



CloudForms 3.1 Management Engine 5.3 Integration Services Guide

Systems Management, Web Services, CMDB

Red Hat CloudForms Documentation Team

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Abstract

This guide provides web services available to integrate CloudForms Management Engine with external applications. It details the specification of the CloudForms Management Engine RESTful API, which is implemented as standard REST HTTP requests and responses of content type JSON. This guide also details the CFME SOAP API. Note that the SOAP API is being deprecated, and future updates will be focused on the REST API.

Table of Contents

Chapter 1. Introduction to Red Hat CloudForms	5
1.1. Architecture	5
1.2. Requirements	6
1.3. Terminology	7
1.4. Getting Help and Giving Feedback	10
Part I. REST API	12
Chapter 2. Specification	13
2.1. HTTP Basics	13
2.2. CRUD Examples	16
2.3. Authentication	17
2.4. JSON Specification	19
2.5. Query Specification	23
Chapter 3. CFME Model	26
3.1. CloudForms Management Engine Features and Class Mapping	26
Chapter 4. Reference Guide	28
4.1. Authentication	28
4.2. HTTP Headers	28
4.3. Listing and Querying Collections and Sub-Collections	28
4.4. Collection Queries	28
4.5. Sub-Collection Queries	29
4.6. Available Actions	29
Chapter 5. Examples	32
5.1. Add Service Catalog	32
5.2. Add Service Catalogs	32
5.3. Assign Service Templates	33
5.4. Assign Tags to Service	33
5.5. Assign Tags by Name to a Service	34
5.6. Assign a Tag by Reference to a Service	34
5.7. Assign Tags to Service Template	34
5.8. Automation Request	35
5.9. Automation Requests	36
5.10. Delete Service Catalogs	37
5.11. Delete Service Templates	37
5.12. Delete Services	37
5.13. Edit Service Catalogs	38
5.14. Edit Service	38
5.15. Edit Services	38
5.16. Edit Service Template	39
5.17. Edit Service Templates	39
5.18. Edit Service via PATCH	39
5.19. Edit Service Catalog	40
5.20. Edit Service via PUT	40
5.21. Order Service	40
5.22. Order Services	40
5.23. Provision Request	41
5.24. Provision Requests	42
5.25. Retire Service Now	44
5.26. Retire Service in Future	44

5.27. Retire Services	44
5.28. Unassign Service Templates	45
5.29. Unassign Tags from Service Template	45
5.30. Unassign Tags from Service	45
5.31. Unassign a Tag by Name from a Service	46
5.32. Unassign a Tag by Reference from a Service	46
5.33. Example Queries	47
Part II. SOAP API	49
Chapter 6. Insight Web Services	50
6.1. ClusterGetTags	50
6.2. DatastoreGetTags	51
6.3. EmsGetTags	52
6.4. EVMDeleteVmByName	54
6.5. EVMClusterList	55
6.6. EVMDatastoreList	56
6.7. EVMHostList	57
6.8. EVMResourcePoolList	59
6.9. EVMPing	59
6.10. EVMVmAccounts	60
6.11. EVMVmList	62
6.12. EVMVmSoftware	64
6.13. FindClusterById	66
6.14. FindClustersById	71
6.15. FindDatastoreById	77
6.16. FindDatastoresById	81
6.17. FindEmsByGuid	85
6.18. FindHostByGuid	87
6.19. FindHostsByGuid	90
6.20. FindResourcePoolById	93
6.21. FindResourcePoolsById	95
6.22. FindVmByGuid	97
6.23. FindVmsByGuid	103
6.24. GetClusterList	109
6.25. GetClustersByList	111
6.26. GetClustersByTag	116
6.27. GetDatastoreList	122
6.28. GetDatastoresByList	123
6.29. GetDatastoresByTag	127
6.30. GetEmsByList	131
6.31. GetEmsList	133
6.32. GetHostsByList	134
6.33. GetHostList	137
6.34. GetResourcePoolList	138
6.35. GetResourcePoolsByList	139
6.36. GetResourcePoolsByTag	142
6.37. GetTemplatesByTag	144
6.38. GetVmList	151
6.39. GetVmsByList	152
6.40. GetVmsByTag	158
6.41. HostGetTags	165
6.42. ResourcePoolGetTags	166
6.43. VmGetTags	168

8.45. vMGetDays	100
Chapter 7. Control Web Services	170
7.1. ClusterSetTag	170
7.2. DatastoreSetTag	171
7.3. EmsSetTag	172
7.4. EVMActionList	173
7.5. EVMAAddLifecycleEvent	174
7.6. EVMAssignPolicy	175
7.7. EVMConditionList	176
7.8. EVMEventList	178
7.9. EVMGetPolicy	179
7.10. EVMPolicyList	181
7.11. EVMVmEventByProperty	183
7.12. EVMVmScanByProperty	184
7.13. EVMSmartStart	185
7.14. EVMSmartStop	186
7.15. EVMSmartSuspend	187
7.16. EVMUnassignPolicy	188
7.17. EVMVmRsop	189
7.18. HostSetTag	191
7.19. ResourcePoolSetTag	192
7.20. VmAddCustomAttribute	193
7.21. VmAddCustomAttributes	194
7.22. VmAddCustomAttributeByFields	196
7.23. VmDeleteCustomAttribute	198
7.24. VmDeleteCustomAttributes	200
7.25. VmSetTag	201
7.26. VmSetOwner	202
Chapter 8. Automate Web Services	204
8.1. CreateAutomationRequest	204
8.2. EVMProvisionRequestEx	205
8.3. GetAutomationRequest	211
8.4. GetAutomationTask	212
8.5. GetVmProvisionRequest	213
8.6. GetVmProvisionTask	215
8.7. VmProvisionRequest	217
Examples	220
A.1. Windows PowerShell: List All Provider, Hosts and VMs	220
A.2. Windows PowerShell: VM Provisioning	221
A.3. Windows PowerShell: GetVmProvisionRequest	221
A.4. Windows PowerShell: CreateAutomationRequest	222
A.5. Windows PowerShell: GetAutomationRequest	223
A.6. Windows PowerShell: GetAutomationTask	224
Advanced Provisioning Values	225
B.1. Defining new vLans adapters during provisioning	225
B.2. Defining new SCSI Controller during provisioning	225
B.3. Defining new disks during provisioning	225
B.4. Changing Provisioning Requester	226
B.5. Cloning Type	226
B.6. Limit template selection	227

Model Properties	229
C.1. Providers	229
C.2. Clusters	231
C.3. Hosts	236
C.4. Host Hardware Attributes	239
C.5. Resource Pools	239
C.6. Datastores	240
C.7. Virtual Machines	243
C.8. Virtual Machines Hardware Attributes	252
WSDL File	254
Revision History	309

Chapter 1. Introduction to Red Hat CloudForms

Red Hat CloudForms Management Engine delivers the insight, control, and automation enterprises need to address the challenges of managing virtual environments. This technology enables enterprises with existing virtual infrastructures to improve visibility and control, and those starting virtualization deployments to build and operate a well-managed virtual infrastructure.

Red Hat CloudForms 3.1 is comprised of a single component, the CloudForms Management Engine. It has the following feature sets:

- » **Insight:** Discovery, Monitoring, Utilization, Performance, Reporting, Analytics, Chargeback, and Trending.
- » **Control:** Security, Compliance, Alerting, and Policy-Based Resource, and Configuration Enforcement.
- » **Automate:** IT Process, Task and Event, Provisioning, and Workload Management and Orchestration.
- » **Integrate:** Systems Management, Tools and Processes, Event Consoles, Configuration Management Database (CMDB), Role-based Administration (RBA), and Web Services.

1.1. Architecture

The diagram below describes the capabilities of Red Hat CloudForms Management Engine. Its features are designed to work together to provide robust management and maintenance of your virtual infrastructure.

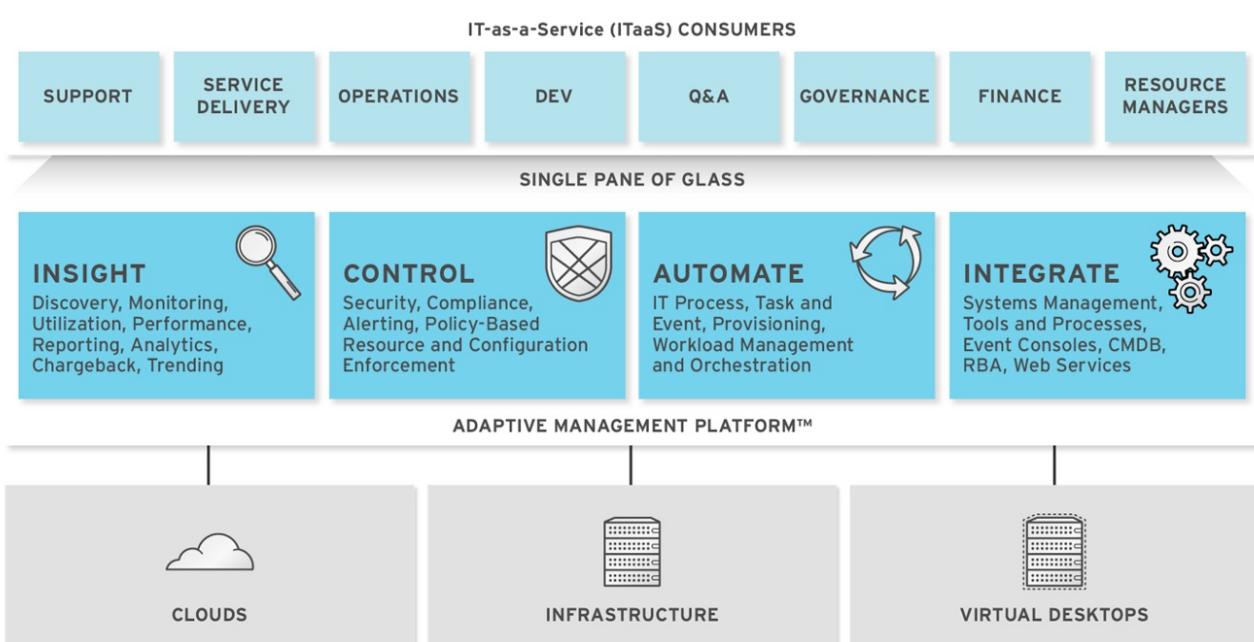


Figure 1.1. Features

The architecture comprises the following components:

- » The CloudForms Management Engine Appliance (Appliance) which is supplied as a secure, high-performance, preconfigured virtual machine. It provides support for Secure Socket Layer (SSL) communications.
- » The CloudForms Management Engine Server (Server) resides on the Appliance. It is the software layer that communicates between the SmartProxy and the Virtual Management Database. It includes support for Secure Socket Layer (SSL) communications.
- » The Virtual Management Database (VMDB) resides either on the Appliance or another computer accessible to the Appliance. It is the definitive source of intelligence collected about your Virtual Infrastructure. It also holds status information regarding Appliance tasks.
- » The CloudForms Management Engine Console (Console) is the Web interface used to view and control the Server and Appliance. It is consumed through Web 2.0 mash-ups and web services (WS Management) interfaces.
- » The SmartProxy can reside on the Appliance or on an ESX Server. If not embedded in the Server, the SmartProxy can be deployed from the Appliance. Each storage location must have a SmartProxy with visibility to it. The SmartProxy acts on behalf of the Appliance communicating with it over HTTPS (SSL) on standard port 443.

1.2. Requirements

To use CloudForms Management Engine, the following requirements must be met:

- » One of the following Web Browsers:
 - Mozilla Firefox for versions supported under Mozilla's Extended Support Release (ESR) [1]
 - Internet Explorer 8 or higher
 - Google Chrome for Business
- » A monitor with minimum resolution of 1280x1024.
- » Adobe Flash Player 9 or above. At the time of publication, you can access it at <http://www.adobe.com/products/flashplayer/>.
- » The CloudForms Management Engine Appliance must already be installed and activated in your enterprise environment.
- » The SmartProxy must have visibility to the virtual machines and cloud instances that you want to control.
- » The resources that you want to control must have a SmartProxy associated with them.

Regions and Zones

Use **regions** for centralizing data which is collected from public and private virtualization environments. A region is ultimately represented as a single database for the VMDB. Regions are particularly useful when multiple geographical locations need to be managed as they enable all the data collection to happen at each particular location and avoids data collection traffic across slow links between networks.

When multiple regions are being used, each with their own unique ID, a master region can be created to centralize the data of all the children regions into a single master database. To do this, configure each child region to replicate its data to the master region database (Red Hat recommends use of region 99). This parent and child region is a one-to-many relationship.

Regions can contain multiple zones, which in turn contain appliances. Zones are used for further segregating network traffic along with enabling failover configurations. Each appliance has the capability to be configured for a number of specialized server roles. These roles are limited to the zone containing the appliance they run on. If multiple appliances in a zone are configured with duplicate server roles, CFME determines whether the roles use a failover configuration or dependent on the role, as yet another resource for executing its specialized tasks.



Note

- » Replicating a parent region to a higher-level parent is not supported.
- » Parent region can be configured after the child regions are online.



Important

Due to browser limitations, Red Hat supports logging in to only one tab for each multi-tabbed browser. Console settings are saved for the active tab only. For the same reason, CloudForms Management Engine does not guarantee that the browser's **Back** button will produce the desired results. CloudForms Management Engine recommends using the breadcrumbs provided in the Console.

1.3. Terminology

The following terms are used throughout this document. Review them before proceeding.

Account Role

A designation assigned to a user allowing or restricting a user to parts and functions of the CloudForms Management Engine console.

Action

An execution that is performed after a condition is evaluated.

Alert

CloudForms Management Engine alerts notify administrators and monitoring systems of critical configuration changes and threshold limits in the virtual environment. The notification can take the form of either an email or an SNMP trap.

Analysis Profile

A customized scan of hosts, virtual machines, or instances. You can collect information from categories, files, event logs, and registry entries.

Cloud

A pool of on-demand and highly available computing resources. The usage of these resources are scaled depending on the user requirements and metered for cost.

CloudForms Management Engine Appliance

A virtual machine on which the virtual management database (VMDB) and CloudForms Management Engine server reside.

CloudForms Management Engine Console

A web-based interface into the CloudForms Management Engine Appliance.

CloudForms Management Engine Role

A designation assigned to a CloudForms Management Engine server that defines what a CloudForms Management Engine server can do.

CloudForms Management Engine Server

The application that runs on the CloudForms Management Engine Appliance and communicates with the SmartProxy and the VMDB.

Cluster

Hosts that are grouped together to provide high availability and load balancing.

Condition

A test of criteria triggered by an event.

Discovery

Process run by the CloudForms Management Engine server which finds virtual machine and cloud providers.

Drift

The comparison of a virtual machine, instance, host, cluster to itself at different points in time.

Event

A trigger to check a condition.

Event Monitor

Software on the CloudForms Management Engine Appliance which monitors external providers for events and sends them to the CloudForms Management Engine server.

Host

A computer on which virtual machine monitor software is loaded.

Instance/Cloud Instance

A on-demand virtual machine based upon a predefined image and uses a scalable set of hardware resources such as CPU, memory, networking interfaces.

Managed/Registered VM

A virtual machine that is connected to a host and exists in the VMDB. Also, a template that is connected to a provider and exists in the VMDB. Note that templates cannot be connected to a host.

Managed/Unregistered VM

A virtual machine or template that resides on a repository or is no longer connected to a provider or host and exists in the VMDB. A virtual machine that was previously considered registered may become unregistered if the virtual machine was removed from provider inventory.

Provider

A computer on which software is loaded which manages multiple virtual machines that reside on multiple hosts.

Policy

A combination of an event, a condition, and an action used to manage a virtual machine.

Policy Profile

A set of policies.

Refresh

A process run by the CloudForms Management Engine server which checks for relationships of the provider or host to other resources, such as storage locations, repositories, virtual machines, or instances. It also checks the power states of those resources.

Regions

Regions are used to create a central database for reporting and charting. Regions are used primarily to consolidate multiple VMDBs into one master VMDB for reporting.

Resource

A host, provider, instance, virtual machine, repository, or datastore.

Resource Pool

A group of virtual machines across which CPU and memory resources are allocated.

Repository

A place on a datastore resource which contains virtual machines.

SmartProxy

The SmartProxy is a software agent that acts on behalf of the CloudForms Management Engine Appliance to perform actions on hosts, providers, storage and virtual machines.

The SmartProxy can be configured to reside on the CloudForms Management Engine Appliance or on an ESX server version. The SmartProxy can be deployed from the CloudForms Management Engine Appliance, and provides visibility to the VMFS storage. Each storage location must have a SmartProxy with visibility to it. The SmartProxy acts on behalf of the CloudForms Management Engine Appliance. If the SmartProxy is not embedded in the CloudForms Management Engine server, it communicates with the CloudForms Management Engine Appliance over HTTPS (SSL) on standard port 443.

SmartState Analysis

Process run by the SmartProxy which collects the details of a virtual machine or instance. Such details include accounts, drivers, network information, hardware, and security patches. This process is also run by the CloudForms Management Engine server on hosts and clusters. The data is stored in the VMDB.

and clusters. The data is stored in the VMDB.

SmartTags

Descriptors that allow you to create a customized, searchable index for the resources in your clouds and infrastructure.

Storage Location

A device, such as a VMware datastore, where digital information resides that is connected to a resource.

Tags

Descriptive terms defined by a CloudForms Management Engine user or the system used to categorize a resource.

Template

A template is a copy of a preconfigured virtual machine, designed to capture installed software and software configurations, as well as the hardware configuration, of the original virtual machine.

Unmanaged Virtual Machine

Files discovered on a datastore that do not have a virtual machine associated with them in the VMDB. These files may be registered to a provider that the CloudForms Management Engine server does not have configuration information on. Possible causes may be that the provider has not been discovered or that the provider has been discovered, but no security credentials have been provided.

Virtual Machine

A software implementation of a system that functions similar to a physical machine. Virtual machines utilize the hardware infrastructure of a physical host, or a set of physical hosts, to provide a scalable and on-demand method of system provisioning.

Virtual Management Database (VMDB)

Database used by the CloudForms Management Engine Appliance to store information about your resources, users, and anything else required to manage your virtual enterprise.

Virtual Thumbnail

An icon divided into smaller areas that summarize the properties of a resource.

Zones

CloudForms Management Engine Infrastructure can be organized into zones to configure failover and to isolate traffic. Zones can be created based on your environment. Zones can be based on geographic location, network location, or function. When first started, new servers are put into the default zone.

1.4. Getting Help and Giving Feedback

If you experience difficulty with a procedure described in this documentation, visit the Red Hat Customer Portal at <http://access.redhat.com>. Through the customer portal, you can:

- search or browse through a knowledgebase of technical support articles about Red Hat products

- » submit a support case to Red Hat Global Support Services (GSS)
- » access other product documentation

Red Hat also hosts a large number of electronic mailing lists for discussion of Red Hat software and technology. You can find a list of publicly available mailing lists at <https://www.redhat.com/mailman/listinfo>. Click on the name of any mailing list to subscribe to that list or to access the list archives.

Documentation Feedback

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, please submit a report to GSS through the customer portal.

When submitting a report, be sure to mention the manual's identifier: *Integration Services Guide*

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.

[1] <http://www.mozilla.org/en-US/firefox/organizations/faq/>

Part I. REST API

Chapter 2. Specification



Important

Currently, the REST API only supports the features detailed in the *Reference Guide* and *Examples* chapters.

2.1. HTTP Basics

2.1.1. REST API Entry Point

The REST API is made available via the /api URL prefix. It can be accessed on the CloudForms Management Engine server directly via HTTP using the default port as follows:

```
http://localhost:3000/api
```

Or external to the CFME Appliance as follows:

```
https://<cfmeHost_fqdn>/api
```

Response

```
{
  "id" : "http://localhost:3000/api",
  "name" : "CFME API",
  "version" : "1.0",
  "versions" : [
    {
      "name" : "1.0",
      "href" : "http://localhost:3000/api/v1.0"
    },
    {
      "name" : "0.5",
      "href" : "http://localhost:3000/api/v0.5"
    },
    {
      "name" : "0.1",
      "href" : "http://localhost:3000/api/v0.1"
    }
  ]
  "collections" : [
    {
      "name" : "providers",
      "href" : "http://localhost:3000/api/providers",
      "description" : "Extended Management Systems"
    },
    {
      "name" : "vms",
      "href" : "http://localhost:3000/api/vms",
      "description" : "Virtual Machines"
    }
  ]
}
```

```

    },
    ...
]
}

```

- Version is the Current API version, accessible via either of the following:
 - /api/
 - /api/v1.0/
- Versions lists all the earlier API versions that are still exposed via their respective entry points:
 - /api/v**Version**/

2.1.2. Supported Content Types

Requests:

Accept: application/json

Responses:

Content-Type: application/json

2.1.3. URL Paths

The recommended convention for URLs is to use alternative collection or resource path segments, relative to the API entry point as described in the following example:

URL	Description
/api	The REST API Entrypoint
/api/v Version	The REST Entrypoint for a specific version of the REST API
/api/:collection	A top-level collection
/api/:collection/:id	A specific resource of that collection
/api/:collection/:id/:subcollection	Sub-collection under the specific resource

2.1.4. Methods and related URLs

The basic HTTP Methods used for the API are GET, POST, PUT, PATCH and DELETE.

URL	Semantic
GET /api/:collection	Return all resources of the collection
GET /api/:collection/:id	Return the specific resource
POST /api/:collection	Create a resource in the collection
POST /api/:collection/:id	Perform an Action on a resource in the collection
PUT /api/:collection/:id	Update a specific resource
PATCH /api/:collection/:id	Update a specific resource
DELETE /api/:collection/:id	Delete a specific resource

:collection represents specific CloudForm entities like services, hosts, and vms.

2.1.5. Updating Resources

Use the following methods to update attributes in a resource:

- » Update a resource via the PUT HTTP Method
- » Update a resource via a POST Method with an *edit* action.
- » Update a resource via the PATCH HTTP Method

While PUT is the common method, the PATCH mechanism gives better control on which attribute to edit or add, and enables removal, which is not available with the other two methods.

2.1.6. Modifying Resource Attributes

PUT /api/vms/42

```
{
  "name" : "A new VM name",
  "description" : "A Description for the new VM"
}
```

POST /api/vms/42

```
{
  "action" : "edit",
  "resource" : {
    "name" : "A new VM name",
    "description" : "A Description for the new VM"
  }
}
```

PATCH /api/vms/42

```
[
  { "action": "edit", "path": "name", "value": "A new VM name" },
  { "action": "add", "path": "description", "value": "A Description for the new VM" },
  { "action": "remove", "path": "policies/3/description" }
]
```

In the PATCH implementation, path either references local attributes or attributes from a related resource in a subcollection.

2.1.7. Return Codes

Success

- » **200 OK** - The request has succeeded without errors, this code should be returned for example when retrieving a collection or a single resource.

- » **201 Created** - The request has been fulfilled and resulted in a **new resource being created**. The resource is available before this status code is returned. The response includes the HTTP body of the newly created resource.
- » **202 Accepted** - The request has been accepted for processing, but the processing has not been completed. Like, resource is not fully available yet. This status code is usually returned when the resource creation happens asynchronously. In this case the HTTP response includes a pointer to *monitor* or a *job* where the client can query to get the current status of the request and the estimate on when the request will be actually fulfilled.
- » **204 No Content** - The server has fulfilled the request but does not need to return an entity-body, and might want to return updated meta information. This HTTP response is commonly used for the DELETE requests, as the resource that was deleted does not exist anymore.

Client Errors

- » **400 Bad Request** - The request could not be understood by the server due to malformed syntax. The client SHOULD NOT repeat the request without modifications. In REST API this status code should be returned to client when the client uses the wrong combination of attributes, like expanding the non-existing collection, or using the pagination parameter incorrectly. Another use-case could be creating or performing actions on the resource, when the wrong JSON serialization of the resource or action is used.
- » **401 Unauthorized** - The request requires user authentication. The response MUST include a *Authenticate* header field containing a challenge applicable to the requested resource. If the request includes *Authenticate* header, then this HTTP status code might indicate that the current user is **not authorized** to perform given action or to access given resource.
- » **403 Forbidden** - The server understood the request, but is refusing to fulfill it. Authorization will not help in this case. This HTTP status code might indicate that the action performed is not supported for this resource or collection.
- » **404 Not Found** - In this case, the server has not found anything that matches with the URL.
- » **415 Unsupported Media Type** - The server is refusing to service the request because the entity of the request is in a format not supported by the requested resource for the requested method. This error must be returned, when the client is explicitly asking for format other than JSON (application/json).

Server Errors

- » **500 Internal Server Error** - The server encountered an unexpected condition which prevented it from fulfilling the request. This error code must be used when an exception is raised in the application and the exception has nothing to do with the client request.

2.2. CRUD Examples

The following examples show the basic CRUD operations (Create ,Read, Update, Delete) using the REST API.

For Authentication, we are showing here basic authentication via the `--user admin:smartvm` credentials argument. For multiple API calls it is recommended to access the CFME REST API via token based authentication. See [Section 2.3, “Authentication”](#) for details.

Show a collection of Resources

Get a collection of services: **GET /api/services**

```
curl --user admin:smartvm
-i -X GET -H "Accept: application/json"
http://localhost:3000/api/services
```

Return a single Resource

Return a single service: **GET /api/services/:id**

```
curl --user admin:smartvm
-i -X GET -H "Accept: application/json"
http://localhost:3000/api/services/1
```

Create a Resource

Create a new provider: **POST /api/providers**

```
curl --user admin:smartvm
-i -X POST -H "Accept: application/json"
-d '{
  "name"      : "RHEV Provider",
  "type"      : "rhev",
  "hostname"   : "rhevm.local.com",
  "address"    : "192.168.5.1",
  "port"       : "80",
  "username"   : "admin",
  "password"   : "12345"
}'
http://localhost:3000/api/services
```

Update a Resource

Update the email of a user: **PUT /api/users/:id**

```
curl --user admin:smartvm
-i -X PUT -H "Accept: application/json"
-d '{ "email" : "john.doe@local.com" }'
http://localhost:3000/api/users/1
```

Delete a Resource

Delete a service: **DELETE /api/services/:id**

```
curl --user admin:smartvm
-i -X DELETE -H "Accept: application/json"
http://localhost:3000/api/services/1
```

2.3. Authentication

There are two methods of authentication for the CFME REST API:

- » Basic Authentication: the user and password credentials are passed in with each HTTP request.
- » Token based Authentication: the client requests a token for the username/password credentials

specified. Then the token is used in lieu of the username/password for each subsequent API call.

2.3.1. Using Basic Authentication

The following example demonstrates how to use basic authentication:

```
$ curl --user username:password  
-i -X GET -H "Accept: application/json"  
http://localhost:3000/api/services/1013
```

For multiple REST API calls to the CFME engine, token-based authentication is recommended.

2.3.2. Using Authentication Tokens

Authentication Tokens:

- » are associated with the user credential
- » provide the necessary identify for RBAC in subsequent REST calls
- » expire after a certain amount of time - 10 minutes by default.

Request

```
$ curl --user username:password  
-i X GET -H "Accept: application/json"  
http://localhost:3000/api/auth
```

Response

```
HTTP/1.1 200 OK  
Content-Type: application/json  
  
{  
  "auth_token" : "af0245-238722-4d23db",  
  "expires_on" : "2013-12-07T18:20:07Z"  
}
```

Request using Token based authentication

```
$ curl -i -X GET -H "Accept: application/json"  
-H "X-Auth-Token: af0245-238722-4d23db"  
http://localhost:3000/api/services/1013
```

Failed response due to invalid token

```
HTTP/1.1 401 Unauthorized  
WWW-Authenticate: Basic realm="Application"  
...
```

When a request fails due to an invalid token, the client must re-authenticate with the user credentials to obtain a new Authentication Token.

2.4. JSON Specification

The API uses JSON throughout; the Content-Type for all requests and responses is **application/json**.

As is general practice with REST, clients should not make assumptions about the server's URL space. Clients are expected to discover all URL's by navigating the API. To keep this document readable, we still mention specific URL's, generally in the form of an absolute path. Clients should not use these, or assume that the actual URL structure follows these examples, and instead use discovered URL's. Any client should start its discovery with the API entry point, here denoted with **/api**.

2.4.1. Basic types

The following are basic data types and type combinators that are used throughout:

Name	Explanation	Example serialization
String	JSON string	{ "state" : "running" }
URL	Absolute URL	{ "href" : "http://SERVER/vms/1/start" }
Timestamp	Timestamp in ISO8601 format	{ "created" : "2013-12-05T08:15:30Z" }
Array[T]	Array where each entry has type T	{ "vms" : [{ "id" : "1" }, { "id" : "2" }] }
Ref[T]	A reference to a T, used to model relations, the T is a valid Resource identifier	{ "vm" : { "href" : URL } }
Collection	Array[T] where T represents a Ref[T], this might allow actions to be executed on all members as a single unit	{ "vms" : { "count" : "2", "resources" : [{ "href" : URL }, { "href" : URL }], "actions" : [] } }
Struct	A structure with sub-attributes	"power_state": {"state": "ON", "last_boot_time": "2013-05-29T15:28Z", "state_change_time": "2013-05-29T15:28Z"}

2.4.2. Common Attributes and Actions

The following describes attributes and actions that are shared by all resources and collections defined in this API.

Attributes

Attribute	Type	Description
id	Ref(self)	A unique self reference
name	String	A human name of the resource

```
{
  "id" : "http://localhost:3000/api/resources/1",
  "name" : "first_resource"
}
```

Actions

Action	HTTP method	Description
add	POST	Add new resource to the collection
edit	PUT/PATCH/POST	Edit attributes in resource
delete	DELETE	Delete resource



Note

Advertising of the common actions depends purely on the role and permissions of that the current API user does have for the particular resource.

2.4.3. Collections

Resources can be grouped into collections. Each collection is homogeneous so that it contains only one type of resource, and unordered. Resources can also exist outside any collection. In this case, we refer to these resources as singleton resources. Collections are themselves resources as well.

Collections can exist globally, at the top level of an API, but can also be contained inside a single resource. In the latter case, we refer to these collections as sub-collections. Sub-collections are usually used to express some kind of “contained in” relationship

Collections are serialized in JSON in the following way:

```
{
  "id" : Ref(self),
  "count": String,
  "subcount": String,
  "resources": [ ... ],
  "actions": [ ... ]
}
```

Where the **id** attribute is basically an URL to the collection itself. The **count** attribute in a collection always denotes the total number of items in the collection, not the number of items returned. The **subcount** attribute in a collection depicts the number of items returned. Then the **resources** attribute is an Array[T] where T might be a list of references to the T or, if expanded a list of resources with all attributes. The **actions** then contains an Array of actions that can be performed against the collection resources.

2.4.4. Action Specification

The representation of each resource will only contain an action and its URL if the current user is presently allowed to perform that action against that resource. Actions will be contained in the *actions* attribute of a resource; that attribute contains an array of action definition, where each action definition has a rel, method and a href attribute.

- *name* attribute contains the action name
- *method* attribute states the HTTP method that must be used in a client HTTP request in order to perform the given action (eg. GET, POST, PUT, DELETE)
- *href* attribute contains the absolute URL that the HTTP request should be performed against

- » *form* an optional attribute that references a JSON document which describes the resource attributes that can be provided in the message body when performing this action. This description indicates which of those attributes are mandatory and which are optional.

Collection actions

The actions performed against a collection of resources, are in most cases batch operations against multiple resources. The action request must include an HTTP body with the action name and the list of resource representations that the action will be performed against.

The resource representation might include the resource attributes as they can change the way how the action is actually performed. In the example below, the first resource is started with *enable_ipmi* attribute, but the second resource omits this attribute which means the default value will be used.

Sample JSON request body for collection action:

POST /api/vms

```
{
  "action": "start",
  "resources" : [
    { "href" : "http://localhost:3000/api/vms/1", "enable_ipmi" :
"enabled", "initial_state" : "started" },
    { "href" : "http://localhost:3000/api/vms/2" }
  ]
}
```

Actions in collection:

```
{
  "id" : Ref(self),
  "count": String,
  "resources": [ ... ],
  "actions": [
    {
      "name" : "shutdown",
      "method" : "post",
      "href" : URL
    },
    {
      "name" : "restart",
      "method" : "post",
      "href" : URL
    },
    {
      "name" : "poweron",
      "method" : "post",
      "href" : URL
    },
    {
      "name" : "poweroff",
      "method" : "post",
      "href" : URL
    },
    {
      "name" : "suspend",
      "method" : "post",
      "href" : URL
    }
  ]
}
```

```

    "method" : "post",
    "href"   : URL
  },
  {
    "name"   : "edit",
    "method" : "post",
    "form"   : { "href" : "http://localhost:3000/api/vms?form_for=add" },
    "href"   : URL
  },
  {
    "name"   : "destroy",
    "method" : "delete",
    "href"   : URL
  }
]
}

```

Resource actions

An action performed against a given resource is always described in the body of the HTTP request. The HTTP body could contain a list of resource attributes that dictate how the state of the receiving resource is to be changed once the action is performed. At minimum the JSON document in the message body must contain the name of the action to be performed.

In cases where no attributes are required to perform an action the HTTP body will contain an empty JSON document, in which case default values will be assigned to the corresponding attributes.

Sample JSON request body for resource action:

POST /api/vms/123

```
{
  "action"   : "start",
  "resource" : { "enable_ipmi" : "enabled" }
}
```

POST /api/vms/321

```
{
  "action"   : "start",
  "resource" : {}
}
```

Actions in a resource:

```
{
  "id"      : Ref(self),
  "name"    : "resource human name",
  "actions" : [
    {
      "name"   : "edit",
      "method" : "post",
      "form"   : { "href" : "http://localhost:3000/api/vms?form_for=edit" },
    }
  ]
}
```

```

  "href"    : URL
}
]
}
```

2.4.5. Forms

Getting a Form

The URL to fetch a form is part of the **action** serialization. In a case when no form is referenced, the action does not require any attributes to be performed.

Resource including an action with a Form:

```
{
  "id"      : Ref(self),
  "name"    : "resource human name",
  "actions" : [
    {
      "name"    : "edit",
      "method"  : "post",
      "form"    : { "href" : "http://localhost:3000/vms?form_for=edit" },
      "href"    : URL
    }
  ]
}
```

```
GET /api/vms?form_for=edit HTTP/1.1
```

Example of a Form:

```
{
  "required" : [ "name", "host" ],
  "optional" : [ "description" ],
  "internal" : [ "power_state", "created_on" ]
}
```

The following describes the semantics of the attribute identifiers:

- » required - these attributes must be specified for the action to be carried out.
- » optional - these are optional attributes, which may be specified and processed by the action. These may be shown in a UI but not enforced.
- » internal - it is not necessary to define these, but they are required for a UI form to show and extend a form with more attributes than the required and optional identifiers permit. This identifier shows what attributes are system managed and not modifiable by the REST client.

2.5. Query Specification

This specification identifies the controls available when querying collections.

2.5.1. Control Attributes

The controls are specified in the GET URL as attribute value pairs as follows:

```
GET /api/resources?ctl1=val1&ctl2=val2
```

Category	Attribute	Semantics
Paging	offset	0-based offset of first item to return
	limit	number of items to return. If 0 is specified then the remaining items are returned
Scope	sqlfilter	String specifying the SQL filter to search on. See <i>Filtering</i> below.
	attributes=atr1,atr2	Which attributes in addition to id to return. If not specified or all (default is attributes=all), then all attributes are returned
	expand=resources	Expands the resources returned in the collection beyond href. See <i>Expanding Collection</i> below.
Sorting	sort_by=atr1,atr2	By which attribute(s) to sort the result by
	sort_order=ascending or descending	Order of the sort

- ▶ The **count** attribute in a collection always denotes the total number of items in the collection, not the number of items returned.
- ▶ The **subcount** attribute in a collection denotes the number of items from the collection that were returned, for example as the result of a paged request.

2.5.2. Filtering

GET requests against collections support the following query parameters to enable filtering:

- ▶ **sqlfilter**: The SQL filter to use for querying the collection.

```
GET /api/resources?sqlfilter=name LIKE 'myservice%'
```

2.5.3. Expanding Collections

While in the JSON serialization example the description says that the resource might be a list of references to the resource, using the **expand** parameter returns a full JSON serialization of the resource instead:

GET /api/vms

```
{
  "id" : "http://localhost:3000/api/vms"
```

```
"count": "2",
"resources": [
    { "href" : "http://localhost:3000/api/vms/1" },
    { "href" : "http://localhost:3000/api/vms/2" }
],
"actions": []
}
```

GET /api/vms?expand=resources

```
{
  "id" : "http://localhost:3000/api/vms"
  "count": "2",
  "resources": [
      {
          "id" : "http://localhost:3000/api/vms/1",
          "name" : "My First VM",
          ...
      },
      {
          "id" : "http://localhost:3000/api/vms/2",
          "name" : "My Second VM",
          ...
      }
  ],
  "actions": []
}
```

Chapter 3. CFME Model

3.1. CloudForms Management Engine Features and Class Mapping

This table presents the CloudForms Feature Set, Entities, Components, Classes as well as the related REST API collection and targeted availability in which API Version.

Feature Set	Entity	Component	Class	REST Collection	API version
Services					
	Services		Service	services	1.0
	Service Catalogs	Catalog Items	ServiceTemplate	service_templates	1.0
		Catalogs	ServiceTemplateC	service_catalogs	1.0
Workloads					
		VMs & Instances	Vm		
		Templates & Images	MiqTemplate		
	Requests		MiqRequest		
Infrastructure					
	Provider	ExtManagementSystem	providers		1.0
	Cluster	EmsCluster	clusters		1.0
	Host	Host	hosts		1.0
	VMs & Templates	VmOrTemplate			
		VMs	Vm	vms	1.0
		Templates	MiqTemplate	templates	1.0
	Resource Pools	ResourcePool	resource_pools		1.0
	Datastores	Storage	data_stores		1.0
	Repositories	Repository			
	PXE Servers	PxeServer			
		Customization Templates	CustomizationTemplate		
		System Image Types	PxeImageType		
		ISO Datastores	IsoDatastore		
	Requests	MiqRequest			
Control					
	Policy Profiles	MiqPolicySet	policy_profiles		1.0
	Policies	MiqPolicy	policies		1.0
	Events	MiqEvent			
	Conditions	Condition			
	Actions	MiqAction			

Feature Set	Entity	Component	Class	REST Collection	API version
	Alert Profiles		MiqAlertSet		
	Alerts		MiqAlert		
Automate					
Explorer	Datastore		MiqAeNamespace MiqAelInstance		
	Alert				
	Automation				
	EVMApplications				
	Factory				
	Integration				
	Sample				
	System				
Customization					
	Provisioning Dialogs		MiqDialog		
	Service Dialogs		Dialog		
	Buttons				
		Button Groups	CustomButtonSet		
		Buttons	CustomButton		
	Automation Requests	AutomationRequest			
Configure					
Settings					
	Zone		Zone	zones	1.0
		EVM Server	MiqServer	servers	1.0
		Schedules	MiqSchedule		
Access Control					
	Users		User	users	1.0
	Groups		MiqGroup	groups	1.0
	Roles		MiqUserRole	roles	1.0

Chapter 4. Reference Guide

4.1. Authentication

Type	Mechanism
Basic Authentication	Basic HTTP Authorization with user and password
Token Based Authentication	
- Acquiring Token	/api/auth with Basic Authentication
- Authenticating with Token	X-Auth-Token Header

4.2. HTTP Headers

Header	Value
Authorization	Basic base64_encoded(user:password)
X-Auth-Token	Token provided by /api/auth
Accept	application/json
Content-Type	application/json

4.3. Listing and Querying Collections and Sub-Collections

Feature	Path
Listing Available Collections	/api
Listing Collections	/api/collection
Listing Sub-Collections	/api/collection/ <i>id</i> /sub-collection

Querying Capability	Query Parameters
Paging	offset, limit
Sorting	sort_by=attr, sort_order=asc\desc
Filtering	sqlfilter="..."
Querying by Tag	example: by_tag=/department/finance
Expanding Results	expand=what. Example: expand=resources,tags,service_templates
Selecting Attributes	attributes=atr1, atr2. Example: attributes=id,name,type

4.4. Collection Queries

Collection	URL
Services	/api/services
Service Templates	/api/service_templates
Service Catalogs	/api/service_catalogs
Clusters	/api/clusters
Datastores	/api/data_stores
Hosts	/api/hosts

Collection	URL
Providers	/api/providers
Resource Pools	/api/resource_pools
EVM Servers	/api/servers
Templates	/api/templates
Vms	/api/vms
Zones	/api/zones
Policies	/api/policies
Policy Profiles	/api/policy_profiles
Groups	/api/groups
Roles	/api/roles
Users	/api/users
Requests	/api/requests
Service Requests	/api/service_requests
Request Tasks	/api/request_tasks
Automation Requests	/api/automation_requests
Provision Requests	/api/provision_requests

For example queries, see [Section 5.33, “Example Queries”](#)

4.5. Sub-Collection Queries

Sub-Collection	URL
Service Templates	/api/collection/ <i>id</i> /service_templates
Tags	/api/collection/ <i>id</i> /tags
Automation Request Tasks	/api/automation_requests/ <i>id</i> /request_tasks /api/automation_requests/ <i>id</i> /tasks (alias of request_tasks)
Provision Request Tasks	/api/provision_requests/ <i>id</i> /request_tasks /api/provision_requests/ <i>id</i> /tasks (alias of request_tasks)

4.6. Available Actions

Action	Method	URL	Example
Edit Service	POST	/api/services/ <i>id</i>	Section 5.14, “Edit Service”
Edit Service via PUT	PUT	/api/services/ <i>id</i>	Section 5.20, “Edit Service via PUT”
Edit Service via PATCH	PATCH	/api/services/ <i>id</i>	Section 5.18, “Edit Service via PATCH”
Edit Services	POST	/api/services/	Section 5.15, “Edit Services”

Action	Method	URL	Example
Assign Tags to Service	POST	/api/services/ <i>id</i> /tags	Section 5.4, “Assign Tags to Service”
Unassign Tags from Service	POST	/api/services/ <i>id</i> /tags	Section 5.30, “Unassign Tags from Service”
Retire Service Now	POST	/api/services/ <i>id</i>	Section 5.25, “Retire Service Now”
Retire Service in Future	POST	/api/services/ <i>id</i>	Section 5.26, “Retire Service in Future”
Retire Services	POST	/api/services	Section 5.27, “Retire Services”
Delete Service	DELETE	/api/services/ <i>id</i>	
Delete Services	POST	/api/services	Section 5.12, “Delete Services”
Edit Service Template	POST	/api/service_templates/ <i>id</i>	Section 5.16, “Edit Service Template”
Edit Service Templates	POST	/api/service_templates	Section 5.17, “Edit Service Templates”
Assign Tags to Service Template	POST	/api/service_templates/ <i>id</i> /tags	Section 5.7, “Assign Tags to Service Template”
Unassign Tags from Service Template	POST	/api/service_templates/ <i>id</i> /tags	Section 5.29, “Unassign Tags from Service Template”
Delete Service Template	DELETE	/api/service_templates/ <i>id</i>	
Delete Service Templates	POST	/api/service_templates	Section 5.11, “Delete Service Templates”
Add Service Catalog	POST	/api/service_catalogs	Section 5.1, “Add Service Catalog”
Add Service Catalogs	POST	/api/service_catalogs	Section 5.2, “Add Service Catalogs”
Edit Service Catalog	POST	/api/service_catalogs/ <i>id</i>	Section 5.19, “Edit Service Catalog”
Edit Service Catalogs	POST	/api/service_catalogs	Section 5.13, “Edit Service Catalogs”
Assign Service Templates	POST	/api/service_catalogs/ <i>id</i> /service_templates	Section 5.3, “Assign Service Templates”
Unassign Service Templates	POST	/api/service_catalogs/ <i>id</i> /service_templates	Section 5.28, “Unassign Service Templates”
Order Service	POST	/api/service_catalogs/ <i>id</i> /service_templates	Section 5.21, “Order Service”
Order Services	POST	/api/service_catalogs/ <i>id</i> /service_templates	Section 5.22, “Order Services”
Delete Service Catalog	DELETE	/api/service_catalogs/ <i>id</i>	
Delete Service Catalogs	POST	/api/service_catalogs	Section 5.10, “Delete Service Catalogs”
Automation Request	POST	/api/automation_requests	Section 5.8, “Automation Request”

Action	Method	URL	Example
Automation Requests	POST	/api/automation_requests	Section 5.9, “Automation Requests”
Provision Request	POST	/api/provision_requests	Section 5.23, “Provision Request”
Provision Requests	POST	/api/provision_requests	Section 5.24, “Provision Requests”

Chapter 5. Examples

5.1. Add Service Catalog

```
POST /api/service_catalogs
```

```
{  
    "action" : "add",  
    "resource" : {  
        "name" : "Sample Service Catalog",  
        "description" : "Description of Sample Service Catalog",  
        "service_templates" : [  
            { "href" : "http://localhost:3000/api/service_templates/3" },  
            { "href" : "http://localhost:3000/api/service_templates/4" }  
        ]  
    }  
}
```

Back to [Section 4.6, “Available Actions”](#)

5.2. Add Service Catalogs

```
POST /api/service_catalogs
```

```
{  
    "action" : "add",  
    "resources" : [  
        {  
            "name" : "First Sample Service Catalog",  
            "description" : "Description of First Sample Service Catalog"  
            "service_templates" : [  
                { "href" : "http://localhost:3000/api/service_templates/1" },  
                { "href" : "http://localhost:3000/api/service_templates/2" }  
            ]  
        },  
        {  
            "name" : "Second Sample Service Catalog",  
            "description" : "Description of Second Sample Service Catalog"  
            "service_templates" : [  
                { "href" : "http://localhost:3000/api/service_templates/3" },  
                { "href" : "http://localhost:3000/api/service_templates/4" }  
            ]  
        },  
        {  
            "name" : "Third Sample Service Catalog",  
            "description" : "Description of Third Sample Service Catalog"  
            "service_templates" : [  
                { "href" : "http://localhost:3000/api/service_templates/5" },  
                { "href" : "http://localhost:3000/api/service_templates/6" }  
            ]  
        }  
    ]  
}
```

```

        ]
    }
]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.3. Assign Service Templates

POST /api/service_catalogs/1/service_templates

```
{
  "action" : "assign",
  "resources" : [
    { "href" : "http://localhost:3000/api/service_templates/5" },
    { "href" : "http://localhost:3000/api/service_templates/6" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.4. Assign Tags to Service

POST /api/services/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "category" : "location", "name" : "ny" },
    { "category" : "department", "name" : "finance" },
    { "category" : "environment", "name" : "dev" }
  ]
}
```

Assign Tags by Name to a Service

POST /api/services/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "name" : "/department/finance" },
    { "name" : "/location/ny" }
  ]
}
```

Assign a Tag by Reference to a Service

POST /api/services/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "href" : "http://localhost:3000/api/services/1/tags/49" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.5. Assign Tags by Name to a Service

POST /api/services/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "name" : "/department/finance" },
    { "name" : "/location/ny" }
  ]
}
```

5.6. Assign a Tag by Reference to a Service

POST /api/services/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "href" : "http://localhost:3000/api/services/1/tags/49" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.7. Assign Tags to Service Template

POST /api/service_templates/1/tags

```
{
  "action" : "assign",
  "resources" : [
    { "category" : "location", "name" : "ny" },
    { "category" : "department", "name" : "finance" },
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.8. Automation Request

In the automation requests:

- » version defaults to "1.1" if not specified.
- » user_name defaults to the REST API authenticated user if not specified.

```
POST /api/automation_requests
```

```
{
  "version" : "1.1",
  "uri_parts" : {
    "namespace" : "System",
    "class" : "Request",
    "instance" : "InspectME",
    "message" : "create"
  }
  "parameters" : {
    "var1" : "xxxxx",
    "var2" : "yyyyy",
    "var3" : 1024,
    "var4" : true,
    "var5" : "last value"
  }
  "requester" : {
    "user_name" : "jdoe",
    "auto_approve" : true
  }
}
```

Optionally, the action based request format is also supported:

```
POST /api/automation_requests
```

```
{
  "action" : "create",
  "resource" : {
    "version" : "1.1",
    "uri_parts" : {
      "namespace" : "System",
      "class" : "Request",
      "instance" : "InspectME",
      "message" : "create"
    }
    "parameters" : {
      "var1" : "xxxxx",
      "var2" : "yyyyy",
      "var3" : 1024,
      "var4" : true,
      "var5" : "last value"
    }
    "requester" : {
      "user_name" : "jdoe",
    }
  }
}
```

```

        "auto_approve" : true
    }
}
}
```

[Back to Section 4.6, “Available Actions”](#)

5.9. Automation Requests

In the automation requests:

- » version defaults to "1.1" if not specified.
- » user_name defaults to the REST API authenticated user if not specified.

