timeLast>
        <userTag1></userTag1>
        <userTag2></userTag2>
        <visible>true</visible>
    </alarm>
    ...
</alarm-list>
Get Alarm State (All)

This call returns the severity of the most critical alarm currently visible to the user.

URL

/alarms/state

Method

GET

Returns

- 200 OK & AlarmSeverity structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Alarm Summary
- Web Service

JSON

Sample Request

GET /rest/alarms/state HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
  "level": "5",
  "severity": "Critical"
}

XML

Sample Request
GET /rest/alarms/state HTTP/1.1
Accept: application/xml

Sample Reply

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarm-severity>
  <level>5</level>
  <severity>Critical</severity>
</alarm-severity>

Get Alarm State (Filtered)

This call returns the severity of the most critical alarm currently open that matches the given alarm filter. For details on the Alarm Filter structure passed to this call, refer to the article Call Reference.

URL
/alarms/state

Method
Post

Inputs
- AlarmFilter structure

Returns
- 200 OK & AlarmSeverity structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Alarm Summary
- Web Service

JSON

Sample Request
POST /rest/alarms/state HTTP/1.1
Accept: application/json
Content-Type: application/json

{
    "assigned_to": "userA",
    "custom1": "lorum",
    "custom2": "ipsum",
    "custom3": "dolor",
    "custom4": "sit",
    "custom5": "amet",
    "domain": "domainA",
    "hostname": "hostA",
    "hub": "hubB",
    "level": "2,3,4,5,6",
    "message": "message text to search for",
    "message_count": ">2",
    "origin": "customerA",
    "probe": "cdm",
    "robot": "robotC",
    "source": "maecenas",
    "subsystem": "cpu",
    "subsystem_id": "1.3.1",
    "timeArrival": "2011-11-22T12:54:35+01:00",
    "timeLast": "2011-11-22T12:54:35+01:00",
    "userTag1": "utag1",
    "userTag2": "utag2",
    "visible": "true"
}

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json

XML

Sample Request
POST /rest/alarms/state HTTP/1.1
Accept: application/xml
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarmfilter>
  <level>2,3,4,5,6</level>
</alarmfilter>

Filtering by assigned person:
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarmfilter>
  <assigned_to>administrator</assigned_to>
</alarmfilter>

Filtering by alarm id:
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarmfilter>
  <id>LC29347578-03846</id>
</alarmfilter>

Sample Reply
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<alarm-severity>
  <level>5</level>
  <severity>Critical</severity>
</alarm-severity>

Update an Alarm (Accept)

URL
/alarms/{alarmid}/accept

Method
PUT

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found
Valid Users
- Bus users

Required Permissions
- Accept
- Web Service

Sample Request
```
PUT /rest/alarms/DL31165458-85308/accept HTTP/1.1
```

Sample Reply
```
HTTP/1.1 204 No Content
```

Update an Alarm (Acknowledge)

URL
/alarms/(alarmid)/ack

Method
PUT

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Acknowledge
- Web Service

Sample Request
```
PUT /rest/alarms/DL31165458-85308/ack HTTP/1.1
```

Sample Reply
Update an Alarm (Assign)

URL
/alarms/{alarmid}/assign/{assignToUsername}

Method
PUT

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus user

Required Permissions
- Assign
- Web Service

Sample Request

PUT /rest/alarms/DL31165458-85308/assign/operatorA HTTP/1.1

Sample Reply

HTTP/1.1 204 No Content

Update an Alarm (Unassign)

URL
/alarms/{alarmid}/unassign

Method
PUT

Returns
Valid Users

- Bus user

Required Permissions

- Unassign
- Web Service

Sample Request

```
PUT /rest/alarms/DL31165458-85308/unassign HTTP/1.1
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Alarm Filters

Alarm-related calls use the following filter fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>The alarm id (nimid) of the alarm.</td>
</tr>
<tr>
<td>level</td>
<td>A comma-separated list of all levels that should be returned, where:</td>
</tr>
<tr>
<td></td>
<td>1 = Information, 2 = Warning, 3 = Minor, 4 = Major, 5 = Critical</td>
</tr>
<tr>
<td>hostname</td>
<td>The hostname. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>source</td>
<td>The alarm source. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>domain</td>
<td>The domain of the alarm. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>hub</td>
<td>The hub of the alarm. This contains the first hub that received the alarm.</td>
</tr>
<tr>
<td></td>
<td>This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>robot</td>
<td>The robot name that raised the alarm. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>probe</td>
<td>The name of the probe that raised the alarm. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>subsystem_id</td>
<td>The subsystem_id of the alarm. See the subsystem-tree in the alarm server (nas). This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>subsystem</td>
<td>The subsystem name of the alarm. See the subsystem-tree in the alarm server (nas). This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>origin</td>
<td>The origin of the alarm. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>parameter</td>
<td>description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td>message_count</td>
<td>The amount of times that this alarm has recurred. The value should be an operator and an integer value. For Json, valid operators: “=”, “&lt;=”, “&lt;”, “&gt;=”, “&gt;”, “!” e.g. “&gt;2” will only return alarms that recurred more than twice. For xml, valid operators: “=”, “&lt;=”, “&lt;”, “&gt;=”, “&gt;”, “!” e.g. “&gt;2” will only return alarms that recurred more than twice.</td>
</tr>
<tr>
<td>message</td>
<td>The message text of the alarm. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>userTag1</td>
<td>The value of the user tag 1. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>userTag2</td>
<td>The value of the user tag 2. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>custom1</td>
<td>The value of the custom field 1. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>custom2</td>
<td>The value of the custom field 2. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>custom3</td>
<td>The value of the custom field 3. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>custom4</td>
<td>The value of the custom field 4. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>custom5</td>
<td>The value of the custom field 5. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>assigned_to</td>
<td>The name of the user the alarm is currently assigned to. This value can use perl regular expression syntax.</td>
</tr>
<tr>
<td>timeArrival</td>
<td>A date time value (format: 2011-12-15T01:35:55.524+01:00) specifying the start of the filter time. Only alarms that arrived at the alarm server after this date will be returned.</td>
</tr>
<tr>
<td>timeLast</td>
<td>The time the alarm was last updated.</td>
</tr>
<tr>
<td>visible</td>
<td>This is a Boolean. Valid values are:   - False   - True If set to true, only visible alarms are returned. If set to false, only invisible alarms are returned.</td>
</tr>
</tbody>
</table>

**Computer System Calls**

**Contents**

- Get Computer Systems Details (All)
- Get Computer System Details (Using the CS ID)
- Get Computer System Details (Using the CS Name)
- Get Computer System Details (Using the IP Address)
- Get Computer System Details (Using the Key)

**Get Computer Systems Details (All)**

**URL**

`/computer_systems`

**Method**

GET

**Returns**

- 200 OK & AccountList structure XML/JSON
- 401 Unauthorized
- 404 Not Found
Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

XML

Sample Request

```
GET /rest/computer_systems HTTP/1.1
Accept: application/xml
```

Sample Reply
Get Computer System Details (Using the CS ID)

URL

/computer_systems/cs_id/{cs_id}
Method
GET

Returns
- 200 OK & AccountList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Account Administration
- Web Service

JSON

Sample Request
GET /rest/computer_systems/cs_id/1 HTTP/1.1
Accept: application/json

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
{
    "computer_system": [
        {
            "cs_id": "1",
            "cs_key": "12345678-ab1c-1234-5a6b-7c8d90e1f23",
            "cs_name": "sample_name",
            "cs_type": "A",
            "ip_addresses": [
                {
                    "ip_address": ["10.0.0.1"],
                    "ip_address": ["192.168.0.1"]
                }
            ],
            "mac": "00-1a-2b-3c-4d-5e",
            "maintenance": "0",
            "origin": "primary_hub",
            "os_description": "Service Pack 1",
            "os_name": "WindowsServer-2013",
            "os_type": "Windows"
        }
    ]
}
Get Computer System Details (Using the CS Name)

URL
/computer_systems/cs_name/{cs_name}{?contains=true}

Method
GET

Inputs

- Contains - Use of the optional contains=true parameter will return those systems with the name containing the passed {cs_name} value. As the computer system name attribute is not unique, multiple computer systems may be returned even without the use of the "contains=true" parameter if they share the same name.

Returns

- 200 OK & AccountList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service
### JSON

**Sample Request**

```plaintext
GET /rest/computer_systems/cs_name/sample_name HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "computer_system": [
        {
            "cs_id": "1",
            "cs_key": "12345678-ab1c-1234-5a6b-7c8d90e1f23",
            "cs_name": "sample_name",
            "cs_type": "A",
            "ip_addresses": [
                {
                    "ip_address": ["10.0.0.1"],
                    "ip_address": ["192.168.0.1"]
                }
            ],
            "mac": "00-1a-2b-3c-4d-5e",
            "maintenance": "0",
            "origin": "primary_hub",
            "os_description": "Service Pack 1",
            "os_name": "WindowsServer-2013"
            "os_type": "Windows"
        }
    ]
}
```

### XML

**Sample Request**

```plaintext
GET /rest/computer_systems/cs_name/sample_name HTTP/1.1
Accept: application/xml
```

**Sample Reply**

```xml
HTTP/1.1 200 OK
Content-Type: application/json
{
    "computer_system": [
        {
            "cs_id": "1",
            "cs_key": "12345678-ab1c-1234-5a6b-7c8d90e1f23",
            "cs_name": "sample_name",
            "cs_type": "A",
            "ip_addresses": [
                {
                    "ip_address": ["10.0.0.1"],
                    "ip_address": ["192.168.0.1"]
                }
            ],
            "mac": "00-1a-2b-3c-4d-5e",
            "maintenance": "0",
            "origin": "primary_hub",
            "os_description": "Service Pack 1",
            "os_name": "WindowsServer-2013"
            "os_type": "Windows"
        }
    ]
}
```
Get Computer System Details (Using the IP Address)

Returns computer system details based on the passed IPv4 address.

**URL**

/computer_systems/cs_ip/{cs_ip}

**Method**

GET

**Returns**

- 200 OK & AccountList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Bus users

**Required Permissions**

- Account Administration
- Web Service

**JSON**

Sample Request
### GET Request Example

```
GET /rest/computer_systems/cs_ip/10.0.0.1 HTTP/1.1
Accept: application/json
```

### Sample Reply

**XML**

### Sample Request

```
GET /rest/computer_systems/cs_ip/10.0.0.1 HTTP/1.1
Accept: application/xml
```

### Sample Reply

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<computer_systems>
  <computer_system>
    <cs_id>1</cs_id>
    <cs_key>12345678-ab1c-1234-5a6b-7c8d90e1f23</cs_key>
    <cs_name>sample_name</cs_name>
    <cs_type>A</cs_type>
    <ip_addresses>
      <ip_address>10.0.0.1</ip_address>
      <ip_address>192.168.0.1</ip_address>
    </ip_addresses>
    <mac>00-1a-2b-3c-4d-5e</mac>
    <maintenance>0</maintenance>
    <origin>primary_hub</origin>
    <os_description>Service Pack 1</os_description>
    <os_name>WindowsServer-2013</os_name>
    <os_type>Windows</os_type>
  </computer_system>
</computer_systems>
```

### Get Computer System Details (Using the Key)

**URL**

```
/computer_systems/cs_key/{cs_key}
```

**Method**

GET

**Returns**
Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
GET /rest/computer_systems/cs_key/12345678-ab1c-1234-5a6b-7c8d90e1f23
HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "computer_system":[
        {
            "cs_id":"1",
            "cs_key":"12345678-ab1c-1234-5a6b-7c8d90e1f23",
            "cs_name":"sample_name",
            "cs_type":"A",
            "ip_addresses":[
                {
                    "ip_address": ["10.0.0.1"],
                    "ip_address": ["192.168.0.1"]
                }
            ],
            "mac":"00-1a-2b-3c-4d-5e",
            "maintenance":0,
            "origin":"primary_hub",
            "os_description":"Service Pack 1",
            "os_name":"WindowsServer-2013",
            "os_type":"Windows"
        }
    ]
}
```
Sample Request

GET /rest/computer_systems/cs_key/12345678-ab1c-1234-5a6b-7c8d90e1f23
HTTP/1.1
Accept: application/xml

Sample Reply

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<computer_systems>
  <computer_system>
    <cs_id>1</cs_id>
    <cs_key>12345678-ab1c-1234-5a6b-7c8d90e1f23</cs_key>
    <cs_name>sample_name</cs_name>
    <cs_type>A</cs_type>
    <ip_addresses>
      <ip_address>10.0.0.1</ip_address>
      <ip_address>192.168.0.1</ip_address>
    </ip_addresses>
    <mac>00-1a-2b-3c-4d-5e</mac>
    <maintenance>0</maintenance>
    <origin>primary_hub</origin>
    <os_description>Service Pack 1</os_description>
    <os_name>WindowsServer-2013</os_name>
    <os_type>Windows</os_type>
  </computer_system>
</computer_systems>

Configuration Item (CI) Data Retrieval Calls
Contents
- Get CI Definitions (All)
- Get CI Definition (Single)
- Get CI Metric
- Get CI Metric Definitions (All)
- Get CI Metric Definition (Single)

Get CI Definitions (All)
This call returns a list of all CI definitions. This call is not limited to definitions delivered by components belonging to the account of an account user.

URL
/cl/definitions

Method
GET

Returns

- 200 OK – CIDefinitionList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account Contact users
- Bus users

Required Permissions

- Web Service

JSON

**Sample Request**

```
GET /rest/ci/definitions HTTP/1.1
Accept: application/json
```

**Sample Reply**

XML

**Sample Request**

```
GET /rest/ci/definitions HTTP/1.1
Accept: application/xml
```

**Sample Reply**
Get CI Definition (Single)

This call returns an individual CI definition for a given ci_type. This call is not limited to definitions delivered by components belonging to the
account of an account user. The ci_type can be determined by retrieving all definitions and looking for the correct match.

URL

/cli/definitions/{ci_type}

Method

GET

Returns

- 200 OK – CIDefinitionList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

```
GET /rest/ci/definitions/3.24
HTTP/1.1

Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "metric_type":"1.10:21",
    "description":"File Size In GB",
    "unit_type":"GB",
    "ci_type":"1.10"
}
```

XML

Sample Request
GET /rest/ci/definitions/3.24
HTTP/1.1
Accept: application/xml

Sample Reply

<?xml version="1.0" encoding="utf-8" standalone="yes"?>

<ci_definition>
  <type>3.24</type>
  <description>Application.OCS</description>
  <parent>3</parent>
  <children_list>
    <ci_definition>
      <type>3.24.1</type>
      <description>Application.OCS.EventLogs</description>
      <parent>3.24</parent>
    </ci_definition>
    <ci_definition>
      <type>3.24.2</type>
      <description>Application.OCS.Files</description>
      <parent>3.24</parent>
    </ci_definition>
    <ci_definition>
      <type>3.24.3</type>
      <description>Application.OCS.Filesystem</description>
      <parent>3.24</parent>
    </ci_definition>
    <ci_definition>
      <type>3.24.4</type>
      <description>Application.OCS.PerformanceCounters</description>
      <parent>3.24</parent>
      <children_list>
        <ci_definition>
          <type>3.24.4.1</type>
          <description>Application.OCS.PerformanceCounters.DynamicCounters</description>
          <parent>3.24.4</parent>
        </ci_definition>
      </children_list>
    </ci_definition>
    <ci_definition>
      <type>3.24.5</type>
      <description>Application.OCS.Processes</description>
      <parent>3.24</parent>
    </ci_definition>
  </children_list>
</ci_definition>
<children_list />
</ci_definition>
<ci_definition>
  <type>3.24.6</type>
  <description>Application.OCS.Services</description>
  <parent>3.24</parent>
  <children_list />
</ci_definition>
<ci_definition>
  <type>3.24.7</type>
  <description>Application.OCS.WMI</description>
  <parent>3.24</parent>
  <children_list>
    <ci_definition>
      <type>3.24.7.1</type>
      <description>Application.OCS.WMI.DynamicCounters</description>
      <parent>3.24.7</parent>
      <children_list />
    </ci_definition>
  </children_list>
</ci_definition>
</children_list>
Get CI Metric

This call returns an individual CI metric for a given metric_id. This call is not limited to definitions delivered by components belonging to the account of an account user.

URL
/cli/metrics/{metric_id}

Method
GET

Returns

- 200 OK – CIMetric structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

```
GET /rest/ci/metrics/M031B035E62A457DA2F674DD723D926F3 HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
   "metric_id":"M031B035E62A457DA2F674DD723D926F3",
   "ci_id":"C4FDD4CE43A2F891815F7129E195ACBC1",
   "metric_type":"1.5:1"
}
```
XML

Sample Request

GET /rest/ci/metrics/M031B035E62A457DA2F674DD723D926F3 HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<ci_metric>
  <metric_id>M031B035E62A457DA2F674DD723D926F3</metric_id>
  <ci_id>C4FDD4CE43A2F891815F7129E195ACBC1</ci_id>
  <metric_type>1.5:1</metric_type>
</ci_metric>

Get CI Metric Definitions (All)

This call returns all CI metric definitions. This call is not limited to definitions delivered by components belonging to the account of an account user.

URL

/ci/metricdefinitions/

Method

GET

Returns

- 200 OK – CIDefinitionList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON
Sample Request

GET /rest/ci/metricdefinitions/ HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
  "ci_metric_definition": [
    {
      "metric_type": "1.1.2:1",
      "description": "% CPU Time",
      "unit_type": "User Defined",
      "ci_type": "1.1.2"
    },
    {
      "metric_type": "1.1.2:10",
      "description": "Total Mbytes",
      "unit_type": "User Defined",
      "ci_type": "1.1.2"
    },
    ...
  ]
}

XML

Sample Request

GET /rest/ci/metricdefinitions/ HTTP/1.1
Accept: application/xml

Sample Reply
Get CI Metric Definition (Single)

URL

`/ci/metricdefinitions/{metric_type}`

Method

GET

Returns

- 200 OK – CIDefinitionList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request
Sample Request

GET /rest/ci/metricdefinitions/1.10:21 HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "metric_type":"1.10:21",
   "description":"File Size In GB",
   "unit_type":"GB",
   "ci_type":"1.10"
}

XML

Sample Request

GET /rest/ci/metricdefinitions/1.10:21 HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<ci_metric_definition>
   <metric_type>1.10:21</metric_type>
   <description>File Size In GB</description>
   <unit_type>GB</unit_type>
   <ci_type>1.10</ci_type>
</ci_metric_definition>

Contact Calls

Contacts

- Create a New Contact
- Get a Contact
- Update a Contact
- Update a Contact's Password
- Delete a Contact (Single)
- Inputs for Liferay User Language
Create a New Contact

Notes:
- The accountId specified in the request xml/json must be the id of a valid account. If it is not, you will get a foreign key constraint error.
- When creating an UMP user contact an ACL must be provided.

URL
/contacts

Method
POST

Input
- Contact structure

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Account Administration
- Web Service

JSON

Sample Request
Sample Request

```
POST /rest/contacts HTTP/1.1
Accept: application/json
Content-Type: application/json
{
    "accountId":"41",
    "contactId":"0",
    "email":chris@lala.com,
    "firstName":"Testfirstname",
    "language":"English",
    "lastName": "Testlastname",
    "loginName": "testcontact",
    "password": "lalala",
    "acl": "testAcl"
}
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "accountId": "41",
    "contactId": "18",
    "creationDate": "2011-11-22T13:51:41.840+01:00",
    "email":chris@lala.com,
    "firstName": "Testfirstname",
    "language": "English",
    "lastName": "Testlastname",
    "loginName": "testcontact",
    "password": "osfPlF9dQcjJkJ66HmL8pg==",
    "acl": "testAcl"
}
```
POST /rest/contacts HTTP/1.1
Accept: application/xml
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
   <accountId>21</accountId>
   <email>chris@lala.com</email>
   <firstName>Testfirstname</firstName>
   <language>English</language>
   <lastName>Testlastname</lastName>
   <loginName>testcontact</loginName>
   <password>lalala</password>
   <acl>testAcl</acl>
</contact>

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
   <accountId>21</accountId>
   <contactId>8</contactId>
   <creationDate>2011-11-03T15:47:29.703+01:00</creationDate>
   <email>chris@lala.com</email>
   <firstName>Testfirstname</firstName>
   <language>English</language>
   <lastName>Testlastname</lastName>
   <loginName>testcontact</loginName>
   <password>osfP1F9dQcjJkJ66HmL8pg==</password>
   <acl>testAcl</acl>
</contact>

Get a Contact

URL

/contacts/(contact_id)

Method

GET

Returns
Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

**Sample Request**

```bash
GET /rest/contacts/5 HTTP/1.1
Accept: application/json
```

**Sample Reply**

```plaintext
HTTP/1.1 200 OK
Content-Type: application/json
{
    "accountId":"3",
    "acl":"Administrator",
    "contactId":"5",
    "creationDate":"2011-10-28T16:45:18+02:00",
    "department":"
    "description":",
    "email":",
    "firstName":",
    "language":",
    "lastName":",
    "loginName": "contactadmin",
    "mobile":",
    "password": "a9Ki6Vu+O6S56vAZHXK95Q==",
    "phone":",
    "title":"
}
```

XML

**Sample Request**

```bash
GET /rest/contacts/5 HTTP/1.1
Accept: application/xml
```
<xml version="1.0" encoding="UTF-8" standalone="yes">
  <contact>
    <accountId>3</accountId>
    <acl>Administrator</acl>
    <contactId>5</contactId>
    <creationDate>2011-10-28T16:45:18+02:00</creationDate>
    <department></department>
    <description></description>
    <email></email>
    <firstName></firstName>
    <language></language>
    <lastName></lastName>
    <loginName>contactadmin</loginName>
    <mobile></mobile>
    <password>a9Ki6Vu+O6S56vAZHXK95Q==</password>
    <phone></phone>
    <title></title>
  </contact>
</xml>

Note: The language field is only included if the user's language is set.

Update a Contact

Note: Specifying one or more origins when updating an Account does not replace the existing origins. It only adds additional origins. Use the "Remove Origin from Account" call to remove origins. Empty tags (<origin></origin>), tags with white space (<origin>
</origin>), and duplicate origins are ignored.

URL

/accounts/{account_id}

Method

PUT

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Account administration
- Web service

JSON

Sample Request

```plaintext
PUT /rest/accounts/8 HTTP/1.1
Content-Type: application/json
{
    "accountId": "8",
    "address": "Teststreet 42",
    "city": "Testcity",
    "country": "TestCountry",
    "description": "Test Description",
    "fax": "Test Fax no 4711",
    "name": "REST Services Test Account",
    "origin": "primaryhub",
    "phone": "Test phone 0815",
    "postalCode": "123456",
    "state": "Teststate",
    "webSite": "www.testrest.com"
}
```

Sample Reply

```plaintext
HTTP/1.1 204 No Content
```

XML

Sample Request
PUT /rest/accounts/8 HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<account>
    <accountId>8</accountId>
    <address>Teststreet 42</address>
    <city>Testcity</city>
    <country>TestCountry</country>
    <description>Test Description</description>
    <fax>Test Fax no 4711</fax>
    <name>REST Services Test Account</name>
    <origin>primaryhub</origin>
    <phone>Test phone 0815</phone>
    <postalCode>123456</postalCode>
    <state>Teststate</state>
    <website>www.testrest.com</website>
</account>

Sample Reply

HTTP/1.1 204 No Content

Update a Contact’s Password

URL

/contacts/{contact_id}/password

Method

- PUT

Input

- ContactDocument with new clear text password

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users
Required Permissions

- Account Administration - only required for bus users and account contact users that are not equal to the modified contact.
- Web Service

XML

Sample Request

```
PUT /rest/contacts/13 HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<contact>
    <accountId>26</accountId>
    <contactId>13</contactId>
    <creationDate>2011-11-03T16:28:48.860+01:00</creationDate>
    <email>chris@lala.com</email>
    <firstName>Testfirstname</firstName>
    <language>English</language>
    <lastName>Testmodifiedlastname</lastName>
    <loginName>testcontact</loginName>
</contact>
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Delete a Contact (Single)

URL

/contacts/{contact_id}

Method

DELETE

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions
Sample Request

DELETE /rest/contacts/8 HTTP/1.1

Sample Reply

HTTP/1.1 204 No Content

Inputs for Liferay User Language

<table>
<thead>
<tr>
<th>Language</th>
<th>Code</th>
<th>Variant</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>en</td>
<td>en-US</td>
</tr>
<tr>
<td>German</td>
<td>de</td>
<td>de-DE</td>
</tr>
<tr>
<td>Spanish</td>
<td>es</td>
<td>es-ES</td>
</tr>
<tr>
<td>Japanese</td>
<td>ja</td>
<td>ja-JP</td>
</tr>
<tr>
<td>Korean</td>
<td>ko</td>
<td>ko-KR</td>
</tr>
<tr>
<td>Portuguese</td>
<td>pt</td>
<td>pt-BR</td>
</tr>
<tr>
<td>Chinese</td>
<td>zh</td>
<td>zh-CN</td>
</tr>
</tbody>
</table>

Custom Property Calls

Content

- Add Custom Properties
- Get Custom Properties
- Update Custom Properties (Replace Existing Properties)
- Delete a Probe Configuration Value (Single)
- Delete Custom Properties (Multiple)
- Delete Custom Property Values (Multiple)

Add Custom Properties

This call adds custom properties to the specified computer system.

URL

custom_properties/{domain}/{hub}/{robot}/add/{cs_id}/{property_key}

Method

POST

Inputs

- List of property values
Returns

- 204 - No Content
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
POST
/rest/custom_properties/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add/2/Origin HTTP/1.1
Content-Type: application/json

{ "value":[" CustomerA "," CustomerB "," CustomerC "]}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```
POST
/rest/custom_properties/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add/2/Origin HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<values_list>
    <value>CustomerA</value>
    <value>CustomerB</value>
    <value>CustomerC</value>
</values_list>
```

Sample Reply
Get Custom Properties

This call returns the values for the specified custom property.

URL

custom_properties/(domain)/(hub)/(robot)/get/(cs_id)/(property_key)

Method

GET

Returns

- 200 - OK, Property List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

GET
/rest/custom_properties/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/get/2/Origin HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
    "value": ["CustomerA", "CustomerB", "CustomerC"]
}

XML
Update Custom Properties (Replace Existing Properties)

This call adds custom properties to the specified computer system, replacing any existing properties.

URL

custom_properties/{domain}/{hub}/{robot}/replace/{cs_id}/{property_key}

Method

POST

Input

- List of property values.

Returns

- 204 - No Content
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service
Delete a Probe Configuration Value (Single)

**URL**
/probe/config/{domain}/{hub}/{robot}/{probe}/{section+key}

**Method**
DELETE
Returns

- 204 OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

Sample Request

```
DELETE /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config/setup/resttest
HTTP/1.1
```

Sample Reply

```
HTTP/1.1 204 No Content
Server: Apache-Coyote/1.1
```

Delete Custom Properties (Multiple)

URL

custom_properties/{domain}/{hub}/{robot}/remove/{cs_id}/{property_key}

Method

PUT

Input

- List of property values

Returns

- 204 - No Content
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Account Administration
Delete Custom Property Values (Multiple)

This call Deletes the specified values from the specified custom property. If the specified value is the only value, the property is Deleted. Otherwise, other values remain.

URL
custom_properties/(domain)/(hub)/(robot)/Delete/(cs_id)/(property_key)

Method
PUT

Input
- List of property values

Returns
- 204 - No Content
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Account Administration
- Web Service

JSON

Sample Request

```json
PUT
/rest/custom_properties/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc/Delete/2/Origin HTTP/1.1
Content-Type: application/json
{
"value": ["CustomerA","CustomerB","CustomerC"
]
}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request
PUT
/rest/custom_properties/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc/Delete/2/Origin HTTP/1.1
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<values_list>
  <value>CustomerA</value>
  <value>CustomerB</value>
  <value>CustomerC</value>
</values_list>

Sample Reply
HTTP/1.1 204 No Content

Dashboard Calls
Contents
- Get Dashboards
- Get Dashboard State

Get Dashboards

URL
/dashboards

Method
GET

Returns
- 200 OK – DashboardList structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Web Service

JSON

Sample Request
GET /dashboards HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
{
   "dashboard": [
      "Example",
      "MSP-ISP"
   ]
}

XML

Sample Request

GET /dashboards HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<dashboards>
   <dashboard>Example</dashboard>
   <dashboard>MSP-ISP</dashboard>
</dashboards>

Get Dashboard State

URL
/dashboards/{dashboard-name}/state

Method
GET

Returns
Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

**Sample Request**

```
GET /rest/dashboards/Example/state HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/json
2
```

XML

**Sample Request**

```
GET /rest/dashboards/Example/state HTTP/1.1
Accept: application/xml
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/xml
2
```

Group Resource Calls

The calls in this article let you view, create, edit, or delete the groups of computer systems displayed in the USM portlet.