POST /api/automation_requests

```
{
  "action" : "create",
  "resources" : [
    {
      "version" : "1.1",
      "uri_parts" : { "namespace" : "System", "class" : "Request",
      "instance" : "InspectME",
          "message" : "create" },
      "parameters" : { "vm_name" : "test_1",
                      "var2" : "yyyyy",
                      "var3" : 1024,
                      "var4" : true,
                      "var5" : "last value" },
      "requester" : { "user_name" : "jdoe", "auto_approve" : true }
    },
    {
      "uri_parts" : { "namespace" : "System", "class" : "Request",
      "instance" : "InspectME",
          "message" : "create" },
      "parameters" : { "vm_name" : "test_2",
                      "vm_memory" : 1024,
                      "memory_limit" : 16384 },
      "requester" : { "auto_approve" : true }
    },
    {
      "uri_parts" : { "namespace" : "System", "class" : "Request",
      "instance" : "InspectME",
          "message" : "create" },
      "parameters" : { "vm_name" : "test_3",
                      "vm_memory" : 2048,
                      "memory_limit" : 16384 },
      "requester" : { "auto_approve" : true }
    },
    {
      "uri_parts" : { "namespace" : "System", "class" : "Request",
      "instance" : "InspectME",
          "message" : "create" },
      "parameters" : { "vm_name" : "test_4",
                      "vm_memory" : 4096,
                      "memory_limit" : 16384 },
      "requester" : { "auto_approve" : true }
    }
  ]
}
```

```

        "requester" : { "auto_approve" : true }
    }
]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.10. Delete Service Catalogs

POST /api/service_catalogs

```
{
  "action" : "delete",
  "resources" : [
    { "href" : "http://localhost:3000/api/service_catalogs/11" },
    { "href" : "http://localhost:3000/api/service_catalogs/12" },
    { "href" : "http://localhost:3000/api/service_catalogs/13" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.11. Delete Service Templates

POST /api/service_templates

```
{
  "action" : "delete",
  "resources" : [
    { "href" : "http://localhost:3000/api/service_templates/11" },
    { "href" : "http://localhost:3000/api/service_templates/12" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.12. Delete Services

POST /api/services

```
{
  "action" : "delete",
  "resources" : [
    { "href" : "http://localhost:3000/api/services/201" },
    { "href" : "http://localhost:3000/api/services/202" },
    { "href" : "http://localhost:3000/api/services/203" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.13. Edit Service Catalogs

POST /api/service_catalogs

```
{  
  "action" : "edit",  
  "resources" : [  
    {  
      "href" : "http://localhost:3000/api/service_catalogs/2",  
      "description" : "Updated Description for Second Service Catalog"  
    },  
    {  
      "href" : "http://localhost:3000/api/service_catalogs/3",  
      "description" : "Updated Description for Third Service Catalog"  
    }  
  ]  
}
```

[Back to Section 4.6, “Available Actions”](#)

5.14. Edit Service

POST /api/services/1

```
{  
  "action" : "edit",  
  "resource" : {  
    "name" : "service_1",  
    "description" : "This is an updated description for the first  
service"  
  }  
}
```

[Back to Section 4.6, “Available Actions”](#)

5.15. Edit Services

POST /api/services

```
{  
  "action" : "edit",  
  "resources" : [  
    {  
      "href" : "http://localhost:3000/api/services/185",  
      "description" : "This is an updated description for service 185"  
    },  
    {  
      "href" : "http://localhost:3000/api/services/185",  
      "description" : "This is an updated description for service 185"  
    }  
  ]  
}
```

```

        "description" : "This is an updated description for service 186"
    }
]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.16. Edit Service Template

POST /api/service_templates/1

```
{
  "action" : "edit",
  "resource" : {
    "name" : "svc_template_01",
    "description" : "This is a sample service template"
  }
}
```

[Back to Section 4.6, “Available Actions”](#)

5.17. Edit Service Templates

POST /api/service_templates

```
{
  "action" : "edit",
  "resources" : [
    {
      "href" : "http://localhost:3000/api/service_templates/6",
      "description" : "This is the first sample service template"
    },
    {
      "href" : "http://localhost:3000/api/service_templates/7",
      "description" : "This is the second sample service template"
    }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.18. Edit Service via PATCH

Supported attribute actions: add, edit, and remove.

PATCH /api/services/1

```
[  
  { "action" : "edit", "path" : "name", "value" : "service_001" },  
  { "action" : "remove", "path" : "description" }  
]
```

[Back to Section 4.6, “Available Actions”](#)

5.19. Edit Service Catalog

POST /api/service_catalog/3

```
{  
  "action" : "edit",  
  "resource" : {  
    "description" : "Updated Description of Third Service Catalog"  
  }  
}
```

[Back to Section 4.6, “Available Actions”](#)

5.20. Edit Service via PUT

PUT /api/services/1

```
{  
  "name" : "service_1",  
  "description" : "This is an updated description for the first service"  
}
```

[Back to Section 4.6, “Available Actions”](#)

5.21. Order Service

POST /api/service_catalogs/1/service_templates

```
{  
  "action" : "order",  
  "resource" : {  
    "href" : "http://localhost:3000/api/service_templates/3",  
    "option_0_vm_target_name" : "test-vm-0001",  
    "option_0_vm_target_hostname" : "test-vm-0001"  
  }  
}
```

[Back to Section 4.6, “Available Actions”](#)

5.22. Order Services

```
POST /api/service_catalogs/2/service_templates
```

```
{
  "action" : "order",
  "resources" : [
    {
      "href" : "http://localhost:3000/api/service_templates/3",
      "option_1_vm_target_name" : "sample-vm-1201",
      "option_2_vm_target_hostname" : "sample-vm-1201"
    },
    {
      "href" : "http://localhost:3000/api/service_templates/3",
      "option_1_vm_target_name" : "sample-vm-1202",
      "option_2_vm_target_hostname" : "sample-vm-1202"
    },
    {
      "href" : "http://localhost:3000/api/service_templates/4",
      "option_1_vm_target_name" : "dev-vm1",
      "option_2_vm_target_hostname" : "dev-vm1",
      "option_3_vm_memory" : '16384'
    },
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.23. Provision Request

In the provision requests:

- » version defaults to "1.1" if not specified.
- » user_name defaults to the REST API authenticated user if not specified.

```
POST /api/provision_requests
```

```
{
  "version" : "1.1",
  "template_fields" : {
    "guid" : "afe6e8a0-89fd-11e3-b6ac-b8e85646e742"
  },
  "vm_fields" : {
    "number_of_cpus" : 1,
    "vm_name" : "aab_rest_vm1",
    "vm_memory" : "1024",
    "vlan" : "nic1"
  },
  "requester" : {
    "user_name" : "jdoe",
    "owner_first_name" : "John",
    "owner_last_name" : "Doe",
    "owner_email" : "jdoe@sample.com",
    "auto_approve" : true
  },
}
```

```

"tags" : {
    "network_location" : "Internal",
    "cc" : "001"
},
"additional_values" : {
    "request_id" : "1001"
},
"ems_custom_attributes" : { },
"miq_custom_attributes" : { }
}

```

Optionally, the action based request format is also supported:

POST /api/provision_requests

```

{
  "action" : "create",
  "resource" : {
    "version" : "1.1",
    "template_fields" : {
      "guid" : "afe6e8a0-89fd-11e3-b6ac-b8e85646e742"
    },
    "vm_fields" : {
      "number_of_cpus" : 1,
      "vm_name" : "aab_rest_vm1",
      "vm_memory" : "1024",
      "vlan" : "nic1"
    },
    "requester" : {
      "user_name" : "jdoe",
      "owner_first_name" : "John",
      "owner_last_name" : "Doe",
      "owner_email" : "jdoe@sample.com",
      "auto_approve" : true
    },
    "tags" : {
      "network_location" : "Internal",
      "cc" : "001"
    },
    "additional_values" : {
      "request_id" : "1001"
    },
    "ems_custom_attributes" : { },
    "miq_custom_attributes" : { }
  }
}

```

[Back to Section 4.6, “Available Actions”](#)

5.24. Provision Requests

In the provision requests:

- » version defaults to "1.1" if not specified.

- » user_name defaults to the REST API authenticated user if not specified.

```
POST /api/provision_requests
```

```
{
  "action" : "create",
  "resources" : [
    {
      "version" : "1.1",
      "template_fields" : { "guid" : "afe6e8a0-89fd-11e3-b6ac-
b8e85646e742" },
      "vm_fields" : { "vm_name" : "jdoe_rest_vm1",
                      "number_of_cpus" : 1,
                      "vm_memory" : "1024",
                      "vlan" : "nic1" },
      "requester" : { "user_name" : "jdoe",
                      "owner_first_name" : "John",
                      "owner_last_name" : "Doe",
                      "owner_email" : "jdoe@sample.com",
                      "auto_approve" : true },
      "tags" : { "network_location" : "Internal",
                 "cc" : "001" },
      "additional_values" : { "request_id" : "1001" },
      "ems_custom_attributes" : { },
      "miq_custom_attributes" : { }
    },
    {
      "template_fields" : { "guid" : "afe6e8a0-89fd-11e3-b6ac-
b8e85646e742" },
      "vm_fields" : { "vm_name" : "jdoe_rest_vm2",
                      "number_of_cpus" : 1,
                      "vm_memory" : "2048",
                      "vlan" : "nic1" },
      "requester" : { "owner_first_name" : "John",
                      "owner_last_name" : "Doe",
                      "owner_email" : "jdoe@sample.com",
                      "auto_approve" : true },
      "tags" : { "network_location" : "Internal",
                 "cc" : "001" },
      "additional_values" : { "request_id" : "1002" }
    },
    {
      "template_fields" : { "guid" : "afe6e8a0-89fd-11e3-b6ac-
b8e85646e742" },
      "vm_fields" : { "vm_name" : "jdoe_rest_vm3",
                      "number_of_cpus" : 1,
                      "vm_memory" : "4096",
                      "vlan" : "nic1" },
      "requester" : { "owner_first_name" : "John",
                      "owner_last_name" : "Doe",
                      "owner_email" : "jdoe@sample.com",
                      "auto_approve" : true },
      "tags" : { "network_location" : "Internal",
                 "cc" : "001" },
      "additional_values" : { "request_id" : "1003" }
    }
  ]
}
```

```

},
{
  "template_fields" : { "guid" : "afe6e8a0-89fd-11e3-b6ac-
b8e85646e742" },
  "vm_fields" : { "vm_name" : "jdoe_rest_vm4",
                  "number_of_cpus" : 1,
                  "vm_memory" : "8192",
                  "vlan" : "nic1" },
  "requester" : { "owner_first_name" : "John",
                  "owner_last_name" : "Doe",
                  "owner_email" : "jdoe@sample.com",
                  "auto_approve" : true },
  "tags" : { "network_location" : "Internal",
             "cc" : "001" },
  "additional_values" : { "request_id" : "1004" }
}
]
}

```

[Back to Section 4.6, “Available Actions”](#)

5.25. Retire Service Now

POST /api/services/301

```
{
  "action" : "retire",
  "resource" : { "href" : "http://localhost:3000/api/services/301" }
}
```

5.26. Retire Service in Future

POST /api/services/302

```
{
  "action" : "retire",
  "resource" : { "href" : "http://localhost:3000/api/services/302" },
  "date" : "06/24/2014", "warn" : "7" }
```

[Back to Section 4.6, “Available Actions”](#)

5.27. Retire Services

POST /api/services

```
{
  "action" : "retire",
  "resources" : [
```

```
{
  "href" : "http://localhost:3000/api/services/280" },
  { "href" : "http://localhost:3000/api/services/281" },
  { "href" : "http://localhost:3000/api/services/282", "date" :
"06/30/2014", "warn" : "7" },
  { "href" : "http://localhost:3000/api/services/283", "date" :
"06/31/2014", "warn" : "7" },
]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.28. Unassign Service Templates

POST /api/service_catalogs/2/service_templates

```
{
  "action" : "unassign",
  "resources" : [
    { "href" : "http://localhost:3000/api/service_templates/2" },
    { "href" : "http://localhost:3000/api/service_templates/3" },
    { "href" : "http://localhost:3000/api/service_templates/4" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.29. Unassign Tags from Service Template

POST /api/service_templates/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "category" : "location", "name" : "ny" },
    { "category" : "department", "name" : "finance" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.30. Unassign Tags from Service

POST /api/services/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "category" : "department", "name" : "finance" },
    { "category" : "location", "name" : "ny" }
  ]
}
```

```
    { "category" : "environment", "name" : "dev" }
]
}
```

Unassign a Tag by Name from a Service

POST /api/services/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "name" : "/managed/department/finance" }
  ]
}
```

Unassign a Tag by Reference from a Service

POST /api/services/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "href" : "tags/49" }
  ]
}
```

Back to [Section 4.6, “Available Actions”](#)

5.31. Unassign a Tag by Name from a Service

POST /api/services/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "name" : "/managed/department/finance" }
  ]
}
```

5.32. Unassign a Tag by Reference from a Service

POST /api/services/1/tags

```
{
  "action" : "unassign",
  "resources" : [
    { "href" : "tags/49" }
  ]
}
```

[Back to Section 4.6, “Available Actions”](#)

5.33. Example Queries

Query All VMs

```
GET /api/vms
```

Query a Specific VM

```
GET /api/vms/1386
```

Query all VMs, but return only return name and vendor

```
GET /api/vms?expand=resources&attributes=name, vendor
```

Query VMs named sample* and return name and vendor

```
GET /api/vms?expand=resources&attributes=name, vendor&sqlfilter="name LIKE 'sample%'"
```

Query VMs but only return the first 500

```
GET /api/vms?offset=0&limit=500
```

Query VMs but return the second 500

```
GET /api/vms?offset=500&limit=500
```

Query first 1000 VMs, named test*, get name, vendor and guid and sort by name in ascending order

```
GET /api/vms?offset=0&limit=1000&sqlfilter="name LIKE 'test*'"&expand=resources&attributes=name, vendor, guid&sort_by=name&sort_order=asc
```

Query Services tagged for the finance department

```
GET /api/services?by_tag=/department/finance
```

Get details on the Tags of the first service

```
GET /api/services/1/tags?expand=resources
```

Get details of the first service catalog and related details on the assigned service templates

```
GET /api/service_catalogs/1?expand=service_templates
```

Get a specific provision request with expanded details on the associated provision request tasks

```
GET /api/provision_requests/120?expand=tasks
```

Back to [Section 4.4, “Collection Queries”](#)

Part II. SOAP API

Chapter 6. Insight Web Services

This chapter describes web services used by CloudForms Management Engine Insight Feature Set.

At the end of this chapter, you will:

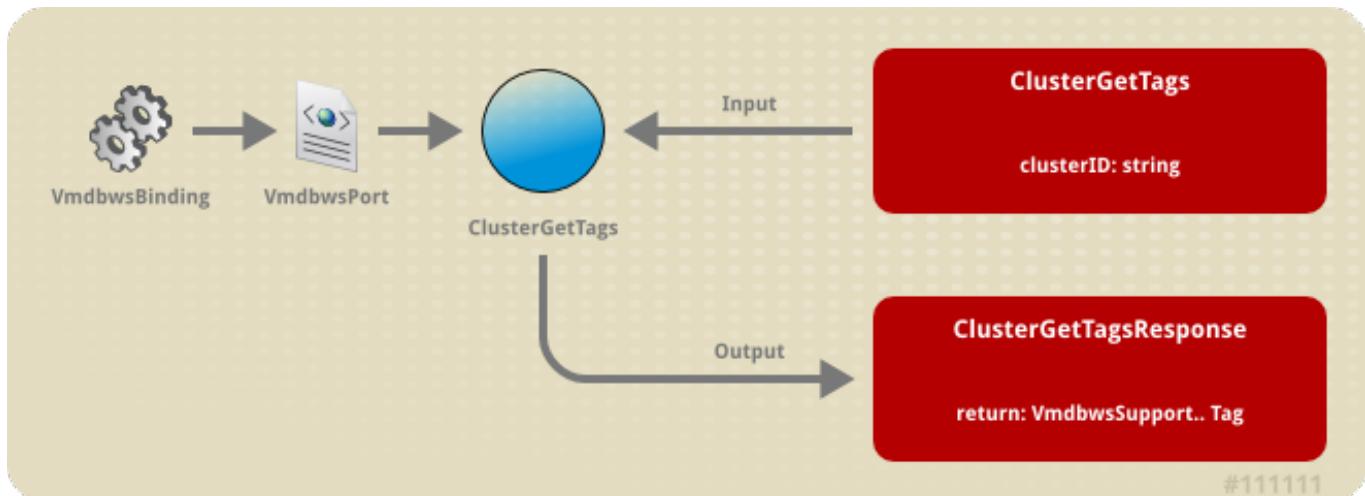
- » Know what web service methods are available to Insight.
- » Be familiar with the parameters that each method can take.
- » See examples of the outputs for each method.

Web Services associated with Insight pertain to data collected from your Virtual Infrastructure. For each Web Service, we supply a brief description, input, output, the excerpt from the WSDL, and a sample output. The sample output may look different depending on the technology used by the Web Service client.

You can find a full copy of the WSDL file in the WSDL File Appendix.

6.1. ClusterGetTags

ClusterGetTags retrieves the list of tags associated with a **Cluster** object. The returned **Tag** objects include properties for **category**, **category_display_name**, **tag_name**, **tag_display_name**, and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



Syntax

- » *Input: [{:clusterID => :string}]*
- » *Output: [[VmdbwsSupport.. TagArray]]*

Examples

The following examples demonstrate **ClusterGetTags** usage:

Example 6.1. ClusterGetTags WSDL

```
<message name="ClusterGetTags">
```

```

<part name="clusterId" type="xsd:string"/>
</message>
<message name="ClusterGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>
        <xsd:element name="tag_path" type="xsd:string"/>
        <xsd:element name="category" type="xsd:string"/>
        <xsd:element name="category_display_name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 6.2. ClusterGetTags Output (Windows PowerShell)

```

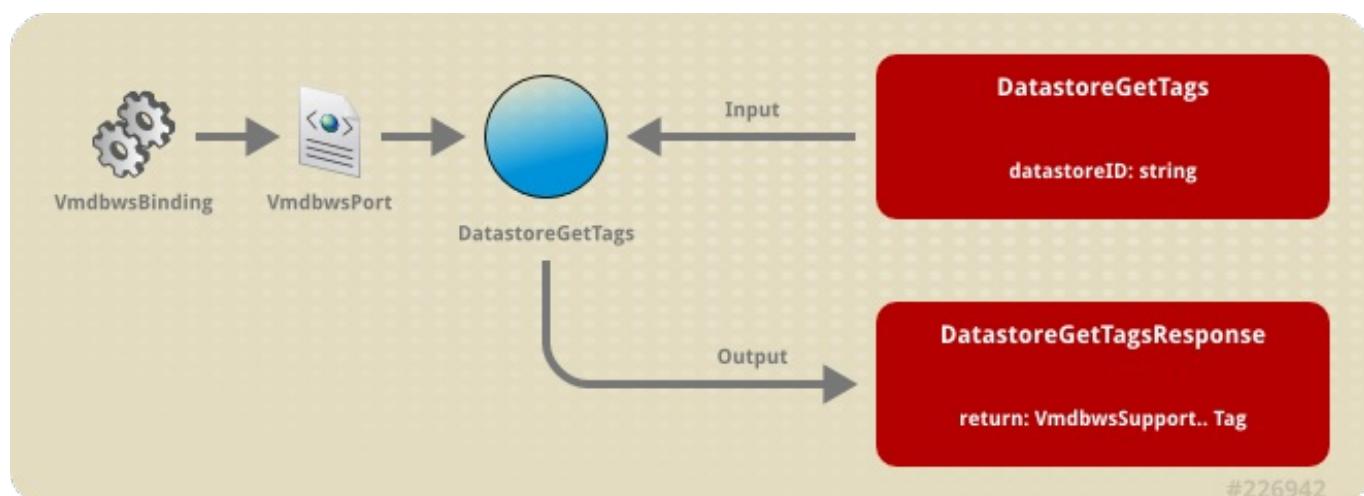
display_name          : Location: Chicago
category              : location
category_display_name : Location
tag_display_name      : Chicago
tag_name               : chicago
tag_path               : /managed/location/chicago

display_name          : Environment: Production
category              : environment
category_display_name : Environment
tag_display_name      : Production
tag_name               : prod
tag_path               : /managed/environment/prod

```

6.2. DatastoreGetTags

DatastoreGetTags retrieves the list of tags associated with a **Datastore** object. The returned **Tag** objects include properties for **category**, **tag_name**, **tag_display_name** and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



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Syntax

- » *Input:* [{:datastoreId => :string}]
- » *Output:* [[VmdbwsSupport..TagArray]]

Examples

The following examples demonstrate **DatastoreGetTags** usage:

Example 6.3. DatastoreGetTags WSDL

```
<message name="DatastoreGetTags">
  <part name="datastoreId" type="xsd:string"/>
</message>
<message name="DatastoreGetTagsResponse">
  <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..Tag">
  <xsd:all>
    <xsd:element name="tag_display_name" type="xsd:string"/>
    <xsd:element name="display_name" type="xsd:string"/>
    <xsd:element name="tag_name" type="xsd:string"/>
    <xsd:element name="tag_path" type="xsd:string"/>
    <xsd:element name="category" type="xsd:string"/>
    <xsd:element name="category_display_name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

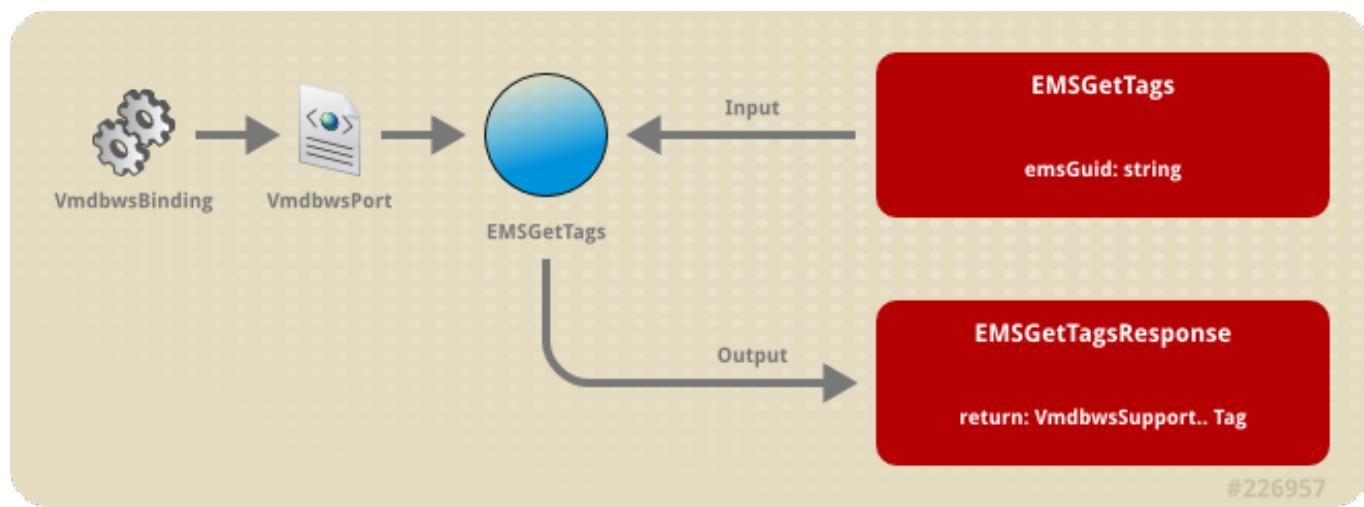
Example 6.4. DatastoreGetTags Output (Windows PowerShell)

```
display_name      : Location: Chicago
category         : location
category_display_name : Location
tag_display_name   : Chicago
tag_name          : chicago
tag_path          : /managed/location/chicago

display_name      : Environment: Production
category         : environment
category_display_name : Environment
tag_display_name   : Production
tag_name          : prod
tag_path          : /managed/environment/prod
```

6.3. EmsGetTags

EmsGetTags retrieves the list of tags associated with a Provider (EMS) object. The returned **Tag** objects include properties for **category**, **tag_name**, **tag_display_name**, and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



Syntax

- » *Input:* [{:emsGuid => :string}]
- » *Output:* [[VmdbwsSupport.. TagArray]]

Examples

The following examples demonstrate **EmsGetTags** usage:

Example 6.5. EmsGetTags WSDL

```

<message name="EmsGetTags">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EmsGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>
        <xsd:element name="tag_path" type="xsd:string"/>
        <xsd:element name="category" type="xsd:string"/>
        <xsd:element name="category_display_name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
    
```

Example 6.6. EmsGetTags Output (Windows PowerShell)

display_name	:	Location: Chicago
category	:	location
category_display_name	:	Location
tag_display_name	:	Chicago
tag_name	:	chicago
tag_path	:	/managed/location/chicago

```

display_name      : Environment: Production
category         : environment
category_display_name : Environment
tag_display_name   : Production
tag_name          : prod
tag_path          : /managed/environment/prod

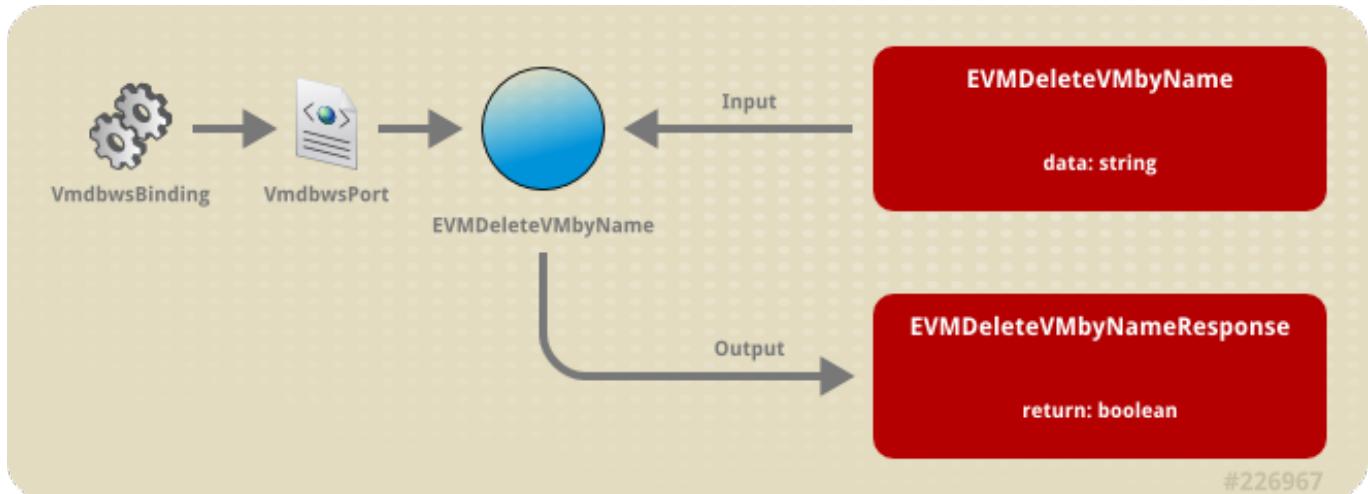
```

6.4. EVMDeleteVmByName

EVMDeleteVmByName looks up a **VirtualMachine** by name and deletes it from the VMDB.

Note

This method will likely be changed or deleted in the future.



Syntax

- » *Input:* Name of the Virtual Machine as a string.
- » *Output:* Boolean value (**true** or **false**)

Examples

The following examples demonstrate **EVMDeleteVmByName** usage:

Example 6.7. EVMDeleteVmByName WSDL

```

<message name="EVMDeleteVmByName">
    <part name="vmName" type="xsd:string"/>
</message>
<message name="EVMDeleteVmByNameResponse">
    <part name="return" type="xsd:boolean"/>
</message>

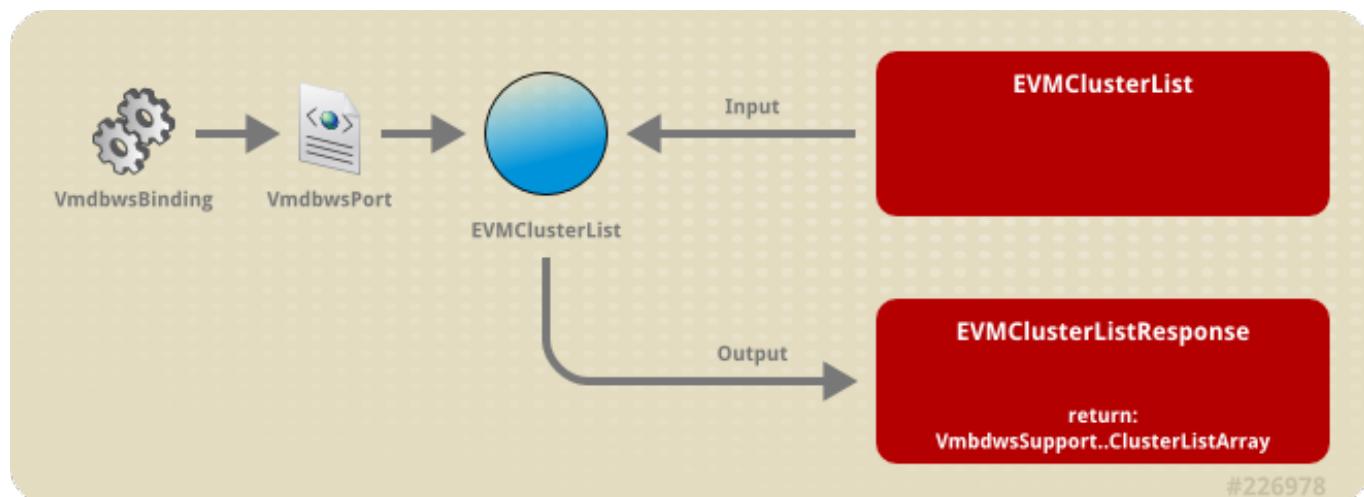
```

Example 6.8. EVMDeleteVmByName (Java)

Calling EVMDeleteVmByName...
...Result:true

6.5. EVMClusterList

EVMClusterList retrieves all of the **id** and **name** values of the **Cluster** instances stored in the VMDB.

**Syntax**

- » **Input:** none
- » **Output:** **VMdbWs..ClusterListArray**. Each **VmbdwsSupport..ClusterList** object contains the guid and name of a host.

Examples

The following examples demonstrate **EVMClusterList** usage:

Example 6.9. EVMClusterList WSDL

```

<message name="EVMClusterList">
</message>
<message name="EVMClusterListResponse">
    <part name="return" type="typens:VmbdwsSupport..ClusterListArray"/>
</message>

<xsd:complexType name="VmbdwsSupport..ClusterList">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 6.10. EVMClusterList Output (PowerShell)

Clusters:

```
id    : 1
name  : Testing-Production Cluster

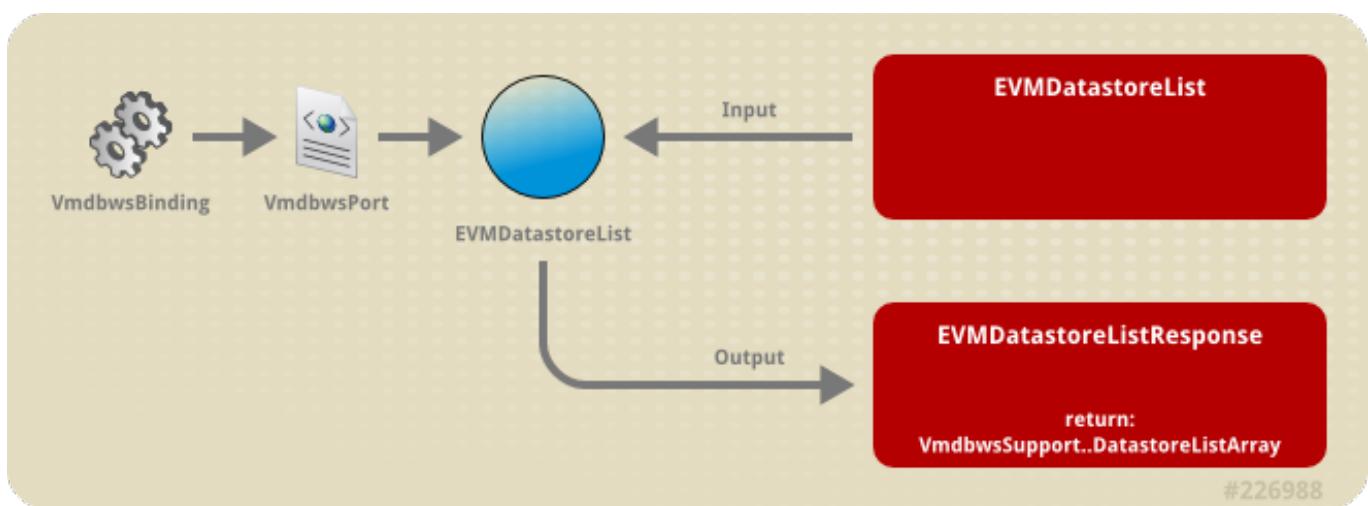
id    : 2
name  : Development-Production Cluster
```

Resource Pools:

id -- 10 9 8 7 6 5 1	name ---- Citrix MiqCloud Production Test environment Testing Training VMware View VMs Default
--	--

6.6. EVMDatasoreList

EVMDatasoreList retrieves all of the **id** and **name** values of the **Datastore** instances stored in the VMDB.



Syntax

- » **Input:** none
- » **Output:** **Vmdbws..DatastoreListArray**. Each **VmdbwsSupport..DatastoreList** object contains the **guid** and **name** of a Datastore.

Examples

The following examples demonstrate **EVMDatastoreList** usage:

Example 6.11. EVMDatastoreList WSDL

```
<message name="EVMDatastoreList" />
<message name="EVMDatastoreListResponse">
  <part name="return" type="typens: VmdbwsSupport..DatastoreListArray"
/>
</message>
...
<xsd:complexType name="VmdbwsSupport..DatastoreList">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

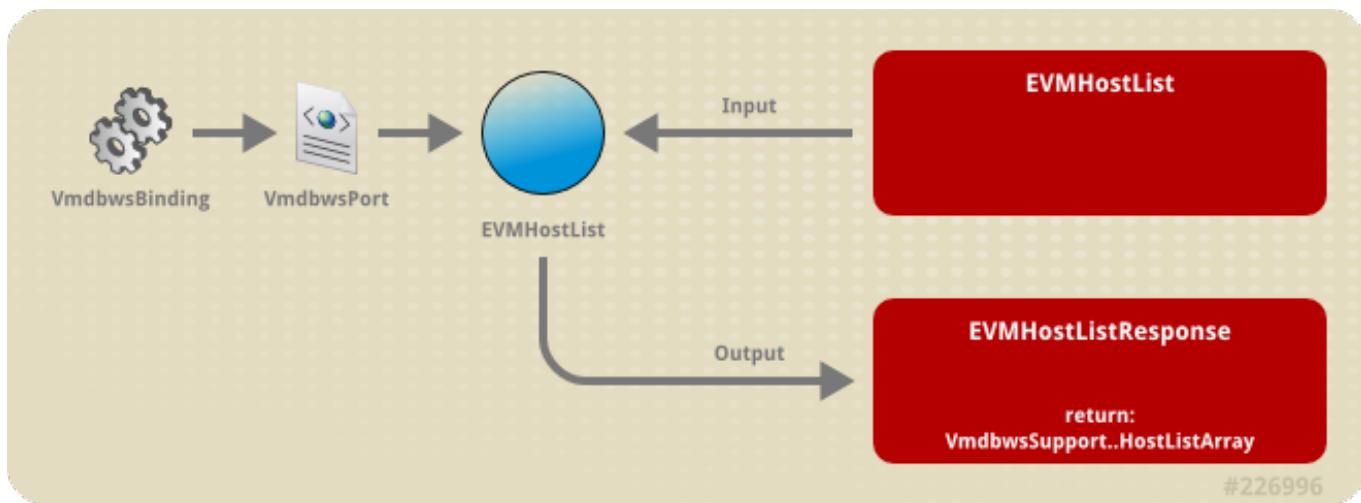
Example 6.12. EVMDatastoreList Output (PowerShell)

Datastores:

id	name
--	-----
8	
StarM1-Test2	
7	
StarM1-TestProd	
6	
StarM1-Dev	
5	
StarM2-Test	
4	
StarM1-vCloud_Test	
3	
StarM1-Test	
2	
local-dev	
1	
Thecus-N7700	

6.7. EVMHostList

EVMHostList retrieves all of the **id** and **name** values of the **Host** instances stored in the VMDB.



Syntax

- » *Input:* none
- » *Output:* **Vmdbws..HostListArray**. Each **Vmdbws..HostList** object contains the **guid** and **name** of a host.

Examples

The following examples demonstrate **EVMHostList** usage:

Example 6.13. EVMHostList WSDL

```

<message name="EVMHostList">
</message>
<message name="EVMHostListResponse">
    <part name="return" type="typens:VmdbwsSupport..HostListArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..HostList">
    <xsd:all>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 6.14. EVMHostList Output (Java)

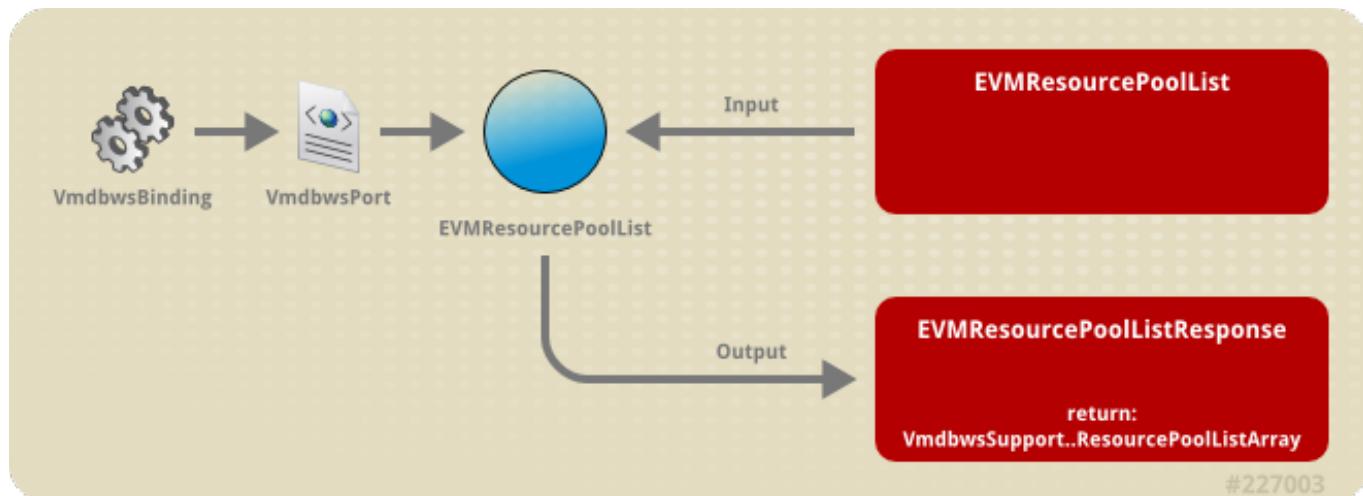
```

Calling EVMHostList...
988be7ca-6c66-11dc-9322-005056b30b86, ESX21.Chicago.MIQ
98957452-6c66-11dc-9322-005056b30b86, ESX7.Mahwah.MIQ
9898d76e-6c66-11dc-9322-005056b30b86, ESX43.Seattle.MIQ
989a5580-6c66-11dc-9322-005056b30b86, ESX54.Dallas.MIQ
749b33e0-3a2d-11dc-8a0d-001641a27095, bhm65@redhat.com
024ba2a6-5d51-11dc-b10b-0017f2d3eb46, luke.redhat.com
02982fb8-5d51-11dc-b10b-0017f2d3eb46, esx1dev.redhat.com
02bb853a-5d51-11dc-b10b-0017f2d3eb46, yoda.redhat.com

```

6.8. EVMResourcePoolList

EVMResourcePoolList retrieves all of the **id** and **name** values of the **ResourcePool** instances stored in the VMDB.



Syntax

- » **Input:** none
- » **Output:** **VmdbWs..ResourcePoolList**. Each **VmdbWs..ResourcePool** object contains the **guid** and **name** of a **ResourcePool**.

Examples

The following examples demonstrate **EVMResourcePoolList** usage:

Example 6.15. EVMResourcePoolList WSDL

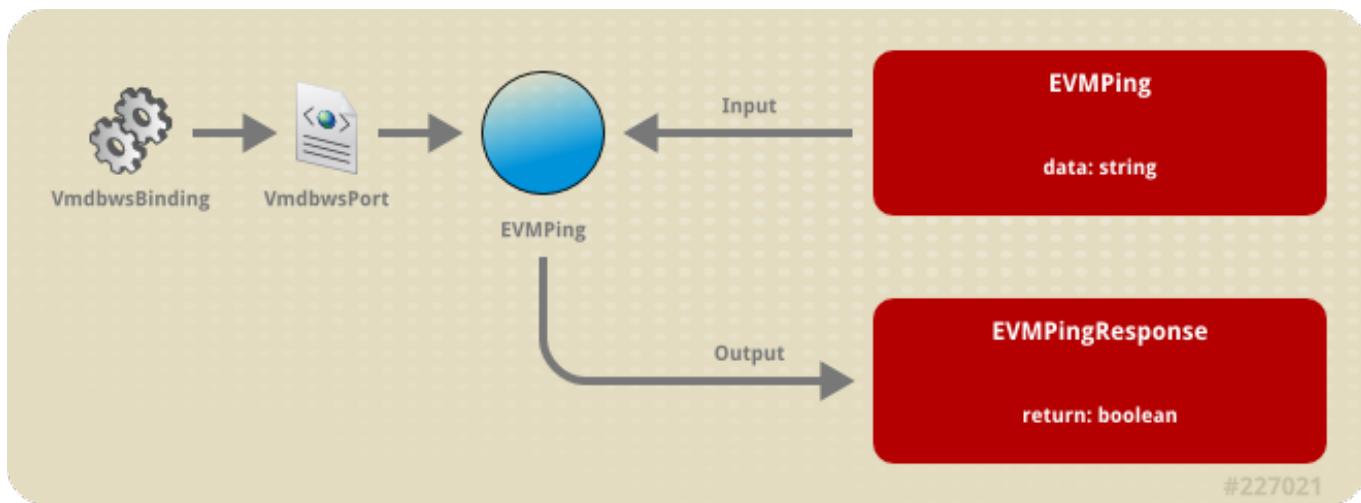
```

<message name="EVMResourcePoolList">
</message>
<message name="EVMResourcePoolListResponse">
  <part name="return"
  type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..ResourcePoolList">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
  
```

6.9. EVMPing

Use **EVMPing** to verify CloudForms Management Engine Appliance is running and accepting web service requests. The request sends data to the VMDB and a successful receipt of the data returns a **true** value.



Syntax

- » *Input*: string of data
- » *Output*: Boolean (**true** or **false**)

Examples

The following examples demonstrate **EVMPing** usage:

Example 6.16. Title

```

<message name="EVMPing">
  <part name="data" type="xsd:string" />
</message>
<message name="EVMPingResponse">
  <part name="return" type="xsd:boolean" />
</message>
  
```

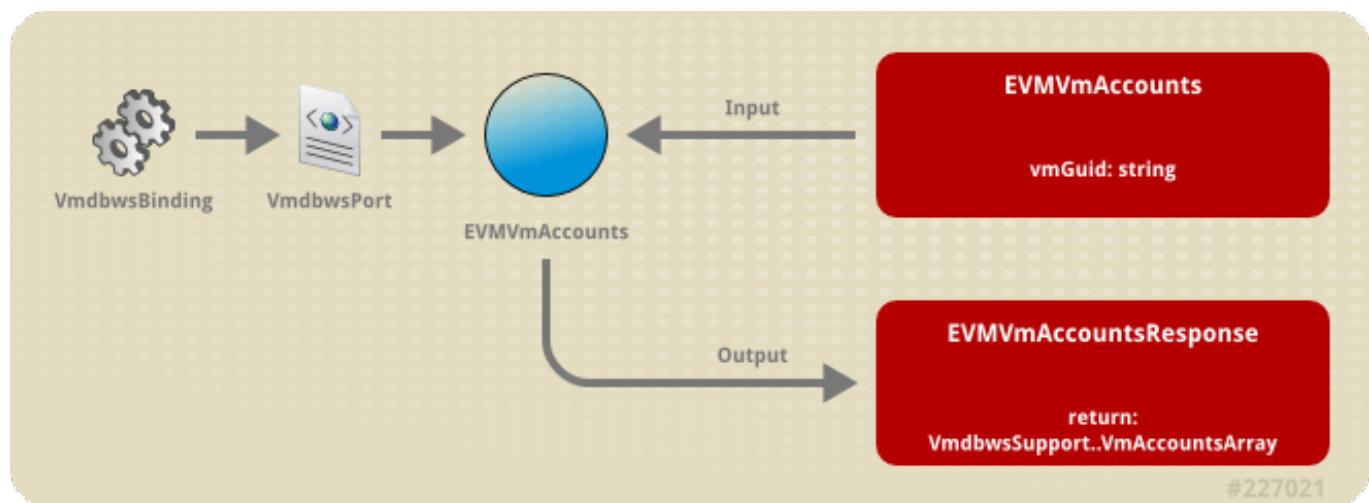
Example 6.17. EVMPing Output (Java)

```

Calling EVMPing...
...Result:true
  
```

6.10. EVMVmAccounts

EVMVmAccounts retrieves the list of **name** and **type** (either **user** or **group**) values of all accounts defined on a virtual machine instance in the VMDB.



Syntax

- » **Input:** The **guid** of a virtual machine existing in the VMDB.
- » **Output:** **VMdbws..VmAccountsArray**. Each **VMdbwsSupport..VmAccounts** object contains the **name** and **type** for an account on a virtual machine.