Only bus users with the ACL permissions *USM Group Modification* and *Web Service* can issue Group Resource calls.
Get Groups

URL

group/groups

Method

GET

>Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized

JSON

Sample Response
{"group": [
{
    "groupType": "0",
    "groupId": "1",
    "parentGroupId": "0",
    "groupName": "Operating Systems",
    "desc": "",
    "descToken": "",
    "priority": "0",
    "lastUpdate": "2014-06-19T00:00:00-06:00",
    "active": "1"
},
{
    "groupType": "2",
    "groupId": "2",
    "parentGroupId": "1",
    "groupName": "Windows",
    "desc": "",
    "descToken": "",
    "priority": "0",
    "lastUpdate": "2016-01-21T00:00:00-07:00",
    "active": "1"
}]
}
Get a Group by ID

URL

group/{group_id}

Method

GET

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

JSON

Sample Request
Get a Group by Name

**URL**

`/{group_name}/exists`

**Method**
GET

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found
- 409 Resource Conflict (if the ACL already exists)

JSON

Sample Request

```json
{
   "group": {
      "groupType": "2",
      "groupId": "2",
      "parentGroupId": "1",
      "groupName": "Windows",
      "desc": "",
      "descToken": "",
      "priority": "0",
      "lastUpdate": "2015-12-17T00:00:00-07:00",
      "active": "1"
   }
}
```

XML

Sample Request

```xml
GET /rest/group/Windows/exists

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<grouplist>
   <group>
      <groupType>2</groupType>
      <groupId>2</groupId>
      <parentGroupId>1</parentGroupId>
      <groupName>Windows</groupName>
      <desc/>
      <descToken/>
      <priority>0</priority>
      <lastUpdate>2015-12-17T00:00:00-07:00</lastUpdate>
      <active>1</active>
   </group>
</grouplist>
```
Create a Static Group

URL

group

Method

POST

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 409 Resource Conflict

JSON

Sample Request

```json
/group POST
{
    "groupType": "0",
    "parentGroupId": "0",
    "groupName": "Capitol",
    "desc": "Washington DC",
}
```

XML

Sample Request

```xml
<group>
   <groupType>0</groupType>
   <parentGroupId>0</parentGroupId>
   <groupName>Capitol</groupName>
   <desc>Capitol</desc>
</group>
```

Update a Static Group

URL

group

Method

PUT
Returns

- 200 OK - GroupList structure XML/JSON
- 400 Bad Request
- 401 Unauthorized
- 500 Group Not Found

JSON

**Sample Request**

```
/group POST
{
    "groupType": "0",
    "parentGroupId": "1",
    "groupName": "New York",
    "desc": "Empire State",
}
```

XML

**Sample Request**

```
<group>
    <groupType>0</groupType>
    <parentGroupId>0</parentGroupId>
    <groupName>New York</groupName>
    <desc>Empire State</desc>
</group>
```

Delete a Group

**URL**

```
/group/{group_id}
```

**Method**

DELETE

Returns

- 200 OK
- 401 Unauthorized
- 500 Internal Server Error

Get Groups by Parent

**URL**
group/groupsByParent/{parent_id}

Method
GET

Returns
- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Get Groups by Computer System IP

URL
`group/{ip}/groupsByIp`

Method
GET

Returns
- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Get Groups by Computer System Name

URL
`group/{name}/groupsByCsName`

Method
GET

Returns
- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found

Add Group Members

This call adds computer systems to the group specified.

URL
`group/members/{group_id}`

Method
POST
Returns

- 200 OK
- 401 Unauthorized
- 500 Internal Server Conflict

JSON

Sample Request

```
/group/members/{groupId} POST
{"cs":[1,15]}
```

XML

Sample Request

```
<cs-list>
  <cs>1</cs>
  <cs>15</cs>
</cs-list>
```

Get Group Members

This call returns a list of computer systems that belong to the group specified.

URL

group/members/{group_id}

Method

GET

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 404 Not Found
- 500 Internal Server Conflict

JSON

Sample Request
{
    "groupmember": [
        {
            "csId": "1",
            "csName": "qa-nms",
            "csIp": "10.238.1.3",
            "groupId": "2"
        },
        {
            "csId": "4",
            "csName": "PERFW2K8-5",
            "csIp": "172.19.8.24",
            "groupId": "2"
        },
        {
            "csId": "7",
            "csName": "hyperv1",
            "csIp": "138.42.136.22",
            "groupId": "2"
        }
    ]
}
DELETE Group Members

This call deletes the computer systems that you specify, but does not delete the group.

URL

group/members/{group_id}

Method

DELETE

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 500 Internal Server Conflict
Delete All Group Members

This call deletes all of the computer systems belonging to the group you specify, but the group is not deleted.

URL
group/members/{groupId}/all

Method
DELETE

Returns
- 200 OK
- 401 Unauthorized
- 500 Internal Server Conflict

Add a Group Account

This call lets you associate an account with a group.

In the USM portlet, you can only associate one account with a group. This call returns an exception if you try to associate multiple accounts with a group.

URL
group/accounts/{group_id}

Method
POST

Returns
Get a Group Account

This call returns the account associated with the group specified.

URL

group/accounts/{group_id}

Method

GET

Returns

- 200 OK - GroupList structure XML/JSON
- 401 Unauthorized
- 500 Internal Server Conflict

JSON

Sample Response

```json
{
    "groupAccount": [
        "1"
    ]
}
```
XML

Sample Response

```xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<groupAccountList>
    <groupAccount>1</groupAccount>
</groupAccountList>
```

Delete a Group Account

URL

group/accounts/{group_id}/{account_id}

Method

DELETE

Returns

- 200 OK
- 401 Unauthorized
- 500 Internal Server Conflict

Delete All Group Accounts

URL

group/accounts/{group_id}/all

Method

DELETE

Returns

- 200 OK
- 401 Unauthorized
- 500 Internal Server Conflict

Maintenance Calls

Contents

- Add Computer Systems to a Schedule
- Create a Duration for an Active Maintenance Window
- Create a Schedule
- Get Historical Maintenance Windows
- Get the Next Fire Time for Schedules
- Update a Maintenance Schedule (Add a New Duration for an Active Window)
- Update a Maintenance Schedule (Stop Maintenance)
- Update a Schedule
Add Computer Systems to a Schedule

URL

/maintenance_mode/{domain}/{hub}/{robot}/add_computer_systems_to_schedule/{schedule_id}

Method

POST

Inputs

- ComputerSystemList structure containing ComputerSystemIds

Returns

- 204 No Content - OK
- Error Message
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

JSON

Sample Request

```plaintext
POST
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add_computer_systems_to_schedule/8 HTTP/1.1
Content-Type: application/json
{
   "cs": ["1","2","3"]
}
```

Sample Reply

```plaintext
HTTP/1.1 204 No Content
```
Sample Request

```
POST /rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add_computer_systems_to_schedule/8 HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<cs-list>
    <cs>1</cs>
    <cs>2</cs>
    <cs>3</cs>
</cs-list>
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Create a Duration for an Active Maintenance Window

**URL**
/maintenance_mode/{domain}/{hub}/{robot}/add_computer_systems_to_active_window/{schedule_id}

**Method**
POST

**Inputs**
- ComputerSystemList structure containing Computer System IDs

**Returns**
- 204 No Content - OK
- Error Message
- 401 Unauthorized
- 404 Not Found

**Valid Users**
- Bus users

**Required Permissions**
- Basic Management
- Web Service

**JSON**
Sample Request

```
POST
rest/maintenance_mode/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc
/add_computer_systems_to_active_window/7 HTTP/1.1
Content-Type: application/json
{
    "cs":["1","2","3"]
}
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```
POST
rest/maintenance_mode/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc
/add_computer_systems_to_active_window/7 HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<cs-list>
    <cs>7</cs>
    <cs>12</cs>
</cs-list>
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Create a Schedule

**URL**

/maintenance_mode/(domain)/(hub)/(robot)/add_schedule

**Method**

POST

**Inputs**
• Schedule Structure

Returns

• 200 OK & Schedule Id XML/JSON
• Error Message
• 401 Unauthorized
• 404 Not Found

Valid Users

• Bus users

Required Permissions

• Basic Management
• Web Service

JSON

Sample Request

```
POST /rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add_schedule HTTP/1.1
Content-Type: application/json
Accept: application/json

{
    "name": "Test Sched A",
    "description": "Test schedule for Maintenance Mode REST API.",
    "start_date_time": {
        "month": "2",
        "day": "28",
        "year": "2014",
        "timestamp": {
            "hours": "15",
            "minutes": "30",
            "seconds": "22"
        }
    },
    "end_time": {
        "type": "duration",
        "end_date_time": {
            "month": "",
            "day": "",
            "year": "",
            "timestamp": {
                "hours": "",
                "minutes": "",
                "seconds": ""
            }
        },
        "duration": {
            "hours": "24",
```
"minutes": "",
"seconds": ""
},

"account_id": "2",
"recurrence_pattern": "3",
"recurrence_period": "Monthly",
"recurrence_days_of_the_week": "",
"recurrence_day_of_the_month": "15",
"recurrence_instance": "",
"recurrence_end_date_time": {
   "month": "2",
   "day": "14",
   "year": "2015",
   "timestamp": {
      "hours": "16",
      "minutes": "30",
      "seconds": "22"
   }
}

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
{
   "schedule_id": "68"
}

XML

Sample Request

POST /rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add_schedule HTTP/1.1
Content-Type: application/xml
Accept: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<schedule>
    <name>Test Sched A</name>
    <description>Test schedule for Maintenance Mode REST API.</description>
    <start_date_time>
        <month>2</month>
        <day>14</day>
        <year>2014</year>
        <timestamp>
            <hours>15</hours>
            <minutes>30</minutes>
            <seconds>22</seconds>
        </timestamp>
    </start_date_time>
    <end_time>
        <type>duration</type>
        <end_date_time>
            <month></month>
            <day></day>
            <year></year>
            <timestamp>
                <hours></hours>
                <minutes></minutes>
                <seconds></seconds>
            </timestamp>
        </end_date_time>
    </end_time>
</schedule>
<minutes></minutes>
<seconds></seconds>
</duration>
<account_id>2</account_id>
<recurrence_pattern>Monthly</recurrence_pattern>
<recurrence_period>1</recurrence_period>
<recurrence_days_of_the_week></recurrence_days_of_the_week>
<recurrence_day_of_the_month>15</recurrence_day_of_the_month>
<recurrence_instance></recurrence_instance>
<recurrence_end_date_time>
  <month>2</month>
  <day>14</day>
  <year>2015</year>
  <timestamp>
    <hours>16</hours>
    <minutes>30</minutes>
    <seconds>22</seconds>
  </timestamp>
</recurrence_end_date_time>
Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<schedule>
  <scheduleId>8</scheduleId>
</schedule>

Get Historical Maintenance Windows

URL

/maintenance_mode/{domain}/{hub}/{robot}/get_historical_maintenance_windows/{from}/{to}/{device_id}/{timezone}

Method

GET

Inputs

- **from** - A date in the format yyyyddMMHHmm (For example, 201114071200 is 2011, 14, 07, 12, 00 or July 14, 2011 12pm)
- **to** - A date in the format yyyyddMMHHmm (e.g. 201111100938)
- **device_id** - The device id (for example, D387491CA4847AA722EBF4DA4A4B3C222) or null. If null is given to indicate no device id, all historical maintenance windows from the start to the end are returned.
- **timezone** - The timezone the maintenance window start and end date-times will be displayed in.

Returns

- 204 No Content (=OK)
- 401 Unauthorized
- Error Message
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

JSON

Sample Request
GET
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/get_historical_maintenance_windows/
201414020000/201428020000/D387491CA4847AA722EBF4DA4A4B3C222/Asia/Tokyo
HTTP/1.1
Accept: application/json

Sample Reply

Content-Type: application/json
{
  "maintenance_window": [
    {
      "start_date_time": "02/25/2014 09:32:45",
      "end_date_time": "02/27/2014 09:32:45"
    },
    {
      "start_date_time": "02/25/2014 09:32:46",
      "end_date_time": "02/25/2014 17:30:00"
    },
    {
      "start_date_time": "02/25/2014 09:32:46",
      "end_date_time": "02/25/2014 16:30:00"
    },
    ...
    {
      "start_date_time": "02/26/2014 10:30:00",
      "end_date_time": "02/26/2014 11:00:00"
    }
  ]
}

XML

Sample Request

GET
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/get_historical_maintenance_windows/
201414020000/201428020000/D387491CA4847AA722EBF4DA4A4B3C222/Asia/Tokyo
HTTP/1.1
Accept: application/xml

Sample Reply
Get the Next Fire Time for Schedules

Note: utc_next_fire_time is the date representation of the millisecond offset from the Unix epoch inserted into the database.

URL
/maintenance_mode/{domain}/{hub}/{robot}/get_next_fire_time_for_schedules?timezone=America/Denver

Method
GET

Inputs

- (optional) timezone - You can specify a timezone to display schedule next fire times in. If no timezone is specified, the timezone of the server on which the wasp probe is running will be used.

Returns

- 204 No Content (=OK)
- 401 Unauthorized
- Error Message
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

JSON
Sample Request

```plaintext
GET
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/get_next_fire_time_for_schedules?timezone=Australia/Lindeman HTTP/1.1
Accept: application/json
```

Sample Reply

```json
Content-Type: application/json
{
  "fire_time": [
    {
      "schedule_id": "45",
      "next_fire_time": "03/04/2014 14:00:10",
    },
    {
      "schedule_id": "49",
      "next_fire_time": "03/06/2014 10:30:00",
    },
    {
      "schedule_id": "122",
      "next_fire_time": "03/14/2014 16:30:22"
    }
  ]
}
```

Sample Request

```plaintext
GET
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/get_next_fire_time_for_schedules?timezone=Australia/Lindeman HTTP/1.1
Accept: application/xml
```

Sample Reply

```xml
<fire_time>
  <schedule id="45">
    <next_fire_time>03/04/2014 14:00:10</next_fire_time>
  </schedule>
  <schedule id="49">
    <next_fire_time>03/06/2014 10:30:00</next_fire_time>
  </schedule>
  <schedule id="122">
    <next_fire_time>03/14/2014 16:30:22</next_fire_time>
  </schedule>
</fire_time>
```
Update a Maintenance Schedule (Add a New Duration for an Active Window)

URL
/maintenance_mode/{domain}/{hub}/{robot}/new_duration_for_active_window/{schedule_id}/{duration_in_minutes}

Method
PUT

Inputs
- String schedule_id - The ID for the schedule you want to add a new duration to.
- String duration_in_minutes - The duration on the active window in minutes.

Returns
- 204 No Content - OK
- 401 Unauthorized
- Error Message

Valid Users
- Bus users

Required Permissions
- Basic Management
- Web Service

Sample Request
Update a Maintenance Schedule (Stop Maintenance)

URL

/maintenance_mode/{domain}/{hub}/{robot}/stop_maintenance/{schedule_id}

Method

PUT

Input

• ComputerSystemList structure containing ComputerSystemIds

Returns

• 204 No Content - OK
• 401 Unauthorized
• 404 Not Found

Valid Users

• Bus users

Required Permissions

• Basic Management
• Web Service

JSON

Sample Request

POST
/rest/probe/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/maintenance_mode/delete_schedule/6 HTTP/1.1
Content-Type: application/json
{
    "cs": ["7", "12"]
}

Sample Reply
HTTP/1.1 204 No Content

XML

Sample Request

```xml
PUT
/rest/probe/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/maintenan
ce_mode/delete_schedule/6 HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<cs-list>
  <cs>7</cs>
  <cs>12</cs>
</cs-list>
```

Sample Reply

HTTP/1.1 204 No Content

Update a Schedule

URL

`/maintenance_mode/{domain}/{hub}/{robot}/modify_schedule/{schedule_id}`

Method

PUT

Input

- Schedule Structure

Returns

- 200 OK & Schedule Id XML/JSON
- Error Message
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Basic Management
- Web Service

JSON

Sample Request

```
PUT
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/add_schedule HTTP/1.1
Content-Type: application/json
Accept: application/json

{
    "name": "Test Sched A",
    "description": "Test schedule for Maintenance Mode REST API."
    "start_date_time": {
        "month": "2",
        "day": "28",
        "year": "2014",
        "timestamp": {
            "hours": "15",
            "minutes": "30",
            "seconds": "22"
        }
    },
    "end_time": {
        "type": "duration",
        "end_date_time": {
            "month": "",
            "day": "",
            "year": "",
            "timestamp": {
                "hours": "",
                "minutes": "",
                "seconds": ""
            }
        },
        "duration": {
            "hours": "24",
            "minutes": "",
            "seconds": ""
        }
    },
    "account_id": "2",
    "recurrence_pattern": "Monthly",
    "recurrence_period": "1",
    "recurrence_days_of_the_week": "",
    "recurrence_day_of_the_month": "15",
    "recurrence_instance": "",
    "recurrence_end_date_time": {
        "month": "2",
        "day": "",
        "year": "",
        "timestamp": {
            "hours": "",
            "minutes": "",
            "seconds": ""
        }
    }
}
```
"day": "14",
"year": "2015",
"timestamp": {
    "hours": "16",
    "minutes": "30",
    "seconds": "22"
}
Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
{
  "schedule_id": "68"
}

XML

Sample Request

PUT
/rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/modify_schedule/8 HTTP/1.1
Content-Type: application/xml
Accept: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<schedule>
  <name>Test Sched A</name>
  <description>Test schedule for Maintenance Mode REST API.</description>
  <start_date_time>
    <month>2</month>
    <day>14</day>
    <year>2014</year>
    <timestamp>
      <hours>15</hours>
      <minutes>30</minutes>
      <seconds>22</seconds>
    </timestamp>
  </start_date_time>
  <end_time>
    <type>duration</type>
    <end_date_time>
      <month></month>
      <day></day>
      <year></year>
      <timestamp>
        <hours></hours>
        <minutes></minutes>
        <seconds></seconds>
      </timestamp>
    </end_date_time>
  </end_time>
  <duration>
    <duration>
<hours>24</hours>
<minutes></minutes>
<seconds></seconds>
</duration>
</end_time>
<account_id>2</account_id>
<recurrence_pattern>Monthly</recurrence_pattern>
<recurrence_period>1</recurrence_period>
<recurrence_days_of_the_week>Tuesday</recurrence_days_of_the_week>
<recurrence_day_of_the_month>15</recurrence_day_of_the_month>
<recurrence_instance>2</recurrence_instance>
<recurrence_end_date_time>
  <month>2</month>
  <day>14</day>
  <year>2014</year>
  <timestamp>
    <hours>16</hours>
    <minutes>30</minutes>
    <seconds>22</seconds>
  </timestamp>
</recurrence_end_date_time>
Delete Computer Systems from a Maintenance Schedule

URL
/maintenance_mode/{domain}/{hub}/{robot}/remove_computer_systems_from_schedule/{schedule_id}

Method
POST

Inputs
- ComputerSystemList structure containing Computer System IDs

Returns
- 204 No Content - OK
- Error Message
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Basic Management
- Web Service

JSON

Sample Request
POST
/rest/maintenance_mode/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc/remove_computer_systems_from_schedule/8 HTTP/1.1
Content-Type: application/json
{
   "cs":["1","2","3"]
}

Sample Reply

HTTP/1.1 204 No Content

XML

Sample Request

POST
/rest/maintenance_mode/w2k8r2-x64-lc_domain/w2k8r2-x64-lc_hub/w2k8r2-x64-lc/remove_computer_systems_from_schedule/6 HTTP/1.1
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<cs-list>
   <cs>1</cs>
   <cs>2</cs>
   <cs>3</cs>
</cs-list>

Sample Reply

HTTP/1.1 204 No Content

Delete a Schedule

URL
/maintenance_mode/{domain}/{hub}/{robot}/delete_schedule/{schedule_id}

Method
DELETE

Returns

- 204 No Content - OK
- 401 Unauthorized
Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

Sample Request

```
DELETE
rest/maintenance_mode/w2k8r2-x64-1c_domain/w2k8r2-x64-1c_hub/w2k8r2-x64-1c/delect_schedule/6 HTTP/1.1
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Inputs for Maintenance Schedule Calls

The minimum required inputs to add a schedule for maintenance mode are the schedule start date/time and end date/time or duration.

The add_schedule inputs are as follows:

- **name** – A name to help identify the schedule.
- **description** – A description to help identify the purpose of the schedule.
- **start_date_time** – The day and time the maintenance period will start. Start date time must be greater than the current time. Enter integer values for month, day, and year. Optionally enter hours, minutes, and seconds.

For example, the following start_date_time represents February 14, 2014 at 12:00:00 am.

```
<start_date_time>
  <month>2</month>
  <day>14</day>
  <year>2014</year>
  <timestamp>
    <hours></hours>
    <minutes></minutes>
    <seconds></seconds>
  </timestamp>
</timezone>
```

The following start_date_time represents February 14, 2014 at 3:30:22 pm.
• **end_time** – The time the maintenance period will end. End time can be specified as a duration or as an end_date_time.
• **duration** – The amount of time in minutes the maintenance period will last. Enter *duration* in the *type* field. Enter integer values for hours, minutes, or seconds and the system will convert the duration to minutes. Seconds are rounded to the nearest minute. For example:

```xml
<end_time>
  <type>end_date_time</type>
  <end_date_time>
    <month></month>
    <day></day>
    <year></year>
    <timestamp>
      <hours></hours>
      <minutes></minutes>
      <seconds></seconds>
    </timestamp>
    <timezone></timezone>
  </end_date_time>
</end_time>
```

• **end_date_time** – The date and time the maintenance period will end. Enter *datetime* in the *type* field. Enter integer values for month, day, and year. Optionally enter hours, minutes, and seconds. For example:

```xml
<end_date_time>
  <type>end_date_time</type>
  <end_date_time>
    <month></month>
    <day></day>
    <year></year>
    <timestamp>
      <hours></hours>
      <minutes></minutes>
      <seconds></seconds>
    </timestamp>
    <timezone></timezone>
  </end_date_time>
  <duration>
    <hours>24</hours>
    <minutes>32</minutes>
    <seconds>56</seconds>
  </duration>
</end_date_time>
```
• account_id – The integer id of an account.
• recurrence_pattern – Leave blank for no recurrence. Enter daily, weekly, or monthly recurrence.
• recurrence_period – Integer that indicates how often the recurrence pattern will occur. For example, for recurrence_patterns of daily, weekly, or monthly; recurrence_period = 3 is every 3 days, 3 weeks, or 3 months respectively; recurrence_period = 1 is daily, weekly, monthly respectively. Required if recurrence_instance is entered.
• recurrence_days_of_the_week – Day of the week when recurrence will occur. If the schedule is weekly this can be a comma separated list for multiple days of the week. For example, “Tuesday,Thursday”.
• recurrence_day_of_the_month – Integer day of the month when recurrence will occur. For example, day 2 of every month.
• recurrence_instance – Only applicable for monthly recurrences. Valid values are 1,3,5 (1st, 3rd, 5th, or last). If this is used, recurrence_days_of_the_week should be specified as a single integer. For example, the following specifies a maintenance period on the 4th Sunday of every month:

  <recurrence_pattern>Monthly</recurrence_pattern>
  <recurrence_period>4</recurrence_period>
  <recurrence_days_of_the_week>Sunday</recurrence_days_of_the_week>
  <recurrence_day_of_the_month></recurrence_day_of_the_month>
  <recurrence_instance>4</recurrence_instance>

• recurrence_end_date_time – The date and time when recurrence will end.
• Timezone – The timezone for the schedule. Timezone must be one of the following:
  • Etc/GMT+12
  • Etc/GMT+11
  • Pacific/Midway
  • Pacific/Niue
  • Pacific/Pago_Pago
  • Pacific/Samoa
  • US/Samoa
  • America/Adak
  • America/Atka
  • Etc/GMT-10
  • HST
  • Pacific/Honolulu
  • Pacific/Johnston
  • Pacific/Rarotonga
  • Pacific/Tahiti
  • SystemV/HST10
  • US/Aleutian
• US/Hawaii
• Pacific/Marquesas
• AST
• America/Anchorage
• America/Juneau
• America/Nome
• America/Sitka
• America/Yakutat
• Etc/GMT+9
• Pacific/Gambier
• SystemV/YST9
• SystemV/YST9YDT
• US/Alaska
• America/Dawson
• America/Ensenada
• America/Los_Angeles
• America/Metlakatla
• America/Santa_Isabel
• America/Tijuana
• America/Vancouver
• America/Whitehorse
• Canada/Pacific
• Canada/Yukon
• Etc/GMT+8
• Mexico/BajaNorte
• PST
• PST8PDT
• Pacific/Pitcairn
• SystemV/PST8
• SystemV/PST8PDT
• US/Pacific
• US/Pacific-New
• America/Boise
• America/Cambridge_Bay
• America/Chihuahua
• America/Creston
• America/Dawson_Creek
• America/Denver
• America/Edmonton
• America/Hermosillo
• America/Inuvik
• America/Mazatlan
• America/Ojinaga
• America/Phoenix
• America/Shiprock
• America/Yellowknife
• Canada/Mountain
• Etc/GMT+7
• MST
• MST7MDT
• Mexico/BajaSur
• Navajo
• PNT
• SystemV/MST7
• SystemV/MST7MDT
• US/Arizona
• US/Mountain
• America/Bahia_Banderas
• America/Belize
• America/Cancun
• America/Chicago
• America/Costa_Rica
• America/El_Salvador
• America/Guatemala
• America/Indiana/Knox
• America/Indiana/Tell_City
• America/Knox_IN
• America/Managua
• America/Matamoros
• America/Menominee
• America/Merida
• America/Mexico_City
- UCT
- UTC
- Universal
- WET
- Zulu
- Africa/Algiers
- Africa/Bangui
- Africa/Brazzaville
- Africa/Beira
- Africa/Ceuta
- Africa/Douala
- Africa/kinshasa
- Africa/Lagos
- Africa/Libreville
- Africa/Luanda
- Africa/Malabo
- Africa/Ndjamena
- Africa/Niamey
- Africa/Porto-Novo
- Africa/Tunis
- Africa/Windhoek
- Arctic/Longyearbyen
- Atlantic/Jan_Mayen
- CET
- ECT
- Etc/GMT-1
- Europe/Amsterdam
- Europe/Andorra
- Europe/Belgrade
- Europe/Berlin
- Europe/Bratislava
- Europe/Brussels
- Europe/Budapest
- Europe/Copenhagen
- Europe/Gibraltar
- Europe/Ljubljana
- Europe/Luxembourg
- Europe/Madrid
- Europe/Malta
- Europe/Monaco
- Europe/Oslo
- Europe/Paris
- Europe/Podgorica
- Europe/Prague
- Europe/Rome
- Europe/San_Marino
- Europe/Sarajevo
- Europe/Skopje
- Europe/Stockholm
- Europe/Tirane
- Europe/Vaduz
- Europe/Vatican
- Europe/Vienna
- Europe/Warsaw
- Europe/Zagreb
- Europe/Zurich
- MET
- Poland
- ART
- Africa/Blantyre
- Africa/Bujumbura
- Africa/Cairo
- Africa/Gaborone
- Africa/Harare
- Africa/Johannesburg
- Africa/Kigali
- Africa/Lubumbashi
- Africa/Lusaka
- Africa/Malabo
- Africa/Maseru
- Africa/Mbabane
- Africa/Tripoli
- Asia/Amman
- Asia/Aqaba
- Asia/Ashgabat
- Asia/Ashkhabad
- Asia/Ashkhabad
- Asia/Ashkhabad
- Asia/Beirut
- Asia/Damascus
- Asia/Gaza
- Asia/Hebron
- Asia/Istanbul
- Asia/Jerusalem
- Asia/Nicosia
- Asia/Tel_Aviv
- CAT
- EET
- Egypt
- Etc/GMT-2
- Europe/Athens
- Europe/Bucharest
- Europe/Chisinau
- Europe/Helsinki
- Europe/Istanbul
- Europe/Kiev
- Europe/Mariehamn
- Europe/Nicosia
- Europe/Riga
- Europe/Simferopol
- Europe/Sofia
- Europe/Tallinn
- Europe/Tiraspol
- Europe/Uzhgorod
- Europe/Viinius
- Europe/Zaporozhye
- Israel
- Libya
- Turkey
- Africa/Addis_Ababa
- Africa/Asmara
- Africa/Asmera
- Africa/Dar_es_Salaam
- Africa/Djibouti
- Africa/Juba
- Africa/Kampala
- Africa/Khartoum
- Africa/Mogadishu
- Africa/Nairobi
- Antarctica/Syowa
- Asia/Aden
- Asia/Baghdad
- Asia/Bahrain
- Asia/Kuwait
- Asia/Qatar
- Asia/Riyadh
- EAT
- Etc/GMT-3
- Europe/Kaliningrad
- Europe/Minsk
- Indian/Antananarivo
- Indian/Comoro
- Indian/Mayotte
- Asia/Riyadh87
- Asia/Riyadh88
- Asia/Riyadh89
- Mideast/Riyadh87
- Mideast/Riyadh88
- Mideast/Riyadh89
- Asia/Tehran
- Iran
- Asia/Baku
- Asia/Dubai
- Asia/Muscat
- Asia/Tbilisi
- Asia/Yerevan
- Etc/GMT-4
- Europe/Moscow
- Europe/Samara
- Europe/Volgograd
• Etc/GMT-12
• Kwajalein
• NST
• NZ
• Pacific/Auckland
• Pacific/Fiji
• Pacific/Funafuti
• Pacific/Kwajalein
• Pacific/Majuro
• Pacific/Nauru
• Pacific/Tarawa
• Pacific/Wake
• Pacific/Wallis
• NZ-CHAT
• Pacific/Chatham
• Etc/GMT-13
• MIT
• Pacific/Apia
• Pacific/Enderbury
• Pacific/Fakaofo
• Pacific/Tongatapu
• Etc/GMT-14
• Pacific/Kirimiti

**Origin Calls**

**Contacts**

- Get Origins (All)
- Get Origins and Related Accounts (All)

---

**Get Origins (All)**

**URL**

`/origins`

**Method**

GET

**Returns**

- 200 OK - OriginList structure
- 401 Unauthorized

**Valid Users**

- Bus users

**Required Permissions**

- Account Administration
- Web Service

**JSON**

*Sample Request*
GET /rest/origins HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{"origin": ["customerA", "customerB", "primaryhub"]}

XML

Sample Request

GET /rest/origins HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<origins>
   <origin>customerA</origin>
   <origin>customerB</origin>
   <origin>primaryhub</origin>
</origins>

Get Origins and Related Accounts (All)

This call returns a list of all origins and a list of account ids that are associated with this origin.

URL

/origins/mapping

Method

GET

Returns

- 200 OK - OriginList structure
- 401 Unauthorized
Valid Users

- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
GET /rest/origins/mapping HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/xml

{"originmapping":
    [
        {"account":"0","name":"customerA"},
        {"account":"3","name":"customerB"},
        {"account":"3","name":"primaryhub"}
    ]
}
```