Examples

The following examples demonstrate **EVMVmAccounts** usage:

Example 6.18. EVMVmAccounts WSDL

```

<message name="EVMVmAccounts">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMVmAccountsResponse">
    <part name="return" type="typens:VmAccountsArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..VmAccounts">
    <xsd:all>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
    
```

Example 6.19. EVMVmAccounts Output (Java)

```

Calling EVMVmAccounts for VM: spam-chicago...
Name: Administrator
Type: user

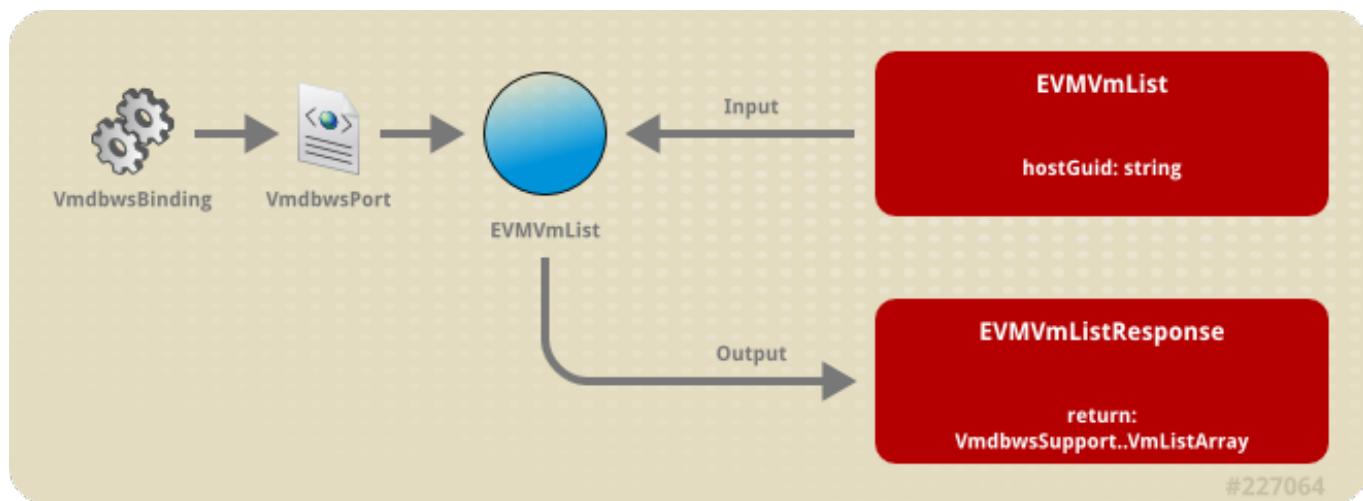
Name: ASPNET
Type: user

Name: Guest
    
```

```
Type: user  
  
Name: IUSR_GFI  
Type: user  
  
Name: IWAM_GFI  
Type: user  
  
Name: SUPPORT_388945a0  
Type: user  
  
Name: Administrators  
Type: group  
  
Name: Backup Operators  
Type: group  
  
Name: Distributed COM Users  
Type: group  
  
Name: Guests  
Type: group  
  
Name: Network Configuration Operators  
Type: group  
  
Name: Performance Log Users  
Type: group  
  
Name: Performance Monitor Users  
Type: group  
  
Name: Power Users  
Type: group  
  
Name: Print Operators  
Type: group  
  
Name: Remote Desktop Users  
Type: group  
  
Name: Replicator  
Type: group  
  
Name: Users  
Type: group  
  
Name: HelpServicesGroup  
Type: group
```

6.11. EVMVmList

EVMVmList retrieves the **id** and **name** values of the virtual machine instances stored in the VMDB. Pass the **hostGuid** argument as an asterisk (*) to return a result set containing all virtual machine instances. Pass the **hostGuid** argument as an ID to return a result set containing only the virtual machine instances assigned to that host.



Syntax

- » **Input:** An ID of a valid host existing in the VMDB or an asterisk (*) for all instances.
- » **Output:** **Vmdbws..VmListArray**. Each **VmdbwsSupport..VmList** object contains the **guid** and **name** of a virtual machine.

Examples

The following examples demonstrate **EVMVmList** usage:

Example 6.20. EVMVmList WSDL

```

<message name="EVMVmList">
  <part name="hostGuid" type="xsd:string" />
</message>
<message name="EVMVmListResponse">
  <part name="return" type="typens: VmdbwsSupport..VmListArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..VmList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string" />
    <xsd:element name="name" type="xsd:string" />
  </xsd:all>
</xsd:complexType>
  
```

Example 6.21. EVMVmList Output (Java)

```

Calling EVMVmList...
ac1de2e8-6c5c-11dc-9322-005056b30b86, spam-chicago
ac2fe146-6c5c-11dc-9322-005056b30b86, dhcp-chicago
ac311624-6c5c-11dc-9322-005056b30b86, ad.controller-chicago
  
```

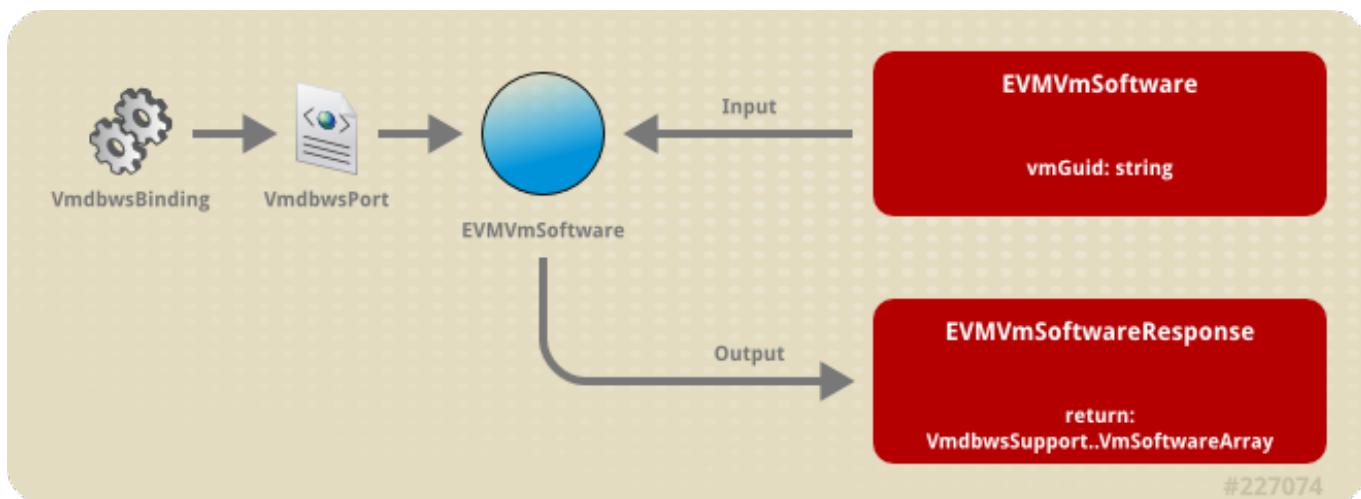
```

ac32974c-6c5c-11dc-9322-005056b30b86, sql1-chicago
ac33d74c-6c5c-11dc-9322-005056b30b86, sql2-chicago
ac34e240-6c5c-11dc-9322-005056b30b86, vpn.rras-chicago
ac37a5c0-6c5c-11dc-9322-005056b30b86, web1-chicago
ac388ba2-6c5c-11dc-9322-005056b30b86, Antispam-Mahwah
ac397094-6c5c-11dc-9322-005056b30b86, dhcpSvr-Mahwah
ac3a5004-6c5c-11dc-9322-005056b30b86, Directory-Mahwah
ac3b2ea2-6c5c-11dc-9322-005056b30b86, Crmsqla-Mahwah
ac3c253c-6c5c-11dc-9322-005056b30b86, Crmsqlb- Mahwah
ac3cfffc-6c5c-11dc-9322-005056b30b86, RRAS-Mahwah
ac3dd58a-6c5c-11dc-9322-005056b30b86, WebSvr1-Mahwah
ac3ed624-6c5c-11dc-9322-005056b30b86, W2003 Template
ac3fae78-6c5c-11dc-9322-005056b30b86, GFIAntispam.ESX43-Seattle
ac40b53e-6c5c-11dc-9322-005056b30b86, dhcp.ESX43Svr-Seattle
ac41bcf4-6c5c-11dc-9322-005056b30b86, AD.ESX43-Seattle
ac429886-6c5c-11dc-9322-005056b30b86, VPN.ESX43-Seattle
ac43857a-6c5c-11dc-9322-005056b30b86, Web.ESX43-Seattle
ac448268-6c5c-11dc-9322-005056b30b86, Subversion.ESX43-Seattle
ac455bac-6c5c-11dc-9322-005056b30b86, Win2k3R2EE_EXCH_LCS
ac46453a-6c5c-11dc-9322-005056b30b86, WIN2K3R2EE_ISA

```

6.12. EVMVmSoftware

EVMVmSoftware retrieves the list of **name**, **vendor**, **description**, and **version** values of all software applications installed on a VM instance in the VMDB.



Syntax

- » **Input:** The **guid** of a virtual machine existing in the VMDB.
- » **Output:** **VmdbwsSupport..VmSoftwareArray**. Each **Vmdbws..VmSoftware** object contains the **name**, **vendor**, **description**, and **version** of a software instance.

Examples

The following examples demonstrate **EVMVmSoftware** usage:

Example 6.22. EVMVmSoftware WSDL

```

<message name="EVMVmSoftware">
  <part name="vmGuid" type="xsd:string" />
</message>
<message name="EVMVmSoftwareResponse">
  <part name="return" type="typens: VmdbwsSupport..VmSoftwareArray" />
</message>
...
  <xsd:complexType name="VmdbwsSupport..VmSoftware">
    <xsd:all>
      <xsd:element name="vendor" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
      <xsd:element name="version" type="xsd:string"/>
      <xsd:element name="description" type="xsd:string"/>
    </xsd:all>
  </xsd:complexType>

```

Example 6.23. EVMVmSoftwareOutput (Java)

```

Calling EVMVmSoftware for VM: spam-chicago...
Name: VMware Tools
Description: null
Vendor: null
Version: 50397184

Name: Acronis Universal Restore for Acronis True Image
Enterprise Server
Description: null
Vendor: null
Version: 151064146

Name: Acronis True Image Enterprise Server
Description: null
Vendor: null
Version: 151064146

Name: Symantec Backup Exec Remote Agent for Windows Servers
Description: null
Vendor: null
Version: 167843325

Name: GFI MailEssentials
Description: null
Vendor: null
Version: 201328598

Name: MSXML 4.0 SP2 (KB927978)
Description: null
Vendor: null
Version: 68429425

Name: Adobe Reader 7.0.8
Description: null
Vendor: null
Version: 117440520

```

```

Name:      GFI MailSecurity for Exchange/SMTP
Description: null
Vendor:    null
Version:   154278041

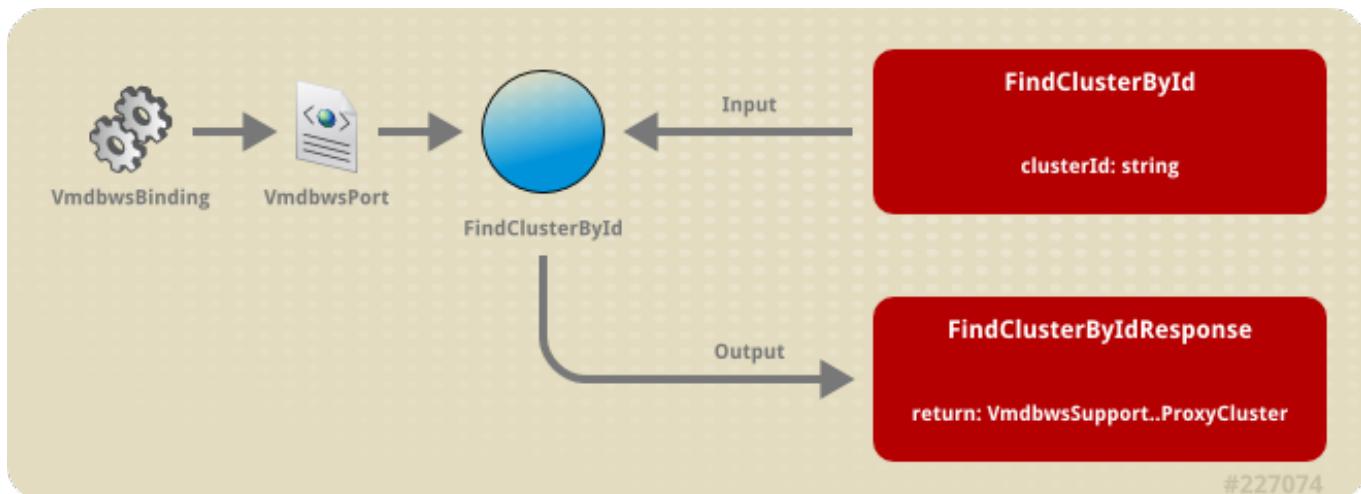
Name:      Adobe Reader 7.0
Description: Adobe Reader 7.0
Vendor:    Adobe Systems Incorporated
Version:   7.0.8.2006051600

Name:      Cluster Administrator
Description: Cluster Administrator
Vendor:    Microsoft Corporation
Version:   5.2.3790.1830

```

6.13. FindClusterById

FindClusterById uses an ID value to find a **Cluster** object.



Syntax

- » *Input:* [{:ClusterId => [:string]}]
- » *Output:* [[ProxyCluster]]

Examples

The following examples demonstrate **FindClusterById** usage:

Example 6.24. FindClusterById WSDL

```

<message name="FindClusterById">
    <part name="clusterId" type="xsd:string"/>
</message>
<message name="FindClusterByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyCluster"/>
</message>
...

```

```

<xsd:complexType name="VmdbwsSupport..ProxyCluster">
  <xsd:all>
    <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
    <xsd:element name="hosts"
type="typens:VmdbwsSupport..HostListArray"/>
    <xsd:element name="resource_pools"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
    <xsd:element name="default_resource_pool"
type="typens:VmdbwsSupport..ResourcePoolList"/>
    <xsd:element name="vms"
type="typens:VmdbwsSupport..VmListArray"/>
    <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
    <xsd:element name="Datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
  </xsd:all>
</xsd:complexType>

```

Example 6.25. FindClusterbyId Output (Windows PowerShell)

Returned Attributes for this Cluster:

```

Name   : aggregate_cpu_speed
Value  : 51048

Name   : aggregate_logical_cpus
Value  : 24

Name   : aggregate_memory
Value  : 172002

Name   : aggregate_physical_cpus
Value  : 6

Name   : aggregate_vm_cpus
Value  : 220

Name   : aggregate_vm_memory
Value  : 480528

Name   : capacity_profile_1_available_host_memory
Value  : 161777451008

Name   : capacity_profile_1_available_host_vcpu
Value  : 24

Name   : capacity_profile_1_memory_commitment_ratio
Value  : 1.2

Name   : capacity_profile_1_memory_maximum
Value  :

Name   : capacity_profile_1_memory_method

```

```
Value : Average of Allocated Memory

Name  : capacity_profile_1_memory_minimum
Value :

Name  : capacity_profile_1_memory_per_vm
Value : 3936485376.0

Name  : capacity_profile_1_memory_per_vm_with_min_max
Value : 3936485376.0

Name  : capacity_profile_1_projected_vm_count_based_on_all
Value : 28

Name  : capacity_profile_1_projected_vm_count_based_on_memory
Value : 50

Name  : capacity_profile_1_projected_vm_count_based_on_vcpu
Value : 28

Name  : capacity_profile_1_remaining_host_memory
Value : -309737186918.4

Name  : capacity_profile_1_remaining_host_vcpu
Value : -172.0

Name  : capacity_profile_1_remaining_vm_count_based_on_all
Value : -100

Name  : capacity_profile_1_remaining_vm_count_based_on_memory
Value : -78

Name  : capacity_profile_1_remaining_vm_count_based_on_vcpu
Value : -100

Name  : capacity_profile_1_vcpu_commitment_ratio
Value : 2.0

Name  : capacity_profile_1_vcpu_maximum
Value :

Name  : capacity_profile_1_vcpu_method
Value : Average of Allocated vCPU

Name  : capacity_profile_1_vcpu_minimum
Value :

Name  : capacity_profile_1_vcpu_per_vm
Value : 1.71875

Name  : capacity_profile_1_vcpu_per_vm_with_min_max
Value : 1.71875

Name  : capacity_profile_2_available_host_memory
Value : 161777451008
```

```
Name  : capacity_profile_2_available_host_vcpu
Value : 45622

Name  : capacity_profile_2_memory_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_memory_maximum
Value :

Name  : capacity_profile_2_memory_method
Value : High Normal Range of Allocated Memory

Name  : capacity_profile_2_memory_minimum
Value :

Name  : capacity_profile_2_memory_per_vm
Value : 1263886336.0

Name  : capacity_profile_2_memory_per_vm_with_min_max
Value : 1263886336.0

Name  : capacity_profile_2_projected_vm_count_based_on_all
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_memory
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_vcpu
Value : 128

Name  : capacity_profile_2_remaining_host_memory
Value : 0.0

Name  : capacity_profile_2_remaining_host_vcpu
Value : 0.0

Name  : capacity_profile_2_remaining_vm_count_based_on_all
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_memory
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_vcpu
Value : 0

Name  : capacity_profile_2_vcpu_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_vcpu_maximum
Value :

Name  : capacity_profile_2_vcpu_method
Value : High Normal Range of Allocated VCPU

Name  : capacity_profile_2_vcpu_minimum
Value :
```

```
Name  : capacity_profile_2_vcpu_per_vm
Value : 356.421875

Name  : capacity_profile_2_vcpu_per_vm_with_min_max
Value : 356.421875

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : first_drift_state_timestamp
Value :

Name  : last_drift_state_timestamp
Value :

Name  : last_scan_on
Value :

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period
Value :

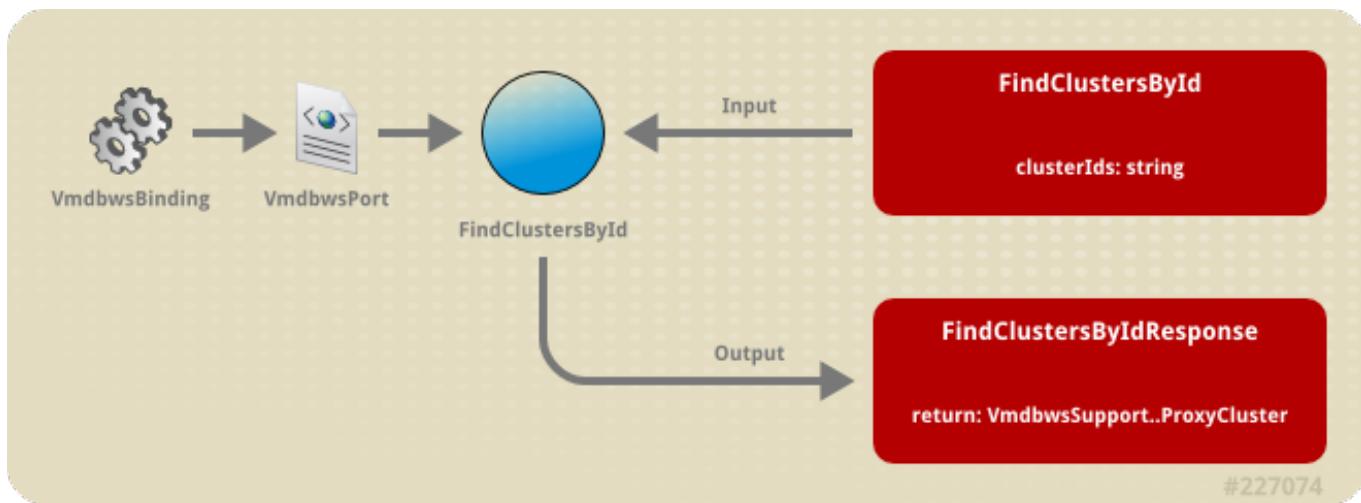
Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_avg_over_time_period
```

```
Value :  
  
Name   : max_mem_usage_absolute_average_avg_over_time_period_without_overhead  
Value :  
  
Name   : max_mem_usage_absolute_average_high_over_time_period  
Value :  
  
Name   : max_mem_usage_absolute_average_high_over_time_period_without_overhead  
Value :  
  
Name   : max_mem_usage_absolute_average_low_over_time_period  
Value :  
  
Name   : max_mem_usage_absolute_average_low_over_time_period_without_overhead  
Value :  
  
Name   : region_description  
Value : Region 0  
  
Name   : region_number  
Value : 0  
  
Name   : total_hosts  
Value : 3  
  
Name   : total_miq_templates  
Value : 5  
  
Name   : total_vms  
Value : 128  
  
Name   : v_cpu_vr_ratio  
Value : 9.200000000000001  
  
Name   : v_parent_datacenter  
Value : Prod  
  
Name   : v_qualified_desc  
Value : Testing-Production Cluster in Prod  
  
Name   : v_ram_vr_ratio  
Value : 2.8000000000000003
```

6.14. FindClustersById

FindClustersById uses ID values to find multiple **Cluster** objects.



Syntax

- » *Input: [[:ClusterIds => [:string]]]*
- » *Output: [[ProxyCluster]]*

Examples

The following examples demonstrate **FindClustersById** usage:

Example 6.26. FindClustersByGuid WSDL

```

<message name="FindClustersById">
    <part name="ClusterIds" type="typens:StringArray"/>
</message>
<message name="FindClustersByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCluster">
    <xsd:all>
        <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
        <xsd:element name="hosts"
type="typens:VmdbwsSupport..HostListArray"/>
        <xsd:element name="resource_pools"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
        <xsd:element name="default_resource_pool"
type="typens:VmdbwsSupport..ResourcePoolList"/>
        <xsd:element name="vms"
type="typens:VmdbwsSupport..VmListArray"/>
        <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
        <xsd:element name="datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
    </xsd:all>
</xsd:complexType>

```

Example 6.27. FindClustersbyId Output (Windows PowerShell)

```
Returned Attributes for this Cluster:
```

```
Name    : aggregate_cpu_speed
Value   : 51048

Name    : aggregate_logical_cpus
Value   : 24

Name    : aggregate_memory
Value   : 172002

Name    : aggregate_physical_cpus
Value   : 6

Name    : aggregate_vm_cpus
Value   : 220

Name    : aggregate_vm_memory
Value   : 480528

Name    : capacity_profile_1_available_host_memory
Value   : 161777451008

Name    : capacity_profile_1_available_host_vcpu
Value   : 24

Name    : capacity_profile_1_memory_commitment_ratio
Value   : 1.2

Name    : capacity_profile_1_memory_maximum
Value   :

Name    : capacity_profile_1_memory_method
Value   : Average of Allocated Memory

Name    : capacity_profile_1_memory_minimum
Value   :

Name    : capacity_profile_1_memory_per_vm
Value   : 3936485376.0

Name    : capacity_profile_1_memory_per_vm_with_min_max
Value   : 3936485376.0

Name    : capacity_profile_1_projected_vm_count_based_on_all
Value   : 28

Name    : capacity_profile_1_projected_vm_count_based_on_memory
Value   : 50

Name    : capacity_profile_1_projected_vm_count_based_on_vcpu
Value   : 28

Name    : capacity_profile_1_remaining_host_memory
Value   : -309737186918.4
```

```
Name  : capacity_profile_1_remaining_host_vcpu
Value : -172.0

Name  : capacity_profile_1_remaining_vm_count_based_on_all
Value : -100

Name  : capacity_profile_1_remaining_vm_count_based_on_memory
Value : -78

Name  : capacity_profile_1_remaining_vm_count_based_on_vcpu
Value : -100

Name  : capacity_profile_1_vcpu_commitment_ratio
Value : 2.0

Name  : capacity_profile_1_vcpu_maximum
Value :

Name  : capacity_profile_1_vcpu_method
Value : Average of Allocated vCPU

Name  : capacity_profile_1_vcpu_minimum
Value :

Name  : capacity_profile_1_vcpu_per_vm
Value : 1.71875

Name  : capacity_profile_1_vcpu_per_vm_with_min_max
Value : 1.71875

Name  : capacity_profile_2_available_host_memory
Value : 161777451008

Name  : capacity_profile_2_available_host_vcpu
Value : 45622

Name  : capacity_profile_2_memory_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_memory_maximum
Value :

Name  : capacity_profile_2_memory_method
Value : High Normal Range of Allocated Memory

Name  : capacity_profile_2_memory_minimum
Value :

Name  : capacity_profile_2_memory_per_vm
Value : 1263886336.0

Name  : capacity_profile_2_memory_per_vm_with_min_max
Value : 1263886336.0

Name  : capacity_profile_2_projected_vm_count_based_on_all
```

```
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_memory
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_vcpu
Value : 128

Name  : capacity_profile_2_remaining_host_memory
Value : 0.0

Name  : capacity_profile_2_remaining_host_vcpu
Value : 0.0

Name  : capacity_profile_2_remaining_vm_count_based_on_all
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_memory
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_vcpu
Value : 0

Name  : capacity_profile_2_vcpu_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_vcpu_maximum
Value :

Name  : capacity_profile_2_vcpu_method
Value : High Normal Range of Allocated vCPU

Name  : capacity_profile_2_vcpu_minimum
Value :

Name  : capacity_profile_2_vcpu_per_vm
Value : 356.421875

Name  : capacity_profile_2_vcpu_per_vm_with_min_max
Value : 356.421875

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :
```

```
Name  : derived_memory_used_low_over_time_period
Value :

Name  : first_drift_state_timestamp
Value :

Name  : last_drift_state_timestamp
Value :

Name  : last_scan_on
Value :

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  : max_cpu_usage_rate_average_high_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  : max_cpu_usage_rate_average_low_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_avg_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_high_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_high_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_low_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_low_over_time_period_without_overhead
Value :

Name  : region_description
Value : Region 0
```

```

Name  : region_number
Value : 0

Name  : total_hosts
Value : 3

Name  : total_miq_templates
Value : 5

Name  : total_vms
Value : 128

Name  : v_cpu_vr_ratio
Value : 9.200000000000001

Name  : v_parent_datacenter
Value : Prod

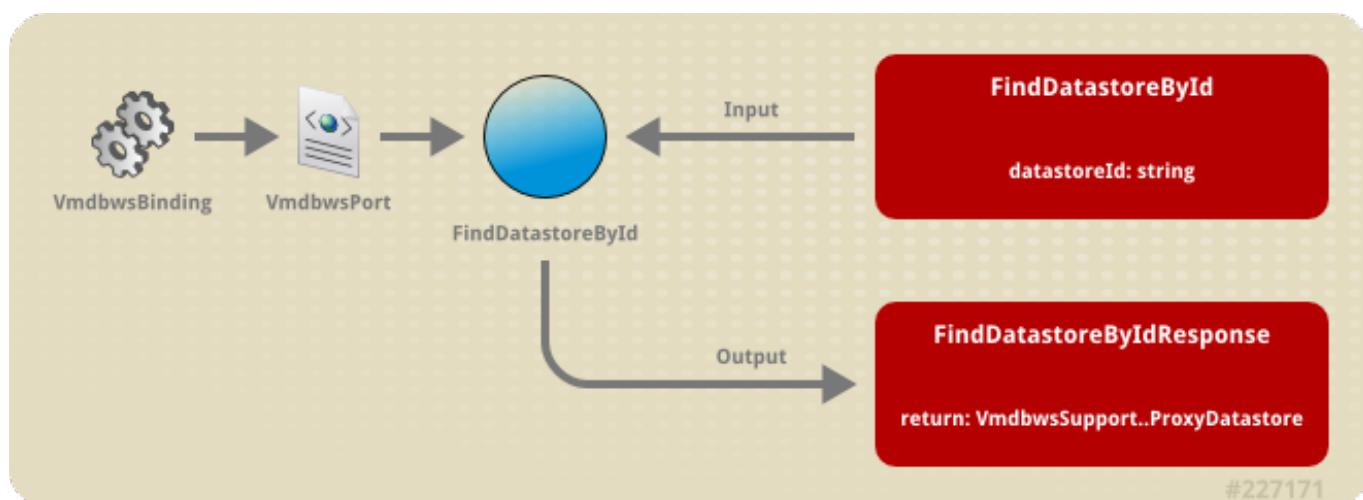
Name  : v_qualified_desc
Value : Testing-Production Cluster in Prod

Name  : v_ram_vr_ratio
Value : 2.8000000000000003

```

6.15. FindDatastoreById

FindDatastoreById uses an ID value to find a **Datastore** object.



Syntax

- » *Input:* `[{:DatastoreId => [:string]}]`
- » *Output:* `[[ProxyDatastore]]`

Examples

The following examples demonstrate **FindDatastoreById** usage:

Example 6.28. FindDatastoreById WSDL

```

<message name="FindDatastoreById">
  <part name="datastoreId" type="xsd:string"/>
</message>
<message name="FindDatastoreByIdResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyDatastore"/>
</message>
...
  <xsd:complexType name="VmdbwsSupport..ProxyDatastore">
    <xsd:all>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
      <xsd:element name="store_type" type="xsd:string"/>
      <xsd:element name="total_space" type="xsd:double"/>
      <xsd:element name="free_space" type="xsd:double"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="multiplehostaccess" type="xsd:boolean"/>
      <xsd:element name="location" type="xsd:string"/>
      <xsd:element name="last_scan_on" type="xsd:dateTime"/>
      <xsd:element name="uncommitted" type="xsd:double"/>
      <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
      <xsd:element name="ems_ref_obj" type="xsd:string"/>
      <xsd:element name="directory_hierarchy_supported"
type="xsd:boolean"/>
      <xsd:element name="thin_provisioning_supported"
type="xsd:boolean"/>
      <xsd:element name="raw_disk_mappings_supported"
type="xsd:boolean"/>
      <xsd:element name="master" type="xsd:boolean"/>
      <xsd:element name="ems_ref" type="xsd:string"/>
      <xsd:element name="vms"
type="typens:VmListArray"/>
      <xsd:element name="all_vms"
type="typens:VmListArray"/>
      <xsd:element name="hosts"
type="typens:HostListArray"/>
      <xsd:element name="ws_attributes"
type="typens:WSAttributesArray"/>
      <xsd:element name="ext_management_systems"
type="typens:EmsListArray"/>
    </xsd:all>
  </xsd:complexType>

```

Example 6.29. FindDatastorebyId Output (Windows PowerShell)

Returned Attributes for this Datastore:

```

Name  : count_of_vmdk_disk_files
Value : 0

```

```
Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : debris_size
Value : 0

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : disk_size
Value : 0

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period_without_overhead
Value :

Name  :
max_mem_usage_absolute_average_high_over_time_period
Value :
```

```
Name   :  
max_mem_usage_absolute_average_high_over_time_period_without_overhead  
Value  :  
  
Name   : max_mem_usage_absolute_average_low_over_time_period  
Value  :  
  
Name   :  
max_mem_usage_absolute_average_low_over_time_period_without_overhead  
Value  :  
  
Name   : region_description  
Value  : Region 0  
  
Name   : region_number  
Value  : 0  
  
Name   : snapshot_size  
Value  : 0  
  
Name   : total_managed_registered_vms  
Value  : 0  
  
Name   : total_managed_unregistered_vms  
Value  : 0  
  
Name   : total_unmanaged_vms  
Value  : 0  
  
Name   : v_debris_percent_of_used  
Value  : 0.0  
  
Name   : v_disk_percent_of_used  
Value  : 0.0  
  
Name   : v_free_space_percent_of_total  
Value  : 0.0  
  
Name   : v_memory_percent_of_used  
Value  : 0.0  
  
Name   : v_provisioned_percent_of_total  
Value  : 0.0  
  
Name   : v_snapshot_percent_of_used  
Value  : 0.0  
  
Name   : v_total_debris_size  
Value  : 0  
  
Name   : v_total_hosts  
Value  : 1  
  
Name   : v_total_memory_size  
Value  : 0
```

```

Name   : v_total_provisioned
Value  : 0

Name   : v_total_snapshot_size
Value  : 0

Name   : v_total_vm_misc_size
Value  : 0

Name   : v_total_vms
Value  : 0

Name   : v_used_space
Value  : 0

Name   : v_used_space_percent_of_total
Value  : 0.0

Name   : v_vm_misc_percent_of_used
Value  : 0.0

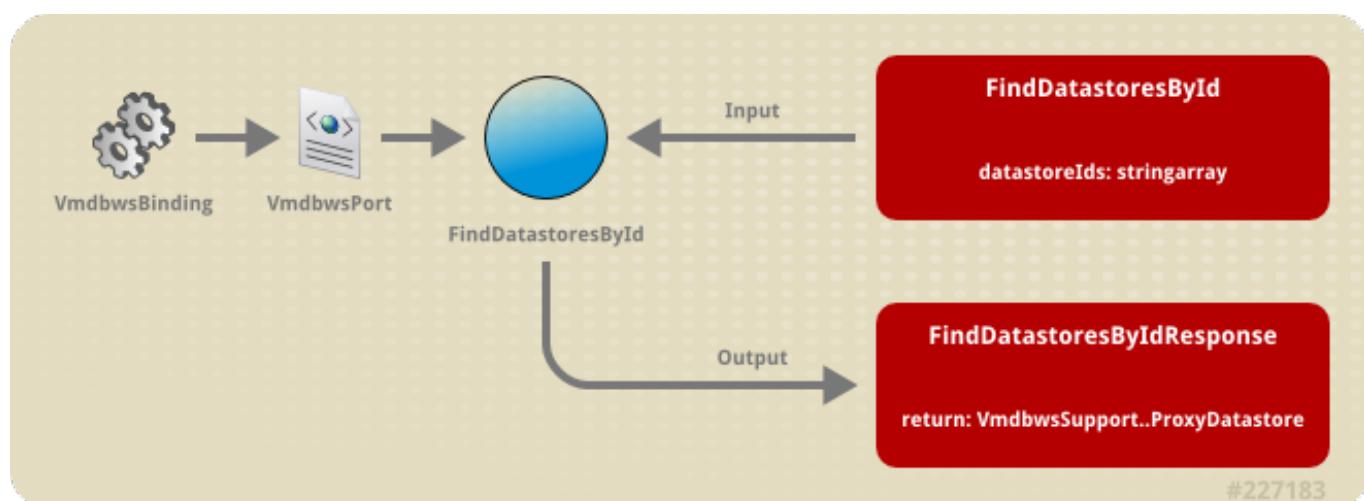
Name   : vm_misc_size
Value  : 0

Name   : vm_ram_size
Value  : 0

```

6.16. FindDatastoresById

FindDatastoresById uses ID values to find multiple **Datastore** object.



Syntax

- » *Input:* [{:DatastoreIds => [:string]}]
- » *Output:* [[ProxyDatastore]]

Examples

The following examples demonstrate **FindDatastoresById** usage:

Example 6.30. FindDatastoresById WSDL

```

<message name="FindDatastoresById">
  <part name="datastoreIds" type="typens:StringArray"/>
</message>
<message name="FindDatastoresByIdResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>
...
  <xsd:complexType name="VmdbwsSupport..ProxyDatastore">
    <xsd:all>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
      <xsd:element name="store_type" type="xsd:string"/>
      <xsd:element name="total_space" type="xsd:double"/>
      <xsd:element name="free_space" type="xsd:double"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="multiplehostaccess" type="xsd:boolean"/>
      <xsd:element name="location" type="xsd:string"/>
      <xsd:element name="last_scan_on" type="xsd:dateTime"/>
      <xsd:element name="uncommitted" type="xsd:double"/>
      <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
      <xsd:element name="ems_ref_obj" type="xsd:string"/>
      <xsd:element name="directory_hierarchy_supported"
        type="xsd:boolean"/>
      <xsd:element name="thin_provisioning_supported"
        type="xsd:boolean"/>
      <xsd:element name="raw_disk_mappings_supported"
        type="xsd:boolean"/>
      <xsd:element name="master" type="xsd:boolean"/>
      <xsd:element name="ems_ref" type="xsd:string"/>
      <xsd:element name="vms"
        type="typens:VmListArray"/>
      <xsd:element name="all_vms"
        type="typens:VmListArray"/>
      <xsd:element name="hosts"
        type="typens:HostListArray"/>
      <xsd:element name="ws_attributes"
        type="typens:WSAttributesArray"/>
      <xsd:element name="ext_management_systems"
        type="typens:EmsListArray"/>
    </xsd:all>
  </xsd:complexType>

```

Example 6.31. FindDatastoresbyId Output (Windows PowerShell)

Returned Attributes for this Datastore:

Name : count_of_vmdk_disk_files

```
Value : 0

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : debris_size
Value : 0

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : disk_size
Value : 0

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period_without_overhead
Value :

Name  :
max_mem_usage_absolute_average_high_over_time_period
Value :
```

```
Name  :  
max_mem_usage_absolute_average_high_over_time_period_without_overhead  
Value :  
  
Name  : max_mem_usage_absolute_average_low_over_time_period  
Value :  
  
Name  :  
max_mem_usage_absolute_average_low_over_time_period_without_overhead  
Value :  
  
Name  : region_description  
Value : Region 0  
  
Name  : region_number  
Value : 0  
  
Name  : snapshot_size  
Value : 0  
  
Name  : total_managed_registered_vms  
Value : 0  
  
Name  : total_managed_unregistered_vms  
Value : 0  
  
Name  : total_unmanaged_vms  
Value : 0  
  
Name  : v_debris_percent_of_used  
Value : 0.0  
  
Name  : v_disk_percent_of_used  
Value : 0.0  
  
Name  : v_free_space_percent_of_total  
Value : 0.0  
  
Name  : v_memory_percent_of_used  
Value : 0.0  
  
Name  : v_provisioned_percent_of_total  
Value : 0.0  
  
Name  : v_snapshot_percent_of_used  
Value : 0.0  
  
Name  : v_total_debris_size  
Value : 0  
  
Name  : v_total_hosts  
Value : 1  
  
Name  : v_total_memory_size  
Value : 0
```

```

Name   : v_total_provisioned
Value  : 0

Name   : v_total_snapshot_size
Value  : 0

Name   : v_total_vm_misc_size
Value  : 0

Name   : v_total_vms
Value  : 0

Name   : v_used_space
Value  : 0

Name   : v_used_space_percent_of_total
Value  : 0.0

Name   : v_vm_misc_percent_of_used
Value  : 0.0

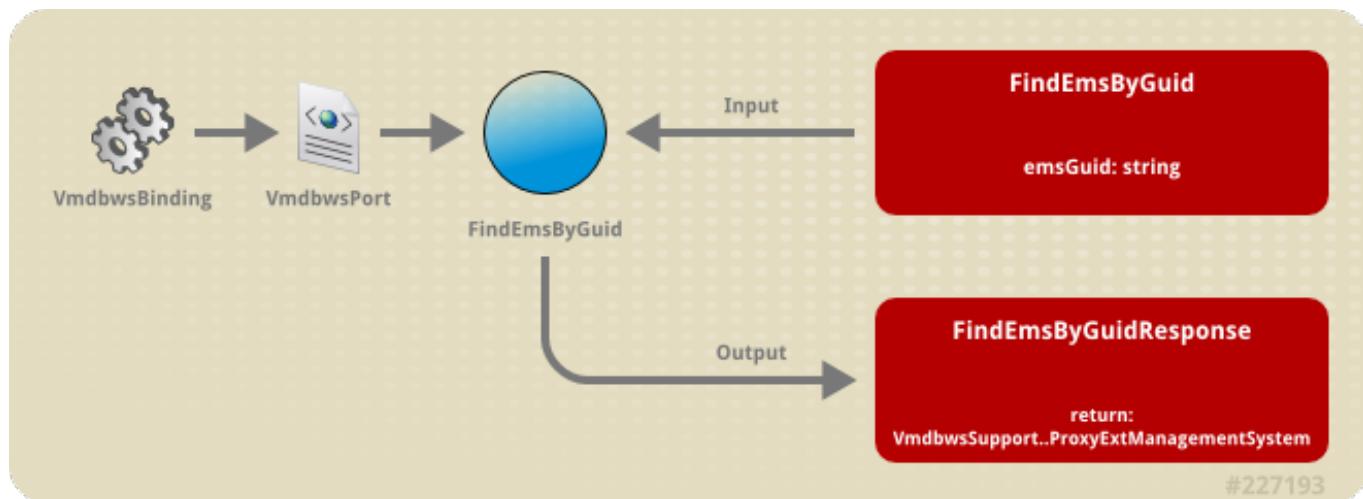
Name   : vm_misc_size
Value  : 0

Name   : vm_ram_size
Value  : 0

```

6.17. FindEmsByGuid

FindEmsByGuid uses a GUID value to find a management system object.



Syntax

- » *Input: [{:emsGuid => :string}]*
- » *Output: [[ProxyExtManagementSystem]]*

Examples

The following examples demonstrate **FindEmsByGuid** usage:

Example 6.32. FindEmsByGuid WSDL

```

<message name="FindEmsByGuid">
  <part name="emsGuid" type="xsd:string" />
</message>
<message name="FindEmsByGuidResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyExtManagementSystem" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyExtManagementSystem">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="emstype" type="xsd:string"/>
    <xsd:element name="port" type="xsd:string"/>
    <xsd:element name="hostname" type="xsd:string"/>
    <xsd:element name="ipaddress" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="zone_id" type="xsd:string"/>
    <xsd:element name="type" type="xsd:string"/>
    <xsd:element name="api_version" type="xsd:string"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="hosts"
      type="typens:VmdbwsSupport..HostListArray"/>
      <xsd:element name="vms"
        type="typens:VmdbwsSupport..VmListArray"/>
          <xsd:element name="ws_attributes"
            type="typens:VmdbwsSupport..WSAttributesArray"/>
              </xsd:all>
            </xsd:complexType>

```

Example 6.33. FindEmsByGuid Output (Windows PowerShell)

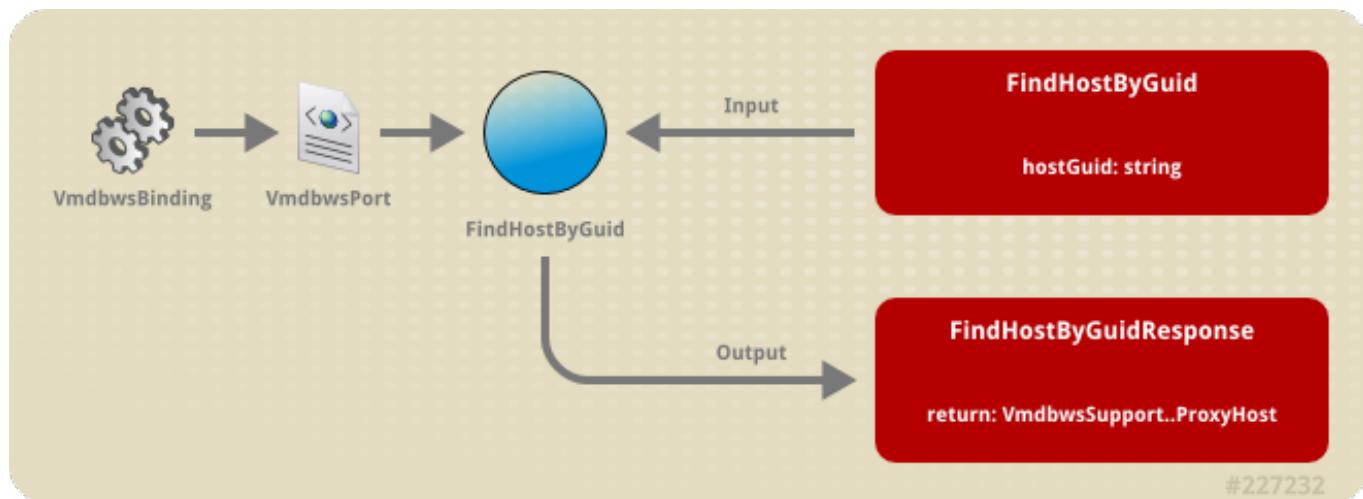
Calling FindEmsByGuid...	
Name	Value
-----	-----
aggregate_memory	48251
total_storages	3
max_cpu_usage_rate_average_high_over_time...	8.13731902166194
max_cpu_usage_rate_average_low_over_time...	3.2237920894491707
derived_memory_used_high_over_time_period	13172.316302780524
max_mem_usage_absolute_average_low_over...	24.998298320564096
max_cpu_usage_rate_average_low_over_time...	3.073792089449171
total_vms_and_templates	12
max_mem_usage_absolute_average_avg_over...	27.504166666666677
max_mem_usage_absolute_average_high_over...	28.00003501276926
aggregate_vm_memory	49152

authentication_status	Valid
region_number	0
derived_memory_used_avg_over_time_period	13090.820207175926
total_miq_templates	2
total_hosts	1
region_description	Region 0
emstype_description	Red Hat Enterprise
Virtualization Manager	
cpu_usagemhz_rate_average_high_over_time...	1859.4985639212157
aggregate_logical_cpus	8
zone_name	default
aggregate_vm_cpus	15
max_cpu_usage_rate_average_avg_over_time...	5.530555555555555
max_mem_usage_absolute_average_avg_over_...	25.49416666666668
aggregate_physical_cpus	1
derived_memory_used_low_over_time_period	13009.324111571328
max_mem_usage_absolute_average_low_over_...	27.008298320564094
max_cpu_usage_rate_average_avg_over_time...	5.680555555555555
cpu_usagemhz_rate_average_low_over_time_...	1256.3802808541543
cpu_usagemhz_rate_average_avg_over_time_...	1557.939422387685
total_vms	10
max_mem_usage_absolute_average_high_over...	25.990035012769262
max_cpu_usage_rate_average_high_over_tim...	7.987319021661939
aggregate_cpu_speed	19152

...

6.18. FindHostByGuid

FindHostByGuid uses a GUID value to find a host object.



Syntax

- » **Input:** `[{:hostGuid => [:string]}]`
- » **Output:** `[[ProxyHost]]`

Examples

The following examples demonstrate **FindHostByGuid** usage:

Example 6.34. FindHostByGuid WSDL

```

<message name="FindHostByGuid">
  <part name="hostGuid" type="xsd:string" />
</message>
<message name="FindHostByGuidResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyHost" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyHost">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="hostname" type="xsd:string"/>
    <xsd:element name="ipaddress" type="xsd:string"/>
    <xsd:element name="vmm_vendor" type="xsd:string"/>
    <xsd:element name="vmm_version" type="xsd:string"/>
    <xsd:element name="vmm_product" type="xsd:string"/>
    <xsd:element name="vmm_buildnumber" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="user_assigned_os" type="xsd:string"/>
    <xsd:element name="power_state" type="xsd:string"/>
    <xsd:element name="smart" type="xsd:double"/>
    <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="connection_state" type="xsd:string"/>
    <xsd:element name="ssh_permit_root_login" type="xsd:string"/>
    <xsd:element name="ems_ref_obj" type="xsd:string"/>
    <xsd:element name="admin_disabled" type="xsd:boolean"/>
    <xsd:element name="service_tag" type="xsd:string"/>
    <xsd:element name="asset_tag" type="xsd:string"/>
    <xsd:element name="ipmi_address" type="xsd:string"/>
    <xsd:element name="mac_address" type="xsd:string"/>
    <xsd:element name="type" type="xsd:string"/>
    <xsd:element name="failover" type="xsd:boolean"/>
    <xsd:element name="ems_ref" type="xsd:string"/>
    <xsd:element name="vms"
      type="typens:VmListArray"/>
      <xsd:element name="ext_management_system"
        type="typens:EmsList"/>
        <xsd:element name="ws_attributes"
          type="typens:WSAttributesArray"/>
        </xsd:all>
      </xsd:complexType>

```

Example 6.35. FindHostByGuid Output (Windows PowerShell)

Calling FindHostByGuid...

Name	Value

```

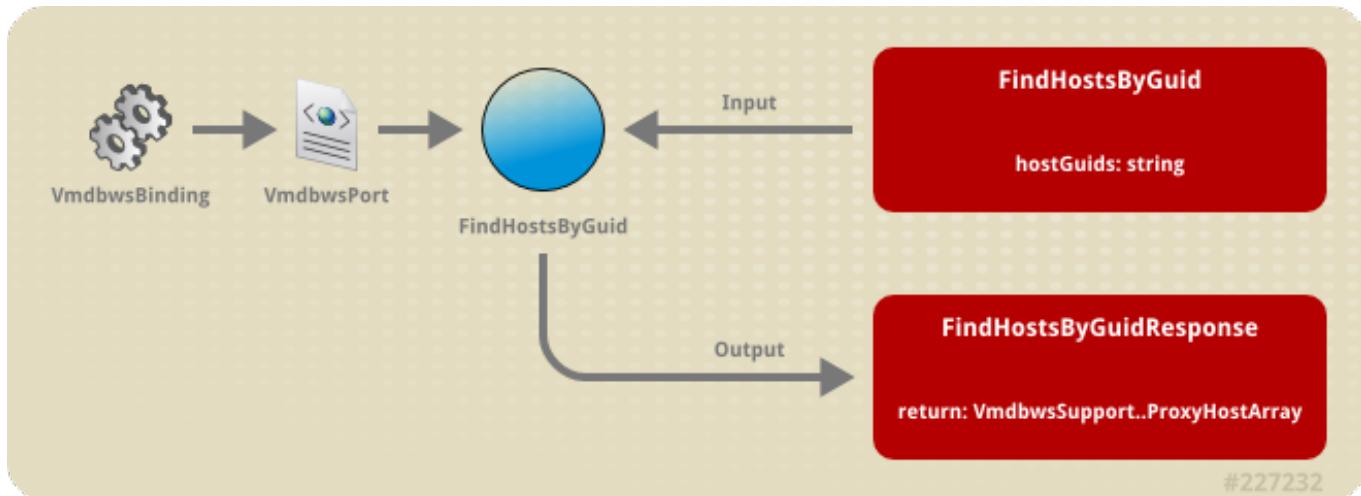
-----
last_scan_on                               2012-07-24 21:00:39
-0700
max_cpu_usage_rate_average_high_over_time_period 8.13731902166194
last_drift_state_timestamp                2012-07-24 21:00:39
-0700
v_total_vms                                2
enabled_tcp_outbound_ports
max_cpu_usage_rate_average_low_over_time_period 3.2237920894491707
derived_memory_used_high_over_time_period    13172.316302780524
platform                                     linux
max_mem_usage_absolute_average_low_over_time_pe... 24.998298320564096
max_cpu_usage_rate_average_low_over_time_period... 3.073792089449171
enabled_run_level_3_services
abrt-ccpp|abrt-
oops|abrt|acpid|at...
max_cpu_usage_rate_average_high_over_time_perio... 7.987319021661939
ipmi_enabled                                false
v_annotation
enabled_udp_outbound_ports
max_mem_usage_absolute_average_high_over_time_p... 28.00003501276926
last_compliance_timestamp
v_owning_datacenter                          Default
region_number                                0
enabled_run_level_0_services
enabled_tcp_inbound_ports
all_enabled_ports
enabled_run_level_5_services
abrt-ccpp|abrt-
oops|abrt|acpid|at...
service_names
abrt-ccpp|abrt-
oops|abrt|acpid|at...
os_image_name                                linux_generic
cpu_usagemhz_rate_average_low_over_time_period 1256.3802808541543
enabled_run_level_1_services
acpid|auditd|cgconfig|crond|cups|i...
region_description                           Region 0
enabled_udp_inbound_ports
v_total_miq_templates                        0
v_owning_cluster                            Pod1
v_owning_folder                             Datacenters
first_drift_state_timestamp                 2012-07-23 13:07:45
-0700
max_cpu_usage_rate_average_avg_over_time_period... 5.530555555555555
enabled_inbound_ports
max_mem_usage_absolute_average_avg_over_time_pe... 25.494166666666668
derived_memory_used_low_over_time_period      13009.324111571328
enabled_outbound_ports
max_mem_usage_absolute_average_low_over_time_pe... 27.008298320564094
max_cpu_usage_rate_average_avg_over_time_period 5.680555555555555
v_total_storages                            3
cpu_usagemhz_rate_average_avg_over_time_period 1557.939422387685
enabled_run_level_4_services
acpid|atd|auditd|autofs|cgconfig|c...
max_mem_usage_absolute_average_avg_over_time_pe... 27.504166666666677
max_mem_usage_absolute_average_high_over_time_p... 25.990035012769262
derived_memory_used_avg_over_time_period       13090.820207175926
enabled_run_level_6_services

```

cpu_usagemhz_rate_average_high_over_time_period authentication_status enabled_run_level_2_services acpid auditd cgconfig crond cups i... last_compliance_status	1859.4985639212157 Valid
---	-----------------------------

6.19. FindHostsByGuid

FindHostsByGuid uses a GUID array to find multiple **Host** objects.



Syntax

- » *Input:* [{:hostGuids => [:stringarray]}]
- » *Output:* [[ProxyHost]]

Examples

The following examples demonstrate **FindHostsByGuid** usage:

Example 6.36. FindHostsByGuid WSDL

```

<message name="FindHostsByGuid">
    <part name="hostGuids" type="typens:StringArray" />
</message>
<message name="FindHostsByGuidResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyHostArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyHost">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="hostname" type="xsd:string"/>
        <xsd:element name="ipaddress" type="xsd:string"/>
        <xsd:element name="vmm_vendor" type="xsd:string"/>
        <xsd:element name="vmm_version" type="xsd:string"/>
        <xsd:element name="vmm_product" type="xsd:string"/>
        <xsd:element name="vmm_buildnumber" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

```

<xsd:element name="created_on" type="xsd:dateTime"/>
<xsd:element name="updated_on" type="xsd:dateTime"/>
<xsd:element name="guid" type="xsd:string"/>
<xsd:element name="ems_id" type="xsd:string"/>
<xsd:element name="user_assigned_os" type="xsd:string"/>
<xsd:element name="power_state" type="xsd:string"/>
<xsd:element name="smart" type="xsd:double"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="uid_ems" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="ssh_permit_root_login" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="admin_disabled" type="xsd:boolean"/>
<xsd:element name="service_tag" type="xsd:string"/>
<xsd:element name="asset_tag" type="xsd:string"/>
<xsd:element name="ipmi_address" type="xsd:string"/>
<xsd:element name="mac_address" type="xsd:string"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="failover" type="xsd:boolean"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
    <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
        <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
    </xsd:all>
</xsd:complexType>

```

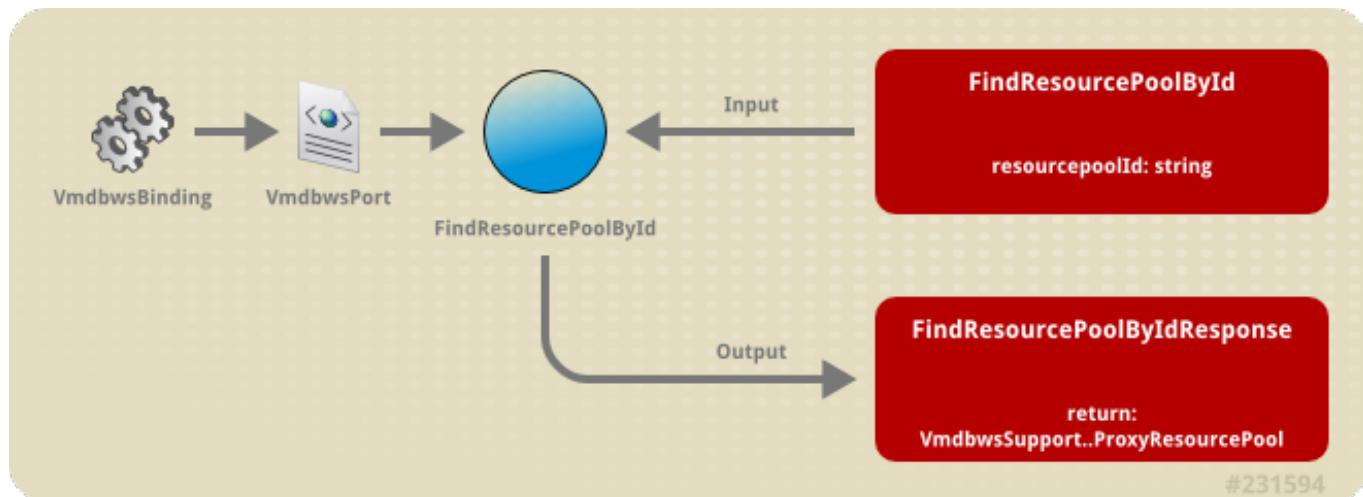
Example 6.37. FindHostsByGuid Output (Windows PowerShell)

Calling FindHostByGuid...	
Name	Value
-----	-----
last_scan_on	2012-07-24
21:00:39 -0700	
max_cpu_usage_rate_average_high_over_time_period	8.13731902166194
last_drift_state_timestamp	2012-07-24
21:00:39 -0700	
v_total_vms	2
enabled_tcp_outbound_ports	
max_cpu_usage_rate_average_low_over_time_period	
3.2237920894491707	
derived_memory_used_high_over_time_period	
13172.316302780524	
platform	linux
max_mem_usage_absolute_average_low_over_time_period...	
24.998298320564096	
max_cpu_usage_rate_average_low_over_time_period_wit...	
3.073792089449171	
enabled_run_level_3_services	abrt-ccpp abrt-
oops abrtd acp...	
max_cpu_usage_rate_average_high_over_time_period_wi...	
7.987319021661939	
ipmi_enabled	false

v_annotation		
enabled_udp_outbound_ports		
max_mem_usage_absolute_average_high_over_time_period		
28.00003501276926		
last_compliance_timestamp		
v_owning_datacenter	Default	
region_number	0	
enabled_run_level_0_services		
enabled_tcp_inbound_ports		
all_enabled_ports		
enabled_run_level_5_services	abrt-ccpp abrt-	
oops abrtd acp...		
service_names	abrt-ccpp abrt-	
oops abrtd acp...		
os_image_name	linux_generic	
cpu_usagemhz_rate_average_low_over_time_period		
1256.3802808541543		
enabled_run_level_1_services		
acpid auditd cgconfig crond c...		
region_description	Region 0	
enabled_udp_inbound_ports		
v_total_miq_templates	0	
v_owning_cluster	Pod1	
v_owning_folder	Datacenters	
first_drift_state_timestamp	2012-07-23	
13:07:45 -0700		
max_cpu_usage_rate_average_avg_over_time_period_wit...		
5.530555555555555		
enabled_inbound_ports		
max_mem_usage_absolute_average_avg_over_time_period...		
25.49416666666668		
derived_memory_used_low_over_time_period		
13009.324111571328		
enabled_outbound_ports		
max_mem_usage_absolute_average_low_over_time_period		
27.008298320564094		
max_cpu_usage_rate_average_avg_over_time_period		
5.680555555555555		
v_total_storages	3	
cpu_usagemhz_rate_average_avg_over_time_period		
1557.939422387685		
enabled_run_level_4_services		
acpid atd auditd autofs cgcon...		
max_mem_usage_absolute_average_avg_over_time_period		
27.504166666666677		
max_mem_usage_absolute_average_high_over_time_perio...		
25.990035012769262		
derived_memory_used_avg_over_time_period		
13090.820207175926		
enabled_run_level_6_services		
cpu_usagemhz_rate_average_high_over_time_period		
1859.4985639212157		
authentication_status	Valid	
enabled_run_level_2_services		
acpid auditd cgconfig crond c...		
last_compliance_status		

6.20. FindResourcePoolById

FindResourcePoolById uses an ID value to find a **ResourcePool**.



#231594

Syntax

- » *Input: [{:ResourcePoolId => [:string]}]*
- » *Output: [[ProxyResourcePool]]*

Examples

The following examples demonstrate **FindResourcePoolById** usage:

Example 6.38. FindResourcePoolById WSDL

```

<message name="FindResourcePoolById">
  <part name="resourcepoolId" type="xsd:string"/>
</message>
<message name="FindResourcePoolByIdResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyResourcePool"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyResourcePool">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="memory_reserve" type="xsd:double"/>
    <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
    <xsd:element name="memory_limit" type="xsd:double"/>
    <xsd:element name="memory_shares" type="xsd:double"/>
    <xsd:element name="memory_shares_level" type="xsd:string"/>
    <xsd:element name="cpu_reserve" type="xsd:double"/>
  </xsd:all>
</xsd:complexType>
  
```

```

<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="is_default" type="xsd:boolean"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="vapp" type="xsd:boolean"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
    <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
        <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
            <xsd:element name="parent_cluster"
type="typens:VmDbwsSupport..ClusterList"/>
                </xsd:all>
            </xsd:complexType>

```

Example 6.39. FindResourcePoolbyId Output (Windows PowerShell)

Returned Attributes for this ResourcePool:

```

Name   : aggregate_cpu_speed
Value  : 51048

Name   : aggregate_logical_cpus
Value  : 24

Name   : aggregate_memory
Value  : 172002

Name   : aggregate_physical_cpus
Value  : 6

Name   : aggregate_vm_cpus
Value  : 215

Name   : aggregate_vm_memory
Value  : 470800

Name   : region_description
Value  : Region 0

Name   : region_number
Value  : 0

Name   : v_direct_miq_templates
Value  : 0

Name   : v_direct_vms
Value  : 9

Name   : v_parent_cluster

```

```

Value : Testing-Production Cluster

Name   : v_parent_datacenter
Value  : Prod

Name   : v_parent_folder
Value  : Datacenters

Name   : v_parent_host
Value  :

Name   : v_parent_resource_pool
Value  :

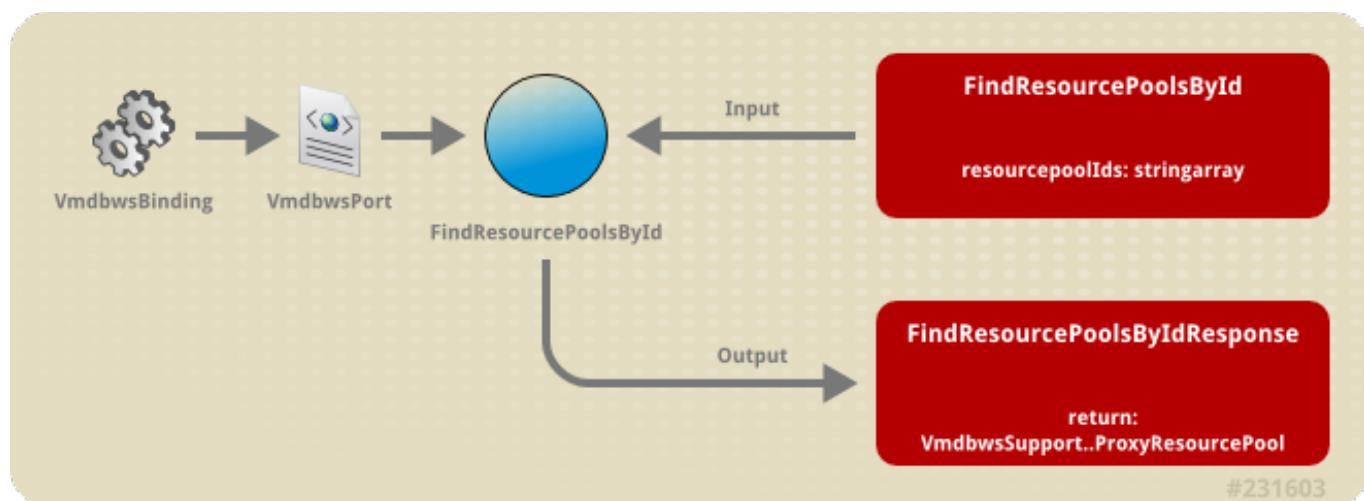
Name   : v_total_miq_templates
Value  : 0

Name   : v_total_vms
Value  : 128

```

6.21. FindResourcePoolsById

FindResourcePoolsById uses ID values to find multiple **ResourcePool** objects.



Syntax

- » *Input:* [{:ResourcePoolIds => [:string]}]
- » *Output:* [[ProxyResourcePool]]

Examples

The following examples demonstrate **FindResourcePoolsById** usage:

Example 6.40. FindResourcePoolByGuid WSDL

```

<message name="FindResourcePoolsById">
  <part name="resourcepoolIds" type="typens:StringArray"/>
</message>

```

```

<message name="FindResourcePoolsByIdResponse">
  <part name="return"
type="typens:VmDbwsSupport..ProxyResourcePoolArray"/>
</message>

  <xsd:complexType name="VmDbwsSupport..ProxyResourcePool">
    <xsd:all>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
      <xsd:element name="ems_id" type="xsd:string"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="uid_ems" type="xsd:string"/>
      <xsd:element name="memory_reserve" type="xsd:double"/>
      <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
      <xsd:element name="memory_limit" type="xsd:double"/>
      <xsd:element name="memory_shares" type="xsd:double"/>
      <xsd:element name="memory_shares_level" type="xsd:string"/>
      <xsd:element name="cpu_reserve" type="xsd:double"/>
      <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
      <xsd:element name="cpu_limit" type="xsd:double"/>
      <xsd:element name="cpu_shares" type="xsd:double"/>
      <xsd:element name="cpu_shares_level" type="xsd:string"/>
      <xsd:element name="is_default" type="xsd:boolean"/>
      <xsd:element name="ems_ref_obj" type="xsd:string"/>
      <xsd:element name="vapp" type="xsd:boolean"/>
      <xsd:element name="ems_ref" type="xsd:string"/>
      <xsd:element name="vms"
type="typens:VmListArray"/>
        <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
          <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
            <xsd:element name="parent_cluster"
type="typens:VmDbwsSupport..ClusterList"/>
              </xsd:all>
            </xsd:complexType>

```

Example 6.41. FindResourcePoolbyId Output (Windows PowerShell)

Returned Attributes for this ResourcePool:

Name : aggregate_cpu_speed
Value : 51048

Name : aggregate_logical_cpus
Value : 24

Name : aggregate_memory
Value : 172002

Name : aggregate_physical_cpus
Value : 6

```
Name  : aggregate_vm_cpus
Value : 215

Name  : aggregate_vm_memory
Value : 470800

Name  : region_description
Value : Region 0

Name  : region_number
Value : 0

Name  : v_direct_miq_templates
Value : 0

Name  : v_direct_vms
Value : 9

Name  : v_parent_cluster
Value : Testing-Production Cluster

Name  : v_parent_datacenter
Value : Prod

Name  : v_parent_folder
Value : Datacenters

Name  : v_parent_host
Value :

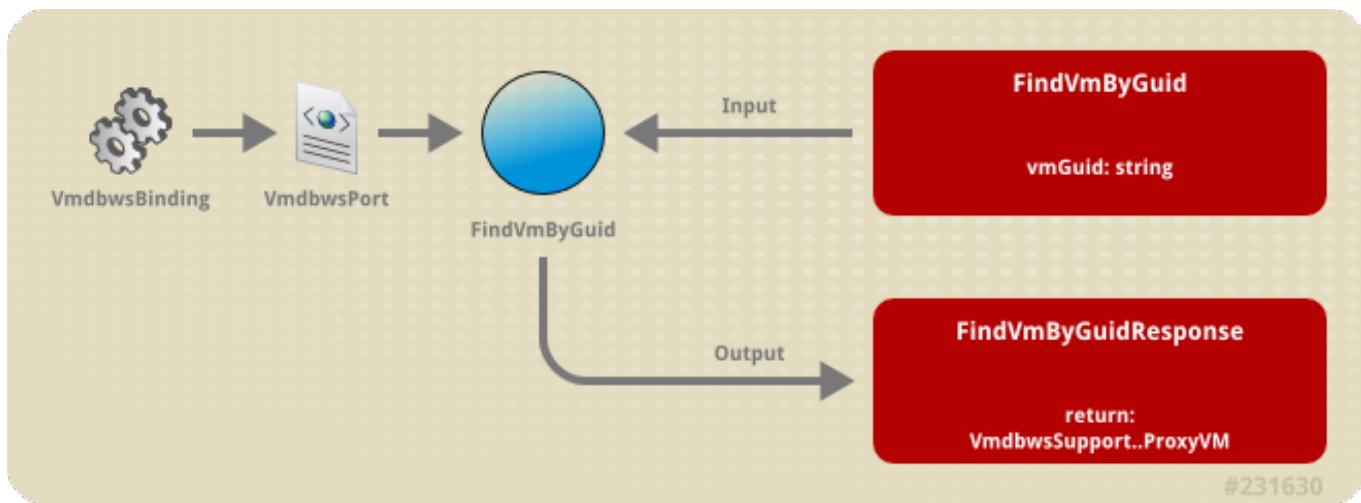
Name  : v_parent_resource_pool
Value :

Name  : v_total_miq_templates
Value : 0

Name  : v_total_vms
Value : 128
```

6.22. FindVmByGuid

FindVmByGuid uses a GUID value to find a VM object.



Syntax

- » *Input: [{:vmGuid => :string}]*
- » *Output: [[ProxyVm]]*

Examples

The following examples demonstrate **FindVmByGuid** usage:

Example 6.42. FindVmByGuid WSDL

```

<message name="FindVmByGuid">
  <part name="vmGuid" type="xsd:string" />
</message>
<message name="FindVmByGuidResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyVm" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyVm">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="vendor" type="xsd:string"/>
    <xsd:element name="format" type="xsd:string"/>
    <xsd:element name="version" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="location" type="xsd:string"/>
    <xsd:element name="config_xml" type="xsd:string"/>
    <xsd:element name="autostart" type="xsd:string"/>
    <xsd:element name="host_id" type="xsd:string"/>
    <xsd:element name="last_sync_on" type="xsd:dateTime"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="storage_id" type="xsd:string"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="last_scan_on" type="xsd:dateTime"/>
    <xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
  
```

```

<xsd:element name="retires_on" type="xsd:date"/>
<xsd:element name="retired" type="xsd:boolean"/>
<xsd:element name="boot_time" type="xsd:dateTime"/>
<xsd:element name="tools_status" type="xsd:string"/>
<xsd:element name="standby_action" type="xsd:string"/>
<xsd:element name="power_state" type="xsd:string"/>
<xsd:element name="state_changed_on" type="xsd:dateTime"/>
<xsd:element name="previous_state" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="blackbox_exists" type="xsd:boolean"/>
<xsd:element name="blackbox_validated" type="xsd:boolean"/>
<xsd:element name="registered" type="xsd:boolean"/>
<xsd:element name="busy" type="xsd:boolean"/>
<xsd:element name="smart" type="xsd:boolean"/>
<xsd:element name="memory_reserve" type="xsd:double"/>
<xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
<xsd:element name="memory_limit" type="xsd:double"/>
<xsd:element name="memory_shares" type="xsd:double"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:double"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
    <xsd:element name="host"
type="typens:VmdbwsSupport..HostList"/>
        <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
            <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
                </xsd:all>
            </xsd:complexType>

```

Example 6.43. FindVmByGuid Output (Windows PowerShell)

Calling FindVmByGuid...
Name

disk_4_disk_type

Value

conservative_vcpus_recommended_change	-1
recommended_vcpus	1
max_cpu_usage_rate_average_high_over_time_period	44.02290026709669
parent_blue_folder_3_name	
aggressive_mem_recommended_change_pct	68.9
disk_6_disk_type	
conservative_recommended_vcpus	3
disk_4_size_on_disk	
disks_aligned	False
paravirtualization	
mem_cpu	6144
v_owning_cluster	Pod1
vmsafe_agent_address	
moderate_mem_recommended_change_pct	44.8
disk_1_size_on_disk	
num_hard_disks	5
disk_5_partitions_aligned	False
aggressive_vcpus_recommended_change_pct	50.0
evm_owner_email	
moderate_recommended_mem	3392
disk_7_mode	
evm_owner_name	
vdi_user_home_path	
v_total_snapshots	1
last_compliance_status	
vmsafe_immutable_vm	
vdi_connection_session_type	
cpu_usagemhz_rate_average_avg_over_time_period	651.6342140812435
orphaned	false
disk_size	0
disk_7_partitions_aligned	
used_storage_by_state	6442450944
vdi_user_name	
disk_3_size	
max_cpu_usage_rate_average_low_over_time_perio...	5.529877510681107
owned_by_current_user	false
disk_8_size	
vdi_endpoint_mac_address	
recommended_mem	1912
aggressive_vcpus_recommended_change	1
region_description	Region 0
disk_5_size_on_disk	
evm_owner_userid	
vdi_user_appdata	
disk_9_size_on_disk	
v_snapshot_newest_total_size	
max_cpu_usage_rate_average_max_over_time_period	100.0
moderate_vcpus_recommended_change_pct	50.0
v_snapshot_newest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
moderate_mem_recommended_change	2752
disk_6_size	
allocated_disk_storage	0
last_drift_state_timestamp	2012-07-24 20:12:32 -
0700	
region_number	0

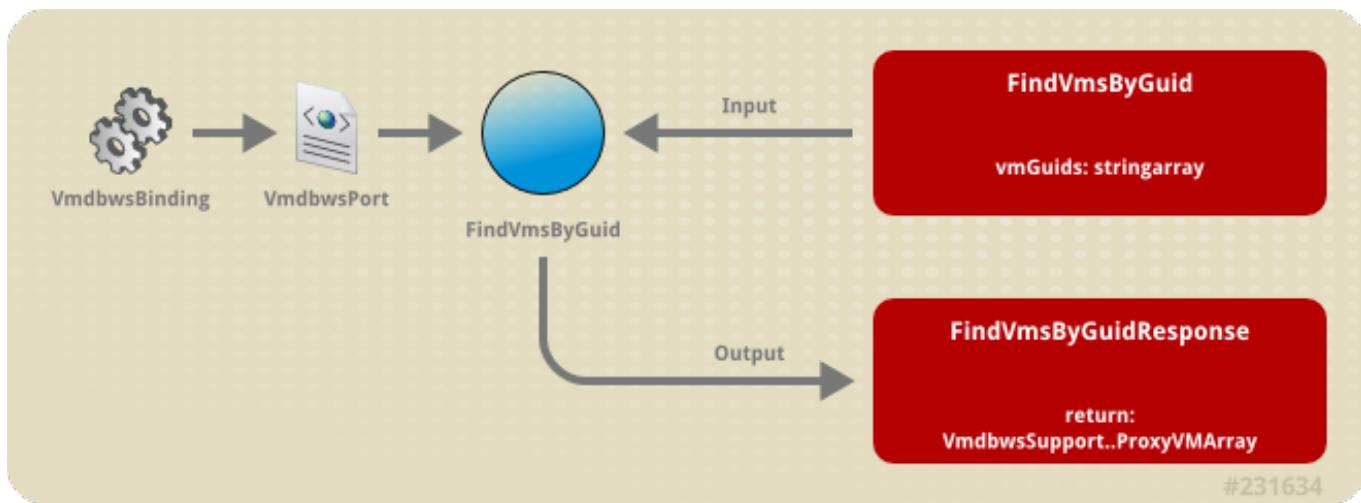
disk_1_mode	
disk_7_disk_type	
disk_5_used_percent_of_provisioned	0.0
aggressive_recommended_mem	1912
disk_8_mode	
v_pct_free_disk_space	
disk_6_partitions_aligned	
aggressive_mem_recommended_change	4232
disk_9_size	
disk_7_size_on_disk	
max_cpu_usage_rate_average_avg_over_time_period	24.776388888888896
disk_9_disk_type	
disk_1_partitions_aligned	True
num_cpu	2
disk_7_used_percent_of_provisioned	
derived_memory_used_max_over_time_period	3234.03377777778
vmsafe_fail_open	
disk_3_disk_type	
moderate_vcpus_recommended_change	1
owned_by_current_ldap_group	false
derived_memory_used_low_over_time_period	232.8316855769765
disk_2_disk_type	
disk_2_partitions_aligned	True
vdi_connection_dns_name	
disk_5_size	
disk_8_used_percent_of_provisioned	
max_mem_usage_absolute_average_high_over_time_...	55.178755912966935
disk_4_size	
v_host_vmm_product	RHEV-H
parent_blue_folder_7_name	
disk_9_used_percent_of_provisioned	
disk_1_used_percent_of_provisioned	0.0
vdi_connection_session_name	
conservative_mem_recommended_change_pct	4.9
v_owning_folder	Datacenters
disk_8_disk_type	
thin_provisioned	false
overallocated_vcpus_pct	50.0
uncommitted_storage	0
disk_8_size_on_disk	
debris_size	0
num_disks	5
conservative_vcpus_recommended_change_pct	-50.0
vm_misc_size	0
max_mem_usage_absolute_average_avg_over_time_p...	31.08472222222226
max_mem_usage_absolute_average_avg_over_time_p...	31.08472222222226
vdi_user_dns_domain	
v_datastore_path	MTCRHDS001/17830c59-
6ae4-420f-af5c-f6898c6c5b27.ovf	
vdi_endpoint_type	
vdi_user_home_share	
os_image_name	linux_centos
moderate_recommended_vcpus	1
parent_blue_folder_1_name	Default
has_rdm_disk	false
vdi_available	false

disk_6_used_percent_of_provisioned	
used_disk_storage	0
vdi_connection_logon_server	
ipaddresses	10.10.1.211
parent_blue_folder_4_name	
derived_memory_used_high_over_time_period	2522.6954255341334
conservative_recommended_mem	5840
disk_9_mode	
storage_name	MTCRHDS001
v_owning_folder_path	Datacenters
is_evm_appliance	false
max_cpu_usage_rate_average_high_over_time_peri...	44.02290026709669
vdi_connection_name	
v_snapshot_newest_name	Active Image
ems_cluster_name	Pod1
v_snapshot_newest_timestamp	2012-06-19 14:04:47 - 0700
disk_2_size_on_disk	
max_mem_usage_absolute_average_max_over_time_p...	95.0
vmsafe_timeout_ms	
disk_2_mode	
v_snapshot_oldest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
first_drift_state_timestamp	2012-07-24 20:12:32 - 0700
vm_ram_size	0
max_mem_usage_absolute_average_high_over_time_...	55.178755912966935
vdi_endpoint_name	
vmsafe_enable	
parent_blue_folder_2_name	
parent_blue_folder_5_name	
disk_3_mode	
disk_1_disk_type	
disconnected	false
vdi_user_logon_time	
v_pct_used_disk_space	
disk_4_mode	
v_owning_datacenter	Default
disk_1_size	
disk_9_partitions_aligned	
hostnames	
disk_4_partitions_aligned	True
disk_6_size_on_disk	
cpu_usagemhz_rate_average_low_over_time_period	366.26730508150735
max_mem_usage_absolute_average_low_over_time_p...	6.99068853147752
disk_8_partitions_aligned	
parent_blue_folder_6_name	
snapshot_size	0
disk_5_disk_type	
disk_2_used_percent_of_provisioned	0.0
parent_blue_folder_9_name	
platform	linux
provisioned_storage	6442450944
disk_3_used_percent_of_provisioned	0.0
vdi_connection_remote_ip_address	
disk_3_size_on_disk	

max_cpu_usage_rate_average_avg_over_time_period	24.776388888888896
cpu_usagemhz_rate_average_high_over_time_period	937.0011230809796
derived_memory_used_avg_over_time_period	1377.7635555555548
last_compliance_timestamp	
disk_6_mode	
vdi_user_domain	
v_snapshot_oldest_name	Active Image
has_active_vdi_session	false
host_name	mtcrhel62001.miq.net
v_owning_blue_folder_path	
Datacenters/Default/vm	
conservative_mem_recommended_change	304
v_owning_resource_pool	Default for Cluster
Pod1	
v_snapshot_oldest_timestamp	2012-06-19 14:04:47 -
0700	
disk_7_size	
owning_ldap_group	
v_annotation	Production V5 EVM
appliance (iSCSI scanning)	
cpu_usagemhz_rate_average_max_over_time_period	1053.93493333333
max_cpu_usage_rate_average_low_over_time_period	5.529877510681107
v_is_a_template	False
max_mem_usage_absolute_average_low_over_time_p...	6.99068853147752
disk_5_mode	
vdi_connection_url	
parent_blue_folder_8_name	
aggressive_recommended_vcpus	1
v_snapshot_oldest_total_size	
disk_4_used_percent_of_provisioned	0.0
archived	false
vdi_user_home_drive	
disk_2_size	
mac_addresses	00:1a:4a:0a:01:00
vmsafe_agent_port	
v_owning_blue_folder	vm
vdi_endpoint_ip_address	
disk_3_partitions_aligned	True
used_storage	6442450944
overallocated_mem_pct	68.9

6.23. FindVmsByGuid

FindVmsByGuid finds VM objects by GUID.



Syntax

- » *Input: [{:vmGuids => :string}]*
- » *Output: [[ProxyVm]]*

Examples

The following examples demonstrate **FindVmsByGuid** usage:

Example 6.44. FindVmsByGuid WSDL

```

<message name="FindVmsByGuid">
  <part name="vmGuids" type="typens:StringArray" />
</message>
<message name="FindVmsByGuidResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyVmArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyVm">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="vendor" type="xsd:string"/>
    <xsd:element name="format" type="xsd:string"/>
    <xsd:element name="version" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="location" type="xsd:string"/>
    <xsd:element name="config_xml" type="xsd:string"/>
    <xsd:element name="autostart" type="xsd:string"/>
    <xsd:element name="host_id" type="xsd:string"/>
    <xsd:element name="last_sync_on" type="xsd:dateTime"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="storage_id" type="xsd:string"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="last_scan_on" type="xsd:dateTime"/>
    <xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="retires_on" type="xsd:date"/>
  </xsd:all>
</xsd:complexType>
  
```

```

<xsd:element name="retired" type="xsd:boolean"/>
<xsd:element name="boot_time" type="xsd:dateTime"/>
<xsd:element name="tools_status" type="xsd:string"/>
<xsd:element name="standby_action" type="xsd:string"/>
<xsd:element name="power_state" type="xsd:string"/>
<xsd:element name="state_changed_on" type="xsd:dateTime"/>
<xsd:element name="previous_state" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="blackbox_exists" type="xsd:boolean"/>
<xsd:element name="blackbox_validated" type="xsd:boolean"/>
<xsd:element name="registered" type="xsd:boolean"/>
<xsd:element name="busy" type="xsd:boolean"/>
<xsd:element name="smart" type="xsd:boolean"/>
<xsd:element name="memory_reserve" type="xsd:double"/>
<xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
<xsd:element name="memory_limit" type="xsd:double"/>
<xsd:element name="memory_shares" type="xsd:double"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:double"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmDbwsSupport..ProxyCustomAttributeArray"/>
    <xsd:element name="host"
type="typens:VmDbwsSupport..HostList"/>
        <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
            <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
                </xsd:all>
            </xsd:complexType>

```

Example 6.45. FindVmsByGuid Output (Windows PowerShell)

Calling FindVmsByGuid...	
Name	Value
---	-----
disk_4_disk_type	
conservative_vcpus_recommended_change	-1

recommended_vcpus	1
max_cpu_usage_rate_average_high_over_time_period	44.02290026709669
parent_blue_folder_3_name	
aggressive_mem_recommended_change_pct	68.9
disk_6_disk_type	
conservative_recommended_vcpus	3
disk_4_size_on_disk	
disks_aligned	False
paravirtualization	
mem_cpu	6144
v_owning_cluster	Pod1
vmsafe_agent_address	
moderate_mem_recommended_change_pct	44.8
disk_1_size_on_disk	
num_hard_disks	5
disk_5_partitions_aligned	False
aggressive_vcpus_recommended_change_pct	50.0
evm_owner_email	
moderate_recommended_mem	3392
disk_7_mode	
evm_owner_name	
vdi_user_home_path	
v_total_snapshots	1
last_compliance_status	
vmsafe_immutable_vm	
vdi_connection_session_type	
cpu_usagemhz_rate_average_avg_over_time_period	651.6342140812435
orphaned	false
disk_size	0
disk_7_partitions_aligned	
used_storage_by_state	6442450944
vdi_user_name	
disk_3_size	
max_cpu_usage_rate_average_low_over_time_perio...	5.529877510681107
owned_by_current_user	false
disk_8_size	
vdi_endpoint_mac_address	
recommended_mem	1912
aggressive_vcpus_recommended_change	1
region_description	Region 0
disk_5_size_on_disk	
evm_owner_userid	
vdi_user_appdata	
disk_9_size_on_disk	
v_snapshot_newest_total_size	
max_cpu_usage_rate_average_max_over_time_period	100.0
moderate_vcpus_recommended_change_pct	50.0
v_snapshot_newest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
moderate_mem_recommended_change	2752
disk_6_size	
allocated_disk_storage	0
last_drift_state_timestamp	2012-07-24 20:12:32 -
0700	
region_number	0
disk_1_mode	

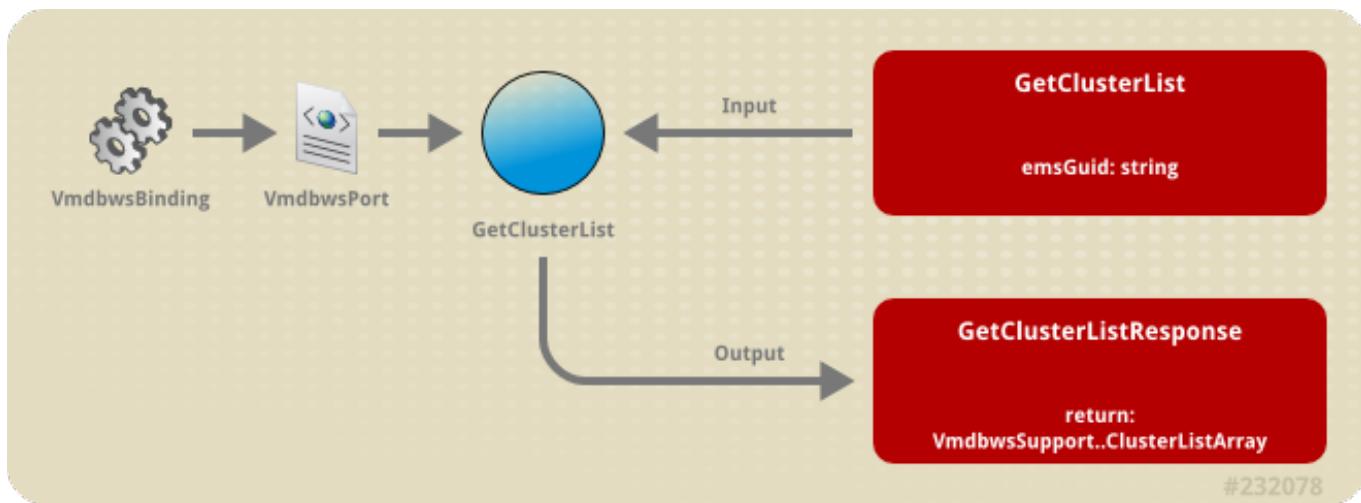
disk_7_disk_type	
disk_5_used_percent_of_provisioned	0.0
aggressive_recommended_mem	1912
disk_8_mode	
v_pct_free_disk_space	
disk_6_partitions_aligned	
aggressive_mem_recommended_change	4232
disk_9_size	
disk_7_size_on_disk	
max_cpu_usage_rate_average_avg_over_time_period	24.776388888888896
disk_9_disk_type	
disk_1_partitions_aligned	True
num_cpu	2
disk_7_used_percent_of_provisioned	
derived_memory_used_max_over_time_period	3234.03377777778
vmsafe_fail_open	
disk_3_disk_type	
moderate_vcpus_recommended_change	1
owned_by_current_ldap_group	false
derived_memory_used_low_over_time_period	232.8316855769765
disk_2_disk_type	
disk_2_partitions_aligned	True
vdi_connection_dns_name	
disk_5_size	
disk_8_used_percent_of_provisioned	
max_mem_usage_absolute_average_high_over_time_...	55.178755912966935
disk_4_size	
v_host_vmm_product	RHEV-H
parent_blue_folder_7_name	
disk_9_used_percent_of_provisioned	
disk_1_used_percent_of_provisioned	0.0
vdi_connection_session_name	
conservative_mem_recommended_change_pct	4.9
v_owning_folder	Datacenters
disk_8_disk_type	
thin_provisioned	false
overallocated_vcpus_pct	50.0
uncommitted_storage	0
disk_8_size_on_disk	
debris_size	0
num_disks	5
conservative_vcpus_recommended_change_pct	-50.0
vm_misc_size	0
max_mem_usage_absolute_average_avg_over_time_p...	31.08472222222226
max_mem_usage_absolute_average_avg_over_time_p...	31.08472222222226
vdi_user_dns_domain	
v_datastore_path	MTCRHDS001/17830c59-
6ae4-420f-af5c-f6898c6c5b27.ovf	
vdi_endpoint_type	
vdi_user_home_share	
os_image_name	linux_centos
moderate_recommended_vcpus	1
parent_blue_folder_1_name	Default
has_rdm_disk	false
vdi_available	false
disk_6_used_percent_of_provisioned	

used_disk_storage	0
vdi_connection_logon_server	10.10.1.211
ipaddresses	10.10.1.211
parent_blue_folder_4_name	2522.6954255341334
derived_memory_used_high_over_time_period	5840
conservative_recommended_mem	5840
disk_9_mode	MTCRHDS001
storage_name	Datacenters
v_owning_folder_path	false
is_evm_appliance	Active Image
max_cpu_usage_rate_average_high_over_time_peri...	44.02290026709669
vdi_connection_name	Pod1
v_snapshot_newest_name	2012-06-19 14:04:47 -
ems_cluster_name	0700
v_snapshot_newest_timestamp	disk_2_size_on_disk
	95.0
vmsafe_timeout_ms	max_mem_usage_absolute_average_max_over_time_p...
disk_2_mode	55.178755912966935
v_snapshot_oldest_description	disk_2_size
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	0
first_drift_state_timestamp	first_drift_state_timestamp
0700	2012-07-24 20:12:32 -
vm_ram_size	vm_ram_size
max_mem_usage_absolute_average_high_over_time_...	vm_ram_size
vdi_endpoint_name	parent_blue_folder_2_name
vmsafe_enable	parent_blue_folder_5_name
parent_blue_folder_2_name	disk_3_mode
parent_blue_folder_5_name	disk_1_disk_type
disk_3_mode	disconnected
disk_1_disk_type	vdi_user_logon_time
disconnected	v_diagram
vdi_user_logon_time	v_pct_used_disk_space
v_diagram	disk_4_mode
v_pct_used_disk_space	v_owning_datacenter
disk_4_mode	disk_1_size
v_owning_datacenter	disk_9_partitions_aligned
disk_1_size	hostnames
disk_9_partitions_aligned	disk_4_partitions_aligned
hostnames	disk_6_size_on_disk
disk_4_partitions_aligned	cpu_usagemhz_rate_average_low_over_time_period
disk_6_size_on_disk	max_mem_usage_absolute_average_low_over_time_p...
cpu_usagemhz_rate_average_low_over_time_period	disk_8_partitions_aligned
max_mem_usage_absolute_average_low_over_time_p...	parent_blue_folder_6_name
disk_8_partitions_aligned	snapshot_size
parent_blue_folder_6_name	disk_5_disk_type
snapshot_size	disk_2_used_percent_of_provisioned
disk_5_disk_type	parent_blue_folder_9_name
disk_2_used_percent_of_provisioned	platform
parent_blue_folder_9_name	provisioned_storage
platform	disk_3_used_percent_of_provisioned
provisioned_storage	vdi_connection_remote_ip_address
disk_3_used_percent_of_provisioned	disk_3_size_on_disk
vdi_connection_remote_ip_address	max_cpu_usage_rate_average_avg_over_time_perio...
disk_3_size_on_disk	24.776388888888896

cpu_usagemhz_rate_average_high_over_time_perio...	937.0011230809796
derived_memory_used_avg_over_time_period	1377.7635555555548
last_compliance_timestamp	
disk_6_mode	
vdi_user_domain	
v_snapshot_oldest_name	Active Image
has_active_vdi_session	false
host_name	mtcrhel62001.miq.net
v_owning_blue_folder_path	
Datacenters/Default/vm	
conservative_mem_recommended_change	304
v_owning_resource_pool	Default for Cluster
Pod1	
v_snapshot_oldest_timestamp	2012-06-19 14:04:47 -
0700	
disk_7_size	
owning_ldap_group	
v_annotation	Production V5 EVM
appliance (iSCSI scanning)	
cpu_usagemhz_rate_average_max_over_time_period	1053.93493333333
max_cpu_usage_rate_average_low_over_time_period	5.529877510681107
v_is_a_template	False
max_mem_usage_absolute_average_low_over_time_p...	6.99068853147752
disk_5_mode	
vdi_connection_url	
parent_blue_folder_8_name	
aggressive_recommended_vcpus	1
v_snapshot_oldest_total_size	
disk_4_used_percent_of_provisioned	0.0
archived	false
vdi_user_home_drive	
disk_2_size	
mac_addresses	00:1a:4a:0a:01:00
vmsafe_agent_port	
v_owning_blue_folder	vm
vdi_endpoint_ip_address	
disk_3_partitions_aligned	True
used_storage	6442450944
overallocated_mem_pct	

6.24. GetClusterList

GetClusterList returns all clusters as list objects.



Syntax

- » *Input:* [{:emsGuid => :string}]
- » *Output:* **ClusterList** as an array. List object contains **name** and **ID** properties.

Examples

The following examples demonstrate **GetClusterList** usage:

Example 6.46. GetClusterList WSDL

```

<message name="GetClusterList">
  <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetClusterListResponse">
  <part name="return" type="typens:VmdbwsSupport..ClusterListArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..ClusterList">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>

```

Example 6.47. GetClusterList Output (Windows PowerShell)

```

Clusters:

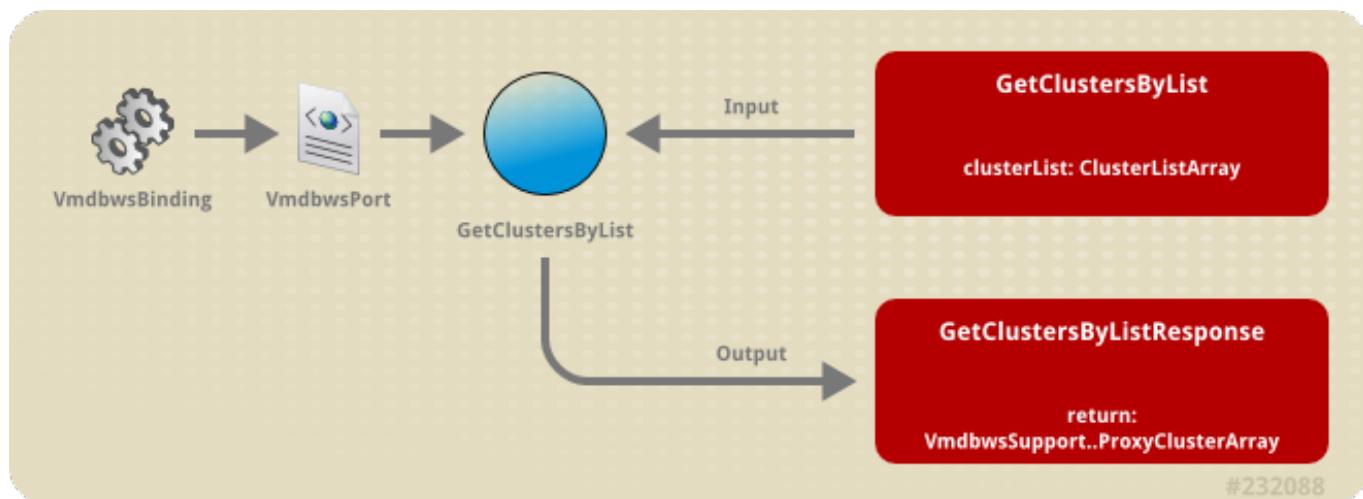
id   : 1
name : Testing-Production Cluster

id   : 2
name : Development-Production Cluster

```

6.25. GetClustersByList

GetClustersByList returns an array of cluster objects. The input is usually the object returned from the **GetClusterList** method or from the **Cluster** property of a **ProxyExtManagementSystem** object.



Syntax

- » **Input:** `[:ClusterList => [ClusterList]]`
- » **Output:** **ProxyCluster** as an array.

Examples

The following examples demonstrate **GetClustersByList** usage:

Example 6.48. GetClustersByList WSDL

```

<message name="GetClustersByList">
    <part name="ClusterList"
        type="typens:VmdbwsSupport..ClusterListArray"/>
</message>
<message name="GetClustersByListResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCluster">
    <xsd:all>
        <xsd:element name="ext_management_system"
            type="typens:VmdbwsSupport..EmsList"/>
        <xsd:element name="hosts"
            type="typens:VmdbwsSupport..HostListArray"/>
        <xsd:element name="resource_pools"
            type="typens:VmdbwsSupport..ResourcePoolListArray"/>
        <xsd:element name="default_resource_pool"
            type="typens:VmdbwsSupport..ResourcePoolList"/>
        <xsd:element name="vms"
            type="typens:VmdbwsSupport..VmListArray"/>
        <xsd:element name="ws_attributes"
            type="typens:VmdbwsSupport..WSAttributesArray"/>
    </xsd:all>
</xsd:complexType>
  
```

```
<xsd:element name="storages"
type="typens:VmDbwsSupport..StorageListArray"/>
  </xsd:all>
</xsd:complexType>
```

Example 6.49. GetClustersByList Output (Windows PowerShell)

Returned Attributes for this Cluster:

```
Name  : aggregate_cpu_speed
Value : 51048
```

```
Name  : aggregate_logical_cpus
Value : 24
```

```
Name  : aggregate_memory
Value : 172002
```

```
Name  : aggregate_physical_cpus
Value : 6
```

```
Name  : aggregate_vm_cpus
Value : 220
```

```
Name  : aggregate_vm_memory
Value : 480528
```

```
Name  : capacity_profile_1_available_host_memory
Value : 161777451008
```

```
Name  : capacity_profile_1_available_host_vcpu
Value : 24
```

```
Name  : capacity_profile_1_memory_commitment_ratio
Value : 1.2
```

```
Name  : capacity_profile_1_memory_maximum
Value :
```

```
Name  : capacity_profile_1_memory_method
Value : Average of Allocated Memory
```