XML

Sample Request

```
GET /rest/origins/mapping HTTP/1.1
Accept: application/xml
```

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<originmappings>
    <originmapping>
        <account>0</account>
        <name>customerA</name>
    </originmapping>
    <originmapping>
        <account>3</account>
        <name>customerB</name>
    </originmapping>
    <originmapping>
        <account>3</account>
        <name>primaryhub</name>
    </originmapping>
</originmappings>

Probe Calls

Contents
- Get a Probe Configuration (Single)
- Get a Probe Configuration Value (Single)
- Get Probe Information
- Invoke Callback
- Invoke Callback2
- NimPds Schema
- Update Probe Configuration Values (Multiple)
- Update a Probe Configuration Value (Single)
- Update a Probe State (Activate/Deactivate)
- Delete a Probe Configuration (Single)

Get a Probe Configuration (Single)

URL
/probe/{domain}/{hub}/{robot}/{probe}/config

Method
GET

Returns
- 200 OK & XML/JSON PdsDocument List of Configuration Keys
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users
Required Permissions

- Basic Management
- Web Service

### JSON

#### Sample Request

```
GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Accept: application/json
```

#### Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "probeConfigKey": [
    {
      "key": "/disk/alarm/fixed/Q:\/delta_error/threshold",
      "value": "10"
    },
    {
      "key": "/memory/interval",
      "value": "5 min"
    },
    {
      "key": "/memory/qos_memory_paging",
      "value": "no"
    },
    {
      "key": "/memory/qos_memory_usage",
      "value": "no"
    },
    {
      "key": "/memory/samples",
      "value": "5"
    },
    ...
  ]
}
```

### XML

#### Sample Request

```
GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Accept: application/xml
```

#### Sample Reply

```xml
<Config>
  <probeConfigKey>
    <key>/disk/alarm/fixed/Q:\/delta_error/threshold</key>
    <value>10</value>
  </probeConfigKey>
  <key>/memory/interval</key>
  <value>5 min</value>
  <key>/memory/qos_memory_paging</key>
  <value>no</value>
  <key>/memory/qos_memory_usage</key>
  <value>no</value>
  <key>/memory/samples</key>
  <value>5</value>
  ...
</Config>
```
Get a Probe Configuration Value (Single)

URL
/probe/{domain}/{hub}/{robot}/{probe}/config/{section+key}

Method
GET

Returns
- 200 OK & Configuration value as String
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Basic Management
- Web Service

JSON

Sample Request
GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config/setup/resttest
HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
{
  "value":"ignoreme"
}

XML

Sample Request

GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config/setup/resttest
HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
<value>ignoreme</value>

Get Probe Information

This call returns information about a running probe.

URL
/probe/ {domain}/{hub}/{robot}/{probe}/info

Method
GET

Returns

- 200 OK & XML/JSON ProbeInfo Structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Basic Management
- Web Service

JSON

Sample Request

GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/info HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json

{
    "company":"Nimsoft Corporation",
    "connections":"51",
    "libDate":"Sep 17 2010",
    "libVersion":"5.12 (64bit)",
    "messages":"1",
    "name":"cdm",
    "restarted":"1970-01-01T01:00:00+01:00",
    "started":"1969-12-21T19:54:36.832+01:00",
    "version":"4.41"
}

XML

Sample Request

GET /rest/probe/chris-dev/primaryhub/nb-1538/cdm/info HTTP/1.1
Accept: application/xml

Sample Reply
HTTP/1.1 200 OK

Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<probeinfo>
  <company>Nimsoft Corporation</company>
  <connections>1</connections>
  <libDate>Sep 17 2010</libDate>
  <libVersion>5.12 (64bit)</libVersion>
  <messages>1</messages>
  <name>cdm</name>
  <restarted>1970-01-01T01:00:00+01:00</restarted>
  <started>1970-01-16T07:42:21.663+01:00</started>
  <version>4.41</version>
</probeinfo>

Invoke Callback

The following method allows for the invocation of any callback. These methods accepts and returns NimPds. The NimPds schema is provided below.

Note: The timeout parameter is denoted in milliseconds.

URL
/probe/{domain}/{hub}/{robot}/{probe}/callback/{callback}

Method
POST

Input
- CallbackRequest structure

Returns
- 200 OK & XML/JSON PdsDocument
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
Basic Management
Web Service

JSON

Sample Request

```
POST /rest/probe/chris-dev/primaryhub/nb-1538/controller/callback/get_info
HTTP/1.1
Accept: application/json
Content-Type: application/json
{
    "timeout":"5000",
    "parameters":{
        "name":"detail",
        "type":"int",
        "value":"1"
    }
}
```

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
{
    "entry": [
        {
            "@name": "robotname",
            "@datatype": "string",
            "value": {
                "@type": "xs:string",
                "$": "nb-1538"
            }
        },
        {
            "@name": "hubname",
            "@datatype": "string",
            "value": {
                "@type": "xs:string",
                "$": "primaryhub"
            }
        },
        {
            "@name": "os_description",
            "@datatype": "string",
            "value": {
                "@type": "xs:string",
                "$": "Service Pack 1 Build 7601"
            }
        },
        {
            "@name": "timezone_name",
            "@datatype": "string",
            "value": {
                "@type": "xs:string",
                "$": "Mitteleuropäische Zeit"
            }
        },
        {
            "@name": "access_0",
            "@datatype": "int",
            "value": {
                "@type": "xs:int",
                "$": "0"
            }
        }
    ]
}
Sample Request

POST /rest/probe/chris-dev/primaryhub/nb-1538/controller/callback/get_info
HTTP/1.1
Accept: application/xml
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<callbackrequest>
  <timeout>5000</timeout>
  <parameters>
    <name>detail</name>
    <type>int</type>
    <value>1</value>
  </parameters>
</callbackrequest>

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<pds>
  <entry name="robotname" datatype="string">
    <value>nb-1538</value>
  </entry>
  <entry name="hubname" datatype="string">
    <value>primaryhub</value>
  </entry>
  <entry name="os_description" datatype="string">
    <value>Build 7600</value>
  </entry>
  <entry name="timezone_name" datatype="string">
    <value>Mitteleuropäische Zeit</value>
  </entry>
  <entry name="access_0" datatype="int">
    <value>0</value>
  </entry>
  <entry name="workdir" datatype="string">
    <value>C:\Program Files (x86)\Nimsoft</value>
  </entry>
  <entry name="access_1" datatype="int">
    <value>1</value>
  </entry>
  ...
</pds>

Invoke Callback2
The following method allows for the invocation of any callback. These methods accepts and returns NimPds. The NimPds schema is provided below.

**URL**
/probe/{domain}/{hub}/{robot}/{probe}/callback2/{callback}

**Method**
POST

**Input**
- CallbackRequest structure

**Returns**
- 200 OK & XML/JSON PdsDocument
- 401 Unauthorized
- 404 Not Found

**Valid Users**
- Bus users

**Required Permissions**
- Basic Management
- Web Service

**JSON**

**Sample Request**

```
POST /rest/probe/chris-dev/primaryhub/nb-1538/controller/callback2/get_info HTTP/1.1
Accept: application/json
Content-Type: application/json

{
    "nimInt": { "@key":"detail","$":"0" } ,
    "nimInt": [ { "@key":"detail","$":"0" } , { "@key":"detail","$":"0" } ],
    "nimString": {"@key":"name","$":"value"},
    "nimString": [ { "@key":"name","$":"value2"},{"@key":"robot","$":"value3" } ]
}
```

**Sample Reply**