```
Name  : capacity_profile_1_memory_minimum
Value :
```

```
Name  : capacity_profile_1_memory_per_vm
Value : 3936485376.0
```

```
Name  : capacity_profile_1_memory_per_vm_with_min_max
Value : 3936485376.0
```

```
Name  : capacity_profile_1_projected_vm_count_based_on_all
Value : 28
```

```
Name  : capacity_profile_1_projected_vm_count_based_on_memory
```

```
Value : 50

Name  : capacity_profile_1_projected_vm_count_based_on_vcpu
Value : 28

Name  : capacity_profile_1_remaining_host_memory
Value : -309737186918.4

Name  : capacity_profile_1_remaining_host_vcpu
Value : -172.0

Name  : capacity_profile_1_remaining_vm_count_based_on_all
Value : -100

Name  : capacity_profile_1_remaining_vm_count_based_on_memory
Value : -78

Name  : capacity_profile_1_remaining_vm_count_based_on_vcpu
Value : -100

Name  : capacity_profile_1_vcpu_commitment_ratio
Value : 2.0

Name  : capacity_profile_1_vcpu_maximum
Value :

Name  : capacity_profile_1_vcpu_method
Value : Average of Allocated vCPU

Name  : capacity_profile_1_vcpu_minimum
Value :

Name  : capacity_profile_1_vcpu_per_vm
Value : 1.71875

Name  : capacity_profile_1_vcpu_per_vm_with_min_max
Value : 1.71875

Name  : capacity_profile_2_available_host_memory
Value : 161777451008

Name  : capacity_profile_2_available_host_vcpu
Value : 45622

Name  : capacity_profile_2_memory_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_memory_maximum
Value :

Name  : capacity_profile_2_memory_method
Value : High Normal Range of Allocated Memory

Name  : capacity_profile_2_memory_minimum
Value :
```

```
Name  : capacity_profile_2_memory_per_vm
Value : 1263886336.0

Name  : capacity_profile_2_memory_per_vm_with_min_max
Value : 1263886336.0

Name  : capacity_profile_2_projected_vm_count_based_on_all
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_memory
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_vcpu
Value : 128

Name  : capacity_profile_2_remaining_host_memory
Value : 0.0

Name  : capacity_profile_2_remaining_host_vcpu
Value : 0.0

Name  : capacity_profile_2_remaining_vm_count_based_on_all
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_memory
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_vcpu
Value : 0

Name  : capacity_profile_2_vcpu_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_vcpu_maximum
Value :

Name  : capacity_profile_2_vcpu_method
Value : High Normal Range of Allocated vCPU

Name  : capacity_profile_2_vcpu_minimum
Value :

Name  : capacity_profile_2_vcpu_per_vm
Value : 356.421875

Name  : capacity_profile_2_vcpu_per_vm_with_min_max
Value : 356.421875

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :
```

```
Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : first_drift_state_timestamp
Value :

Name  : last_drift_state_timestamp
Value :

Name  : last_scan_on
Value :

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  : max_cpu_usage_rate_average_high_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  : max_cpu_usage_rate_average_low_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_avg_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_avg_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_high_over_time_period
Value :

Name  :
max_mem_usage_absolute_average_high_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_low_over_time_period
Value :
```

```

Name   :
max_mem_usage_absolute_average_low_over_time_period_without_overhead
Value  :

Name   : region_description
Value  : Region 0

Name   : region_number
Value  : 0

Name   : total_hosts
Value  : 3

Name   : total_miq_templates
Value  : 5

Name   : total_vms
Value  : 128

Name   : v_cpu_vr_ratio
Value  : 9.200000000000001

Name   : v_parent_datacenter
Value  : Prod

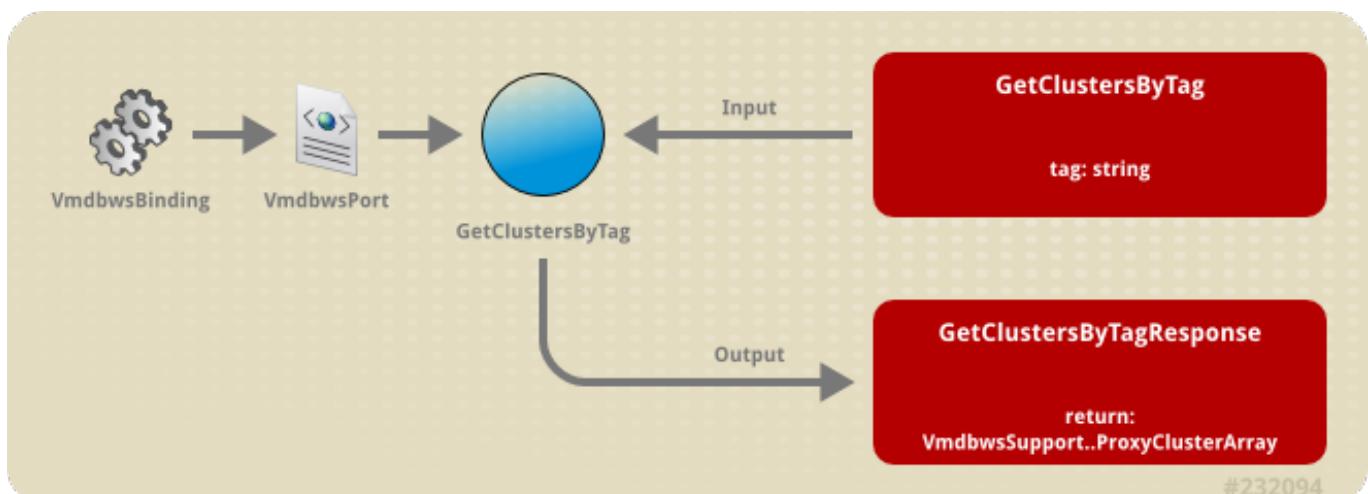
Name   : v_qualified_desc
Value  : Testing-Production Cluster in Prod

Name   : v_ram_vr_ratio
Value  : 2.8000000000000003

```

6.26. GetClustersByTag

GetClustersByTag returns an array of cluster objects based on tag assignment. The input is a tag string.



Syntax

- » **Input:** [{:tag => :string}]
- » **Output:** **ProxyCluster** as an array.

Examples

The following examples demonstrate **GetClustersByTag** usage:

Example 6.50. GetClustersByTag WSDL

```
<message name="GetClustersByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetClustersByTagResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCluster">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="ha_enabled" type="xsd:boolean"/>
    <xsd:element name="ha_admit_control" type="xsd:boolean"/>
    <xsd:element name="ha_max_failures" type="xsd:double"/>
    <xsd:element name="drs_enabled" type="xsd:boolean"/>
    <xsd:element name="drs_automation_level" type="xsd:string"/>
    <xsd:element name="drs_migration_threshold" type="xsd:double"/>
    <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
    <xsd:element name="ems_ref_obj" type="xsd:string"/>
    <xsd:element name="effective_cpu" type="xsd:double"/>
    <xsd:element name="effective_memory" type="xsd:double"/>
    <xsd:element name="ems_ref" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

Example 6.51. GetClustersByTag Output (Windows PowerShell)

Returned Attributes for this Cluster:

```
Name  : aggregate_cpu_speed
Value : 51048
```

```
Name  : aggregate_logical_cpus
Value : 24
```

```
Name  : aggregate_memory
Value : 172002
```

```
Name  : aggregate_physical_cpus
Value : 6

Name  : aggregate_vm_cpus
Value : 220

Name  : aggregate_vm_memory
Value : 480528

Name  : capacity_profile_1_available_host_memory
Value : 161777451008

Name  : capacity_profile_1_available_host_vcpu
Value : 24

Name  : capacity_profile_1_memory_commitment_ratio
Value : 1.2

Name  : capacity_profile_1_memory_maximum
Value :

Name  : capacity_profile_1_memory_method
Value : Average of Allocated Memory

Name  : capacity_profile_1_memory_minimum
Value :

Name  : capacity_profile_1_memory_per_vm
Value : 3936485376.0

Name  : capacity_profile_1_memory_per_vm_with_min_max
Value : 3936485376.0

Name  : capacity_profile_1_projected_vm_count_based_on_all
Value : 28

Name  : capacity_profile_1_projected_vm_count_based_on_memory
Value : 50

Name  : capacity_profile_1_projected_vm_count_based_on_vcpu
Value : 28

Name  : capacity_profile_1_remaining_host_memory
Value : -309737186918.4

Name  : capacity_profile_1_remaining_host_vcpu
Value : -172.0

Name  : capacity_profile_1_remaining_vm_count_based_on_all
Value : -100

Name  : capacity_profile_1_remaining_vm_count_based_on_memory
Value : -78

Name  : capacity_profile_1_remaining_vm_count_based_on_vcpu
Value : -100
```

```
Name  : capacity_profile_1_vcpu_commitment_ratio
Value : 2.0

Name  : capacity_profile_1_vcpu_maximum
Value :

Name  : capacity_profile_1_vcpu_method
Value : Average of Allocated vCPU

Name  : capacity_profile_1_vcpu_minimum
Value :

Name  : capacity_profile_1_vcpu_per_vm
Value : 1.71875

Name  : capacity_profile_1_vcpu_per_vm_with_min_max
Value : 1.71875

Name  : capacity_profile_2_available_host_memory
Value : 161777451008

Name  : capacity_profile_2_available_host_vcpu
Value : 45622

Name  : capacity_profile_2_memory_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_memory_maximum
Value :

Name  : capacity_profile_2_memory_method
Value : High Normal Range of Allocated Memory

Name  : capacity_profile_2_memory_minimum
Value :

Name  : capacity_profile_2_memory_per_vm
Value : 1263886336.0

Name  : capacity_profile_2_memory_per_vm_with_min_max
Value : 1263886336.0

Name  : capacity_profile_2_projected_vm_count_based_on_all
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_memory
Value : 128

Name  : capacity_profile_2_projected_vm_count_based_on_vcpu
Value : 128

Name  : capacity_profile_2_remaining_host_memory
Value : 0.0

Name  : capacity_profile_2_remaining_host_vcpu
```

```
Value : 0.0

Name  : capacity_profile_2_remaining_vm_count_based_on_all
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_memory
Value : 0

Name  : capacity_profile_2_remaining_vm_count_based_on_vcpu
Value : 0

Name  : capacity_profile_2_vcpu_commitment_ratio
Value : 1.0

Name  : capacity_profile_2_vcpu_maximum
Value :

Name  : capacity_profile_2_vcpu_method
Value : High Normal Range of Allocated vCPU

Name  : capacity_profile_2_vcpu_minimum
Value :

Name  : capacity_profile_2_vcpu_per_vm
Value : 356.421875

Name  : capacity_profile_2_vcpu_per_vm_with_min_max
Value : 356.421875

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : first_drift_state_timestamp
Value :

Name  : last_drift_state_timestamp
Value :

Name  : last_scan_on
Value :
```

```
Name   : max_cpu_usage_rate_average_avg_over_time_period
Value  :

Name   :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value  :

Name   : max_cpu_usage_rate_average_high_over_time_period
Value  :

Name   :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value  :

Name   : max_cpu_usage_rate_average_low_over_time_period
Value  :

Name   :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value  :

Name   : max_mem_usage_absolute_average_avg_over_time_period
Value  :

Name   :
max_mem_usage_absolute_average_avg_over_time_period_without_overhead
Value  :

Name   : max_mem_usage_absolute_average_high_over_time_period
Value  :

Name   :
max_mem_usage_absolute_average_high_over_time_period_without_overhead
Value  :

Name   : max_mem_usage_absolute_average_low_over_time_period
Value  :

Name   :
max_mem_usage_absolute_average_low_over_time_period_without_overhead
Value  :

Name   : region_description
Value  : Region 0

Name   : region_number
Value  : 0

Name   : total_hosts
Value  : 3

Name   : total_miq_templates
Value  : 5

Name   : total_vms
Value  : 128
```

```

Name   : v_cpu_vr_ratio
Value  : 9.200000000000001

Name   : v_parent_datacenter
Value  : Prod

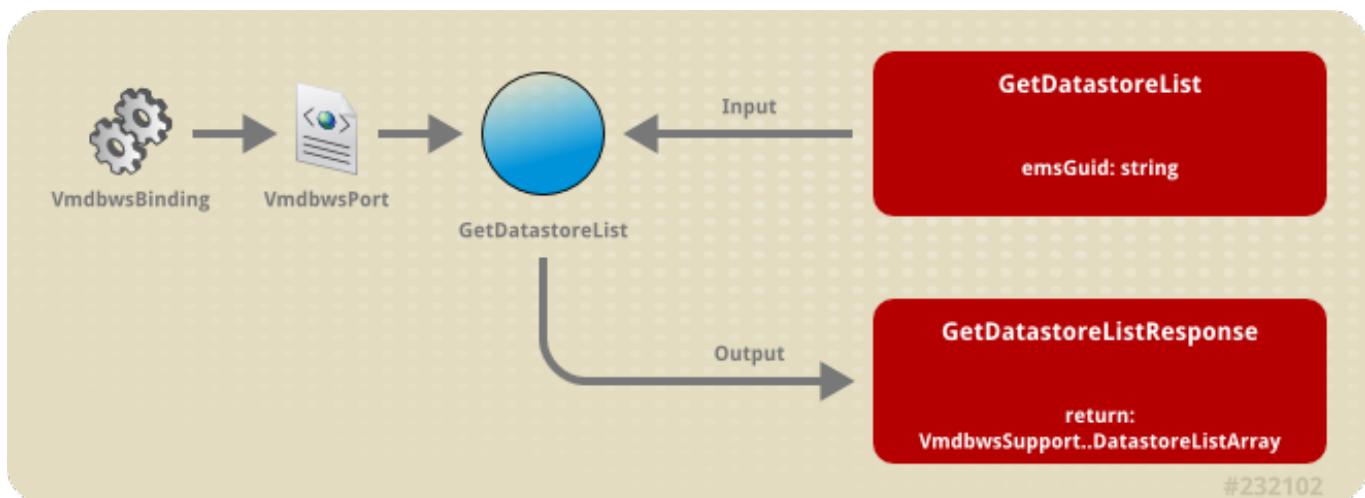
Name   : v_qualified_desc
Value  : Testing-Production Cluster in Prod

Name   : v_ram_vr_ratio
Value  : 2.8000000000000003

```

6.27. GetDatastoreList

GetDatastoreList returns all datastores for a management system as list objects.



Syntax

- » **Input:** `[{:emsGuid => :string}]`
- » **Output:** **DatastoreList** as an array. List object contains **name** and **ID** properties.

Examples

The following examples demonstrate **GetDatastoreList** usage:

Example 6.52. GetDatastoreList WSDL

```

<message name="GetDatastoreList">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetDatastoreListResponse">
    <part name="return" type="typens:VmdbwsSupport..DatastoreListArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..DatastoreList">
    <xsd:all>

```

```

<xsd:element name="id" type="xsd:string"/>
<xsd:element name="name" type="xsd:string"/>
</xsd:all>
</xsd:complexType>

```

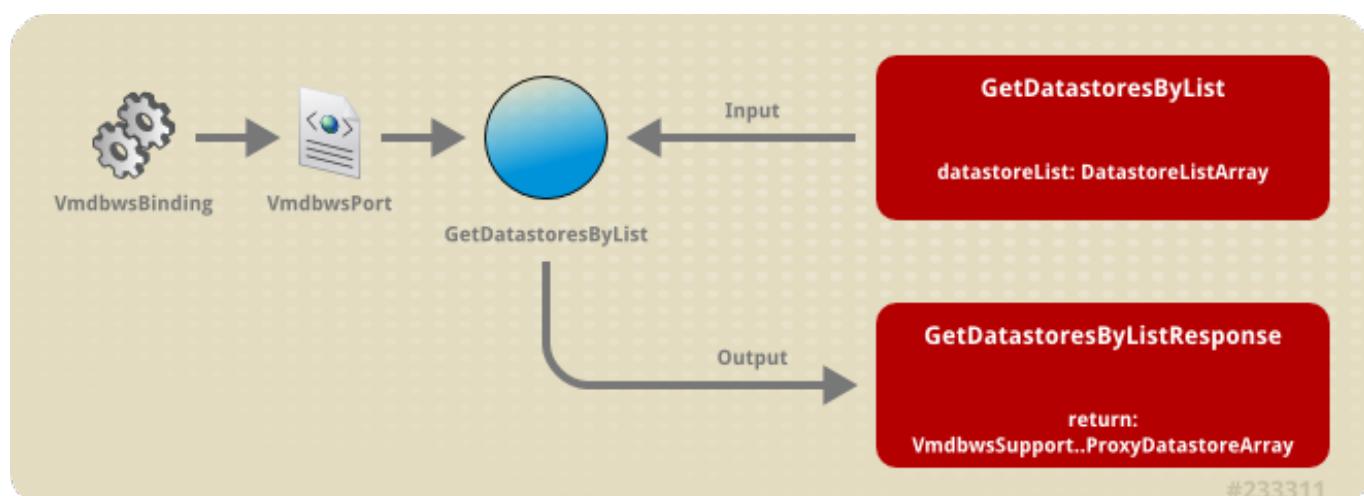
Example 6.53. GetDatastoreList Output (Windows PowerShell)

Datastores:

id	name
--	-----
8	StarM1-Test2
7	StarM1-TestProd
6	StarM1-Dev
5	StarM2-Test
4	StarM1-vCloud_Test
3	StarM1-Test
2	local-dev
1	Thecus-N7700

6.28. GetDatastoresByList

GetDatastoresByList returns an array of datastore objects. The input is usually the object returned from the **GetDatastoreList** method or from the **datastore** property of a **ProxyExtManagementSystem** object.



Syntax

- Input: [{:datastoreList => [DatastoreListarray]}]

- » *Output:* **ProxyDatastore** as an array.

Examples

The following examples demonstrate **GetDatastoresByList** usage:

Example 6.54. GetDatastoresByList WSDL

```

<message name="GetDatastoresByList">
    <part name="datastoreList"
        type="typens:VmdbwsSupport..DatastoreListArray"/>
</message>
<message name="GetDatastoresByListResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>
...
    <xsd:complexType name="VmdbwsSupport..ProxyDatastore">
        <xsd:all>
            <xsd:element name="id" type="xsd:string"/>
            <xsd:element name="name" type="xsd:string"/>
            <xsd:element name="store_type" type="xsd:string"/>
            <xsd:element name="total_space" type="xsd:double"/>
            <xsd:element name="free_space" type="xsd:double"/>
            <xsd:element name="created_on" type="xsd:dateTime"/>
            <xsd:element name="updated_on" type="xsd:dateTime"/>
            <xsd:element name="multiplehostaccess" type="xsd:double"/>
            <xsd:element name="location" type="xsd:string"/>
            <xsd:element name="last_scan_on" type="xsd:dateTime"/>
            <xsd:element name="uncommitted" type="xsd:double"/>
            <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
            <xsd:element name="ems_ref_obj" type="xsd:string"/>
            <xsd:element name="directory_hierarchy_supported"
                type="xsd:boolean"/>
                <xsd:element name="thin_provisioning_supported"
                type="xsd:boolean"/>
                    <xsd:element name="raw_disk_mappings_supported"
                type="xsd:boolean"/>
                    <xsd:element name="master" type="xsd:boolean"/>
                    <xsd:element name="ems_ref" type="xsd:string"/>
                    <xsd:element name="vms"
                type="typens:VmdbwsSupport..VmListArray"/>
                    <xsd:element name="all_vms"
                type="typens:VmdbwsSupport..VmListArray"/>
                    <xsd:element name="hosts"
                type="typens:VmdbwsSupport..HostListArray"/>
                    <xsd:element name="ws_attributes"
                type="typens:VmdbwsSupport..WSAttributesArray"/>
                    <xsd:element name="ext_management_systems"
                type="typens:VmdbwsSupport..EmsListArray"/>
                </xsd:all>
            </xsd:complexType>

```

Example 6.55. GetDatastoresByList Output (Windows PowerShell)

```
Returned Attributes for this Datastore:
```

```
Name    : count_of_vmdk_disk_files
Value   : 0

Name    : cpu_usagemhz_rate_average_avg_over_time_period
Value   :

Name    : cpu_usagemhz_rate_average_high_over_time_period
Value   :

Name    : cpu_usagemhz_rate_average_low_over_time_period
Value   :

Name    : debris_size
Value   : 0

Name    : derived_memory_used_avg_over_time_period
Value   :

Name    : derived_memory_used_high_over_time_period
Value   :

Name    : derived_memory_used_low_over_time_period
Value   :

Name    : disk_size
Value   : 0

Name    : max_cpu_usage_rate_average_avg_over_time_period
Value   :

Name    :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value   :

Name    :
max_cpu_usage_rate_average_high_over_time_period
Value   :

Name    :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value   :

Name    :
max_cpu_usage_rate_average_low_over_time_period
Value   :

Name    :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value   :

Name    :
max_mem_usage_absolute_average_avg_over_time_period
Value   :
```

```
Name  :  
max_mem_usage_absolute_average_avg_over_time_period_without_overhead  
Value :  
  
Name  : max_mem_usage_absolute_average_high_over_time_period  
Value :  
  
Name  :  
max_mem_usage_absolute_average_high_over_time_period_without_overhead  
Value :  
  
Name  : max_mem_usage_absolute_average_low_over_time_period  
Value :  
  
Name  :  
max_mem_usage_absolute_average_low_over_time_period_without_overhead  
Value :  
  
Name  : region_description  
Value : Region 0  
  
Name  : region_number  
Value : 0  
  
Name  : snapshot_size  
Value : 0  
  
Name  : total_managed_registered_vms  
Value : 0  
  
Name  : total_managed_unregistered_vms  
Value : 0  
  
Name  : total_unmanaged_vms  
Value : 0  
  
Name  : v_debris_percent_of_used  
Value : 0.0  
  
Name  : v_disk_percent_of_used  
Value : 0.0  
  
Name  : v_free_space_percent_of_total  
Value : 0.0  
  
Name  : v_memory_percent_of_used  
Value : 0.0  
  
Name  : v_provisioned_percent_of_total  
Value : 0.0  
  
Name  : v_snapshot_percent_of_used  
Value : 0.0  
  
Name  : v_total_debris_size
```

```

Value : 0

Name  : v_total_hosts
Value : 1

Name  : v_total_memory_size
Value : 0

Name  : v_total_provisioned
Value : 0

Name  : v_total_snapshot_size
Value : 0

Name  : v_total_vm_misc_size
Value : 0

Name  : v_total_vms
Value : 0

Name  : v_used_space
Value : 0

Name  : v_used_space_percent_of_total
Value : 0.0

Name  : v_vm_misc_percent_of_used
Value : 0.0

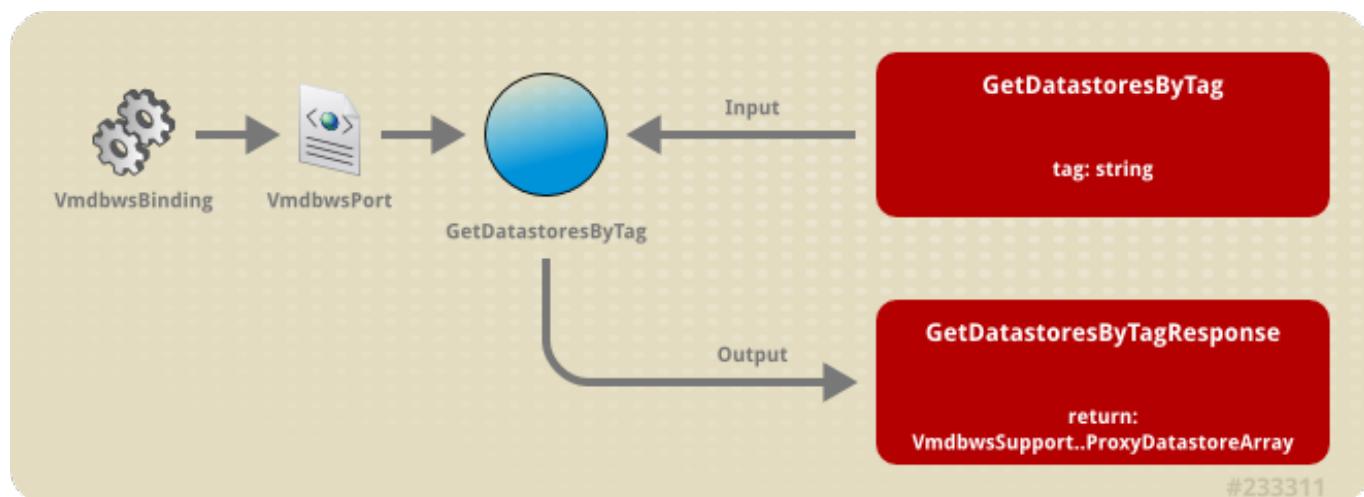
Name  : vm_misc_size
Value : 0

Name  : vm_ram_size
Value : 0

```

6.29. GetDatastoresByTag

GetDatastoresByTag returns an array of datastore objects. The input is a tag string.



#233311

Syntax

- » **Input:** `[{:tag => :string}]`
- » **Output:** `ProxyDatastore` as an array.

Examples

The following examples demonstrate `GetDatastoresByTag` usage:

Example 6.56. GetDatastoresByList WSDL

```

<message name="GetDatastoresByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetStoragesByTagResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>
...
  <xsd:complexType name="VmdbwsSupport..ProxyDatastore">
    <xsd:all>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
      <xsd:element name="store_type" type="xsd:string"/>
      <xsd:element name="total_space" type="xsd:double"/>
      <xsd:element name="free_space" type="xsd:double"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="multiplehostaccess" type="xsd:boolean"/>
      <xsd:element name="location" type="xsd:string"/>
      <xsd:element name="last_scan_on" type="xsd:dateTime"/>
      <xsd:element name="uncommitted" type="xsd:double"/>
      <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
      <xsd:element name="ems_ref_obj" type="xsd:string"/>
      <xsd:element name="directory_hierarchy_supported"
        type="xsd:boolean"/>
        <xsd:element name="thin_provisioning_supported"
        type="xsd:boolean"/>
          <xsd:element name="raw_disk_mappings_supported"
        type="xsd:boolean"/>
          <xsd:element name="master" type="xsd:boolean"/>
          <xsd:element name="ems_ref" type="xsd:string"/>
          <xsd:element name="vms"
        type="typens:VmListArray"/>
          <xsd:element name="all_vms"
        type="typens:VmListArray"/>
          <xsd:element name="hosts"
        type="typens:HostListArray"/>
          <xsd:element name="ws_attributes"
        type="typens:WSAttributesArray"/>
          <xsd:element name="ext_management_systems"
        type="typens:EmsListArray"/>
        </xsd:all>
    </xsd:complexType>
```

Example 6.57. GetDatastoresByList Output (Windows PowerShell)

```
Returned Attributes for this Datastore:

Name  : count_of_vmdk_disk_files
Value : 0

Name  : cpu_usagemhz_rate_average_avg_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_high_over_time_period
Value :

Name  : cpu_usagemhz_rate_average_low_over_time_period
Value :

Name  : debris_size
Value : 0

Name  : derived_memory_used_avg_over_time_period
Value :

Name  : derived_memory_used_high_over_time_period
Value :

Name  : derived_memory_used_low_over_time_period
Value :

Name  : disk_size
Value : 0

Name  : max_cpu_usage_rate_average_avg_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_avg_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_high_over_time_period_without_overhead
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period
Value :

Name  :
max_cpu_usage_rate_average_low_over_time_period_without_overhead
Value :

Name  : max_mem_usage_absolute_average_avg_over_time_period
```

```
Value :  
  
Name   : max_mem_usage_absolute_average_avg_over_time_period_without_overhead  
Value :  
  
Name   : max_mem_usage_absolute_average_high_over_time_period  
Value :  
  
Name   : max_mem_usage_absolute_average_high_over_time_period_without_overhead  
Value :  
  
Name   : max_mem_usage_absolute_average_low_over_time_period  
Value :  
  
Name   : max_mem_usage_absolute_average_low_over_time_period_without_overhead  
Value :  
  
Name   : region_description  
Value : Region 0  
  
Name   : region_number  
Value : 0  
  
Name   : snapshot_size  
Value : 0  
  
Name   : total_managed_registered_vms  
Value : 0  
  
Name   : total_managed_unregistered_vms  
Value : 0  
  
Name   : total_unmanaged_vms  
Value : 0  
  
Name   : v_debris_percent_of_used  
Value : 0.0  
  
Name   : v_disk_percent_of_used  
Value : 0.0  
  
Name   : v_free_space_percent_of_total  
Value : 0.0  
  
Name   : v_memory_percent_of_used  
Value : 0.0  
  
Name   : v_provisioned_percent_of_total  
Value : 0.0  
  
Name   : v_snapshot_percent_of_used  
Value : 0.0
```

```
Name  : v_total_debris_size
Value : 0

Name  : v_total_hosts
Value : 1

Name  : v_total_memory_size
Value : 0

Name  : v_total_provisioned
Value : 0

Name  : v_total_snapshot_size
Value : 0

Name  : v_total_vm_misc_size
Value : 0

Name  : v_total_vms
Value : 0

Name  : v_used_space
Value : 0

Name  : v_used_space_percent_of_total
Value : 0.0

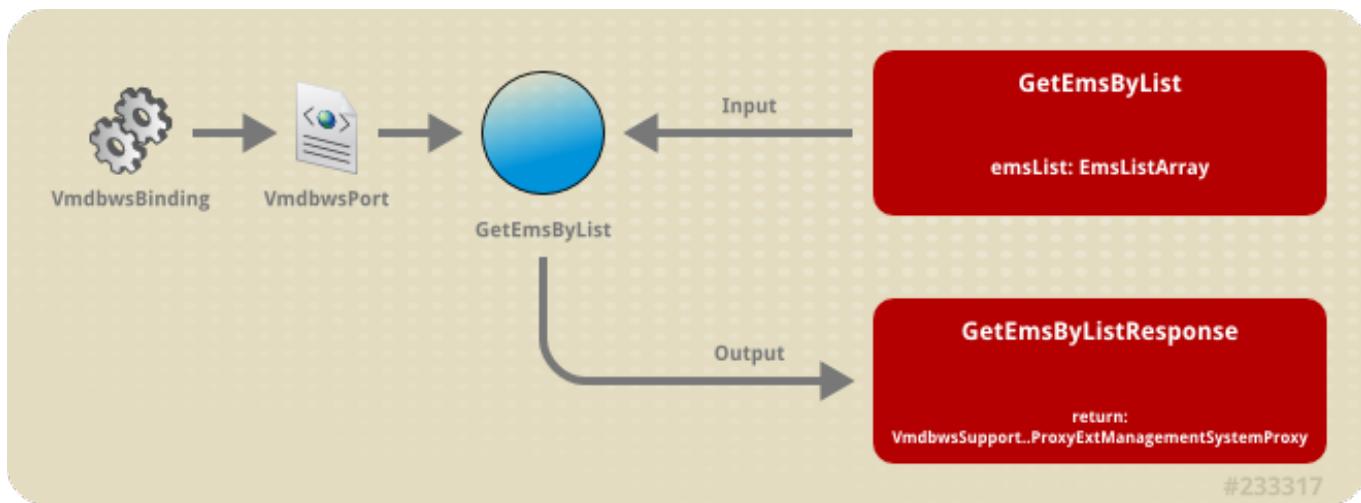
Name  : v_vm_misc_percent_of_used
Value : 0.0

Name  : vm_misc_size
Value : 0

Name  : vm_ram_size
Value : 0
```

6.30. GetEmsByList

GetEmsByList returns an array of management system objects. The **emsList** input is usually the object returned from the **GetEmsList** method. The **ProxyExtManagementSystem** object contains numerous properties listed in the WSDL file contents.



Syntax

- » *Input:* [{:emsList => [EmsList]}]. The object returned by the **GetEmsList** method.
- » *Output:* **ProxyExtManagementSystem** as an array.

Examples

The following examples demonstrate **GetEmsByList** usage:

Example 6.58. GetEmsByList WSDL

```

<message name="GetEmsByList">
    <part name="emsList" type="typens:VmdbwsSupport..EmsListArray" />
</message>
<message name="GetEmsByListResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyExtManagementSystemArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyExtManagementSystem">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="emstype" type="xsd:string"/>
        <xsd:element name="port" type="xsd:string"/>
        <xsd:element name="hostname" type="xsd:string"/>
        <xsd:element name="ipaddress" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="zone_id" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="api_version" type="xsd:string"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="hosts"
            type="typens:VmdbwsSupport..HostListArray"/>
            <xsd:element name="vms"
            type="typens:VmdbwsSupport..VmListArray"/>

```

```

<xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
  </xsd:all>
</xsd:complexType>

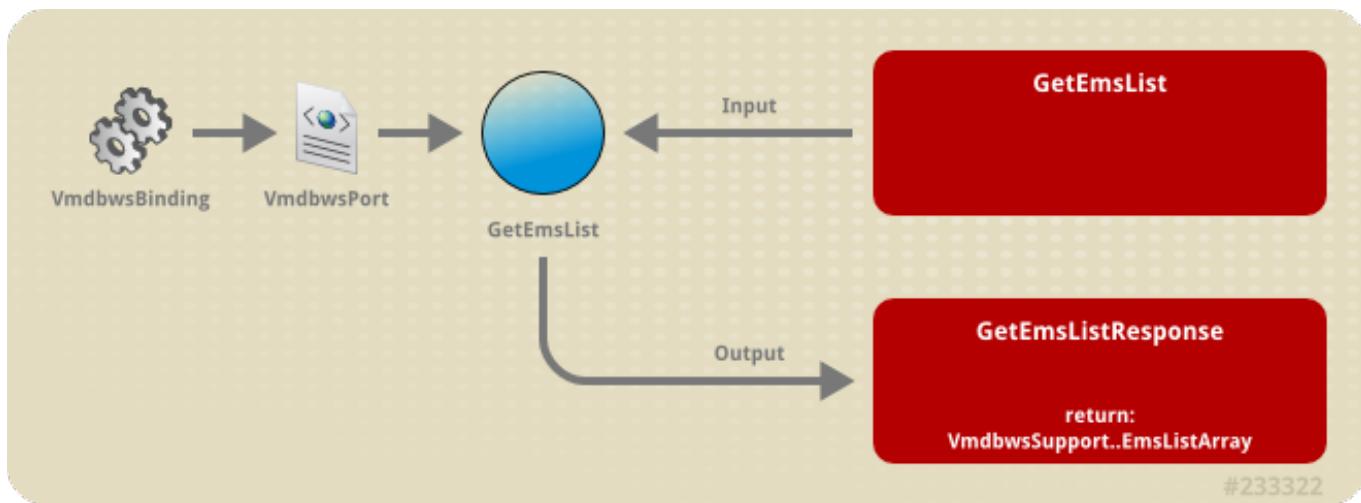
```

Example 6.59. GetEmsByList Output (Windows PowerShell)

Name	Value
aggregate_memory	48251
total_storages	3
max_cpu_usage_rate_average_high_over_time_period	8.13731902166194
max_cpu_usage_rate_average_low_over_time_period	3.2237920894491707
derived_memory_used_high_over_time_period	13172.316302780524
max_mem_usage_absolute_average_low_over_time_p...	24.998298320564096
max_cpu_usage_rate_average_low_over_time_perio...	3.073792089449171
total_vms_and_templates	12
max_mem_usage_absolute_average_avg_over_time_p...	27.504166666666677
max_mem_usage_absolute_average_high_over_time_...	28.00003501276926
aggregate_vm_memory	49152
authentication_status	Valid
region_number	0
derived_memory_used_avg_over_time_period	13090.820207175926
total_miq_templates	2
total_hosts	1
region_description	Region 0
emstype_description	Red Hat Enterprise
Virtualization Manager	
cpu_usagemhz_rate_average_high_over_time_period	1859.4985639212157
aggregate_logical_cpus	8
zone_name	default
aggregate_vm_cpus	15
max_cpu_usage_rate_average_avg_over_time_perio...	5.530555555555555
max_mem_usage_absolute_average_avg_over_time_p...	25.49416666666668
aggregate_physical_cpus	1
derived_memory_used_low_over_time_period	13009.324111571328
max_mem_usage_absolute_average_low_over_time_p...	27.008298320564094
max_cpu_usage_rate_average_avg_over_time_period	5.680555555555555
cpu_usagemhz_rate_average_low_over_time_period	1256.3802808541543
cpu_usagemhz_rate_average_avg_over_time_period	1557.939422387685
total_vms	10
max_mem_usage_absolute_average_high_over_time_...	25.990035012769262
max_cpu_usage_rate_average_high_over_time_peri...	7.987319021661939
aggregate_cpu_speed	19152

6.31. GetEmsList

GetEmsList returns all management systems as list objects.



Syntax

- » **Input:** none
- » **Output:** **EmsList** as an array. List object contains **name** and **guid** properties.

Examples

The following examples demonstrate **GetEmsList** usage:

Example 6.60. GetEmsList WSDL

```

<message name="GetEmsList">
</message>
<message name="GetEmsListResponse">
    <part name="return" type="typens:VmdbwsSupport..EmsListArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..EmsList">
    <xsd:all>
        <xsd:element name="guid" type="xsd:string" />
        <xsd:element name="name" type="xsd:string" />
    </xsd:all>
</xsd:complexType>

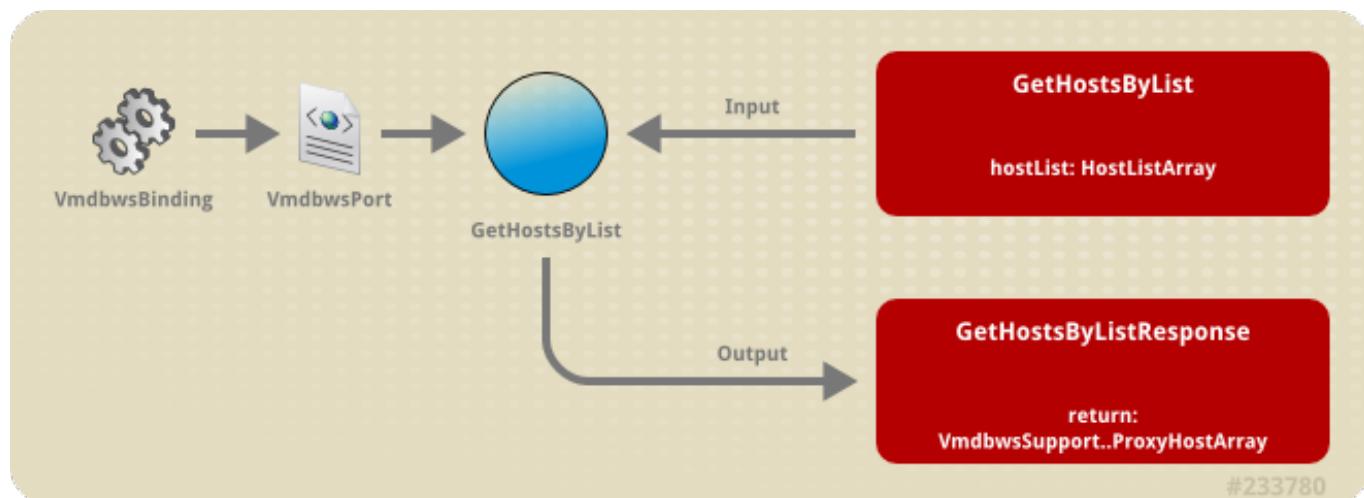
```

Example 6.61. GetEmsList Output (Windows PowerShell)

Calling GetEmsList...	
guid	name
-----	-----
86fbda29c-d32c-11df-a9a6-000c29f67b01	254.42
d87e2170-fc07-11df-905f-000c29fb2535	252.6

6.32. GetHostsByList

GetHostsByList returns an array of host objects. The **hostList** input is usually the object returned from the **GetHostList** method or from the **hosts** property of a **ProxyExtManagementSystem** object.



Syntax

- » **Input:** `[{:hostList => [HostList]}]`. The object returned by the **GetHostList** method or from the **hosts** property of a **ProxyExtManagementSystem** object.
- » **Output:** **ProxyHost** as an array.

Examples

The following examples demonstrate **GetHostsByList** usage:

Example 6.62. GetHostsByList WSDL

```

<message name="GetHostsByList">
    <part name="hostList" type="typens:VmdbwsSupport..HostListArray" />
</message>
<message name="GetHostsByListResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyHostArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyHost">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="hostname" type="xsd:string"/>
        <xsd:element name="ipaddress" type="xsd:string"/>
        <xsd:element name="vmm_vendor" type="xsd:string"/>
        <xsd:element name="vmm_version" type="xsd:string"/>
        <xsd:element name="vmm_product" type="xsd:string"/>
        <xsd:element name="vmm_buildnumber" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="user_assigned_os" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="smart" type="xsd:double"/>
    </xsd:all>
</xsd:complexType>

```

```

<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="uid_ems" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="ssh_permit_root_login" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="admin_disabled" type="xsd:boolean"/>
<xsd:element name="service_tag" type="xsd:string"/>
<xsd:element name="asset_tag" type="xsd:string"/>
<xsd:element name="ipmi_address" type="xsd:string"/>
<xsd:element name="mac_address" type="xsd:string"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="failover" type="xsd:boolean"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
    <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
        <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
            </xsd:all>
</xsd:complexType>

```

Example 6.63. GetHostsByList Output (Windows PowerShell)

Calling GetHostsbyList...	
Name	Value
---	-----
last_scan_on	2012-07-24 21:00:39 -
0700	
max_cpu_usage_rate_average_high_over_time_period	8.13731902166194
last_drift_state_timestamp	2012-07-24 21:00:39 -
0700	
v_total_vms	2
enabled_tcp_outbound_ports	
max_cpu_usage_rate_average_low_over_time_period	3.2237920894491707
derived_memory_used_high_over_time_period	13172.316302780524
platform	linux
max_mem_usage_absolute_average_low_over_time_p...	24.998298320564096
max_cpu_usage_rate_average_low_over_time_perio...	3.073792089449171
enabled_run_level_3_services	abrt-ccpp abrt-
oops abrt acp...	
max_cpu_usage_rate_average_high_over_time_peri...	7.987319021661939
ipmi_enabled	false
v_annotation	
enabled_udp_outbound_ports	
max_mem_usage_absolute_average_high_over_time_...	28.00003501276926
last_compliance_timestamp	
v_owning_datacenter	Default
region_number	0
enabled_run_level_0_services	
enabled_tcp_inbound_ports	
all_enabled_ports	
enabled_run_level_5_services	abrt-ccpp abrt-
oops abrt acp...	
service_names	abrt-ccpp abrt-

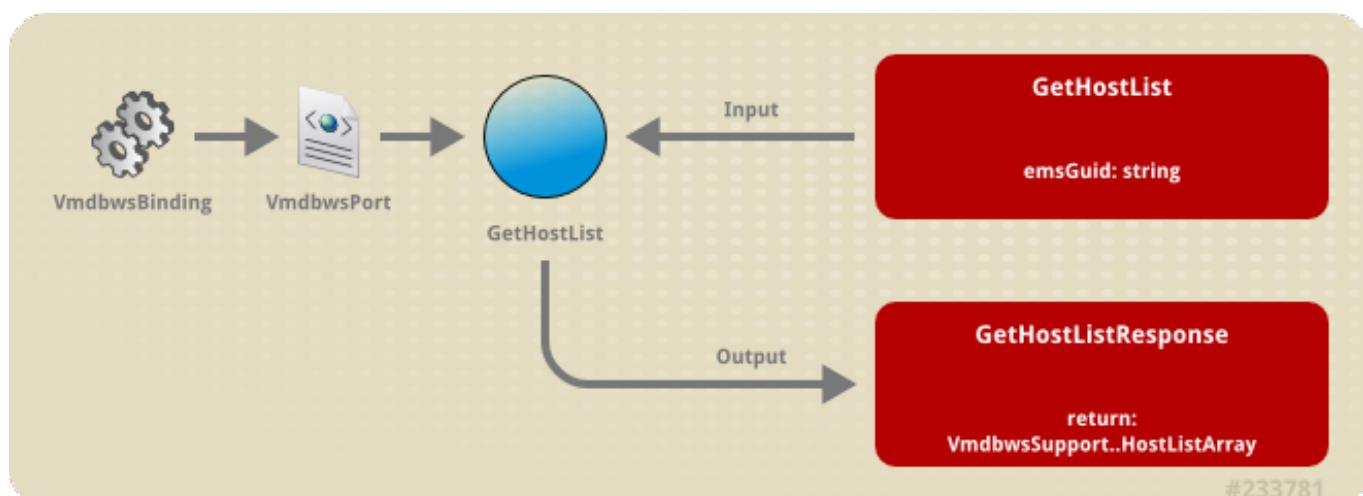
```

oops|abrt|acp...
os_image_name          linux_generic
cpu_usagemhz_rate_average_low_over_time_period 1256.3802808541543
enabled_run_level_1_services
acpid|auditd|cgconfig|crond|c...
region_description      Region 0
enabled_udp_inbound_ports 0
v_total_miq_templates
v_owning_cluster        Pod1
v_owning_folder         Datacenters
first_drift_state_timestamp 2012-07-23 13:07:45 -
0700
max_cpu_usage_rate_average_avg_over_time_perio... 5.530555555555555
enabled_inbound_ports
max_mem_usage_absolute_average_avg_over_time_p... 25.49416666666668
derived_memory_used_low_over_time_period       13009.324111571328
enabled_outbound_ports
max_mem_usage_absolute_average_low_over_time_p... 27.008298320564094
max_cpu_usage_rate_average_avg_over_time_period 5.680555555555555
v_total_storages        3
cpu_usagemhz_rate_average_avg_over_time_period 1557.939422387685
enabled_run_level_4_services
acpid|atd|auditd|autofs|cgcon...
max_mem_usage_absolute_average_avg_over_time_p... 27.504166666666677
max_mem_usage_absolute_average_high_over_time_... 25.990035012769262
derived_memory_used_avg_over_time_period       13090.820207175926
enabled_run_level_6_services
cpu_usagemhz_rate_average_high_over_time_period 1859.4985639212157
authentication_status    Valid
enabled_run_level_2_services
acpid|auditd|cgconfig|crond|c...
last_compliance_status

```

6.33. GetHostList

GetHostList returns the host list objects for the given management system GUID. Use an asterisk ("*") as the **emsGuid** to return all hosts.



Syntax

- » **Input:** [{:emsGuid => :string}]
- » **Output:** VmdbwsSupport..HostList

Examples

The following examples demonstrate **GetHostList** usage:

Example 6.64. GetHostList () WSDL

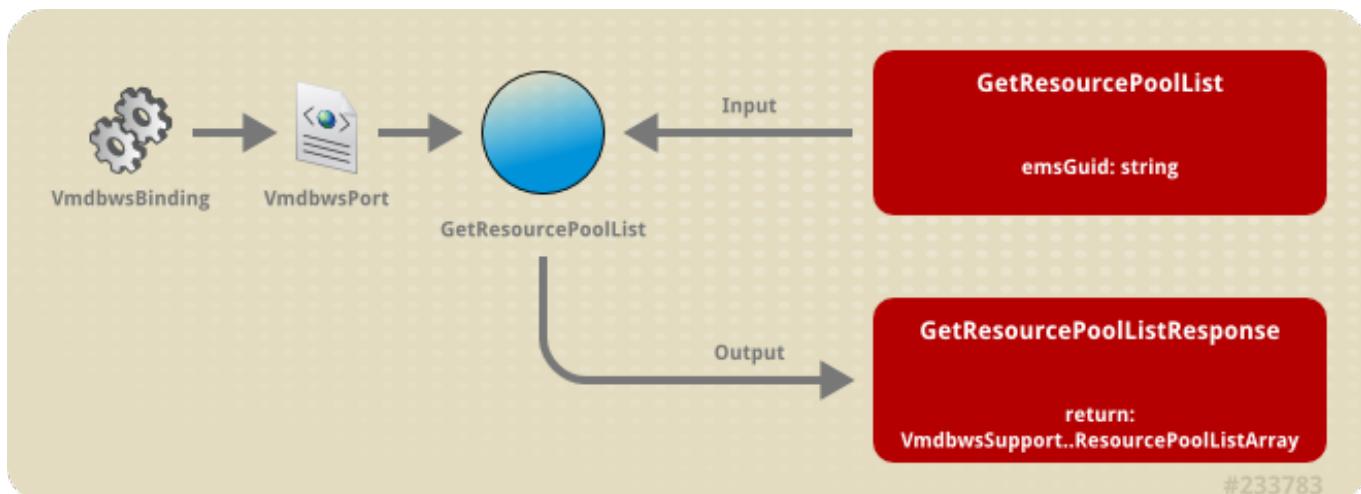
```
<message name="GetHostList">
  <part name="emsGuid" type="xsd:string" />
</message>
<message name="GetHostListResponse">
  <part name="return" type="typens:VmdbwsSupport..HostListArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..HostList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string" />
    <xsd:element name="name" type="xsd:string" />
  </xsd:all>
</xsd:complexType>
```

Example 6.65. GetHostList Output (Windows PowerShell)

Calling GetHostList...	
guid	name
-----	-----
d2b0be78-d32c-11df-954a-000c29f67b01	VI4ESX12.galaxy.local
d124eaac-d32c-11df-954a-000c29f67b01	vi4esx11.galaxy.local

6.34. GetResourcePoolList

GetResourcePoolList returns all resource pools as list objects for a specific management system.