```
Note: The second instances of nimInt and nimString have square brackets added to designate an array.
```
HTTP/1.1 200 OK
Content-Type: application/json
{
    "nimInt": [
        {
            "@key": "ssl_mode",
            "$": "0"
        },
        {
            "@key": "connections",
            "$": "2271"
        },
        {
            "@key": "started",
            "$": "-16388"
        },
        {
            "@key": "messages",
            "$": "10"
        },
        {
            "@key": "restarted",
            "$": "0"
        }
    ],
    "nimString": [
        {
            "@key": "libdate",
            "$": "Jun 30 2011"
        },
        {
            "@key": "ssl_version",
            "$": "OpenSSL 1.0.0c 2 Dec 2010"
        },
        {
            "@key": "company",
            "$": "Nimsoft Corp"
        },
        {
            "@key": "name",
            "$": "hub"
        },
        {
            "@key": "libversion",
            "$": "5.24 (64bit)"
        },
        {
            "@key": "ssl_cipher",
            "$": "DEFAULT"
        },
        {
            "@key": "version",
            "$": "5.60 [Jun 30 2011]"
        }
    ]}
<string index="0">String in a table 11</string>
<string index="0">String in a table 12</string>
<string index="0">String in a table 13</string>
</nimStringTable>

<nimPds>
  <nimIntTable key="IntTable1">
    <int index="0">1</int>
    <int index="1">2</int>
    <int index="2">3</int>
  </nimIntTable>
</nimPds>

<nimPds>
  <nimIntTable key="IntTable1">
    <int index="0">1</int>
    <int index="1">2</int>
    <int index="2">3</int>
  </nimIntTable>
</nimPds>

<nimPds>
  <nimStringTable key="StringTable0">
    <string index="0">String in a table 11</string>
    <string index="0">String in a table 12</string>
    <string index="0">String in a table 13</string>
  </nimStringTable>
</nimPds>

<nimPds>
  <nimStringTable key="StringTable1">
    <string index="0">String in a table 11</string>
    <string index="0">String in a table 12</string>
    <string index="0">String in a table 13</string>
  </nimStringTable>
</nimPds>
Sample Reply

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<nimPds>
    <nimString key="connection_status">:: 1</nimString>
    <nimString key="loglevel">level%d :: 2</nimString>
    <nimString key="_command">detail%d :: 0</nimString>
    <nimString key="_debug">level%d,trunc_size%d,trunc_time%d,now%d :: 1</nimString>
    <nimString key="uptime">:: 1</nimString>
    <nimString key="disk_status">filesys,vgroup :: 1</nimString>
    <nimString key="_stop">:: 3</nimString>
    <nimString key="get_export">detail%d :: 1</nimString>
    <nimString key="memory_history">:: 1</nimString>
    <nimString key="get_info">:: 1</nimString>
    <nimString key="cpu_history">:: 1</nimString>
    <nimString key="cpu_status">id :: 1</nimString>
    <nimString key="cluster_info">:: 1</nimString>
    <nimString key="get_token">string :: 1</nimString>
    <nimString key="memory_status">:: 1</nimString>
    <nimString key="disk_history">vgroup :: 1</nimString>
    <nimString key="_status">detail%d :: 0</nimString>
    <nimString key="_restart">:: 3</nimString>
</nimPds>

NimPds Schema

<?xml version="1.0" encoding="utf-8"?>
<xs:schema xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    attributeFormDefault="unqualified"
    elementFormDefault="qualified"
    xmlns:xs="http://www.w3.org/2001/XMLSchema"
    xmlns:nim="http://nimsoft.com/2012/XML">
    <xs:element name="nimString">
        <xs:complexType>
            <xs:simpleContent>
                <xs:extension base="xs:string">
                    <xs:attribute name="key" type="xs:string" use="required" />
                </xs:extension>
            </xs:simpleContent>
        </xs:complexType>
    </xs:element>
</xs:schema>
<xs:complexType name="nimIntTable">
  <xs:sequence>
    <xs:element maxOccurs="unbounded" name="int">
      <xs:complexType>
        <xs:simpleContent>
          <xs:extension base="xs:long">\n            <xs:attribute name="index" type="xs:long" use="required" />
          </xs:extension>
        </xs:simpleContent>
      </xs:complexType>
    </xs:element>
    <xs:attribute name="key" type="xs:string" use="required" />
  </xs:sequence>
</xs:complexType>

<xs:element name="nimPdsTable">
  <xs:complexType>
    <xs:sequence>
      <xs:element maxOccurs="unbounded" ref="nimPds"/>
    </xs:sequence>
    <xs:attribute name="key" type="xs:string" use="required" />
  </xs:complexType>
</xs:element>

<xs:element name="nimPds">
  <xs:complexType>
    <xs:sequence>
      <xs:element maxOccurs="unbounded" ref="nimInt"/>
      <xs:element maxOccurs="unbounded" ref="nimDouble"/>
      <xs:element maxOccurs="unbounded" ref="nimInt64"/>
      <xs:element maxOccurs="unbounded" ref="nimString"/>
      <xs:element maxOccurs="unbounded" ref="nimCData"/>
      <xs:element maxOccurs="unbounded" ref="nimPdsTable"/>
      <xs:element maxOccurs="unbounded" ref="nimIntTable"/>
      <xs:element maxOccurs="unbounded" ref="nimStringTable"/>
      <xs:element maxOccurs="unbounded" ref="nimPds"/>
    </xs:sequence>
    <xs:attribute name="key" type="xs:string" use="optional" />
    <xs:attribute name="index" type="xs:long" use="optional" />
Update Probe Configuration Values (Multiple)

**Note:** You can supply an empty value parameter to delete configuration values.

**URL**
/probe/config/{domain}/{hub}/{robot}/{probe}/config

**Method**
PUT

**Input**
- ProbeConfigKeys structure

**Returns**
- 204 OK
- 401 Unauthorized
- 404 Not Found

**Valid Users**
- Bus users

**Required Permissions**
- Basic Management
- Web Service

**JSON**

Sample Request
PUT /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Accept: application/json
Content-Type: application/json
{
    "configkey":[
        {
            "key":"/setup/resttest",
            "value":"ignoreme"
        },
        {
            "key":"/setup/resttest2",
            "value":"ignoremetoo"
        }
    ]
}

Sample Reply

HTTP/1.1 204 No Content

XML

Sample Request

PUT /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Accept: application/xml
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<probeConfigKeys>
    <configkey>
        <key>/setup/resttest</key>
        <value>ignoreme</value>
    </configkey>
    <configkey>
        <key>/setup/resttest2</key>
        <value>ignoremetoo</value>
    </configkey>
</probeConfigKeys>

Sample Reply

HTTP/1.1 204 No Content
Update a Probe Configuration Value (Single)

URL
/probe/{domain}/(hub)/(robot)/(probe)/config

Method
PUT

Input
- ProbeConfigKey structure

Returns
- 204 OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Basic Management
- Web Service

JSON

Sample Request

```
PUT /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Content-Type: application/json
{
  "configkey": [
    {
      "key": "/setup/resttest",
      "value": "ignoreme"
    }
  ]
}
```

Sample Reply

```
HTTP/1.1 204 No Content
Server: Apache-Coyote/1.1
Date: Tue, 01 Nov 2011 10:01:14 GMT
```
Sample Request

```xml
PUT /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config HTTP/1.1
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<config>
  <configkey>
    <key>/setup/resttest</key>
    <value>ignoreme</value>
  </configkey>
</config>
```

Sample Reply

```
HTTP/1.1 204 No Content
Server: Apache-Coyote/1.1
Date: Tue, 01 Nov 2011 10:01:14 GMT
```

Update a Probe State (Activate/Deactivate)

URL

/probe/(domain)/(hub)/(robot)/(probe)/active|inactive

Method

POST

Returns

- 204 OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions

- Basic Management
- Web Service

Sample Request
POST /rest/probe/chris-dev/primaryhub/nb-1538/cdm/active
HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 204 No Content

Delete a Probe Configuration (Single)

URL
/probe/config /{domain}/(hub)/(robot)/(probe)/(section+key)

Method
Delete

Returns
- 204 OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Basic Management
- Web Service

JSON

Sample Request

DELETE /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config/setup/resttest
HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 204 No Content
Server: Apache-Coyote/1.1
Sample Request

DELETE /rest/probe/chris-dev/primaryhub/nb-1538/cdm/config/setup/resttest
HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 204 No Content
Server: Apache-Coyote/1.1

QoS Calls

Contents

- Get Historical QoS Data (Aggregated)
- Get Historical QoS Data (Using the Constraint ID)
- Get Historical QoS Data (Using the Metric ID)
- Get Historical QoS Data (Using the Table ID)
- Get QoS Data (Using the Constraint ID)
- Get QoS Data (Using the Metric ID)
- Get QoS Data (Using the Table ID)
- Get QoS Definitions (All)
- Get QoS Definition (Single Definition Using the QoS Name)
- Get Raw QoS Data
- Get Sources for QoS-Name
- Get Targets for QoS-Name and Source
- Get Targets for QoS-Name and Source for a Given Origin

Get Historical QoS Data (Aggregated)

This call returns “historical” QoS data. “Historical” data is aggregated data while “raw” data will return all data points that are stored for that combination of QoS Name, source and target.

URL

/qos/data/name/{qosname}/source/{source}/target/{from}/to/maxrows/historical

Method

GET

Inputs

- qosname - The name of a QoS definition (for example, QOS_CPU_USAGE).
- source - The name of a valid QoS source for that QoS definition.
- target - A valid target-value for the combination of QoS Name and Source.
- from - A date in the format yyyyddMMHHmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- to - A date in the format yyyyddMMHHmm (for example, 20111100938) or the keyword now which is resolved to the current date and time on the server.
- maxrows - the maximum number of datapoints to return (0 returns unlimited rows).

Returns
- 200 OK – QoS Data List
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Web Service

JSON

Sample Request

```
GET /rest/qos/data/name/QOS_CPU_USAGE/WIN-CXP6LPT7V6G/WIN-CXP6LPT7V6G/201101010000/20111111257/20/historical HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "data": [
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "54.65",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "75.13",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "92.49",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "85.23",
      "tableid": "1",
      "tz_offset": "-3600"
    }
  ]
}
```
XML

**Sample Request**

```plaintext
GET
/rest/qos/data/name/QOS_CPU_USAGE/WIN-CXP6LPT7V6G/WIN-CXP6LPT7V6G/20110101
0000/20111111257/20/historical HTTP/1.1
Accept: application/xml
```

**Sample Reply**

```plaintext
HTTP/1.1 200 OK

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>
```

Get Historical QoS Data (Using the Constraint ID)

**URL**

/qos/data /constraintid/{constraint_id}/{from}/{to}/{maxrows}/historical
Method
GET

Inputs
- **constraint_id** – A valid QoS constraint ID. You can retrieve a constraint_id using SLA/SLO calls.
- **from** – A date in the format yyyymmddHHmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** – A date in the format yyyymmddHHmm (for example, 201111090938) or the keyword **now** which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

Returns
- 200 OK – QoS Data List
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Web Service

JSON

**Sample Request**

```
GET /rest/qos/data/constraintid/14/201101010000/201111111257/20/historical
HTTP/1.1
Accept: application/json
```

**Sample Reply**
HTTP/1.1 200 OK
Content-Type: application/json
{
    "data": [
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "54.65",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "75.13",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "92.49",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "85.23",
            "tableid": "1",
            "tz_offset": "-3600"
        }
    ]
}
HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>

Get Historical QoS Data (Using the Metric ID)

URL
/qos/data/metricid/{ci_metric_id}/{from}/{to}/{maxrows}/historical

Method
GET

Inputs
- **ci_metric_id** – A valid Configuration Item Metric ID. This ID can be retrieved from alarms.
- **from** – A date in the format yyyyddMMHHmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** – A date in the format yyyyddMMHHmm (for example, 201111100938) or the keyword **now** which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

Returns
Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

```
GET
/rest/qos/data/metricid/MDF2DD98996F2EB3FCF3C60B4AC9A5FE5/201101010000/2011111257/20/historical HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
   "data": [
      {
         "sampletime": "2011-11-17T00:00:00+01:00",
         "samplevalue": "54.65",
         "tableid": "1",
         "tz_offset": "-3600"
      },
      {
         "sampletime": "2011-11-17T00:00:00+01:00",
         "samplevalue": "75.13",
         "tableid": "1",
         "tz_offset": "-3600"
      },
      {
         "sampletime": "2011-11-17T00:00:00+01:00",
         "samplevalue": "92.49",
         "tableid": "1",
         "tz_offset": "-3600"
      },
      {
         "sampletime": "2011-11-17T00:00:00+01:00",
         "samplevalue": "85.23",
         "tableid": "1",
         "tz_offset": "-3600"
      }
   ]
}
```
Get Historical QoS Data (Using the Table ID)

**URL**

/qos/data/tableid/{table_id}/{from}/{to}/{maxrows}/historical

**Method**
GET

Inputs

- **table_id** – The table_id for the QoS data series.
- **from** - A date in the format yyyymmddHHMM (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** - A date in the format yyyymmddHHMM (for example, 201111090938) or the keyword **now** which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

Returns

- 200 OK – QoS Data List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

**Sample Request**

```plaintext
GET /rest/qos/data/tableid/1/201101010000/201111090938/20/historical
HTTP/1.1
Accept: application/json
```

**Sample Reply**
HTTP/1.1 200 OK
Content-Type: application/json
{
   "data": [
   {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "54.65",
      "tableid": "1",
      "tz_offset": "-3600"
   },
   {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "75.13",
      "tableid": "1",
      "tz_offset": "-3600"
   },
   {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "92.49",
      "tableid": "1",
      "tz_offset": "-3600"
   },
   {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "85.23",
      "tableid": "1",
      "tz_offset": "-3600"
   }
   ]
}

XML

Sample Request

GET /rest/qos/data/tableid/1/201101010000/20111111257/20/historical
HTTP/1.1
Accept: application/xml

Sample Reply
HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>

Get QoS Data (Using the Constraint ID)

URL
/qos/data/constraint/{constraint_id}/{from}/{to}/{maxrows}

Method
GET

Inputs
- **constraint_id** – A valid QoS constraint ID. You can retrieve a constraint_id using SLA/SLO calls.
- **from** – A date in the format yyyyddMMHHmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** – A date in the format yyyyddMMHHmm (for example, 201111100938) or the keyword now which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

Returns
200 OK – QoS Data List
401 Unauthorized
404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

**Sample Request**

```plaintext
GET /rest/qos/data/constraint/14/201101010000/2011111257/20 HTTP/1.1
Accept: application/json
```

**Sample Reply**

```json
HTTP/1.1 200 OK
Content-Type: application/json
{
  "data": [  
  
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "54.65",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "75.13",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "92.49",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "85.23",
      "tableid": "1",
      "tz_offset": "-3600"
    }
  ]
}
```
Get QoS Data (Using the Metric ID)

URL
/qos/data/metricid/{ci_metric_id}/{from}/{to}/{maxrows}

Method
GET
Sample Request

GET /rest/qos/data/metricid/MDF2DD98996F2EB3FCF3C60B4AC9A5FE5/201101010000/2011111257/20 HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
  "data": [
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "54.65",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "75.13",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "92.49",
      "tableid": "1",
      "tz_offset": "-3600"
    },
    {
      "sampletime": "2011-11-17T00:00:00+01:00",
      "samplevalue": "85.23",
      "tableid": "1",
      "tz_offset": "-3600"
    }
  ]
}
GET
/rest/qos/data/metricid/MDF2DD98996F2EB3FCF3C60B4AC9A5FE5/201101010000/2011111257/20 HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>

Get QoS Data (Using the Table ID)

URL
/qos/data/tableid/{table_id}/(from)/(to)/(maxrows)

Method
GET
Inputs

- **table_id** – The table_id for the QoS data series.
- **from** - A date in the format yyyyddMMHHmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** - A date in the format yyyyddMMHHmm (for example, 201111100938) or the keyword **now** which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

Returns

- 200 OK – QoS Data List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

**Sample Request**

```
GET /rest/qos/data/tableid/1/201101010000/201111111257/20 HTTP/1.1
Accept: application/json
```

**Sample Reply**
HTTP/1.1 200 OK
Content-Type: application/json
{
    "data": [
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "54.65",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "75.13",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "92.49",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "85.23",
            "tableid": "1",
            "tz_offset": "-3600"
        }
    ]
}
HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>

Get QoS Definitions (All)

This call returns a list of all QoS definitions. This call is not limited to definitions delivered by components belonging to the account of an account user.

URL
/qos/definitions

Method
GET

Returns
- 200 OK – QoSDefinitionList structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
Bus users

Required Permissions

- Web Service

JSON

Sample Request

GET /rest/qos/definitions HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
    "qos-definition": [
        {
            "bool": "false",
            "description": "Computer Uptime",
            "hasMax": "false",
            "name": "QOS_COMPUTER_UPTIME",
            "qosDefId": "26",
            "qosGroup": "QOS_MACHINE",
            "type": "0",
            "unit": "Seconds",
            "unitShort": "s"
        },
        {
            "bool": "false",
            "description": "CPU Usage",
            "hasMax": "true",
            "name": "QOS_CPU_USAGE",
            "qosDefId": "14",
            "qosGroup": "QOS_MACHINE",
            "type": "0",
            "unit": "Percent",
            "unitShort": "%"
        }
    ]
}

XML

Sample Request
GET /rest/qos/definitions HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<qos-definitions>
  <qos-definition>
    <bool>false</bool>
    <description>CPU Usage</description>
    <hasMax>true</hasMax>
    <name>QOS_CPU_USAGE</name>
    <qosDefId>14</qosDefId>
    <qosGroup>QOS_MACHINE</qosGroup>
    <type>0</type>
    <unit>Percent</unit>
    <unitShort>%</unitShort>
  </qos-definition>
  <qos-definition>
    <bool>false</bool>
    <description>Disk Usage</description>
    <hasMax>true</hasMax>
    <name>QOS_DISK_USAGE</name>
    <qosDefId>12</qosDefId>
    <qosGroup>QOS_MACHINE</qosGroup>
    <type>0</type>
    <unit>Megabytes</unit>
    <unitShort>MB</unitShort>
  </qos-definition>
</qos-definitions>

Get QoS Definition (Single Definition Using the QoS Name)

This call returns a QoS definition for a given QoS name. With the QoS-Definition, all source/target combinations are returned. For Account contact users, only source/target combinations of the matching origin are displayed.

URL
/qos/definitions/(qos-name)

Method
GET
Returns

- 200 OK – QoSDefinition structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

```
GET /rest/qos/definitions/QOS_CPU_USAGE HTTP/1.1
Accept: application/json
```

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/json
{
    "bool": "false",
    "description": "CPU Usage",
    "hasMax": "true",
    "name": "QOS_CPU_USAGE",
    "qosDefId": "14",
    "qosGroup": "QOS_MACHINE",
    "type": "0",
    "unit": "Percent",
    "unitShort": ",%
    "sourceTargets": [
        {
            "origin": "primaryhub",
            "source": "WIN-CXP6LPT7V6G",
            "target": "WIN-CXP6LPT7V6G"
        },
        {
            "origin": "primaryhub",
            "source": "WIN-CXP6LPT7V6G",
            "target": "User"
        },
        {
            "origin": "primaryhub",
            "source": "WIN-CXP6LPT7V6G",
            "target": "System"
        },
        {
            "origin": "primaryhub",
            "source": "WIN-CXP6LPT7V6G",
            "target": "Wait"
        },
        {
            "origin": "primaryhub",
            "source": "WIN-CXP6LPT7V6G",
            "target": "Idle"
        }
    ]
}
Get Raw QoS Data

This call returns “raw” QoS data. In CA UIM, “raw” data will return all data points that are stored for that combination of QoS Name, source and target. The alternative is “historical” (aggregated) data. To retrieve aggregated data append /historical to this call.

URL

/qos/data /name/{qosname}/(source)/(target)/{from}/{to}/{maxrows}

Method

GET
**Inputs**

- **qosname** - The name of a QoS definition (for example, QOS_CPU_USAGE).
- **source** - The name of a valid QoS source for that QoS definition.
- **target** - A valid target-value for the combination of QoS Name and Source.
- **from** - A date in the format yyyyddMMHmmm (for example, 201107131200) or one of the following keywords: lasthour, lastday, lastweek, lastmonth.
- **to** - A date in the format yyyyddMMHmmm (for example, 201111100938) or the keyword **now** which is resolved to the current date and time on the server.
- **maxrows** - the maximum number of datapoints to return (0 returns unlimited rows).

**Returns**

- 200 OK – QoS Data List
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Account contact users
- Bus users

**Required Permissions**

- Web Service

**JSON**

**Sample Request**

```plaintext
GET
/rest/qos/data/name/QOS_CPU_USAGE/WIN-CXP6LPT7V6G/WIN-CXP6LPT7V6G/201101010000/201111111257/20 HTTP/1.1
Accept: application/json
```

**Sample Reply**
HTTP/1.1 200 OK
Content-Type: application/json
{
    "data": [
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "54.65",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "75.13",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "92.49",
            "tableid": "1",
            "tz_offset": "-3600"
        },
        {
            "sampletime": "2011-11-17T00:00:00+01:00",
            "samplevalue": "85.23",
            "tableid": "1",
            "tz_offset": "-3600"
        }
    ]
}
HTTP/1.1 200 OK

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<qos-data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>30.09</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>62.2</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>71.04</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
  <data>
    <sampletime>2011-11-11T00:00:00+01:00</sampletime>
    <samplevalue>53.72</samplevalue>
    <tableid>1</tableid>
    <tz_offset>-3600</tz_offset>
  </data>
</qos-data>

Get Sources for QoS-Name

URL

/qos/sources/{qos-name}

Method

GET

Returns

- 200 OK – QoS Source List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users
Required Permissions

- Web Service

**JSON**

**Sample Request**

```
GET /rest/qos/sources/QOS_CPU_USAGE HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/json
{
  "qos-source":{
    "origin":"primaryhub",
    "source":"WIN-CXP6LPT7V6G"
  }
}
```

**XML**

**Sample Request**

```
GET /rest/qos/sources/QOS_CPU_USAGE HTTP/1.1
Accept: application/xml
```

**Sample Reply**
Get Targets for QoS-Name and Source

Returns a list of all targets for this combination of QOS-Name and Source.

URL
/qos/targets/{qos-name}/{source-name}

Method
GET

Returns

- 200 OK – QoS Target List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request
GET /rest/qos/targets/QOS_CPU_USAGE/WIN-CXP6LPT7V6G HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "target": ["Idle", "System", "User", "Wait", "WIN-CXP6LPT7V6G"]
}

XML

Sample Request

GET /rest/qos/targets/QOS_CPU_USAGE/WIN-CXP6LPT7V6G HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<targets>
    <target>Idle</target>
    <target>System</target>
    <target>User</target>
    <target>Wait</target>
    <target>WIN-CXP6LPT7V6G</target>
</targets>

Get Targets for QoS-Name and Source for a Given Origin

URL
/qos/targets/(qos-name)/(source-name)/(origin)

Method
GET

Returns

- 200 OK – QoS Target List
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request

```
GET /rest/qos/targets/QOS_CPU_USAGE/WIN-CXP6LPT7V6G/primaryhub HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 200 OK
Content-Type: application/json
{
   "target": [
      "Idle",
      "System",
      "User",
      "Wait",
      "WIN-CXP6LPT7V6G"
   ]
}
```

XML

Sample Request

```
GET /rest/qos/targets/QOS_CPU_USAGE/WIN-CXP6LPT7V6G/primaryhub HTTP/1.1
Accept: application/xml
```

Sample Reply
HTTP/1.1 200 OK
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<targets>
    <target>Idle</target>
    <target>System</target>
    <target>User</target>
    <target>Wait</target>
    <target>WIN-CXP6LPT7V6G</target>
</targets>

UIM Infrastructure Calls

Content

- Get Defined Variables
- Get List of Archive Packages
- Get List of Hubs
- Get List of Robots
- Get Robot Details

Get Defined Variables

URL

/variables/{type}

Method

GET

Inputs

type - one of the following:

- QoS
- SLO
- NimBUS Request
- Alarm Filter

Returns

- 200 OK - VariableList structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users

Required Permissions
- Web Service

**JSON**

**Sample Request**

```plaintext
GET /rest/variables/QoS
HTTP/1.1
Accept: application/json
```

**Sample Reply**

```plaintext
HTTP/1.1 200 OK
Content-Type: application/json
{
    "variable-list": [
        {
            "name": "QoS1",
            "status": "0",
            "type": "QoS",
            "value": "0.00"
        }
    ]
}
```

**XML**

**Sample Request**

```plaintext
GET /rest/variables/QoS
HTTP/1.1
Accept: application/xml
```

**Sample Reply**
Get List of Archive Packages

URL
/archive/list

Method
GET

Returns
- 200 OK - Archive List Structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Web Service

JSON

Sample Request

GET /rest/archive/list HTTP/1.1
Accept: application/json

Sample Reply
Get List of Hubs

URL

/hubs

Method

GET

Inputs

- **Offset** - The number of datapoints to offset.
- **maxrows** - The maximum number of datapoints to return (0 returns unlimited rows).
- **inCurrentDomain** - If set to true, the call only returns hubs from the currently authenticated domain.

Returns

- 200 OK – HubList structure
- 401 Unauthorized
- 404 Not Found

Valid Users
• Account contact users
• Bus users

Required Permissions
• Web Service

JSON

**Sample Request**

```
GET /rest/hubs HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/json
{
   "hub":{
      "address": "/chris-dev/primaryhub/win-cxp61pt7v6g/hub",
      "ip": "192.168.211.129",
      "name": "primaryhub",
      "port": "48002",
      "robotName": "win-cxp61pt7v6g",
      "status": "0",
      "version": "5.44 [Apr 26 2011]"
   }
}
```

XML

**Sample Request**

```
GET /rest/hubs HTTP/1.1
Accept: application/xml
```

**Sample Reply**
Get List of Robots

URL

/hubs/{domain}/{hubname}/robots

Method

GET

Inputs

- Offset - The number of datapoints to offset.
- maxrows - The maximum number of datapoints to return (0 returns unlimited rows).
- inCurrentDomain - If set to true, the call only returns hubs from the currently authenticated domain.

Returns

- 200 OK – Robot List structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account contact users
- Bus users

Required Permissions

- Web Service

JSON

Sample Request
GET /rest/hubs/chris-dev/primaryhub/robots HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "robot": [
      {
         "address": "/chris-dev/primaryhub/win-cxp6lpt7v6g",
         "ip": "192.168.211.129",
         "name": "win-cxp6lpt7v6g",
         "status": "0",
         "version": "5.32 Apr 26 2011"
      },
      {
         "address": "/chris-dev/primaryhub/nb-1538",
         "ip": "192.168.211.1",
         "name": "nb-1538",
         "status": "0",
         "version": "5.32 Mar 21 2011"
      }
   ]
}

XML

Sample Request

GET /rest/hubs/chris-dev/primaryhub/robots HTTP/1.1
Accept: application/xml

Sample Reply
HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<robotlist>
  <robot>
    <address>/chris-dev/primaryhub/nb-1538</address>
    <ip>192.168.211.1</ip>
    <name>nb-1538</name>
    <status>0</status>
    <version>5.32 Mar 21 2011</version>
  </robot>
  <robot>
    <address>/chris-dev/primaryhub/win-cxp6lpt7v6g</address>
    <ip>192.168.211.129</ip>
    <name>win-cxp6lpt7v6g</name>
    <status>0</status>
    <version>5.32 Apr 26 2011</version>
  </robot>
</robotlist>

Get Robot Details

URL
/hubs/{domain}/{hub}/{robot}

Method
GET

Returns
- 200 OK - Robot structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account contact users
- Bus users

Required Permissions
- Web Service

JSON

Sample Request
GET /rest/hubs/chris-dev/primaryhub/win-cxp6lpt7v6g HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "address": "/chris-dev/primaryhub/win-cxp6lpt7v6g",
   "ip": "192.168.211.129",
   "name": "win-cxp6lpt7v6g",
   "probes": [
      {
         "active": "true",
         "address": "/chris-dev/primaryhub/win-cxp6lpt7v6g/controller",
         "command": "controller.exe",
         "config": "robot.cfg",
         "description": "Robot process and port controller",
         "group": "Infrastructure",
         "ip": "192.168.211.129",
         "logfile": "controller.log",
         "name": "controller",
         "packageName": "robot_update",
         "packageVersion": "5.32",
         "pid": "1680",
         "port": "48000",
         "timesActivated": "0",
         "timesStarted": "1",
         "timespec": "",
         "type": "0",
         "workdir": "robot"
      },
      {
         "active": "true",
         "address": "/chris-dev/primaryhub/win-cxp6lpt7v6g/hub",
         "arguments": "",
         ...
      }
   ],
   "status": "0",
   "version": "5.32 Apr 26 2011"
}
Updated Calls for Multiple Account Support

The following calls have been updated to support users in multiple accounts. Note that the latest version of the RESTful web services package is required for these calls.
Add an Account for a Contact (Using the Contact ID)

URL

/contacts/{contact_id}/addAccountToContactById/{account_id}

Method

PUT

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```plaintext
PUT /rest/contacts/5/addAccountToContactById/4 HTTP/1.1
Accept: application/json
```

Sample Reply

```plaintext
HTTP/1.1 204 No Content
```
## Add an Account for a Contact (Using the Login Name)

**URL**

/contacts/{login_name}/addAccountToContactByLoginName/{account_id}

**Method**

PUT

**Returns**

- 200 OK – Contact structure
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

**Required Permissions**

- Web Service

### JSON

**Sample Request**

```plaintext
PUT /rest/contacts/user1/addAccountToContactByLoginName/4 HTTP/1.1
Accept: application/json
```

**Sample Reply**

HTTP/1.1 204 No Content

### XML
### Sample Request

```
PUT /rest/contacts/user1/addAccountToContactByLoginName/4 HTTP/1.1
Accept: application/xml
```

### Sample Reply

```
HTTP/1.1 204 No Content
```

### Create a Contact (Single Account)

**URL**

`/contacts`

**Method**

POST

**Input**

- Contact structure

**Returns**

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

**Required Permissions**

- Account Administration
- Web Service

### JSON

**Sample Request**
POST /rest/contacts HTTP/1.1
Accept: application/json
Content-Type: application/json
{
  "accountId": "4",
  "acl": "Operator",
  "department": "Fizz Operator",
  "description": "This is my description",
  "email": "rest_operator@ca.com",
  "firstName": "Rest_Operator",
  "language": "en",
  "lastName": "Last Name",
  "loginName": "rest_operator",
  "mobile": "9701234567",
  "password": "nimbus",
  "phone": "9707654321",
  "title": "Dr. Operator"
}