Syntax

- » *Input:* [{:emsGuid => :string}]
- » *Output:* **ResourcePoolList** as an array. List object contains **name** and **id** properties.

Examples

The following examples demonstrate **GetResourcePoolList** usage:

Example 6.66. GetResourcePoolList WSDL

```
<message name="GetResourcePoolList">
  <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetResourcePoolListResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>

  <xsd:complexType name="VmdbwsSupport..ResourcePoolList">
    <xsd:all>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
  </xsd:complexType>
```

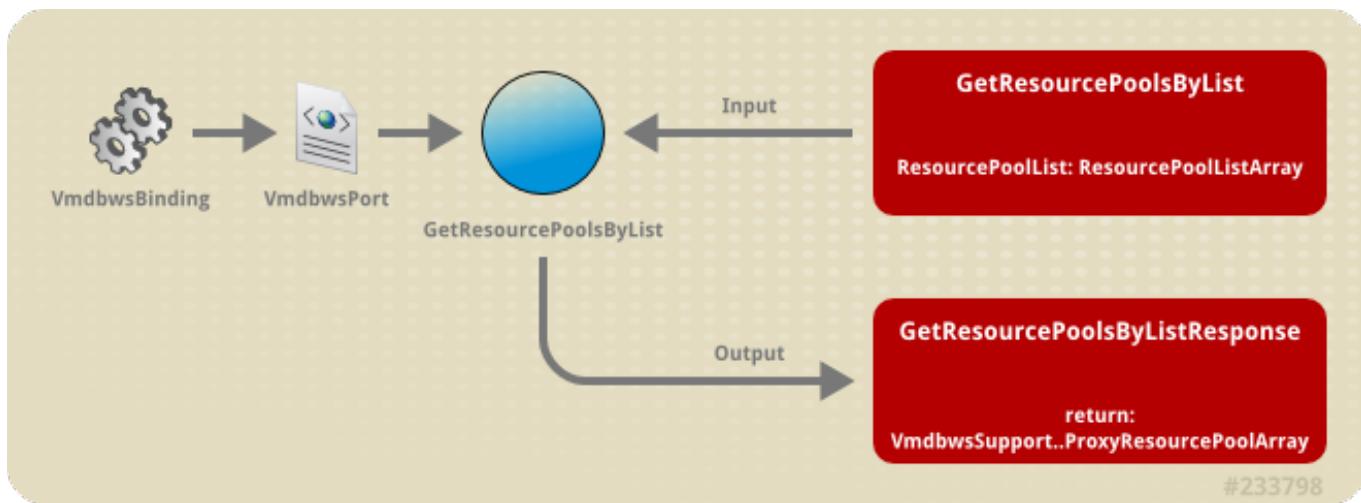
Example 6.67. GetResourcePoolList Output (Windows PowerShell)

Resource Pools:

id	name
--	---
10	Citrix
9	MiqCloud
8	Production Test
environment	
7	Testing
6	Training
5	VMware View VM's
1	Default

6.35. GetResourcePoolsByList

GetResourcePoolsByList returns an array of **ResourcePool** objects. The input is usually the object returned from the **GetResourcePoolList** method or from the **ResourcePool** property of a **ProxyExtManagementSystem** object.



Syntax

- » **Input:** [:ResourcePoolList => [ResourcePoolList]]
- » **Output:** **ProxyResourcePool** as an array.

Examples

The following examples demonstrate **GetResourcePoolsByList** usage:

Example 6.68. GetResourcePoolsByList WSDL

```

<message name="GetResourcePoolsByList">
    <part name="resourcepoolList"
        type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>
<message name="GetResourcePoolsByListResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyResourcePoolArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyResourcePool">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="memory_reserve" type="xsd:double"/>
        <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="memory_limit" type="xsd:double"/>
        <xsd:element name="memory_shares" type="xsd:double"/>
        <xsd:element name="memory_shares_level" type="xsd:string"/>
        <xsd:element name="cpu_reserve" type="xsd:double"/>
        <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="cpu_limit" type="xsd:double"/>
        <xsd:element name="cpu_shares" type="xsd:double"/>
        <xsd:element name="cpu_shares_level" type="xsd:string"/>
        <xsd:element name="is_default" type="xsd:boolean"/>
    </xsd:all>
</xsd:complexType>
  
```

```

<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="vapp" type="xsd:boolean"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="vms"
  type="typens:VmDbwsSupport..VmListArray"/>
    <xsd:element name="ext_management_system"
  type="typens:VmDbwsSupport..EmsList"/>
      <xsd:element name="ws_attributes"
  type="typens:VmDbwsSupport..WSAttributesArray"/>
        <xsd:element name="parent_cluster"
  type="typens:VmDbwsSupport..ClusterList"/>
      </xsd:all>
  </xsd:complexType>

```

Example 6.69. GetResourcePoolsByList Output (Windows PowerShell)

Returned Attributes for this Resource Pool:

```

Name   : aggregate_cpu_speed
Value  : 51048

Name   : aggregate_logical_cpus
Value  : 24

Name   : aggregate_memory
Value  : 172002

Name   : aggregate_physical_cpus
Value  : 6

Name   : aggregate_vm_cpus
Value  : 215

Name   : aggregate_vm_memory
Value  : 470800

Name   : region_description
Value  : Region 0

Name   : region_number
Value  : 0

Name   : v_direct_miq_templates
Value  : 0

Name   : v_direct_vms
Value  : 9

Name   : v_parent_cluster
Value  : Testing-Production Cluster

Name   : v_parent_datacenter
Value  : Prod

```

```

Name   : v_parent_folder
Value  : Datacenters

Name   : v_parent_host
Value  :

Name   : v_parent_resource_pool
Value  :

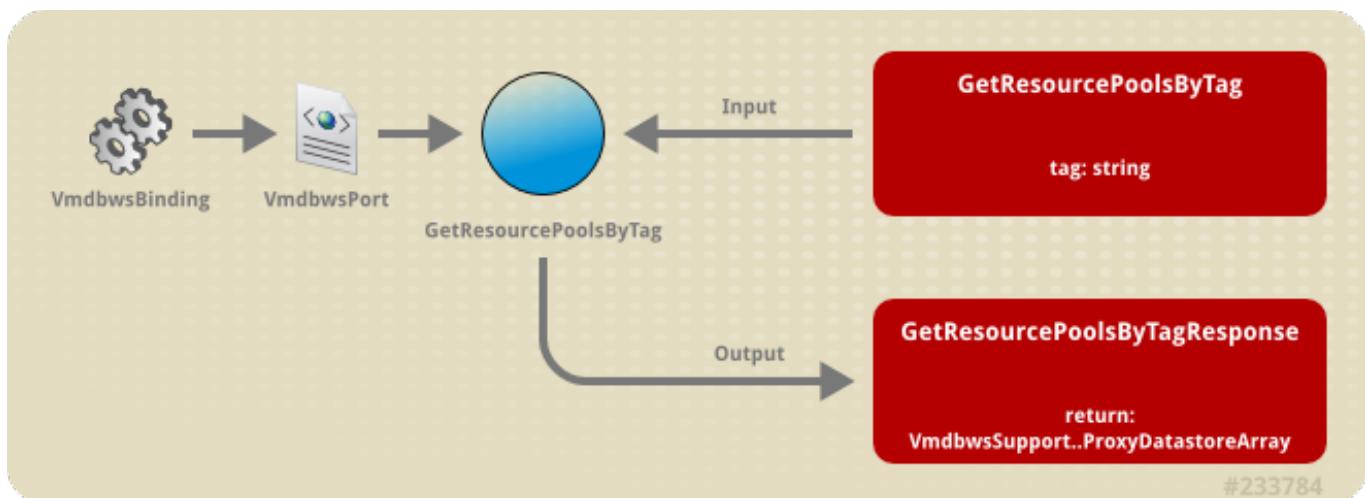
Name   : v_total_miq_templates
Value  : 0

Name   : v_total_vms
Value  : 128

```

6.36. GetResourcePoolsByTag

GetResourcePoolsByTag returns an array of **ResourcePool** objects. The input is a tag string.



Syntax

- » *Input:* [{:tag => :string}]
- » *Output:* **ProxyResourcePool** as an array.

Examples

The following examples demonstrate **GetResourcePoolsByTag** usage:

Example 6.70. GetResourcePoolsByTag WSDL

```

<message name="GetResourcePoolsByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetResourcePoolsByTagResponse">
  <part name="return"
  type="typens:VmdbwsSupport..ProxyResourcePoolArray"/>
</message>

```

```

<xsd:complexType name="VmdbwsSupport..ProxyResourcePool">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="ems_id" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="memory_reserve" type="xsd:double"/>
    <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
    <xsd:element name="memory_limit" type="xsd:double"/>
    <xsd:element name="memory_shares" type="xsd:double"/>
    <xsd:element name="memory_shares_level" type="xsd:string"/>
    <xsd:element name="cpu_reserve" type="xsd:double"/>
    <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
    <xsd:element name="cpu_limit" type="xsd:double"/>
    <xsd:element name="cpu_shares" type="xsd:double"/>
    <xsd:element name="cpu_shares_level" type="xsd:string"/>
    <xsd:element name="is_default" type="xsd:boolean"/>
    <xsd:element name="ems_ref_obj" type="xsd:string"/>
    <xsd:element name="vapp" type="xsd:boolean"/>
    <xsd:element name="ems_ref" type="xsd:string"/>
    <xsd:element name="vms"
      type="typens:VmListArray"/>
      <xsd:element name="ext_management_system"
      type="typens:VmdbwsSupport..EmsList"/>
        <xsd:element name="ws_attributes"
      type="typens:VmdbwsSupport..WSAttributesArray"/>
        <xsd:element name="parent_cluster"
      type="typens:VmdbwsSupport..ClusterList"/>
    </xsd:all>
  </xsd:complexType>

```

Example 6.71. GetResourcePoolsByTag Output (Windows PowerShell)

Returned Attributes for this Resource Pool:

```
Name : aggregate_cpu_speed
Value : 51048
```

```
Name : aggregate_logical_cpus
Value : 24
```

```
Name : aggregate_memory
Value : 172002
```

```
Name : aggregate_physical_cpus
Value : 6
```

```
Name : aggregate_vm_cpus
Value : 215
```

```
Name : aggregate_vm_memory
```

```

Value : 470800

Name  : region_description
Value : Region 0

Name  : region_number
Value : 0

Name  : v_direct_miq_templates
Value : 0

Name  : v_direct_vms
Value : 9

Name  : v_parent_cluster
Value : Testing-Production Cluster

Name  : v_parent_datacenter
Value : Prod

Name  : v_parent_folder
Value : Datacenters

Name  : v_parent_host
Value :

Name  : v_parent_resource_pool
Value :

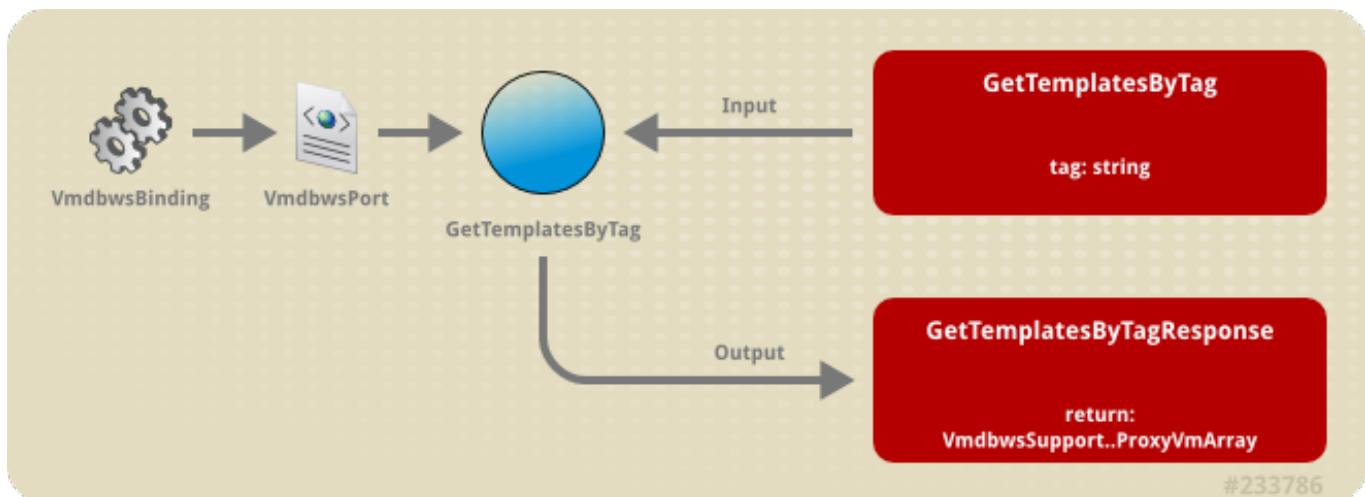
Name  : v_total_miq_templates
Value : 0

Name  : v_total_vms
Value : 128

```

6.37. GetTemplatesByTag

GetTemplatesByTag returns an array of virtual machine objects based on tag assignment. The input is a tag string.



Syntax

- » **Input:** [{:tag => :string}]
- » **Output:** **ProxyVm** as an array

Examples

The following examples demonstrate **GetTemplatesByTag** usage:

Example 6.72. GetTemplatesByTag WSDL

```

<message name="GetTemplatesByTag">
    <part name="tag" type="xsd:string"/>
</message>
<message name="GetTemplatesByTagResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>

<xsd:complexType name="VmdbwsSupport..ProxyVm">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="format" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="location" type="xsd:string"/>
        <xsd:element name="config_xml" type="xsd:string"/>
        <xsd:element name="autostart" type="xsd:string"/>
        <xsd:element name="host_id" type="xsd:string"/>
        <xsd:element name="last_sync_on" type="xsd:dateTime"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="storage_id" type="xsd:string"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="last_scan_on" type="xsd:dateTime"/>
        <xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="retires_on" type="xsd:date"/>
        <xsd:element name="retired" type="xsd:boolean"/>
        <xsd:element name="boot_time" type="xsd:dateTime"/>
        <xsd:element name="tools_status" type="xsd:string"/>
        <xsd:element name="standby_action" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="state_changed_on" type="xsd:dateTime"/>
        <xsd:element name="previous_state" type="xsd:string"/>
        <xsd:element name="connection_state" type="xsd:string"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="blackbox_exists" type="xsd:boolean"/>
        <xsd:element name="blackbox_validated" type="xsd:boolean"/>
        <xsd:element name="registered" type="xsd:boolean"/>
        <xsd:element name="busy" type="xsd:boolean"/>
        <xsd:element name="smart" type="xsd:boolean"/>
    </xsd:all>
</xsd:complexType>

```

```

<xsd:element name="memory_reserve" type="xsd:double"/>
<xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
<xsd:element name="memory_limit" type="xsd:double"/>
<xsd:element name="memory_shares" type="xsd:double"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:double"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ems_cluster_id" type="xsd:string"/>
<xsd:element name="retirement_warn" type="xsd:double"/>
<xsd:element name="retirement_last_warn" type="xsd:dateTime"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
<xsd:element name="host"
type="typens:VmdbwsSupport..HostList"/>
<xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
<xsd:element name="parent_cluster"
type="typens:VmdbwsSupport..ClusterList"/>
<xsd:element name="datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
<xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
<xsd:element name="hardware"
type="typens:VmdbwsSupport..ProxyHardware"/>
<xsd:element name="parent_resource_pool"
type="typens:VmdbwsSupport..ResourcePoolList"/>
</xsd:all>
</xsd:complexType>
```

Example 6.73. GetTemplatesbyTag Output (Windows PowerShell)

Name	Value
---	-----
disk_4_disk_type	
conservative_vcpus_recommended_change	-1
recommended_vcpus	1
max_cpu_usage_rate_average_high_over_time_period	
44.02290026709669	
parent_blue_folder_3_name	

aggressive_mem_recommended_change_pct	68.9
disk_6_disk_type	
conservative_recommended_vcpus	3
disk_4_size_on_disk	
disks_aligned	False
paravirtualization	
mem_cpu	6144
v_owning_cluster	Pod1
vmsafe_agent_address	
moderate_mem_recommended_change_pct	44.8
disk_1_size_on_disk	
num_hard_disks	5
disk_5_partitions_aligned	False
aggressive_vcpus_recommended_change_pct	50.0
evm_owner_email	
moderate_recommended_mem	3392
disk_7_mode	
evm_owner_name	
vdi_user_home_path	
v_total_snapshots	1
last_compliance_status	
vmsafe_immutable_vm	
vdi_connection_session_type	
cpu_usagemhz_rate_average_avg_over_time_period	
651.6342140812435	
orphaned	false
disk_size	0
disk_7_partitions_aligned	
used_storage_by_state	
6442450944	
vdi_user_name	
disk_3_size	
max_cpu_usage_rate_average_low_over_time_period_without_ov...	
5.529877510681107	
owned_by_current_user	false
disk_8_size	
vdi_endpoint_mac_address	
recommended_mem	1912
aggressive_vcpus_recommended_change	1
region_description	Region 0
disk_5_size_on_disk	
evm_owner_userid	
vdi_user_appdata	
disk_9_size_on_disk	
v_snapshot_newest_total_size	
max_cpu_usage_rate_average_max_over_time_period	100.0
moderate_vcpus_recommended_change_pct	50.0
v_snapshot_newest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
moderate_mem_recommended_change	2752
disk_6_size	
allocated_disk_storage	0
last_drift_state_timestamp	2012-07-
24 20:12:32 -0700	
region_number	0
disk_1_mode	

disk_7_disk_type		
disk_5_used_percent_of_provisioned	0.0	
aggressive_recommended_mem	1912	
disk_8_mode		
v_pct_free_disk_space		
disk_6_partitions_aligned		
aggressive_mem_recommended_change	4232	
disk_9_size		
disk_7_size_on_disk		
max_cpu_usage_rate_average_avg_over_time_period		
24.77638888888896		
disk_9_disk_type		
disk_1_partitions_aligned	True	
num_cpu	2	
disk_7_used_percent_of_provisioned		
derived_memory_used_max_over_time_period		
3234.0337777778		
vmsafe_fail_open		
disk_3_disk_type		
moderate_vcpus_recommended_change	1	
owned_by_current_ldap_group	false	
derived_memory_used_low_over_time_period		
232.8316855769765		
disk_2_disk_type		
disk_2_partitions_aligned	True	
vdi_connection_dns_name		
disk_5_size		
disk_8_used_percent_of_provisioned		
max_mem_usage_absolute_average_high_over_time_period_witho...		
55.178755912966935		
disk_4_size		
v_host_vmm_product	RHEV-H	
parent_blue_folder_7_name		
disk_9_used_percent_of_provisioned		
disk_1_used_percent_of_provisioned	0.0	
vdi_connection_session_name		
conservative_mem_recommended_change_pct	4.9	
v_owning_folder		
Datacenters		
disk_8_disk_type		
thin_provisioned	false	
overallocated_vcpus_pct	50.0	
uncommitted_storage	0	
disk_8_size_on_disk		
debris_size	0	
num_disks	5	
conservative_vcpus_recommended_change_pct	-50.0	
vm_misc_size	0	
max_mem_usage_absolute_average_avg_over_time_period_withou...		
31.08472222222226		
max_mem_usage_absolute_average_avg_over_time_period		
31.08472222222226		
vdi_user_dns_domain		
v_datastore_path		
MTCRHDS001/17830c59-6ae4-420f-af5c-f6898c6c5b27.ovf		
vdi_endpoint_type		

vdi_user_home_share	
os_image_name	
linux_centos	
moderate_recommended_vcpus	1
parent_blue_folder_1_name	Default
has_rdm_disk	false
vdi_available	false
disk_6_used_percent_of_provisioned	
used_disk_storage	0
vdi_connection_logon_server	
ipaddresses	
10.10.1.211	
parent_blue_folder_4_name	
derived_memory_used_high_over_time_period	
2522.6954255341334	
conservative_recommended_mem	5840
disk_9_mode	
storage_name	
MTCRHDS001	
v_owning_folder_path	
Datacenters	
is_evm_appliance	false
max_cpu_usage_rate_average_high_over_time_period_without_o...	
44.02290026709669	
vdi_connection_name	
v_snapshot_newest_name	Active
Image	
ems_cluster_name	Pod1
v_snapshot_newest_timestamp	2012-06-
19 14:04:47 -0700	
disk_2_size_on_disk	
max_mem_usage_absolute_average_max_over_time_period	95.0
vmsafe_timeout_ms	
disk_2_mode	
v_snapshot_oldest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
first_drift_state_timestamp	2012-07-
24 20:12:32 -0700	
vm_ram_size	0
max_mem_usage_absolute_average_high_over_time_period	
55.178755912966935	
vdi_endpoint_name	
vmsafe_enable	
parent_blue_folder_2_name	
parent_blue_folder_5_name	
disk_3_mode	
disk_1_disk_type	
disconnected	false
vdi_user_logon_time	
v_pct_used_disk_space	
disk_4_mode	
v_owning_datacenter	Default
disk_1_size	
disk_9_partitions_aligned	
hostnames	
disk_4_partitions_aligned	True

```

disk_6_size_on_disk
cpu_usagemhz_rate_average_low_over_time_period
366.26730508150735
max_mem_usage_absolute_average_low_over_time_period_withou...
6.99068853147752
disk_8_partitions_aligned
parent_blue_folder_6_name
snapshot_size
disk_5_disk_type
disk_2_used_percent_of_provisioned
parent_blue_folder_9_name
platform
provisioned_storage
6442450944
disk_3_used_percent_of_provisioned
vdi_connection_remote_ip_address
disk_3_size_on_disk
max_cpu_usage_rate_average_avg_over_time_period_without_ov...
24.77638888888896
cpu_usagemhz_rate_average_high_over_time_period
937.0011230809796
derived_memory_used_avg_over_time_period
1377.7635555555548
last_compliance_timestamp
disk_6_mode
vdi_user_domain
v_snapshot_oldest_name
Image
has_active_vdi_session
host_name
mtcrhel62001.miq.net
v_owning_blue_folder_path
Datacenters/Default/vm
conservative_mem_recommended_change
v_owning_resource_pool
for Cluster Pod1
v_snapshot_oldest_timestamp
2012-06-
19 14:04:47 -0700
disk_7_size
owning_ldap_group
v_annotation
Production V5 EVM appliance (iSCSI scanning)
cpu_usagemhz_rate_average_max_over_time_period
1053.93493333333
max_cpu_usage_rate_average_low_over_time_period
5.529877510681107
v_is_a_template
max_mem_usage_absolute_average_low_over_time_period
6.99068853147752
disk_5_mode
vdi_connection_url
parent_blue_folder_8_name
aggressive_recommended_vcpus
v_snapshot_oldest_total_size
disk_4_used_percent_of_provisioned
archived

```

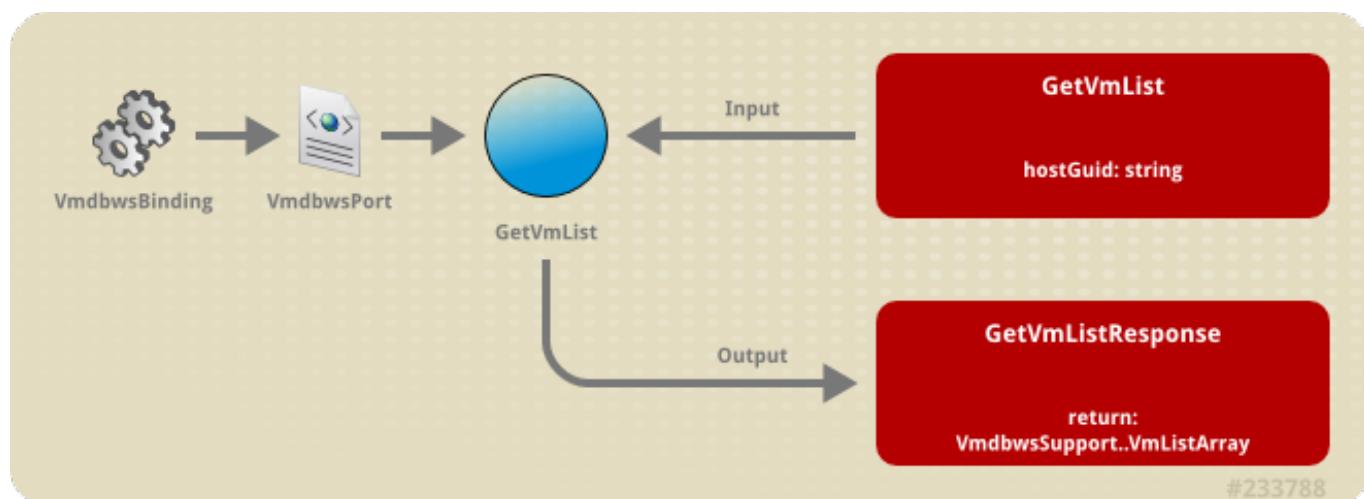
```

vdi_user_home_drive
disk_2_size
mac_addresses
00:1a:4a:0a:01:00
vmsafe_agent_port
v_owning_blue_folder
vdi_endpoint_ip_address
disk_3_partitions_aligned
used_storage
6442450944
overallocated_mem_pct
68 . 9
Connecting to EVM integrate web-services at
https://192.168.253.42/vmdbws/wsdl
Successfully connected to EVM integrate web-services
1. VM: TinyVM - GUID: 2e1b5a54-4480-11e2-a836-005056910000
2. VM: rhel63server - GUID: 95d1550a-449d-11e2-9ae3-005056910000
done

```

6.38. GetVmList

GetVmList returns the virtual machine list object for the given host GUID. Use an asterisk ("*") as the **hostGuid** to return all virtual machines.



Syntax

- » *Input:* [{:hostGuid => :string}]
- » *Output:* **VmdbwsSupport..VmList**

Examples

The following examples demonstrate **GetVmList** usage:

Example 6.74. GetVmList WSDL

```

<message name="GetVmList">
    <part name="hostGuid" type="xsd:string" />
</message>

```

```

<message name="GetVmListResponse">
  <part name="return" type="typens:VmdbwsSupport..VmListArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..VmList">-
  <xsd:all>
    <xsd:element name="guid" type="xsd:string" />
    <xsd:element name="name" type="xsd:string" />
  </xsd:all>
</xsd:complexType>

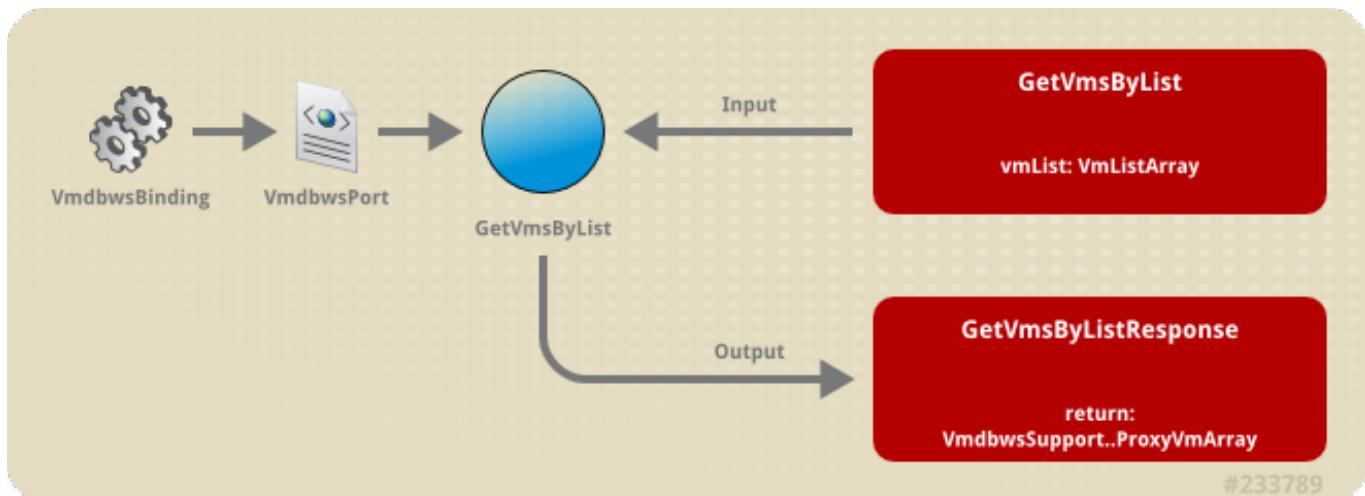
```

Example 6.75. GetVmList Output (Windows PowerShell)

Calling GetVmList...	
guid	name
---	---
cfe05fb2-016e-11e0-8bd5-000c29fb2535	Ubuntu Desktop 10.04 RC
d2fdc6a8-016e-11e0-8bd5-000c29fb2535	Windows Server 2003
Enterprise x64	
f693ba30-fc07-11df-ab2c-000c29fb2535	Win2008TemplateX64

6.39. GetVmsByList

GetVmsByList returns an array of virtual machine objects. The **vmList** input is usually the object returned from the **GetVmList** method or from the **VMS** property of either a **ProxyExtManagementSystem** or **ProxyHost** object. The **ProxyVm** object contains numerous properties listed in the WSDL file contents.



Syntax

- » *Input:* `[{:vmList => [VmList]}]`. The **vmList** input is usually the object returned by the **GetVmList** method or from the **vms** property of either a **ProxyExtManagementSystem** or **ProxyHost** object.
- » *Output:* **ProxyVm** as an array

Examples

The following examples demonstrate **GetVmsByList** usage:

Example 6.76. GetVmsByList WSDL

```

<message name="GetVmsByList">
    <part name="vmList" type="typens:VmDbwsSupport..VmListArray" />
</message>
<message name="GetVmsByListResponse">
    <part name="return" type="typens:VmDbwsSupport..ProxyVmArray" />
</message>
...
<xsd:complexType name="VmDbwsSupport..ProxyVm">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="format" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="location" type="xsd:string"/>
        <xsd:element name="config_xml" type="xsd:string"/>
        <xsd:element name="autostart" type="xsd:string"/>
        <xsd:element name="host_id" type="xsd:string"/>
        <xsd:element name="last_sync_on" type="xsd:dateTime"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="storage_id" type="xsd:string"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="last_scan_on" type="xsd:dateTime"/>
        <xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="retires_on" type="xsd:date"/>
        <xsd:element name="retired" type="xsd:boolean"/>
        <xsd:element name="boot_time" type="xsd:dateTime"/>
        <xsd:element name="tools_status" type="xsd:string"/>
        <xsd:element name="standby_action" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="state_changed_on" type="xsd:dateTime"/>
        <xsd:element name="previous_state" type="xsd:string"/>
        <xsd:element name="connection_state" type="xsd:string"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="blackbox_exists" type="xsd:boolean"/>
        <xsd:element name="blackbox_validated" type="xsd:boolean"/>
        <xsd:element name="registered" type="xsd:boolean"/>
        <xsd:element name="busy" type="xsd:boolean"/>
        <xsd:element name="smart" type="xsd:boolean"/>
        <xsd:element name="memory_reserve" type="xsd:double"/>
        <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="memory_limit" type="xsd:double"/>
        <xsd:element name="memory_shares" type="xsd:double"/>
        <xsd:element name="memory_shares_level" type="xsd:string"/>
        <xsd:element name="cpu_reserve" type="xsd:double"/>
        <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
    </xsd:all>
</xsd:complexType>

```

```

<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
<xsd:element name="host"
type="typens:VmdbwsSupport..HostList"/>
<xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
<xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
</xsd:all>
</xsd:complexType>
```

Example 6.77. GetVmsByList Output (Windows PowerShell)

Calling GetVmsByList...		
Name		Value
---		-----
disk_4_disk_type		
conservative_vcpus_recommended_change		-1
recommended_vcpus		1
max_cpu_usage_rate_average_high_over_time_period		
44.02290026709669		
parent_blue_folder_3_name		
aggressive_mem_recommended_change_pct		68.9
disk_6_disk_type		
conservative_recommended_vcpus		3
disk_4_size_on_disk		
disks_aligned		False
paravirtualization		
mem_cpu		6144
v_owning_cluster		Pod1
vmsafe_agent_address		
moderate_mem_recommended_change_pct		44.8
disk_1_size_on_disk		
num_hard_disks		5
disk_5_partitions_aligned		False
aggressive_vcpus_recommended_change_pct		50.0
evm_owner_email		
moderate_recommended_mem		3392
disk_7_mode		

evm_owner_name	
vdi_user_home_path	
v_total_snapshots	1
last_compliance_status	
vmsafe_immutable_vm	
vdi_connection_session_type	
cpu_usagemhz_rate_average_avg_over_time_period	
651.6342140812435	
orphaned	false
disk_size	0
disk_7_partitions_aligned	
used_storage_by_state	
6442450944	
vdi_user_name	
disk_3_size	
max_cpu_usage_rate_average_low_over_time_period_without_ov...	
5.529877510681107	
owned_by_current_user	false
disk_8_size	
vdi_endpoint_mac_address	
recommended_mem	1912
aggressive_vcpus_recommended_change	1
region_description	Region 0
disk_5_size_on_disk	
evm_owner_userid	
vdi_user_appdata	
disk_9_size_on_disk	
v_snapshot_newest_total_size	
max_cpu_usage_rate_average_max_over_time_period	100.0
moderate_vcpus_recommended_change_pct	50.0
v_snapshot_newest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	
moderate_mem_recommended_change	2752
disk_6_size	
allocated_disk_storage	0
last_drift_state_timestamp	2012-07-
24 20:12:32 -0700	
region_number	0
disk_1_mode	
disk_7_disk_type	
disk_5_used_percent_of_provisioned	0.0
aggressive_recommended_mem	1912
disk_8_mode	
v_pct_free_disk_space	
disk_6_partitions_aligned	
aggressive_mem_recommended_change	4232
disk_9_size	
disk_7_size_on_disk	
max_cpu_usage_rate_average_avg_over_time_period	
24.77638888888896	
disk_9_disk_type	
disk_1_partitions_aligned	True
num_cpu	2
disk_7_used_percent_of_provisioned	
derived_memory_used_max_over_time_period	
3234.0337777778	

vmsafe_fail_open	
disk_3_disk_type	
moderate_vcpus_recommended_change	1
owned_by_current_ldap_group	false
derived_memory_used_low_over_time_period	
232.8316855769765	
disk_2_disk_type	
disk_2_partitions_aligned	True
vdi_connection_dns_name	
disk_5_size	
disk_8_used_percent_of_provisioned	
max_mem_usage_absolute_average_high_over_time_period_witho...	
55.178755912966935	
disk_4_size	
v_host_vmm_product	RHEV-H
parent_blue_folder_7_name	
disk_9_used_percent_of_provisioned	
disk_1_used_percent_of_provisioned	0.0
vdi_connection_session_name	
conservative_mem_recommended_change_pct	4.9
v_owning_folder	
Datacenters	
disk_8_disk_type	
thin_provisioned	false
overallocated_vcpus_pct	50.0
uncommitted_storage	0
disk_8_size_on_disk	
debris_size	0
num_disks	5
conservative_vcpus_recommended_change_pct	-50.0
vm_misc_size	0
max_mem_usage_absolute_average_avg_over_time_period_withou...	
31.08472222222226	
max_mem_usage_absolute_average_avg_over_time_period	
31.0847222222226	
vdi_user_dns_domain	
v_datastore_path	
MTCRHDS001/17830c59-6ae4-420f-af5c-f6898c6c5b27.ovf	
vdi_endpoint_type	
vdi_user_home_share	
os_image_name	
linux_centos	
moderate_recommended_vcpus	1
parent_blue_folder_1_name	Default
has_rdm_disk	false
vdi_available	false
disk_6_used_percent_of_provisioned	
used_disk_storage	0
vdi_connection_logon_server	
ipaddresses	
10.10.1.211	
parent_blue_folder_4_name	
derived_memory_used_high_over_time_period	
2522.6954255341334	
conservative_recommended_mem	5840
disk_9_mode	

```

storage_name
MTCRHDS001
v_owning_folder_path
Datacenters
is_evm_appliance                               false
max_cpu_usage_rate_average_high_over_time_period_without_o...
44.02290026709669
vdi_connection_name
v_snapshot_newest_name                         Active
Image
ems_cluster_name                                Pod1
v_snapshot_newest_timestamp                     2012-06-
19 14:04:47 -0700
disk_2_size_on_disk
max_mem_usage_absolute_average_max_over_time_period      95.0
vmsafe_timeout_ms
disk_2_mode
v_snapshot_oldest_description
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012
first_drift_state_timestamp                    2012-07-
24 20:12:32 -0700
vm_ram_size                                     0
max_mem_usage_absolute_average_high_over_time_period
55.178755912966935
vdi_endpoint_name
vmsafe_enable
parent_blue_folder_2_name
parent_blue_folder_5_name
disk_3_mode
disk_1_disk_type
disconnected                                    false
vdi_user_logon_time
v_pct_used_disk_space
disk_4_mode
v_owning_datacenter                            Default
disk_1_size
disk_9_partitions_aligned
hostnames
disk_4_partitions_aligned                      True
disk_6_size_on_disk
cpu_usagemhz_rate_average_low_over_time_period
366.26730508150735
max_mem_usage_absolute_average_low_over_time_period_withou...
6.99068853147752
disk_8_partitions_aligned
parent_blue_folder_6_name
snapshot_size                                    0
disk_5_disk_type
disk_2_used_percent_of_provisioned            0.0
parent_blue_folder_9_name
platform                                         linux
provisioned_storage
6442450944
disk_3_used_percent_of_provisioned            0.0
vdi_connection_remote_ip_address
disk_3_size_on_disk

```

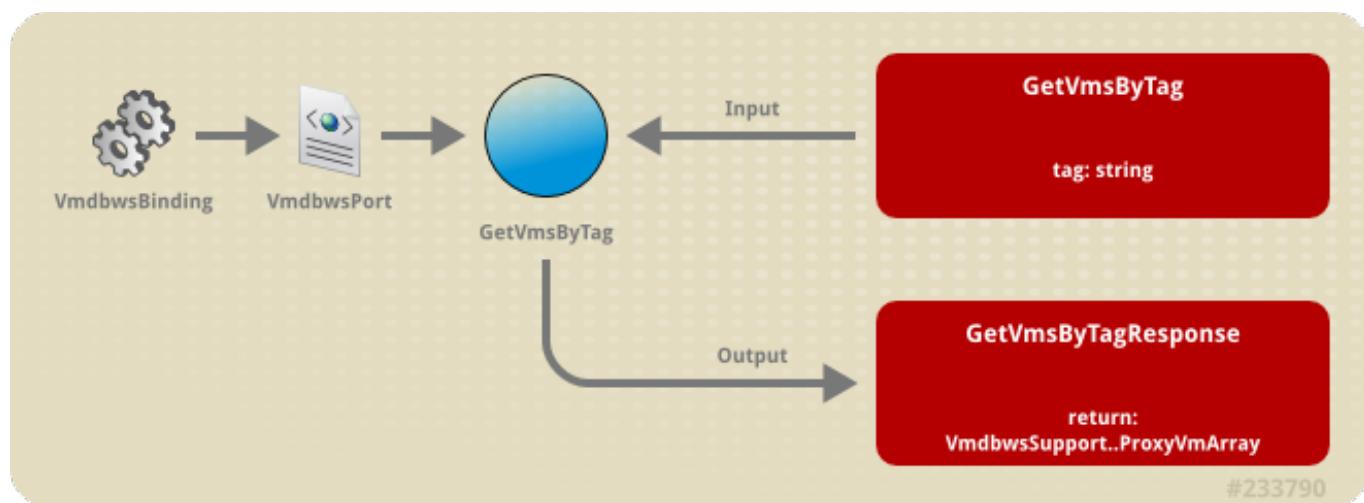
```

max_cpu_usage_rate_average_avg_over_time_period_without_ov...
24.77638888888896
cpu_usagemhz_rate_average_high_over_time_period
937.0011230809796
derived_memory_used_avg_over_time_period
1377.7635555555548
last_compliance_timestamp
disk_6_mode
vdi_user_domain
v_snapshot_oldest_name
Image
has_active_vdi_session
host_name
mtcrhel62001.miq.net
v_owning_blue_folder_path
Datacenters/Default/vm
conservative_mem_recommended_change
304
v_owning_resource_pool
Default
for Cluster Pod1
v_snapshot_oldest_timestamp
2012-06-
19 14:04:47 -0700
disk_7_size
owning_ldap_group
v_annotation
Production V5 EVM appliance (iSCSI scanning)
cpu_usagemhz_rate_average_max_over_time_period
1053.93493333333
max_cpu_usage_rate_average_low_over_time_period
5.529877510681107
v_is_a_template
False
max_mem_usage_absolute_average_low_over_time_period
6.99068853147752
disk_5_mode
vdi_connection_url
parent_blue_folder_8_name
aggressive_recommended_vcpus
1
v_snapshot_oldest_total_size
disk_4_used_percent_of_provisioned
0.0
archived
false
vdi_user_home_drive
disk_2_size
mac_addresses
00:1a:4a:0a:01:00
vmsafe_agent_port
v_owning_blue_folder
vdi_endpoint_ip_address
vm
disk_3_partitions_aligned
True
used_storage
6442450944
overalllocated_mem_pct
68.9

```

6.40. GetVmsByTag

GetVmsByTag returns an array of virtual machine objects based on tag assignment. The input is a tag string.



Syntax

- Input: `[{:tag => :string}]`

- Output: **ProxyVm** as an array

Examples

The following examples demonstrate **GetVmsByTag** usage:

Example 6.78. GetVmsByTag WSDL

```

<message name="GetVmsByTag">
    <part name="tag" type="xsd:string"/>
</message>
<message name="GetVmsByTagResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyVm">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="format" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="location" type="xsd:string"/>
        <xsd:element name="config_xml" type="xsd:string"/>
        <xsd:element name="autostart" type="xsd:string"/>
        <xsd:element name="host_id" type="xsd:string"/>
        <xsd:element name="last_sync_on" type="xsd:dateTime"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="storage_id" type="xsd:string"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

```

<xsd:element name="last_scan_on" type="xsd:dateTime"/>
<xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
<xsd:element name="uid_ems" type="xsd:string"/>
<xsd:element name="retires_on" type="xsd:date"/>
<xsd:element name="retired" type="xsd:boolean"/>
<xsd:element name="boot_time" type="xsd:dateTime"/>
<xsd:element name="tools_status" type="xsd:string"/>
<xsd:element name="standby_action" type="xsd:string"/>
<xsd:element name="power_state" type="xsd:string"/>
<xsd:element name="state_changed_on" type="xsd:dateTime"/>
<xsd:element name="previous_state" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="blackbox_exists" type="xsd:boolean"/>
<xsd:element name="blackbox_validated" type="xsd:boolean"/>
<xsd:element name="registered" type="xsd:boolean"/>
<xsd:element name="busy" type="xsd:boolean"/>
<xsd:element name="smart" type="xsd:boolean"/>
<xsd:element name="memory_reserve" type="xsd:double"/>
<xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
<xsd:element name="memory_limit" type="xsd:double"/>
<xsd:element name="memory_shares" type="xsd:double"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:double"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
    <xsd:element name="host"
type="typens:VmdbwsSupport..HostList"/>
        <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
            <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
                </xsd:all>
            </xsd:complexType>

```

Example 6.79. GetVmsByTag Output (Windows PowerShell)

Name	Value
------	-------

---	-----
disk_4_disk_type	
conservative_vcpus_recommended_change	-1
recommended_vcpus	1
max_cpu_usage_rate_average_high_over_time_period	
44.02290026709669	
parent_blue_folder_3_name	
aggressive_mem_recommended_change_pct	68.9
disk_6_disk_type	
conservative_recommended_vcpus	3
disk_4_size_on_disk	
disks_aligned	False
paravirtualization	
mem_cpu	6144
v_owning_cluster	Pod1
vmsafe_agent_address	
moderate_mem_recommended_change_pct	44.8
disk_1_size_on_disk	
num_hard_disks	5
disk_5_partitions_aligned	False
aggressive_vcpus_recommended_change_pct	50.0
evm_owner_email	
moderate_recommended_mem	3392
disk_7_mode	
evm_owner_name	
vdi_user_home_path	
v_total_snapshots	1
last_compliance_status	
vmsafe_immutable_vm	
vdi_connection_session_type	
cpu_usagemhz_rate_average_avg_over_time_period	
651.6342140812435	
orphaned	false
disk_size	0
disk_7_partitions_aligned	
used_storage_by_state	
6442450944	
vdi_user_name	
disk_3_size	
max_cpu_usage_rate_average_low_over_time_period_without_ov...	
5.529877510681107	
owned_by_current_user	false
disk_8_size	
vdi_endpoint_mac_address	
recommended_mem	1912
aggressive_vcpus_recommended_change	1
region_description	Region 0
disk_5_size_on_disk	
evm_owner_userid	
vdi_user_appdata	
disk_9_size_on_disk	
v_snapshot_newest_total_size	
max_cpu_usage_rate_average_max_over_time_period	100.0
moderate_vcpus_recommended_change_pct	50.0
v_snapshot_newest_description	
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012	

moderate_mem_recommended_change	2752
disk_6_size	0
allocated_disk_storage	2012-07-
last_drift_state_timestamp	
24 20:12:32 -0700	
region_number	0
disk_1_mode	
disk_7_disk_type	
disk_5_used_percent_of_provisioned	0.0
aggressive_recommended_mem	1912
disk_8_mode	
v_pct_free_disk_space	
disk_6_partitions_aligned	
aggressive_mem_recommended_change	4232
disk_9_size	
disk_7_size_on_disk	
max_cpu_usage_rate_average_avg_over_time_period	
24.77638888888896	
disk_9_disk_type	
disk_1_partitions_aligned	True
num_cpu	2
disk_7_used_percent_of_provisioned	
derived_memory_used_max_over_time_period	
3234.0337777778	
vmsafe_fail_open	
disk_3_disk_type	
moderate_vcpus_recommended_change	1
owned_by_current_ldap_group	false
derived_memory_used_low_over_time_period	
232.8316855769765	
disk_2_disk_type	
disk_2_partitions_aligned	True
vdi_connection_dns_name	
disk_5_size	
disk_8_used_percent_of_provisioned	
max_mem_usage_absolute_average_high_over_time_period_witho...	
55.178755912966935	
disk_4_size	
v_host_vmm_product	RHEV-H
parent_blue_folder_7_name	
disk_9_used_percent_of_provisioned	
disk_1_used_percent_of_provisioned	0.0
vdi_connection_session_name	
conservative_mem_recommended_change_pct	4.9
v_owning_folder	
Datacenters	
disk_8_disk_type	
thin_provisioned	false
overallocated_vcpus_pct	50.0
uncommitted_storage	0
disk_8_size_on_disk	
debris_size	0
num_disks	5
conservative_vcpus_recommended_change_pct	-50.0
vm_misc_size	0
max_mem_usage_absolute_average_avg_over_time_period_withou...	

```

31.084722222222226
max_mem_usage_absolute_average_avg_over_time_period
31.084722222222226
vdi_user_dns_domain
v_datastore_path
MTCRHDS001/17830c59-6ae4-420f-af5c-f6898c6c5b27.ovf
vdi_endpoint_type
vdi_user_home_share
os_image_name
linux_centos
moderate_recommended_vcpus 1
parent_blue_folder_1_name Default
has_rdm_disk false
vdi_available false
disk_6_used_percent_of_provisioned
used_disk_storage 0
vdi_connection_logon_server
ipaddresses
10.10.1.211
parent_blue_folder_4_name
derived_memory_used_high_over_time_period
2522.6954255341334
conservative_recommended_mem 5840
disk_9_mode
storage_name
MTCRHDS001
v_owning_folder_path
Datacenters
is_evm_appliance false
max_cpu_usage_rate_average_high_over_time_period_without_o...
44.02290026709669
vdi_connection_name
v_snapshot_newest_name Active
Image
ems_cluster_name Pod1
v_snapshot_newest_timestamp 2012-06-
19 14:04:47 -0700
disk_2_size_on_disk
max_mem_usage_absolute_average_max_over_time_period 95.0
vmsafe_timeout_ms
disk_2_mode
v_snapshot_oldest_description
_ActiveImage_PRDv5EVM002_Tue Jun 19 17:13:11 EDT 2012
first_drift_state_timestamp 2012-07-
24 20:12:32 -0700
vm_ram_size 0
max_mem_usage_absolute_average_high_over_time_period
55.178755912966935
vdi_endpoint_name
vmsafe_enable
parent_blue_folder_2_name
parent_blue_folder_5_name
disk_3_mode
disk_1_disk_type
disconnected false
vdi_user_logon_time

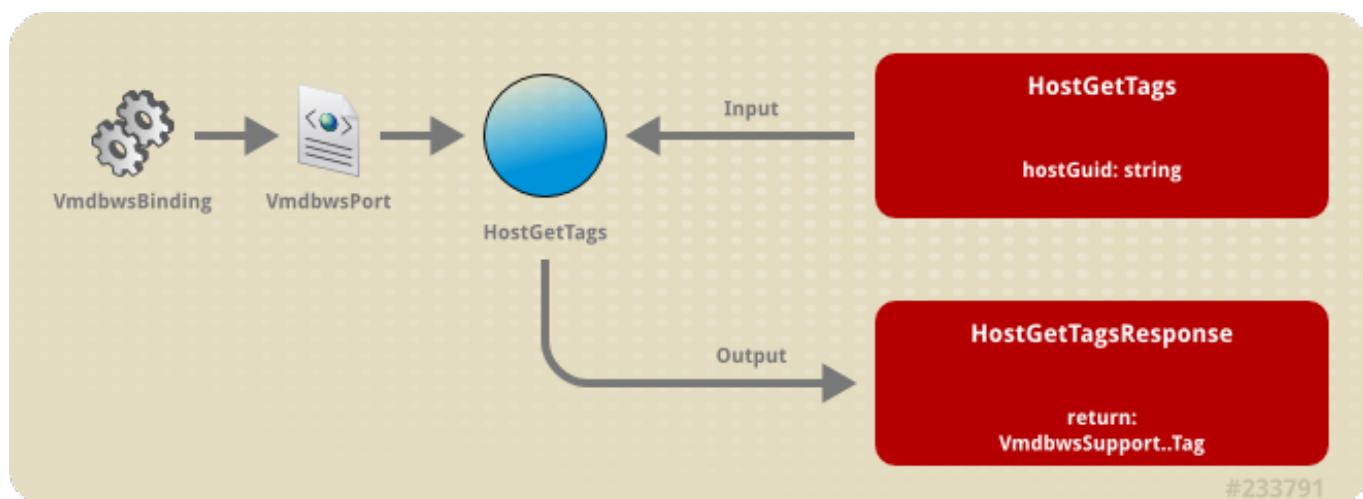
```

v_pct_used_disk_space		
disk_4_mode		Default
v_owning_datacenter		
disk_1_size		
disk_9_partitions_aligned		
hostnames		
disk_4_partitions_aligned		True
disk_6_size_on_disk		
cpu_usagemhz_rate_average_low_over_time_period		
366.26730508150735		
max_mem_usage_absolute_average_low_over_time_period_withou...		
6.99068853147752		
disk_8_partitions_aligned		
parent_blue_folder_6_name		
snapshot_size	0	
disk_5_disk_type		
disk_2_used_percent_of_provisioned	0.0	
parent_blue_folder_9_name		
platform	linux	
provisioned_storage		
6442450944		
disk_3_used_percent_of_provisioned	0.0	
vdi_connection_remote_ip_address		
disk_3_size_on_disk		
max_cpu_usage_rate_average_avg_over_time_period_without_ov...		
24.77638888888896		
cpu_usagemhz_rate_average_high_over_time_period		
937.0011230809796		
derived_memory_used_avg_over_time_period		
1377.7635555555548		
last_compliance_timestamp		
disk_6_mode		
vdi_user_domain		
v_snapshot_oldest_name	Active	
Image		
has_active_vdi_session	false	
host_name		
mtcrhel62001.miq.net		
v_owning_blue_folder_path		
Datacenters/Default/vm		
conservative_mem_recommended_change	304	
v_owning_resource_pool	Default	
for Cluster Pod1		
v_snapshot_oldest_timestamp	2012-06-	
19 14:04:47 -0700		
disk_7_size		
owning_ldap_group		
v_annotation		
Production V5 EVM appliance (iSCSI scanning)		
cpu_usagemhz_rate_average_max_over_time_period		
1053.93493333333		
max_cpu_usage_rate_average_low_over_time_period		
5.529877510681107		
v_is_a_template	False	
max_mem_usage_absolute_average_low_over_time_period		
6.99068853147752		

disk_5_mode		
vdi_connection_url		1
parent_blue_folder_8_name		
aggressive_recommended_vcpus		
v_snapshot_oldest_total_size		
disk_4_used_percent_of_provisioned	0 . 0	
archived	false	
vdi_user_home_drive		
disk_2_size		
mac_addresses		
00:1a:4a:0a:01:00		
vmsafe_agent_port		
v_owning_blue_folder	vm	
vdi_endpoint_ip_address		
disk_3_partitions_aligned	True	
used_storage		
6442450944		
overallocated_mem_pct	68 . 9	

6.41. HostGetTags

HostGetTags retrieves the list of tags associated with a host. The returned tag objects include properties for **category**, **tag_name**, **tag_display_name**, and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



Syntax

- » *Input:* [{:hostGuid => :string}]
- » *Output:* [[Tag]]

Examples

The following examples demonstrate **HostGetTags** usage:

Example 6.80. HostGetTags WSDL

```
<message name="HostGetTags">
```

```

<part name="hostGuid" type="xsd:string" />
</message>
<message name="HostGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>
        <xsd:element name="tag_path" type="xsd:string"/>
        <xsd:element name="category" type="xsd:string"/>
        <xsd:element name="category_display_name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 6.81. HostGetTags Output (Windows PowerShell)

```

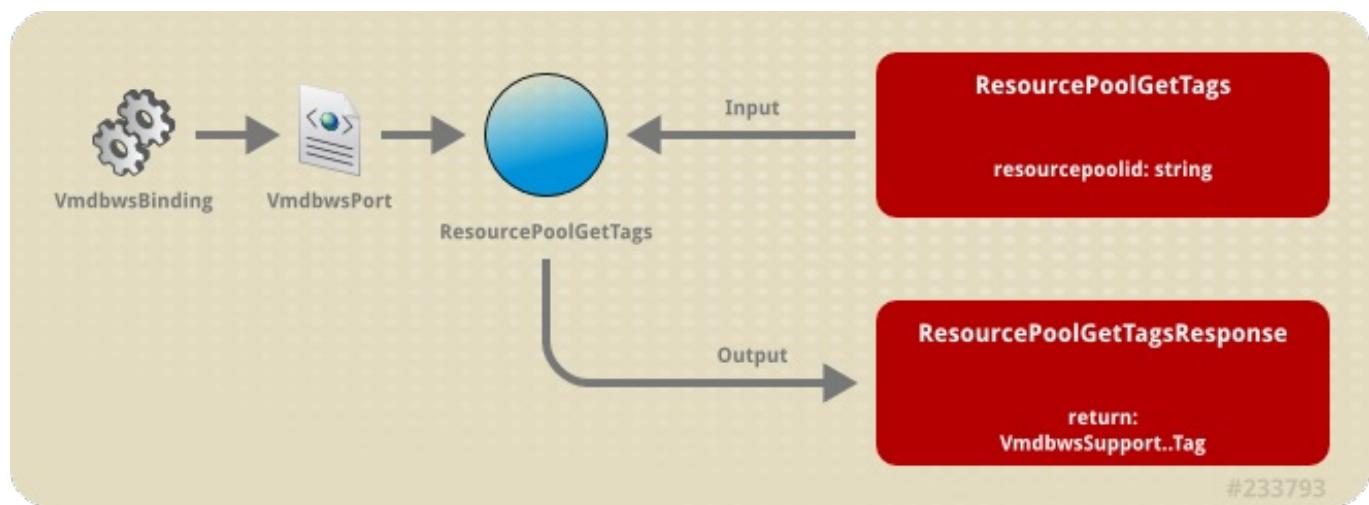
Calling HostGetTags...
display_name      : Location: Chicago
category          : location
category_display_name : Location
tag_display_name   : Chicago
tag_name           : chicago
tag_path           : /managed/location/chicago

display_name      : Environment: Production
category          : environment
category_display_name : Environment
tag_display_name   : Production
tag_name           : prod
tag_path           : /managed/environment/prod

```

6.42. ResourcePoolGetTags

ResourcePoolGetTags retrieves the list of tags associated with a resource pool. The returned tag objects include properties for **category**, **tag_name**, **tag_display_name**, and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



Syntax

- » *Input:* `[{:resourcepoolID => :string}]`
- » *Output:* `[[VmdbwsSupport..TagArray]]`

Examples

The following examples demonstrate **ResourcePoolGetTags** usage:

Example 6.82. ResourcePoolGetTags WSDL

```

<message name="ResourcePoolGetTags">
    <part name="resourcepoolId" type="xsd:string"/>
</message>
<message name="ResourcePoolGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>
        <xsd:element name="tag_path" type="xsd:string"/>
        <xsd:element name="category" type="xsd:string"/>
        <xsd:element name="category_display_name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
    
```

Example 6.83. ResourcePoolGetTags Output (Windows PowerShell)

<code>display_name</code>	: Location: Chicago
<code>category</code>	: location
<code>category_display_name</code>	: Location
<code>tag_display_name</code>	: Chicago
<code>tag_name</code>	: chicago
<code>tag_path</code>	: /managed/location/chicago

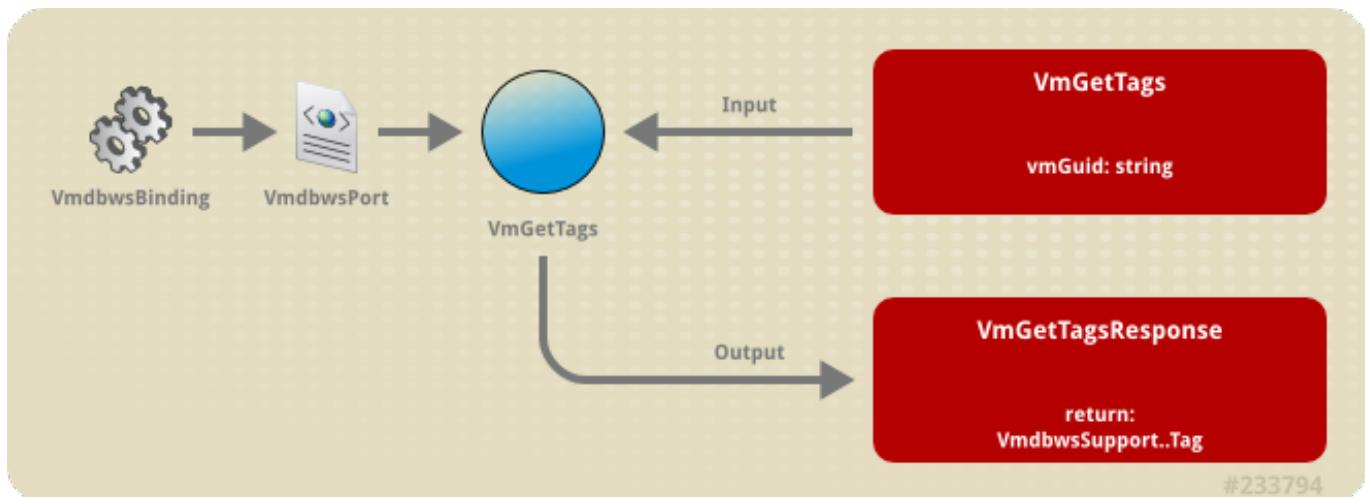
```

display_name      : Environment: Production
category         : environment
category_display_name : Environment
tag_display_name   : Production
tag_name          : prod
tag_path          : /managed/environment/prod

```

6.43. VmGetTags

VmGetTags retrieves the list of tags associated with a virtual machine. The returned tag objects include properties for **category**, **tag_name**, **tag_display_name**, and **tag_path**. See the WSDL definition for the **Tag** object for the full property listing.



Syntax

- » *Input:* `[{:vmGuid => :string}]`
- » *Output:* `[[Tag]]`

Examples

The following examples demonstrate **VmGetTags** usage:

Example 6.84. VmGetTags WSDL

```

<message name="VmGetTags">
    <part name="vmGuid" type="xsd:string" />
</message>
<message name="VmGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>

```

```
<xsd:element name="tag_path" type="xsd:string"/>
<xsd:element name="category" type="xsd:string"/>
<xsd:element name="category_display_name" type="xsd:string"/>
</xsd:all>
</xsd:complexType>
```

Example 6.85. VmGetTags Output (Windows PowerShell)

```
Calling VmGetTags...
display_name      : Cost Center: Cost Center 002
category         : cc
category_display_name : Cost Center
tag_display_name   : Cost Center 002
tag_name          : 002
tag_path          : /managed/cc/002

display_name      : Parent Folder Path (VMs & Templates):
Datacenters/VI4/vm
category         : folder_path_blue
category_display_name : Parent Folder Path (VMs & Templates)
tag_display_name   : Datacenters/VI4/vm
tag_name          : datacenters:vi4:vm
tag_path          : /managed/folder_path_blue/datacenters:vi4:vm
```

Chapter 7. Control Web Services

This chapter describes web services associated with the Control Feature Set.

At the end of this chapter, you will:

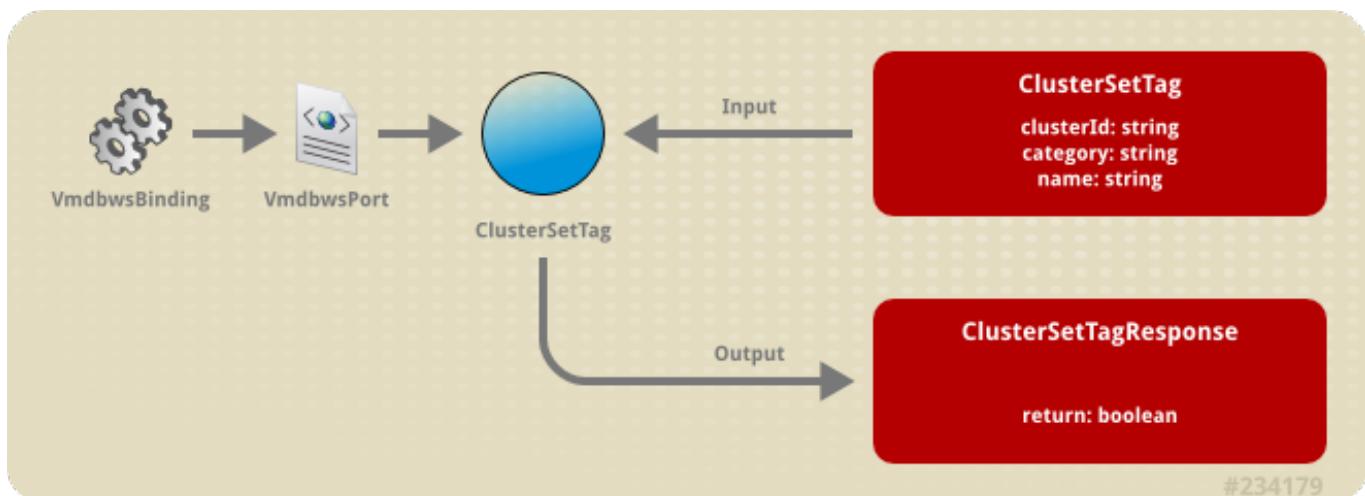
- » Know what web service methods are available to Control.
- » Be familiar with the parameters that each method can take.
- » See examples of the outputs for each method.

Web Services associated with Control pertain to enforcing and assigning policy data in your Virtual Infrastructure. For each Web service, we supply a brief description, input, output, the excerpt from the WSDL, and a sample output.

You can find a full copy of the WSDL file in the [WSDL File Appendix](#).

7.1. ClusterSetTag

ClusterSetTag applies a tag to a cluster. It identifies the tag through a tag **category** and **name**.



Syntax

» *Input:*

```
[{:clusterId => :string},
 {:category=>:string},
 {:name=>:string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **ClusterSetTag** usage:

Example 7.1. ClusterSetTag WSDL

```

<message name="ClusterSetTag">
  <part name="clusterId" type="xsd:string"/>
  <part name="category" type="xsd:string"/>
  <part name="name" type="xsd:string"/>
</message>
<message name="ClusterSetTagResponse">
  <part name="return" type="xsd:boolean"/>
</message>

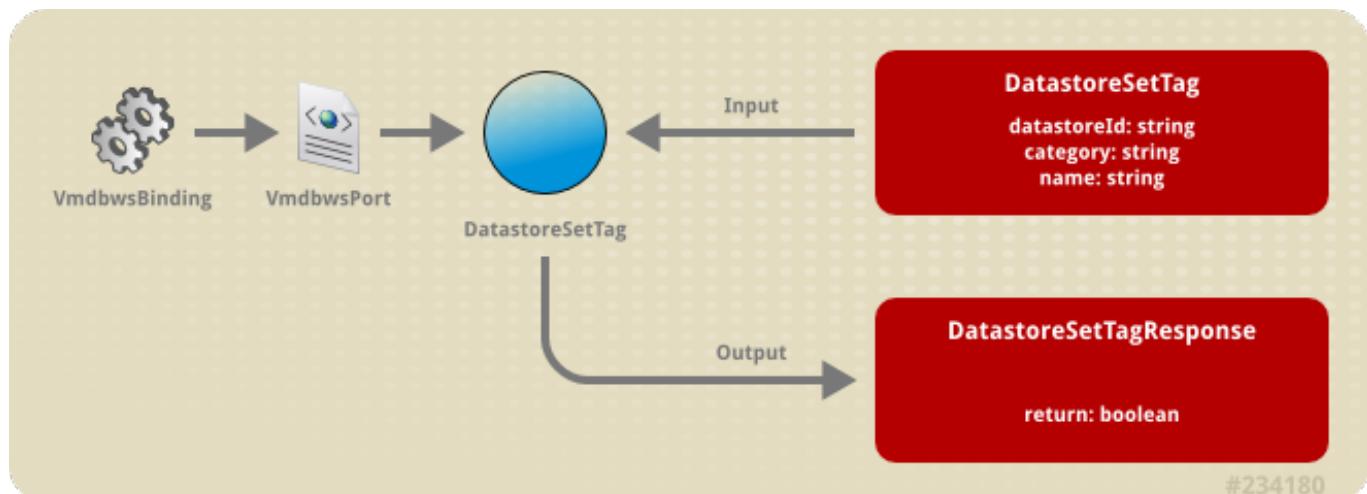
```

Example 7.2. ClusterSetTag Output (Windows PowerShell)

...Result:true

7.2. DatastoreSetTag

DatastoreSetTag applies a tag to a datastore. It identifies the tag through a tag **category** and **name**.



» *Input:*

```
[{:datastoreId => :string},
 {:category=>:string},
 {:name=>:string}]
```

» *Output:*

```
[:boolean]
```

DatastoreSetTag WSDL

```

<message name="DatastoreSetTag">
  <part name="datastoreId" type="xsd:string"/>
  <part name="category" type="xsd:string"/>
  <part name="name" type="xsd:string"/>

```

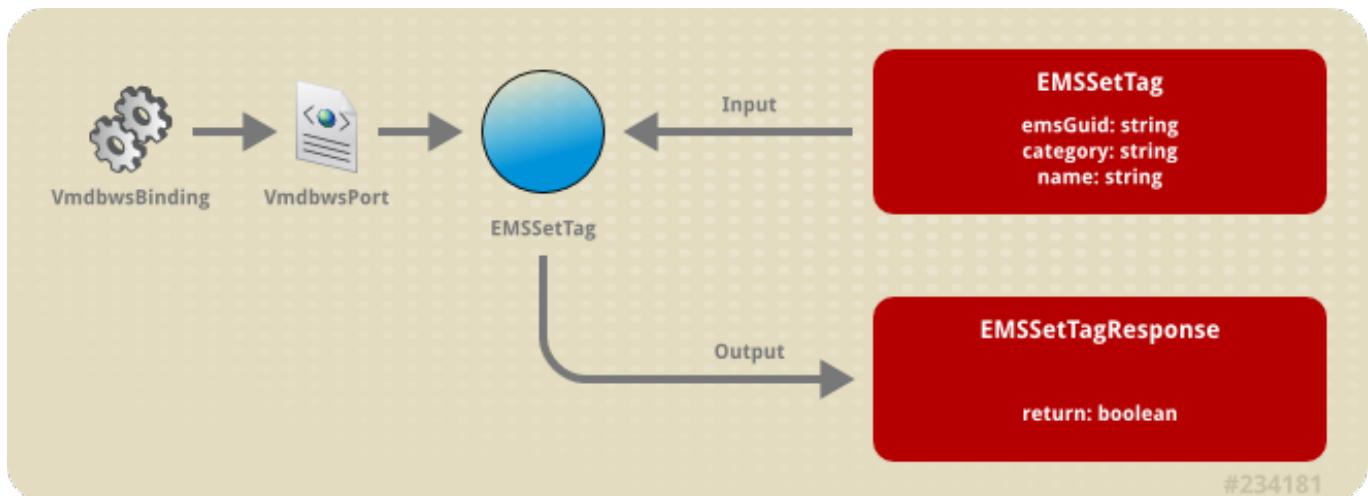
```
</message>
<message name="DatastoreSetTagResponse">
  <part name="return" type="xsd:boolean"/>
</message>
```

DatastoreSetTag Output (Windows PowerShell)

```
...Result:true
```

7.3. EmsSetTag

EmsSetTag applies a tag to a management system. It identifies the tag through a tag **category** and **name**.



Syntax

» *Input:*

```
[{:emsGuid => :string},
 {:category=>:string},
 {:name=>:string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **EmsSetTag** usage:

Example 7.3. EmsSetTag WSDL

```
<message name="EmsSetTag">
  <part name="emsGuid" type="xsd:string"/>
  <part name="category" type="xsd:string"/>
  <part name="name" type="xsd:string"/>
```

```

</message>
<message name="EmsSetTagResponse">
    <part name="return" type="xsd:boolean"/>
</message>

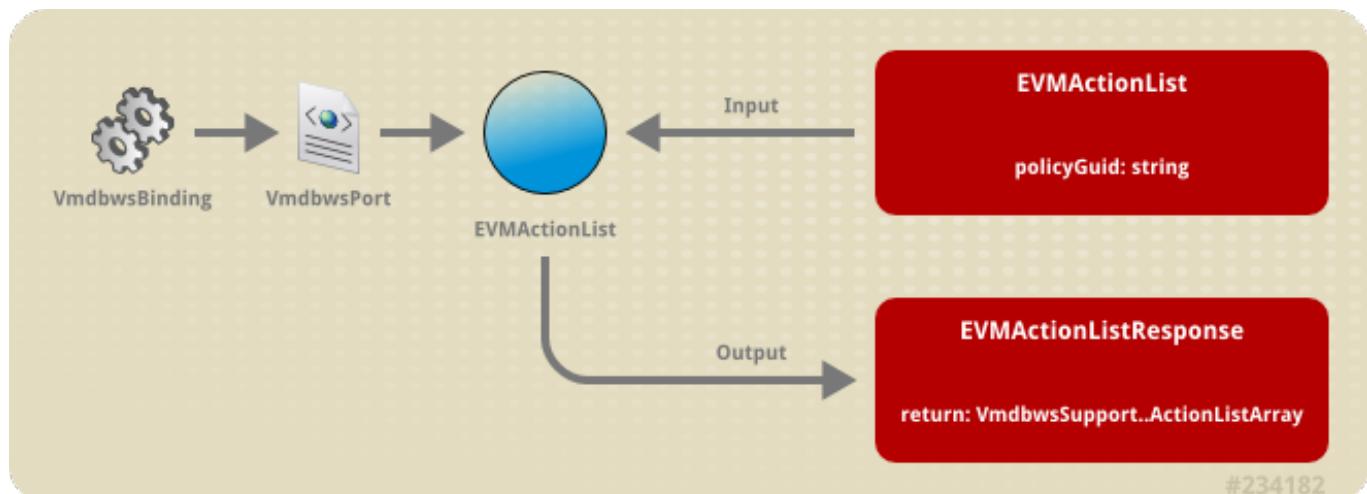
```

Example 7.4. EmsSetTag Output (Windows PowerShell)

```
...Result:true
```

7.4. EVMActionList

EVMActionList returns the list of policy action IDs and names defined for a given policy. If **policyId** is an asterisk ("*"), **all**, or **none**, the method returns all actions.



Syntax

- **Input:** The ID of a policy. If the ID is an asterisk ("*"), **all**, or **none**, the output includes all actions.
- **Output:** **VmdbwsSupport..ActionListArray**. Each **VmdbwsSupport..ActionList** contains the **name** and **guid** of the action for the specified **policyId**.

Examples

The following examples demonstrate **EVMActionList** usage:

Example 7.5. EVMActionList(<policyId>) WSDL

```

<message name="EVMActionList">
    <part name="policyGuid" type="xsd:string"/>
</message>
<message name="EVMActionListResponse">
    <part name="return" type="typens:VmdbwsSupport..ActionListArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ActionList">

```

```

<xsd:all>
  <xsd:element name="name" type="xsd:string"/>
  <xsd:element name="guid" type="xsd:string"/>
</xsd:all>
</xsd:complexType>

```

Example 7.6. EVMActionList Output (Java)

```

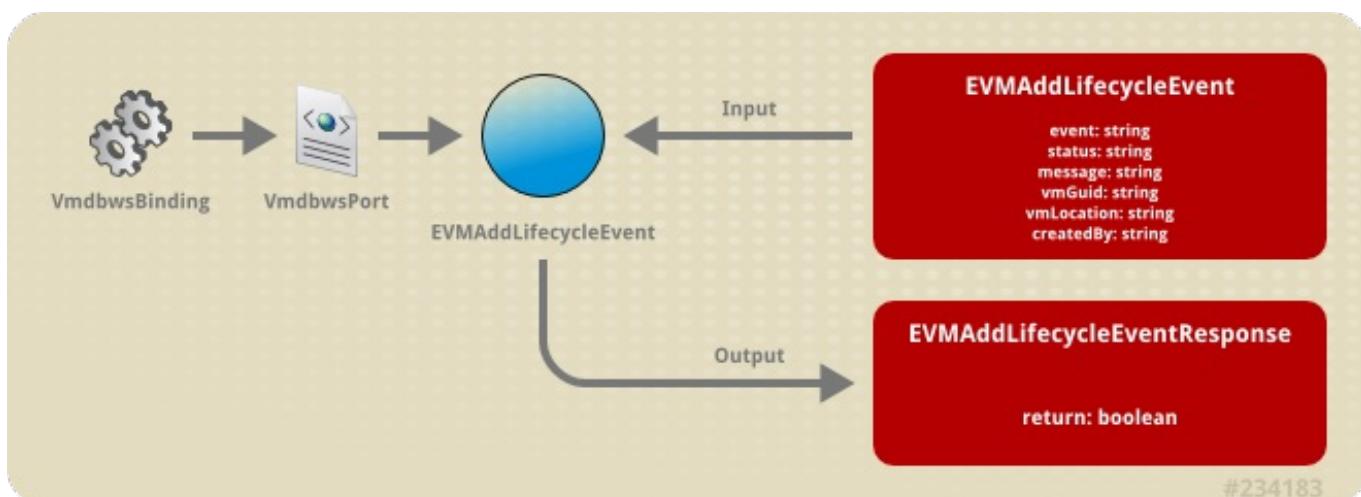
Calling EVMActionList...
fe9c664a-83ca-11dc-8bac-0017f2d3eb46, audit
fe9cdcf6-83ca-11dc-8bac-0017f2d3eb46, log
fe9d4c40-83ca-11dc-8bac-0017f2d3eb46, email
fe9dc2ce-83ca-11dc-8bac-0017f2d3eb46, snmp
fe9e2f48-83ca-11dc-8bac-0017f2d3eb46, sms
fe9e9cb2-83ca-11dc-8bac-0017f2d3eb46, quarantine
fe9f08d2-83ca-11dc-8bac-0017f2d3eb46, remediate
fe9f7786-83ca-11dc-8bac-0017f2d3eb46, tag
fe9fe950-83ca-11dc-8bac-0017f2d3eb46, script
fea06c68-83ca-11dc-8bac-0017f2d3eb46, prevent
fd81ad16-938c-11dc-84a1-0017f2d3eb46, email_on_failure

Calling EVMActionList for policy: env_prod, [189df1e8-83cc-11dc-912b-
0017f2d3eb46]
fd81ad16-938c-11dc-84a1-0017f2d3eb46, email_on_failure
fea06c68-83ca-11dc-8bac-0017f2d3eb46, prevent

```

7.5. EVMAAddLifecycleEvent

EVMAAddLifecycleEvent (**event**, **status**, **message**, **guid**, **location**, **created_by**) adds a lifecycle event record for a virtual machine and records the **event**, **status**, **message**, and **created_by** values in the **lifecycle_events** table in the VMDB. The method looks up a virtual machine either by GUID or fully-qualified path to the configuration file. (For VMware, a fully-qualified path would be similar to **[datastore-1] test3/test3.vmx**)



Syntax

- » *Input:*

```
[{:event => :string},
{:status => :string},
{:message => :string},
{:vmGuid => :string},
{:vmLocation => :string},
{:createdBy => :string}]
```

» *Output:*

```
true
```

Examples

The following examples demonstrate **EVMAddLifecycleEvent** usage:

Example 7.7. EVMAddLifecycleEvent WSDL

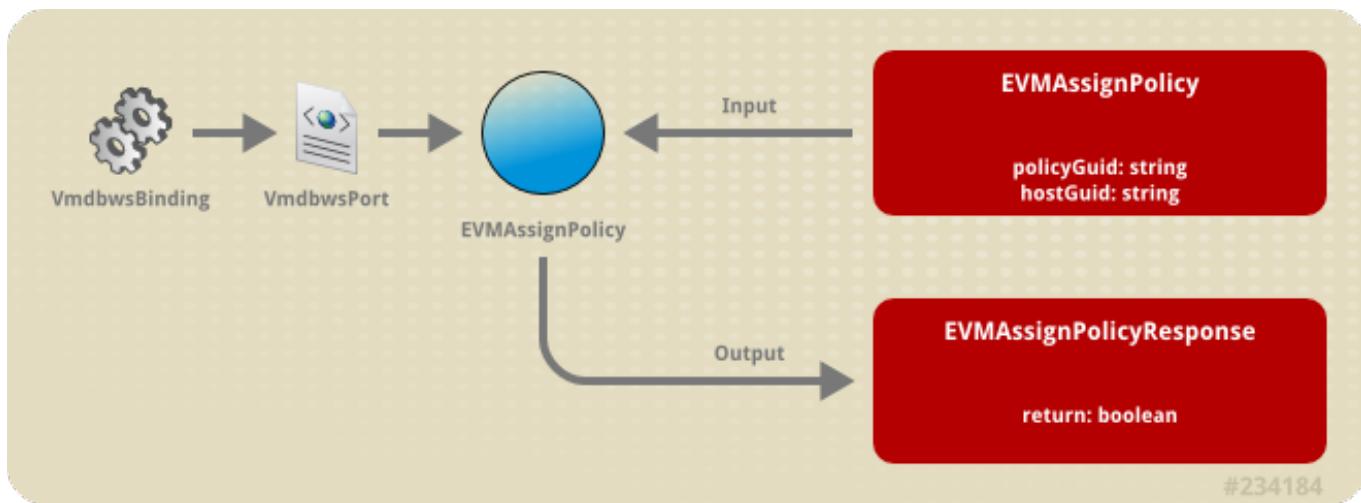
```
<message name="EVMAddLifecycleEvent">
  <part name="event" type="xsd:string"/>
  <part name="status" type="xsd:string"/>
  <part name="message" type="xsd:string"/>
  <part name="vmGuid" type="xsd:string"/>
  <part name="vmLocation" type="xsd:string"/>
  <part name="createdBy" type="xsd:string"/>
</message>
<message name="EVMAddLifecycleEventResponse">
  <part name="return" type="xsd:boolean"/>
</message>
```

Example 7.8. EVMAddLifecycleEventResponse (Java)

```
Calling EVMAddLifecycleEventResponse...
...Result:true
```

7.6. EVMAssignPolicy

EVMAssignPolicy assigns a policy (**policyId**) to a host (**hostId**).



Syntax

- » Input: The ID of a host existing in the VMDB and the ID of a policy instance assigned to that host.
- » Output: Boolean in the form of **true** or **false**.

Examples

The following examples demonstrate **EVMAssignPolicy** usage:

Example 7.9. EVMAssignPolicy WSDL

```

<message name="EVMAssignPolicy">
    <part name="policyGuid" type="xsd:string" />
    <part name="hostGuid" type="xsd:string" />
</message>
<message name="EVMAssignPolicyResponse">
    <part name="return" type="xsd:boolean" />
</message>
    
```

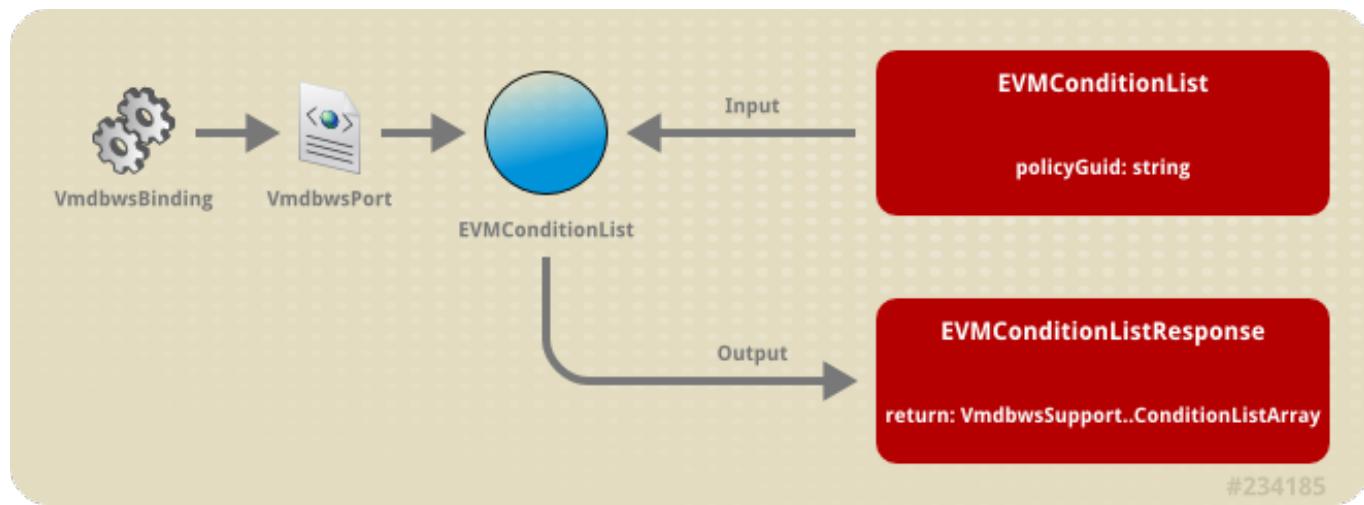
Example 7.10. EVMAssignPolicy Output (Java)

```

Calling EVMAssignPolicy Policy: env_prod, Host: AcmeVista
Result: true
Calling EVMAssignPolicy Policy: env_prod_vm_host, Host: AcmeVista
Result: true
Calling EVMAssignPolicy Policy: hardware_cpus, Host: AcmeVista
Result: true
    
```

7.7. EVMConditionList

EVMConditionList returns the list of policy condition IDs and names defined for a given policy. If **policyId** is an asterisk ("*"), **all** or **none**, the method returns all conditions.



Syntax

- » *Input:* The ID of a policy. If **policyId** is an asterisk ("*"), **all** or **none**, the output includes all conditions.
- » *Output:* **VmdbwsSupport..ConditionListArray**. Each **VmdbwsSupport..ConditionList** contains the **name** and **guid** of the condition for the specified **policyId**.

Examples

The following examples demonstrate **EVMConditionList** usage:

Example 7.11. EVMConditionList WSDL

```

<message name="EVMConditionList">
    <part name="policyGuid" type="xsd:string" />
</message>
<message name="EVMConditionListResponse">
    <part name="return" type="typens:VmdbwsSupport..ConditionListArray"
/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ConditionList">
    <xsd:all>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="guid" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
    
```

Example 7.12. EVMConditionList Output (Java)

```

Calling EVMConditionList...
fe92d7c4-83ca-11dc-8bac-0017f2d3eb46, env_prod
fe936f9a-83ca-11dc-8bac-0017f2d3eb46, env_prod_vm_host
fe94145e-83ca-11dc-8bac-0017f2d3eb46, hardware_cpus
fe94aa18-83ca-11dc-8bac-0017f2d3eb46, os_winxp_sp2
fe953622-83ca-11dc-8bac-0017f2d3eb46, security_accounts
fe95bc00-83ca-11dc-8bac-0017f2d3eb46, security_administrators
    
```

```

fe965b56-83ca-11dc-8bac-0017f2d3eb46, security_av_service
fe96eed6-83ca-11dc-8bac-0017f2d3eb46, security_services
fe978cec-83ca-11dc-8bac-0017f2d3eb46, service_level_gold
fe981478-83ca-11dc-8bac-0017f2d3eb46, service_level_platinum
fe989664-83ca-11dc-8bac-0017f2d3eb46, service_level_silver
fe991bca-83ca-11dc-8bac-0017f2d3eb46, software_KB911567
fe99a004-83ca-11dc-8bac-0017f2d3eb46, test_syntax_1
fe9a2966-83ca-11dc-8bac-0017f2d3eb46, enforce
fe9ab8f4-83ca-11dc-8bac-0017f2d3eb46, linux_only
fe9b37de-83ca-11dc-8bac-0017f2d3eb46, win_only
fe9bbef2-83ca-11dc-8bac-0017f2d3eb46, account_limit
a23c1ed2-83ec-11dc-b8d0-0017f2d3eb46, test_xml_syntax

```

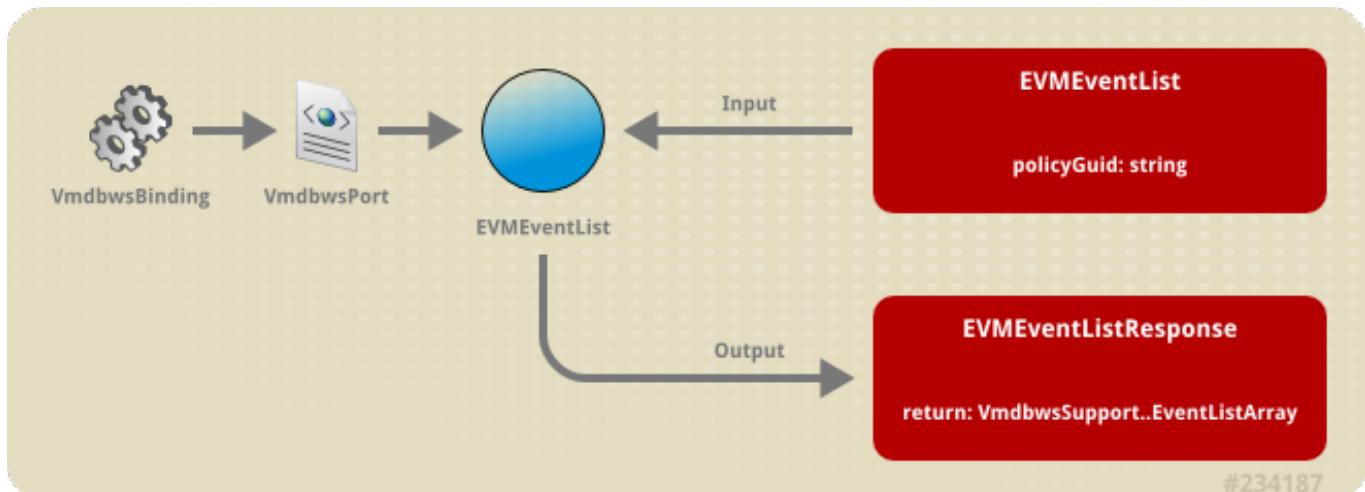
```

Calling EVMConditionList for policy: env_prod, [189df1e8-83cc-11dc-
912b-0017f2d3eb46]
fe92d7c4-83ca-11dc-8bac-0017f2d3eb46, env_prod

```

7.8. EVMEventList

EVMEventList returns the list of policy event IDs and names defined for a given policy. If **policyId** is an asterisk ("*"), **all**, or **none**, the method returns all events.



Syntax

- ▶ **Input:** The ID of a policy. If **policyId** is an asterisk ("*"), **all**, or **none**, the output includes all conditions.
- ▶ **Output:** **VmdbwsSupport..EventListArray**. Each **VmdbwsSupport..EventList** contains the list of conditions for the **policyid**.