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
  "accountId": "4",
  "activeAccountId": "4",
  "accounts": ["4"],
  "acl": "Operator",
  "department": "Fizz Operator",
  "description": "This is my description",
  "email": "rest_operator@ca.com",
  "firstName": "Rest_Operator",
  "language": "en",
  "lastName": "Last Name",
  "loginName": "rest_operator",
  "mobile": "9701234567",
  "password": "nimbus",
  "phone": "9707654321",
  "title": "Dr. Operator"
}

XML

Sample Request
POST /rest/contacts HTTP/1.1
Accept: application/xml
Content-Type: application/xml
Authorization: Basic

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
    <accountId>4</accountId>
    <activeAccountId>4</activeAccountId>
    <accounts>4</accounts>
    <acl>Operator</acl>
        <department>Fizz Operator</department>
        <description>This is my description</description>
        <email>rest_operator@ca.com</email>
        <firstName>Rest_Operator</firstName>
        <language>en</language>
        <lastName>Last Name</lastName>
        <loginName>rest_operator</loginName>
        <mobile>9701234567</mobile>
        <password>nimbus</password>
        <phone>9707654321</phone>
        <title>Dr. Operator</title>
    </acl>
</contact>

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
    <accountId>4</accountId>
    <activeAccountId>4</activeAccountId>
    <accounts>4</accounts>
    <acl>Operator</acl>
        <department>Fizz Operator</department>
        <description>This is my description</description>
        <email>rest_operator@ca.com</email>
        <firstName>Rest_Operator</firstName>
        <language>en</language>
        <lastName>Last Name</lastName>
        <loginName>rest_operator</loginName>
        <mobile>9701234567</mobile>
        <password>nimbus</password>
        <phone>9707654321</phone>
        <title>Dr. Operator</title>
    </acl>
</contact>
Create a Contact (Multiple Accounts)

URL
/contacts

Method
POST

Input
- Contact structure

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account Contact Users (if the user is in the same account as the contact)
- Bus users

Required Permissions
- Account Administration
- Web Service

JSON

Sample Request
POST /rest/contacts HTTP/1.1
Accept: application/json
Content-Type: application/json
Authorization: Basic
{
    "activeAccountId": "4",
    "accounts": [ "4", "14"],
    "acl": "Administrator",
    "department": "Fizz",
    "description": "This is my description",
    "email": "comapny1_rest_admin@ca.com",
    "firstName": "Company1_Rest",
    "language": "en",
    "lastName": "Admin_CONTACT",
    "loginName": "company1_rest_admin",
    "mobile": "9701234567",
    "password": "nimbus",
    "phone": "9707654321",
    "title": "Dr. Operator"
}

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
    "activeAccountId": "4",
    "accounts": [ "4", "14"],
    "acl": "Administrator",
    "department": "Fizz",
    "description": "This is my description",
    "email": "comapny1_rest_admin@ca.com",
    "firstName": "Company1_Rest",
    "language": "en",
    "lastName": "Admin_CONTACT",
    "loginName": "company1_rest_admin",
    "mobile": "9701234567",
    "password": "nimbus",
    "phone": "9707654321",
    "title": "Dr. Operator"
}

XML

Sample Request
POST /rest/contacts HTTP/1.1
Accept: application/xml
Content-Type: application/xml
Authorization: Basic

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
    <activeAccountId>4</activeAccountId>
    <accounts>4</accounts>
    <accounts>14</accounts>
        <acl>Administrator</acl>
        <department>Fizz</department>
        <description>This is my description</description>
        <email>company1_rest_admin@ca.com</email>
        <firstName>company1_rest</firstName>
        <language>en</language>
        <lastName>Last Name</lastName>
        <loginName>company1_rest_admin</loginName>
        <mobile>9701234567</mobile>
        <password>nimbus</password>
        <phone>9707654321</phone>
        <title>Dr. Operator</title>
    </contact>

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
    <activeAccountId>4</activeAccountId>
    <accounts>4</accounts>
    <accounts>14</accounts>
        <acl>Administrator</acl>
        <department>Fizz</department>
        <description>This is my description</description>
        <email>company1_rest_admin@ca.com</email>
        <firstName>company1_rest</firstName>
        <language>en</language>
        <lastName>Last Name</lastName>
        <loginName>company1_rest_admin</loginName>
        <mobile>9701234567</mobile>
        <password>nimbus</password>
        <phone>9707654321</phone>
        <title>Dr. Operator</title>
    </contact>
Delete a Contact

**Note:** If you have users assigned to multiple accounts, the behavior for user deletion is dependent on the permissions assigned to the deleting user:

- **Bus Users**
  - The user is deleted from all accounts and Liferay.
- **Users with the Account Administration Permissions for ALL Accounts the User Belongs To**
  - The user is deleted from all accounts and Liferay.
- **Users with the Account Administration Permissions for SOME Accounts the User Belongs To**
  - The user is removed from the accounts visible to the user performing the deletion.

**URL**

/contacts/{contact_id}

**Method**

DELETE

**Returns**

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

**Required Permissions**

- Account Administration
- Web Service

**Sample Request**

```
DELETE /rest/contacts/14 HTTP/1.1
```

**Sample Reply**

```
HTTP/1.1 204 No Content
```
GET

Returns
- 200 OK – Contact structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account Contact Users (if the user is in the same account as the contact)
- Bus users

Required Permissions
- Web Service

JSON

Sample Request

```
GET /rest/contacts/5 HTTP/1.1
Accept: application/json
```

Sample Reply

```
{
    "accountId": "5",
    "activeAccountID": "5",
    "accounts": ["5"],
    "acl": "Operator",
    "department": "Fizz Operator",
    "description": "This is my description",
    "email": "company1_rest_operator@ca.com",
    "firstName": "company1_Rest_Operator",
    "language": "en",
    "lastName": "Last Name",
    "loginName": "company1_rest_operator",
    "mobile": "9701234567",
    "password": "nimbus",
    "phone": "9707654321",
    "title": "Dr. Operator"
}
```
GET /rest/contacts/5 HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
    <accountId>5</accountId>
    <activeAccountId>5</activeAccountId>
    <accounts>5</accounts>
    <acl>Operator</acl>
    <department>Fizz Operator</department>
    <description>This is my description</description>
    <email>company1_rest_operator@ca.com</email>
    <firstName>company1_rest_operator@ca.com</firstName>
    <language>en</language>
    <lastName>Last Name</lastName>
    <loginName>company1_rest_operator</loginName>
    <mobile>9701234567</mobile>
    <password>nimbus</password>
    <phone>9707654321</phone>
    <title>Dr. Operator</title>
</contact>

Remove the Account from a Contact (Using the Contact ID)

URL
/contacts/{contact_id}/removeAccountFromContactByID/{account_id}

Method
PUT

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
- Account Contact Users (if the user is in the same account as the contact)
- Bus users
Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
PUT /rest/contacts/5/removeAccountFromContactByID/4 HTTP/1.1
Accept: application/json
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```
PUT /rest/contacts/5/removeAccountFromContactByID/4 HTTP/1.1
Accept: application/xml
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Remove the Account from a Contact (Using the Login Name)

URL

/rest/contacts/{login_name}/removeAccountFromContactByLoginName/{account_id}

Method

PUT

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users

- Account Contact Users (if the user is in the same account as the contact)
- Bus users
Required Permissions

- Account Administration
- Web Service

**JSON**

**Sample Request**

```
PUT /rest/contacts/user1/removeAccountFromContactByLoginName/4 HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 204 No Content
```

**XML**

**Sample Request**

```
PUT /rest/contacts/user1/removeAccountFromContactByLoginName/4 HTTP/1.1
Accept: application/xml
```

**Sample Reply**

```
HTTP/1.1 204 No Content
```

**Update a Contact (Single Account)**

**URL**

/contacts/{contactID}

**Method**

PUT

**Input**

- Contact structure

**Returns**

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found
Valid Users

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

**Sample Request**

```
PUT /rest/contacts/4 HTTP/1.1
Accept: application/json
Content-Type: application/json
Authorization: Basic
{
    "accountId": "4",
    "contactId": "2125",
    "acl": "Administrator",
    "department": "Fizz",
    "description": "This is my description",
    "email": "rest_admin@ca.com",
    "firstName": "company1_Rest",
    "language": "en",
    "lastName": "Admin_Contact",
    "loginName": "company1_rest_admin",
    "mobile": "9701234567",
    "password": "nimbus",
    "phone": "9707654321",
    "title": "Dr. Operator"
}
```

**Sample Reply**

```
HTTP/1.1 204 No Content
```

XML

**Sample Request**
PUT /rest/contacts/4 HTTP/1.1
Accept: application/xml
Content-Type: application/xml
Authorization: Basic

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<contact>
  <accountId>4</accountId>
  <contactId>2125</contactId>
  <acl>Operator</acl>
  <department>Fizz Operator</department>
  <description>This is my description</description>
  <email>company1_rest_operator@ca.com</email>
  <firstName>company1_rest_operator@ca.com</firstName>
  <language>en</language>
  <lastName>Last Name</lastName>
  <loginName>company1_rest_operator</loginName>
  <mobile>9701234567</mobile>
  <password>nimbus</password>
  <phone>9707654321</phone>
  <title>Dr. Operator</title>
</contact>

Sample Reply

HTTP/1.1 204 No Content

Update a Contact (Multiple Accounts)

URL
/contacts/{contactID}

Method
PUT

Input
- Contact structure

Returns
- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

Valid Users
• Account Contact Users (if the user is in the same account as the contact)
• Bus users

Required Permissions

• Account Administration
• Web Service

JSON

**Sample Request**

```
PUT /rest/contacts/4 HTTP/1.1
Accept: application/json
Content-Type: application/json
Authorization: Basic
{
  "activeAccountId": "4",
  "contactId": "2125",
  "accounts": [ "4", "14" ],
  "acl": "Administrator",
  "department": "Fizz",
  "description": "This is my description",
  "email": "coke_rest_admin@ca.com",
  "firstName": "company1_Rest",
  "language": "en",
  "lastName": "Admin_Contact",
  "loginName": "company1_rest_admin",
  "mobile": "9701234567",
  "password": "nimbus",
  "phone": "9707654321",
  "title": "Dr. Operator"
}
```

**Sample Reply**

```
HTTP/1.1 204 No Content
```

XML

**Sample Request**
### Set the Active Account (Using the Contact ID)

**URL**

/rest/contacts/{contact_id}/activeAccountByContactId/{account_id}

**Method**

PUT

**Returns**

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found

**Valid Users**

- Bus users
Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```
PUT /rest/contacts/4/activeAccountIdByContactId/14 HTTP/1.1
Accept: application/xml
Content-Type: application/xml
Authorization: Basic
```

Sample Reply

```
HTTP/1.1 204 No Content
```

XML

Sample Request

```
PUT /rest/contacts/4/activeAccountIdByContactId/14 HTTP/1.1
Accept: application/json
Content-Type: application/json
Authorization: Basic
```

Sample Reply

```
HTTP/1.1 204 No Content
```

Set the Active Account (Using the Login Name)

URL

/contacts/{login_name}/activeAccountByLoginName/{account_id}

Method

PUT

Returns

- 204 No Content - OK
- 401 Unauthorized
- 404 Not Found
Valid Users

- Account Contact Users (if the user is in the same account as the contact)
- Bus users

Required Permissions

- Account Administration
- Web Service

JSON

Sample Request

```plaintext
PUT /rest/contacts/login_name/activeAccountIdByLoginName/14 HTTP/1.1
Accept: application/json
Content-Type: application/json
Authorization: Basic
```

Sample Reply

```plaintext
HTTP/1.1 204 No Content
```

XML

Sample Request

```plaintext
PUT /rest/contacts/login_name/activeAccountIdByLoginName/14 HTTP/1.1
Accept: application/xml
Content-Type: application/xml
Authorization: Basic
```

Sample Reply

```plaintext
HTTP/1.1 204 No Content
```

Variable Calls

Contents

- Get Defined Variables
- Get Variable

Get Defined Variables

URL

/variables/{type}
Method
GET

Inputs
type - one of the following:
- QoS
- SLO
- NimBUS Request
- Alarm Filter

Returns
- 200 OK - VariableList structure
- 401 Unauthorized
- 404 Not Found

Valid Users
- Bus users

Required Permissions
- Web Service

JSON

Sample Request

GET /rest/variables/QoS
HTTP/1.1
Accept: application/json

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/json
{
   "variable-list": [
      {
         "name": "QoS1",
         "status": "0",
         "type": "QoS",
         "value": "0.00"
      }
   ]
}

XML
Sample Request

GET /rest/variables/QoS
HTTP/1.1
Accept: application/xml

Sample Reply

HTTP/1.1 200 OK
Content-Type: application/xml

<?xml version="1.0" encoding="UTF-8" standalone="yes"?>

<variable-list>
    <variable>
        <name>QoS1</name>
        <status>0</status>
        <type>QoS</type>
        <value>0.00</value>
    </variable>
</variable-list>

Get Variable

URL

/variables/{variable-name}/{type}

Method

GET

Inputs

type - one of the following:

- QoS
- SLO
- NimBUS Request
- Alarm Filter

Returns

- 200 OK - Variable structure
- 401 Unauthorized
- 404 Not Found

Valid Users

- Bus users
Required Permissions

- Web Service

**JSON**

**Sample Request**

```
GET /rest/variables/QoS1/QoS HTTP/1.1
Accept: application/json
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/json
{
   "variable": [ 
      {
         "name": "QoS1",
         "status": "0",
         "type": "QoS",
         "value": "0.00"
      }
   ]
}
```

**XML**

**Sample Request**

```
GET /rest/variables/QoS1/QoS HTTP/1.1
Accept: application/xml
```

**Sample Reply**

```
HTTP/1.1 200 OK
Content-Type: application/xml
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<variable>
   <name>QoS1</name>
   <status>0</status>
   <type>QoS</type>
   <value>0.00</value>
</variable>
```
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