Examples

The following examples demonstrate **EVMEventList** usage:

Example 7.13. EVMEventList WSDL

```

<message name="EVMEventList">
    <part name="policyGuid" type="xsd:string" />

```

```

</message>
<message name="EVMEventListResponse">
    <part name="return" type="typens:VmdbwsSupport..EventListArray" />
</message>

...
<xsd:complexType name="VmdbwsSupport..EventList">
    <xsd:all>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="guid" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 7.14. EVMEventList Output (Java)

```

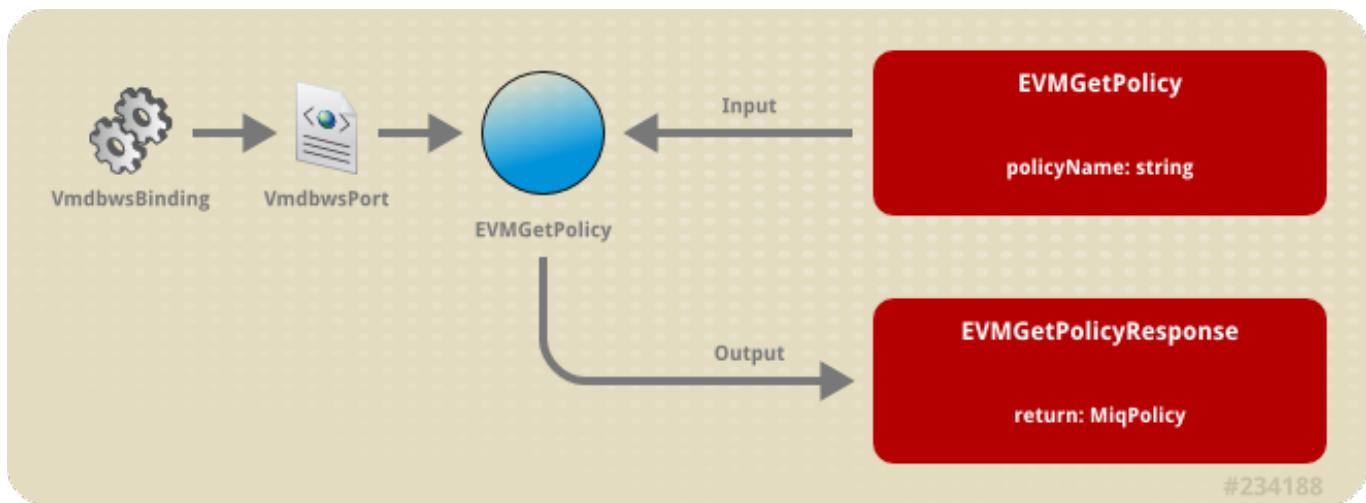
Calling EVMEventList...
fe8aadec-83ca-11dc-8bac-0017f2d3eb46, vm_start
fe8b2b64-83ca-11dc-8bac-0017f2d3eb46, vm_shutdown
fe8b9932-83ca-11dc-8bac-0017f2d3eb46, vm_pause
fe8c1470-83ca-11dc-8bac-0017f2d3eb46, vm_resume
fe8c873e-83ca-11dc-8bac-0017f2d3eb46, vm_migrate
fe8cedbe-83ca-11dc-8bac-0017f2d3eb46, vm_relocate
fe8d53f8-83ca-11dc-8bac-0017f2d3eb46, vm_reset
fe8dbd02-83ca-11dc-8bac-0017f2d3eb46, vm_suspend
fe8e29fe-83ca-11dc-8bac-0017f2d3eb46, vm_poweroff
fe8ea6a4-83ca-11dc-8bac-0017f2d3eb46, vm_create
fe8f23cc-83ca-11dc-8bac-0017f2d3eb46, vm_delete
fe8f9b72-83ca-11dc-8bac-0017f2d3eb46, vm_clone
fe900f62-83ca-11dc-8bac-0017f2d3eb46, vm_deploy
fe90844c-83ca-11dc-8bac-0017f2d3eb46, vm_template
fe90f9e0-83ca-11dc-8bac-0017f2d3eb46, vm_snapshot
fe9172b2-83ca-11dc-8bac-0017f2d3eb46, vm_discover

Calling EVMEventList for policy: env_prod, [189df1e8-83cc-11dc-912b-
0017f2d3eb46]
fe8aadec-83ca-11dc-8bac-0017f2d3eb46, vm_start

```

7.9. EVMGetPolicy

EVMGetPolicy returns all the attributes of a policy.



Syntax

- » **Input:** The **name** attribute of a policy.
- » **Output:** The policy is returned with other attributes of the policy.

Examples

The following examples demonstrate **EVMGetPolicy** usage:

Example 7.15. EVMGetPolicy WSDL

```

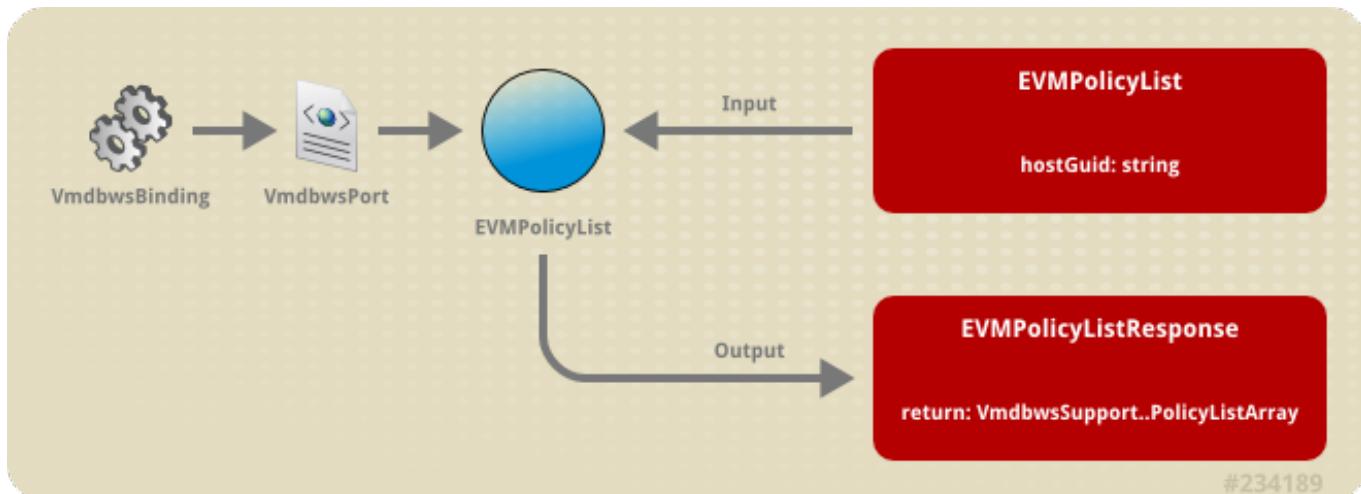
<message name="EVMGetPolicy">
  <part name="policyName" type="xsd:string" />
</message>
<message name="EVMGetPolicyResponse">
  <part name="return" type="typens:MiqPolicy" />
</message>
...
<xsd:complexType name="MiqPolicy">
  <xsd:all>
    <xsd:element name="id" type="xsd:int"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="expression" type="xsd:string"/>
    <xsd:element name="towhat" type="xsd:string"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="created_by" type="xsd:string"/>
    <xsd:element name="updated_by" type="xsd:string"/>
    <xsd:element name="notes" type="xsd:string"/>
    <xsd:element name="active" type="xsd:boolean"/>
    <xsd:element name="mode" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
  
```

Example 7.16. EVMGetPolicy Output (Java)

```
Calling EVMGetPolicy for policy: env_prod
Name: env_prod
Description: VM Tagged as Production
Expression: null
To what: null
Created on:
java.util.GregorianCalendar[time=1193407352000,areFieldsSet=true,areAll
FieldsSet=true,lenient=true,zone=sun.util.calendar.ZoneInfo[id="GMT",of
fset=0,dstSavings=0,useDaylight=false,transitions=0,lastRule=null],first
DayOfWeek=1,minimalDaysInFirstWeek=1,ERA=1,YEAR=2007,MONTH=9,WEEK_OF_YE
AR=43,WEEK_OF_MONTH=4,DAY_OF_MONTH=26,DAY_OF_YEAR=299,DAY_OF_WEEK=6,DA
Y_OF_WEEK_IN_MONTH=4,AM_PM=1,HOUR=2,HOUR_OF_DAY=14,MINUTE=2,SECOND=32,
MILLISECOND=0,ZONE_OFFSET=0,DST_OFFSET=0]
```

7.10. EVMPolicyList

EVMPolicyList retrieves the list of policy names and descriptions for either a specific host or all hosts.



Syntax

- Input: The GUID of the host. If the **hostGuid** is asterisk ("*"), **all**, or **none**, the output includes all conditions.
- Output: **VmdbwsSupport..PolicyListArray**. Each **VmdbwsSupport..PolicyList** object contains the name and description of a policy.

Examples

The following examples demonstrate **EVMPolicyList** usage:

Example 7.17. VMPolicyList WSDL

```
<message name="EVMPolicyList">
    <part name="hostGuid" type="xsd:string" />
</message>
<message name="EVMPolicyListResponse">
```

```

<part name="return" type="typens:VmdbwsSupport..PolicyListArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..PolicyList">
  <xsd:all>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>

```

Example 7.18. EVMPolicyList Output (Java)

```

Calling EVMPolicyList...
Guid:      189df1e8-83cc-11dc-912b-0017f2d3eb46
Name:      env_prod
Description: VM Tagged as Production

Guid:      18a0132e-83cc-11dc-912b-0017f2d3eb46
Name:      env_prod_vm_host
Description: VM Tagged as Production running on Host Tagged as Production

Guid:      18a1d2d6-83cc-11dc-912b-0017f2d3eb46
Name:      hardware_cpus
Description: CPUs setting is more than 1

Guid:      18a3af34-83cc-11dc-912b-0017f2d3eb46
Name:      os_winxp_sp2
Description: Microsoft Windows Server 2003 SP1 or better

Guid:      18a5c440-83cc-11dc-912b-0017f2d3eb46
Name:      security_accounts
Description: Administrators and Guest accounts only

Guid:      18a7bdf4-83cc-11dc-912b-0017f2d3eb46
Name:      security_administrators
Description: 'Administrator' account does not exist

Guid:      18a9e93a-83cc-11dc-912b-0017f2d3eb46
Name:      security_av_service
Description: Anti-virus service is running

Guid:      18abea96-83cc-11dc-912b-0017f2d3eb46
Name:      security_services
Description: Fast User Switching Compatibility service exists

Guid:      18adbe66-83cc-11dc-912b-0017f2d3eb46
Name:      service_level_gold
Description: CPUs setting is 1 and memory is 1024 or less

Guid:      18afd066-83cc-11dc-912b-0017f2d3eb46
Name:      service_level_platinum
Description: CPUs setting is more than 2 and memory is 2048 or less

```

```

Guid:          18b20908-83cc-11dc-912b-0017f2d3eb46
Name:         service_level_silver
Description: CPUs setting is more than 1 or memory 1024 or less

Guid:          18b41194-83cc-11dc-912b-0017f2d3eb46
Name:         software_KB911567
Description: Patch KB911567 is installed

Guid:          18b630be-83cc-11dc-912b-0017f2d3eb46
Name:         test_syntax_1
Description: Test syntax

Guid:          18b823a6-83cc-11dc-912b-0017f2d3eb46
Name:         enforce
Description: Environment Policy : VM can only start if it's in production running on a host in production

Guid:          18ba291c-83cc-11dc-912b-0017f2d3eb46
Name:         linux_only
Description: Linux VM

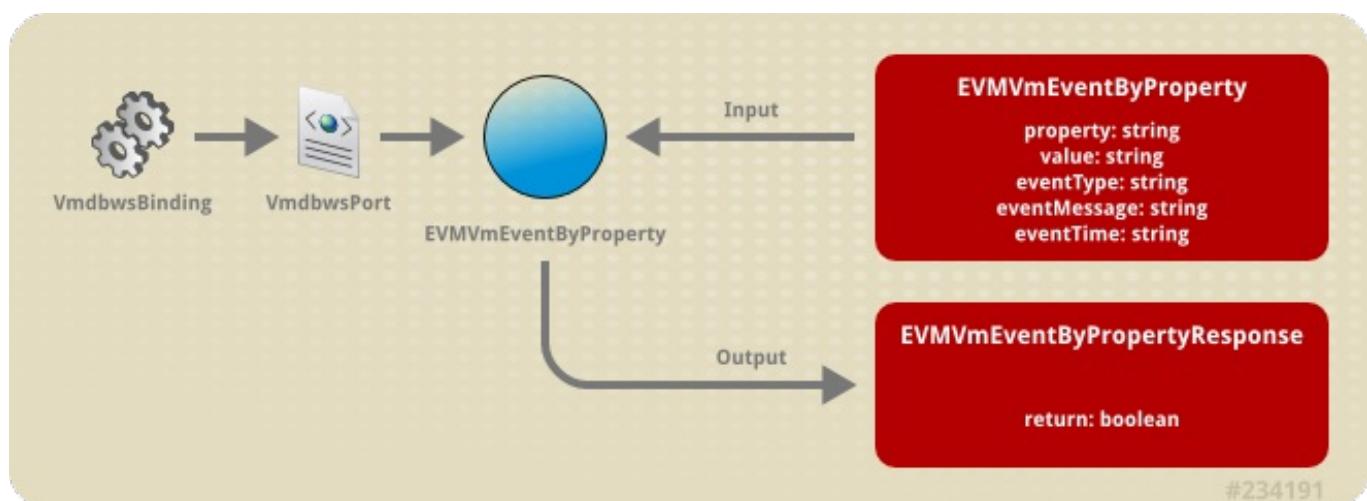
Guid:          18bc1830-83cc-11dc-912b-0017f2d3eb46
Name:         win_only
Description: Windows VM

Guid:          18c7ada8-83cc-11dc-912b-0017f2d3eb46
Name:         account_limit
Description: VM Limited to 5 users

```

7.11. EVMVmEventByProperty

EVMVmEventByProperty adds a virtual machine event where a specified **property** and **value** identifies the virtual machine. Currently the only honored property value is **ipaddress**.



Syntax

- » *Input:*

```
[{:property => :string},
```

```
{:value => :string},
{:eventType => :string},
{:eventMessage => :string},
{:eventTime => :string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **EVMVmEventByProperty** usage:

Example 7.19. EVMVmEventByProperty WSDL

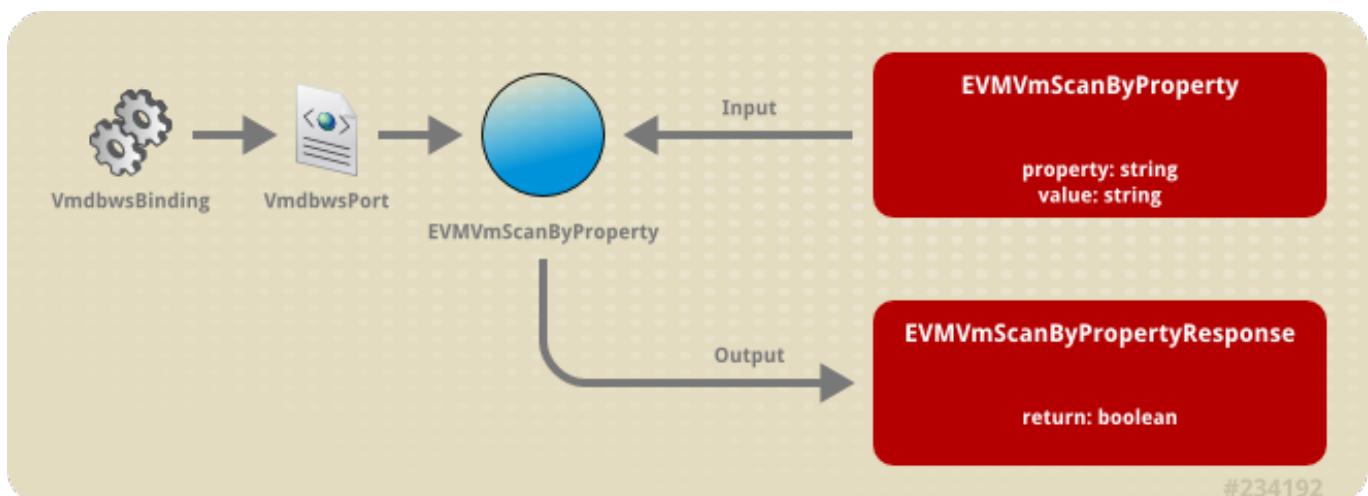
```
<message name="EVMVmEventByProperty">
  <part name="property" type="xsd:string" />
  <part name="value" type="xsd:string" />
  <part name="eventType" type="xsd:string" />
  <part name="eventMessage" type="xsd:string" />
  <part name="eventTime" type="xsd:string" />
</message>
<message name="EVMVmEventByPropertyResponse">
  <part name="return" type="xsd:boolean" />
</message>
```

Example 7.20. EVMVmEventByProperty Output (Windows PowerShell)

```
...Result:true
```

7.12. EVMVmScanByProperty

EVMVmScanByProperty adds a virtual machine scan job to the queue where a specified **property** and **value** identifies the virtual machine. Currently the only honored property value is **ipaddress**.



Syntax

» *Input:*

```
[{:property => :string},
{:value => :string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **EVMVmScanByProperty** usage:

Example 7.21. EVMVmScanByProperty WSDL

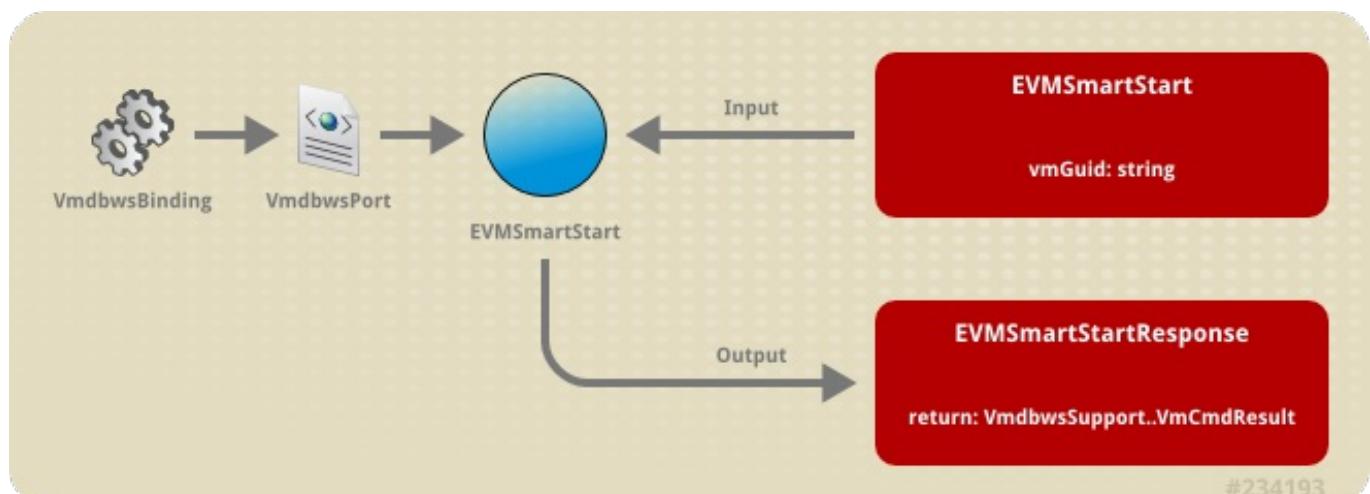
```
<message name="EVMVmScanByProperty">
  <part name="property" type="xsd:string" />
  <part name="value" type="xsd:string" />
</message>
<message name="EVMVmScanByPropertyResponse">
  <part name="return" type="xsd:boolean" />
</message>
```

Example 7.22. EVMVmScanByProperty Output (Windows PowerShell)

```
...Result:true
```

7.13. EVMSmartStart

EVMSmartStart invokes the SmartStart of a virtual machine identified by **vmId**. SmartStart enforces all policies containing the **vm_start** event assigned to the virtual machine and its host.



Syntax

- » **Input:** The GUID of a VM.
- » **Output:** **VmdbwsSupport..VmCmdResult**. Each **VmdbwsSupport..VmCmdResult** contains the result of the SmartStart and the reason for the result.

Examples

The following examples demonstrate **EVMSmartStart** usage:

Example 7.23. EVMSmartStart WSDL

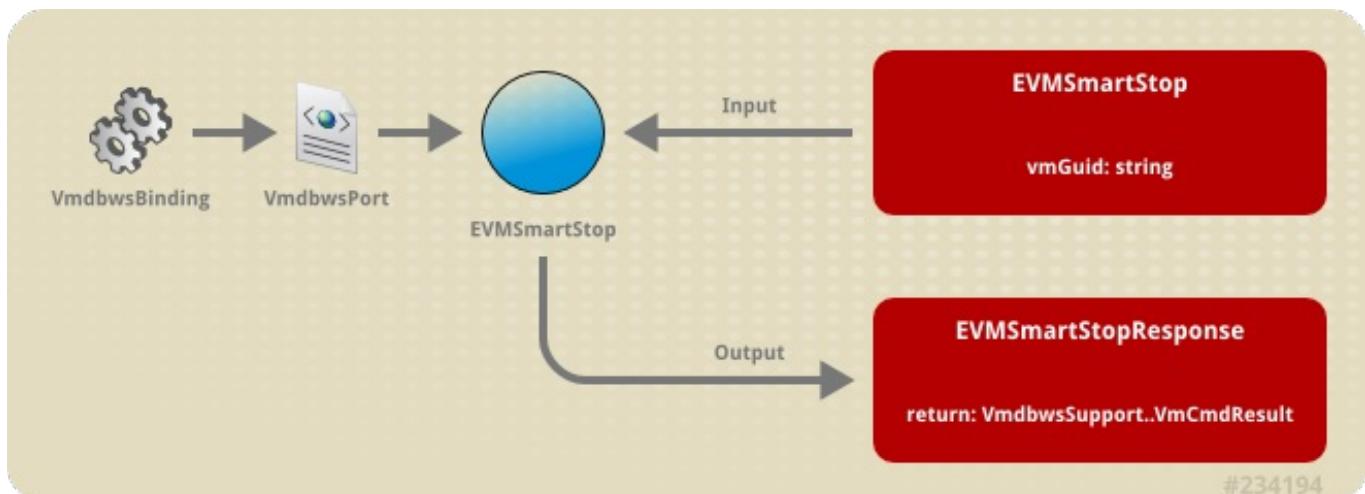
```
<message name="EVMSmartStart">
  <part name="vmGuid" type="xsd:string" />
</message>
<message name="EVMSmartStartResponse">
  <part name="return" type="typens:VmdbwsSupport..VmCmdResult" />
</message>
...
<xsd:complexType name="VmdbwsSupport..VmCmdResult">
  <xsd:all>
    <xsd:element name="result" type="xsd:string"/>
    <xsd:element name="reason" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

Example 7.24. EVMSmartStart Output (Java)

```
Calling EVMSmartStart for VM: Red Hat Exchange
Result: true
Reason: VM [Red Hat Exchange] starting
```

7.14. EVMSmartStop

EVMSmartStop invokes the SmartStop of a virtual machine identified by **vmId**. SmartStop enforces all policies containing the **vm_stop** event assigned to the virtual machine and its host.



Syntax

- » *Input:* The GUID of a VM.
- » *Output:* **VmdbwsSupport..VmCmdResult**. Each **VmdbwsSupport..VmCmdResult** contains the result of the SmartStop and the reason for the result.

Examples

The following examples demonstrate **EVMSmartStop** usage:

Example 7.25. EVMSmartStop WSDL

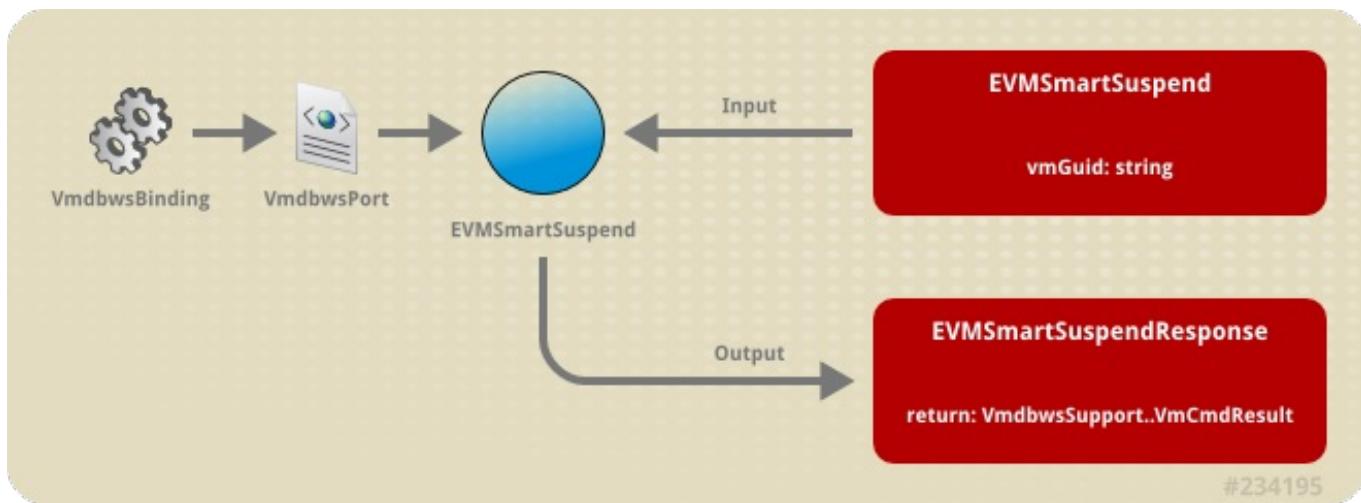
```
<message name="EVMSmartStop">
  <part name="vmGuid" type="xsd:string" />
</message>
<message name="EVMSmartStopResponse">
  <part name="return" type="typens:VmdbwsSupport..VmCmdResult" />
</message>
...
<xsd:complexType name="VmdbwsSupport..VmCmdResult">
  <xsd:all>
    <xsd:element name="result" type="xsd:string"/>
    <xsd:element name="reason" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

Example 7.26. EVMSmartStop Output (Java)

```
Calling EVMSmartStop for VM: Red Hat Exchange
Result: false
Reason: VM [Red Hat Exchange] is already powered off
```

7.15. EVMSmartSuspend

EVMSmartSuspend invokes the SmartSuspend of a virtual machine identified by **vmId**. SmartSuspend enforces all policies containing the **vm_suspend** event assigned to the virtual machine and its host.



Syntax

- » **Input:** The GUID of a VM.
- » **Output:** **VmdbwsSupport..VmCmdResult**. Each **VmdbwsSupport..VmCmdResult** contains the result of the SmartSuspend and the reason for the result.

Examples

The following examples demonstrate **EVMSmartSuspend** usage:

Example 7.27. EVMSmartSuspend WSDL

```

<message name="EVMSmartSuspend">
  <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMSmartSuspendResponse">
  <part name="return" type="typens:VmdbwsSupport..VmCmdResult"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..VmCmdResult">
  <xsd:all>
    <xsd:element name="result" type="xsd:string"/>
    <xsd:element name="reason" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
  
```

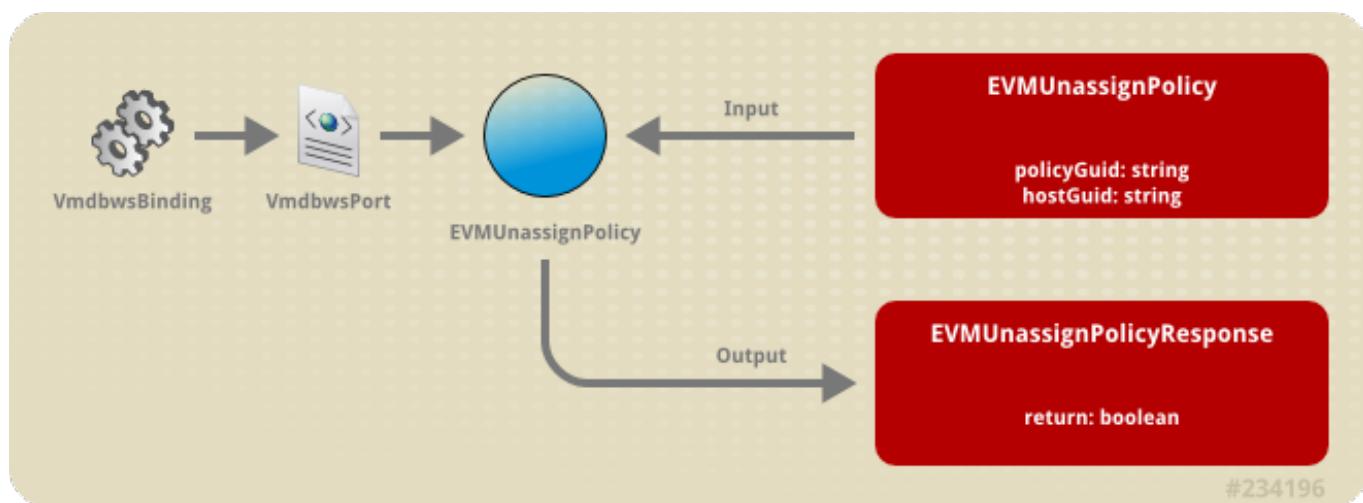
Example 7.28. EVMSmartSuspend Output (Java)

```

Calling EVMSmartSuspend for VM: Red Hat Exchange
Result: false
Reason: VM [Red Hat Exchange] is already suspended or powered off
  
```

7.16. EVMUnassignPolicy

EVMUnassignPolicy removes a policy (identified by **policyId**) from a host (identified by **hostId**).



Syntax

- » **Input:** The GUID of a host existing in the VMDB and the GUID of a policy instance assigned to that host.
- » **Output:** Boolean in the form of **true** or **false**.

Examples

The following examples demonstrate **EVMUnassignPolicy** usage:

Example 7.29. EVMUnassignPolicy WSDL

```

<message name="EVMUnassignPolicy">
    <part name="policyGuid" type="xsd:string" />
    <part name="hostGuid" type="xsd:string" />
</message>
<message name="EVMUnassignPolicyResponse">
    <part name="return" type="xsd:boolean" />
</message>
  
```

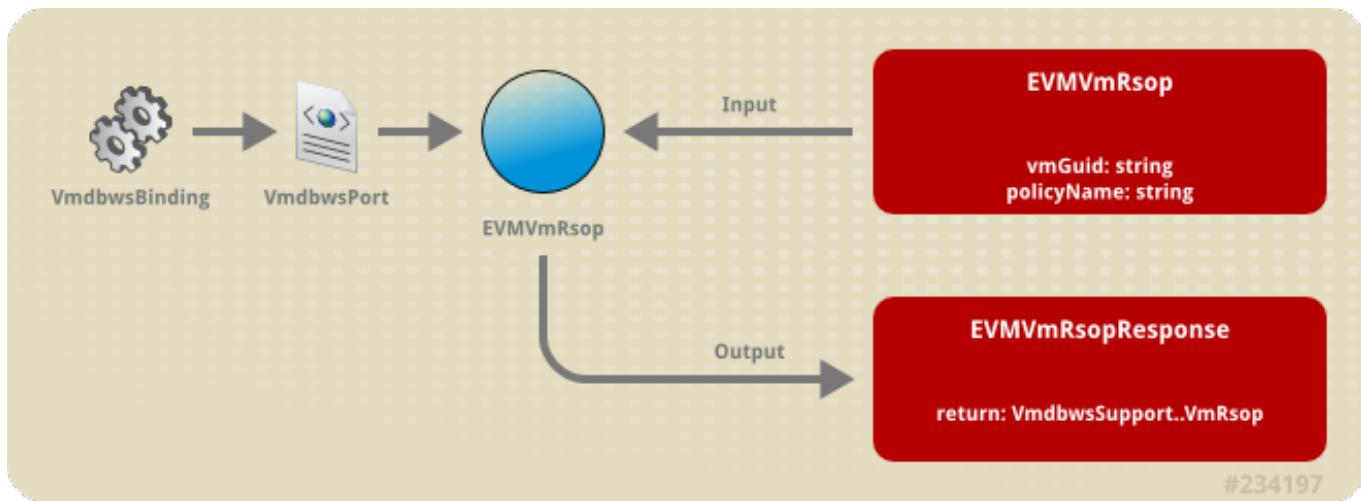
Example 7.30. EVMUnassignPolicy Output

```

Calling EVMUnassignPolicy Policy: env_prod, Host: AcmeVista
Result: true
Calling EVMUnassignPolicy Policy: env_prod_vm_host, Host: AcmeVista
Result: true
Calling EVMUnassignPolicy Policy: hardware_cpus, Host: AcmeVista
Result: true
  
```

7.17. EVMVmRsop

EVMVmRsop performs a resultant set of policy resolution based on a virtual machines ID and an array of policies provided as inputs. Each policy provided in the array is resolved in the context of the virtual machine representing the ID provided. A value of **true** is returned if all policies pass. Otherwise, a value of **false** is returned.



Syntax

- » **Input:** The GUID of a virtual machine existing and the name of a policy in the VMDB.
- » **Output:** **VmdbwsSupport..VmRsop**. Each **VmdbwsSupport..VmRsop** object contains the result and the reason for a policy result.

Examples

The following examples demonstrate **EVMVmRsop** usage:

Example 7.31. EVMVmRsop WSDL

```

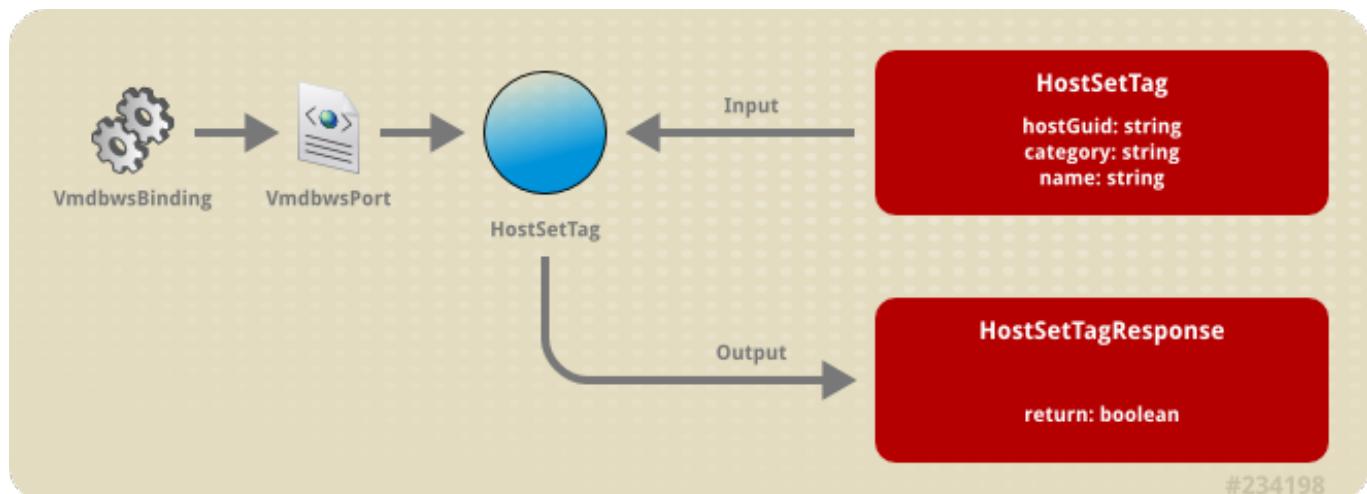
<message name="EVMVmRsop">
    <part name="vmGuid" type="xsd:string" />
    <part name="policyName" type="xsd:string" />
</message>
<message name="EVMVmRsopResponse">
    <part name="return" type="typens:VmdbwsSupport..VmRsop" />
</message>
...
<xsd:complexType name="VmdbwsSupport..VmRsop">
    <xsd:all>
        <xsd:element name="result" type="xsd:string"/>
        <xsd:element name="reason" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
    
```

Example 7.32. EVMVmRsop Output (Java)

```
Calling EVMVmRsop for VM: spam-chicago, Policy: service_level_gold...
Result: false
Reason: Service Level [Gold] Hardware Policy: VM must not start if CPUs
setting is more than 1 and memory is more than 1024
```

7.18. HostSetTag

HostSetTag applies a tag to a host. It identifies the tag through a tag **category** and **name**.



Syntax

» *Input:*

```
[{:hostGuid => :string},
 {:category => :string},
 {:name => :string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **HostSetTag** usage:

Example 7.33. HostSetTag WSDL

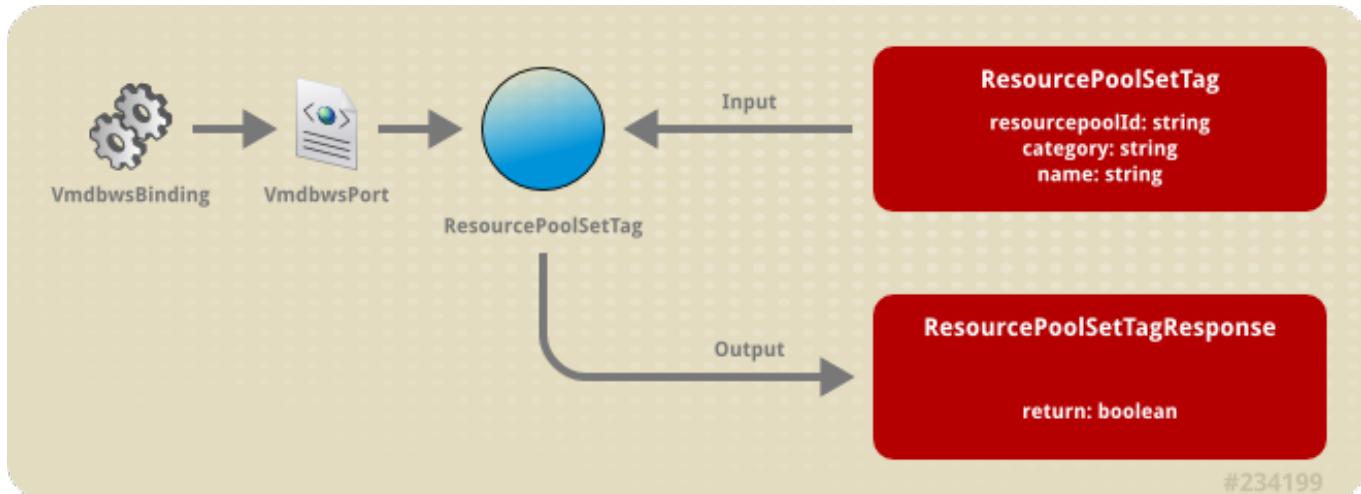
```
<message name="HostSetTag">
    <part name="hostGuid" type="xsd:string" />
    <part name="category" type="xsd:string" />
    <part name="name" type="xsd:string" />
</message>
<message name="HostSetTagResponse">
    <part name="return" type="xsd:boolean" />
</message>
```

Example 7.34. HostSetTag Output (Windows PowerShell)

...Result:true

7.19. ResourcePoolSetTag

ResourcePoolSetTag applies a tag to a resource pool. It identifies the tag through a tag category and name.

**Syntax**

» *Input:*

```
[{:resourcepoolId => :string},
 {:category=>:string},
 {:name=>:string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **ResourcePoolSetTag** usage:

Example 7.35. ResourcePoolSetTag WSDL

```

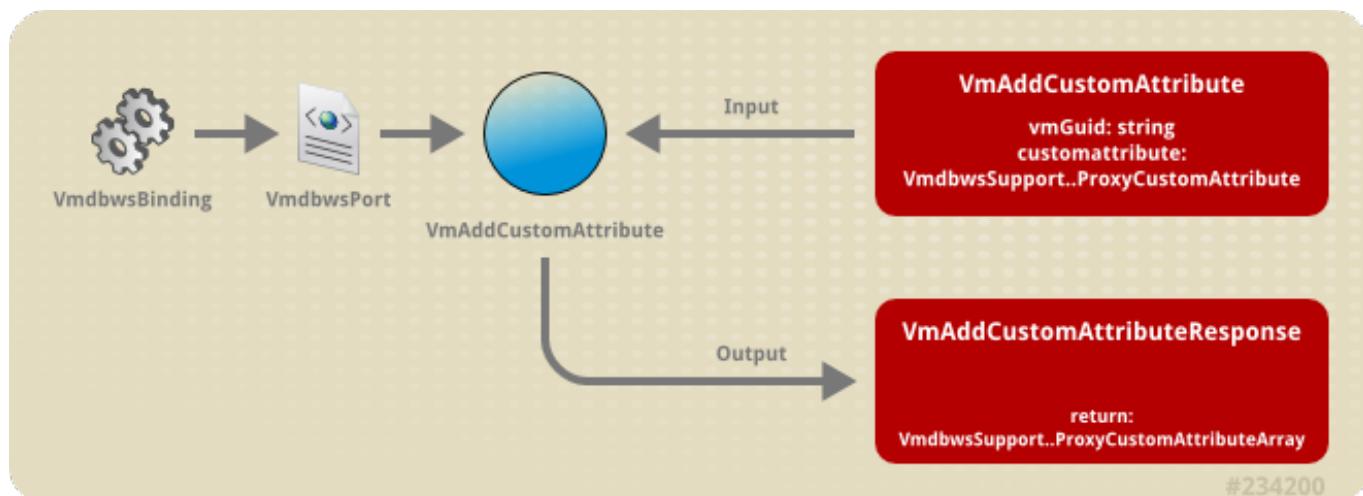
<message name="ResourcePoolSetTag">
    <part name="resourcepoolId" type="xsd:string"/>
    <part name="category" type="xsd:string"/>
    <part name="name" type="xsd:string"/>
</message>
<message name="ResourcePoolSetTagResponse">
    <part name="return" type="xsd:boolean"/>
</message>
```

Example 7.36. ResourcePoolSetTag Output (Windows PowerShell)

```
...Result:true
```

7.20. VmAddCustomAttribute

VmAddCustomAttribute adds or updates a custom attribute of a virtual machine for a **ProxyCustomAttribute** object. See the **VmAddCustomAttributeByFields** method for details on setting properties. The method returns the resultant set of custom attributes associated with the virtual machine after the operation's completion.



Syntax

» *Input:*

```
[{:vmGuid => :string},
{:customAttribute=>ProxyCustomAttribute}]
```

» *Output:*

```
[[ProxyCustomAttribute]]
```

Examples

The following examples demonstrate **VmAddCustomAttribute** usage:

Example 7.37. VmAddCustomAttribute WSDL

```

<message name="VmAddCustomAttribute">
  <part name="vmGuid" type="xsd:string"/>
  <part name="customAttribute"
    type="typens:VmdbwsSupport..ProxyCustomAttribute"/>
</message>
<message name="VmAddCustomAttributeResponse">

```

```

<part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttribute">
  <xsd:all>
    <xsd:element name="value" type="xsd:string"/>
    <xsd:element name="section" type="xsd:string"/>
    <xsd:element name="source" type="xsd:string"/>
    <xsd:element name="resource_type" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="resource_id" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

Example 7.38. VmAddCustomAttribute Output (Windows PowerShell)

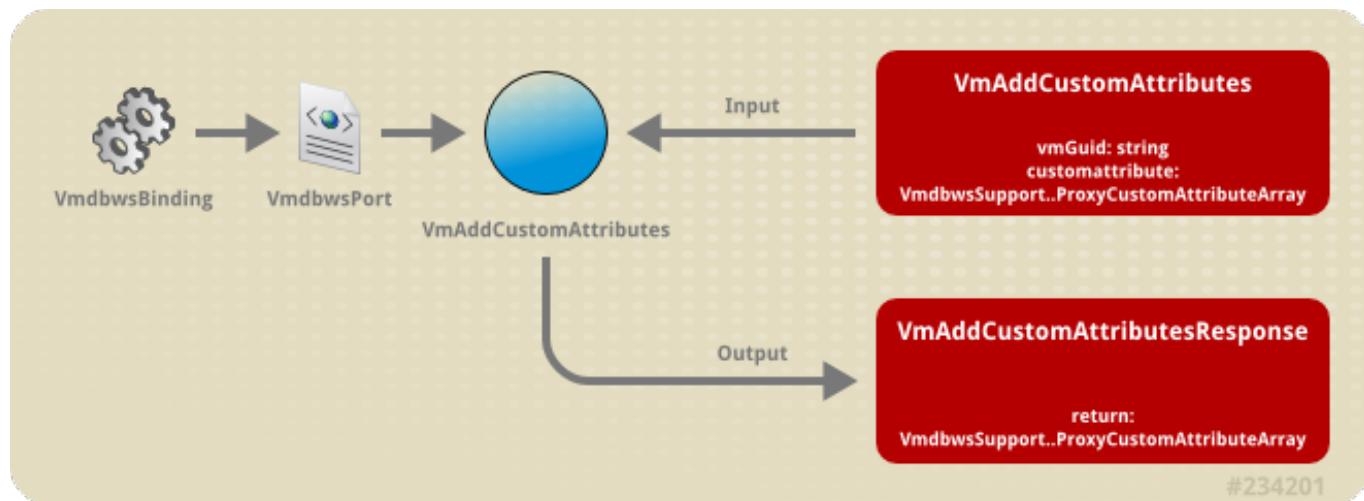
```

section          :
resource_type   : Vm
value           : V1
resource_id     : 3
source          : EVM
region_number   : 0
name            : N1
region_description : Region 0
id              : 94

section          :
resource_type   : Vm
value           : V2
resource_id     : 3
source          : EVM
region_number   : 0
name            : N2
region_description : Region 0
id              : 95
```

7.21. VmAddCustomAttributes

VmAddCustomAttributes adds or updates multiple custom attributes of a virtual machine for an array of **ProxyCustomAttribute** objects. See the **VmAddCustomAttributeByFields** method for details on setting properties. The method returns the resultant set of custom attributes associated with the virtual machine after the operation has completed.



Syntax

» *Input:*

```
[{:vmGuid => :string},
{:customAttribute=>ProxyCustomAttribute}]
```

» *Output:*

```
[[ProxyCustomAttribute]]
```

Examples

The following examples demonstrate **VmAddCustomAttributes** usage:

Example 7.39. VmAddCustomAttributes WSDL

```

<message name="VmAddCustomAttributes">
    <part name="vmGuid" type="xsd:string" />
    <part name="customAttribute"
        type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />
</message>
<message name="VmAddCustomAttributesResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttribute">
    <xsd:all>
        <xsd:element name="value" type="xsd:string"/>
        <xsd:element name="section" type="xsd:string"/>
        <xsd:element name="source" type="xsd:string"/>
        <xsd:element name="resource_type" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="resource_id" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
```

Example 7.40. VmAddCustomAttributes Output (Windows PowerShell)

```

section          :
resource_type   : Vm
value           : V1
resource_id     : 3
source          : EVM
region_number   : 0
name            : N1
region_description : Region 0
id              : 94

section          :
resource_type   : Vm
value           : V2
resource_id     : 3
source          : EVM
region_number   : 0
name            : N2
region_description : Region 0
id              : 95

```

7.22. VmAddCustomAttributeByFields

VmAddCustomAttributeByFields adds or updates a custom attribute of a virtual machine. The method returns the resultant set of custom attributes associated with the virtual machine after the operation has completed.

Parameters

vmGuid

GUID of VM to update

name

Name of custom attribute to add or update

value

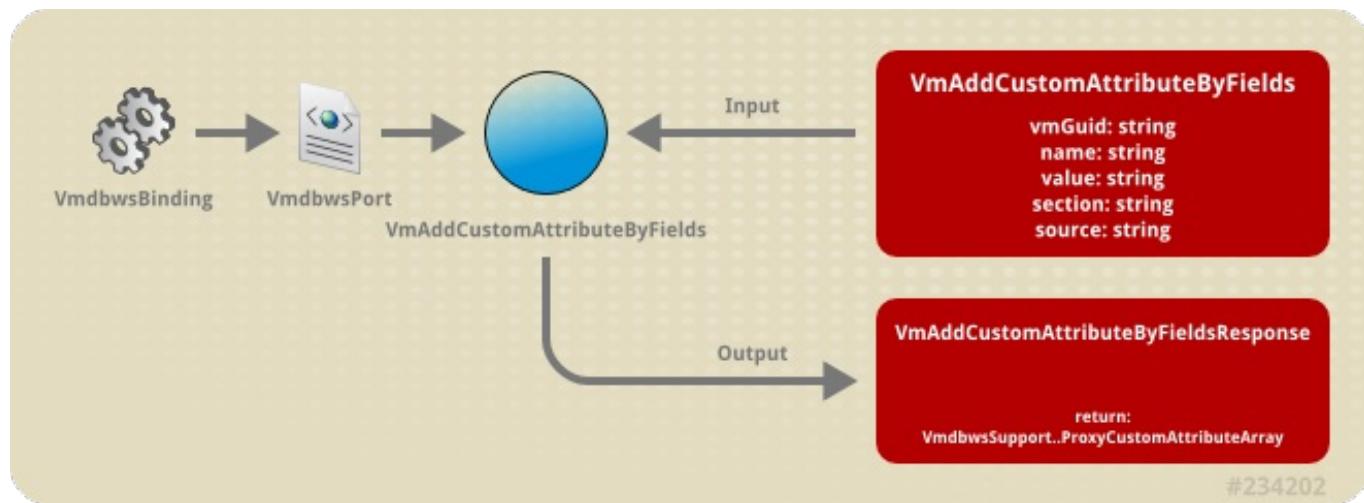
Value of custom attribute

section (optional)

Custom attribute section name. Default: null.

source (optional)

If set to **VC** the custom attribute name must already exist in the Virtual Center that the virtual machine is connected to and the value is set within Virtual Center as well as the CloudForms Management Engine database. Default: null.



Syntax

» *Input:*

```
[{:vmGuid => :string},
 {:name => :string},
 {:value => :string},
 {:section => :string},
 {:source => :string}]
```

» *Output:*

```
[[ProxyCustomAttribute]]
```

Examples

The following examples demonstrate **VmAddCustomAttributeByFields** usage:

Example 7.41. VmAddCustomAttributeByFields WSDL

```

<message name="VmAddCustomAttributeByFields">
    <part name="vmGuid" type="xsd:string" />
    <part name="name" type="xsd:string" />
    <part name="value" type="xsd:string" />
    <part name="section" type="xsd:string" />
    <part name="source" type="xsd:string" />
</message>
<message name="VmAddCustomAttributeByFieldsResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttribute">
    <xsd:all>
        <xsd:element name="value" type="xsd:string"/>
        <xsd:element name="section" type="xsd:string"/>
        <xsd:element name="source" type="xsd:string"/>
        <xsd:element name="resource_type" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
```

```

<xsd:element name="name" type="xsd:string"/>
<xsd:element name="id" type="xsd:string"/>
<xsd:element name="resource_id" type="xsd:string"/>
</xsd:all>
</xsd:complexType>

```

Example 7.42. VmAddCustomAttributeByFields Output (Windows PowerShell)

```

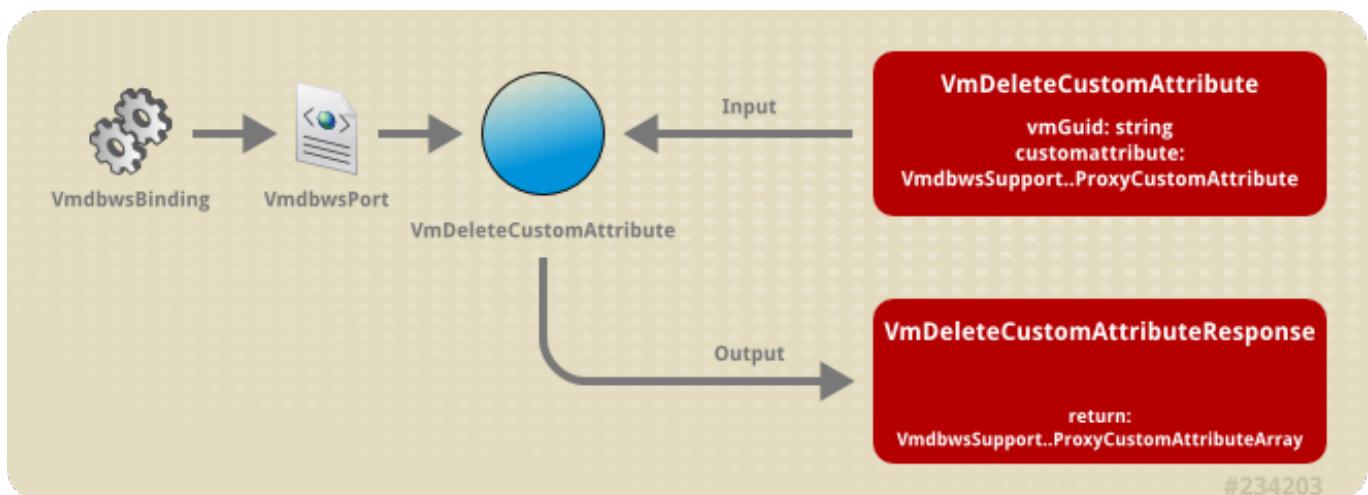
section      :
resource_type : Vm
value        : V1
resource_id  : 3
source       : EVM
region_number : 0
name         : N1
region_description : Region 0
id           : 94

section      :
resource_type : Vm
value        : V2
resource_id  : 3
source       : EVM
region_number : 0
name         : N2
region_description : Region 0
id           : 95

```

7.23. VmDeleteCustomAttribute

VmDeleteCustomAttribute deletes a custom attribute associated with a virtual machine based on the values of a **ProxyCustomAttribute** object. The method returns the resultant set of custom attributes associated with the virtual machine after the operation has completed.



Syntax

- » *Input:*

```
[{vmGuid => :string},
{:customAttribute=>ProxyCustomAttribute}]
```

» *Output:*

```
[[ProxyCustomAttribute]]
```

Examples

The following examples demonstrate **VmDeleteCustomAttribute** usage:

Example 7.43. VmDeleteCustomAttribute WSDL

```
<message name="VmDeleteCustomAttribute">
  <part name="vmGuid" type="xsd:string" />
  <part name="customAttribute"
    type="typens:VmdbwsSupport..ProxyCustomAttribute" />
</message>
<message name="VmDeleteCustomAttributeResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttribute">
  <xsd:all>
    <xsd:element name="value" type="xsd:string"/>
    <xsd:element name="section" type="xsd:string"/>
    <xsd:element name="source" type="xsd:string"/>
    <xsd:element name="resource_type" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="resource_id" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
```

Example 7.44. VmDeleteCustomAttribute Output (Windows PowerShell)

```
section          :
resource_type   : Vm
value           : V1
resource_id     : 3
source          : EVM
region_number   : 0
name            : N1
region_description : Region 0
id              : 94

section          :
resource_type   : Vm
value           : V2
resource_id     : 3
source          : EVM
```

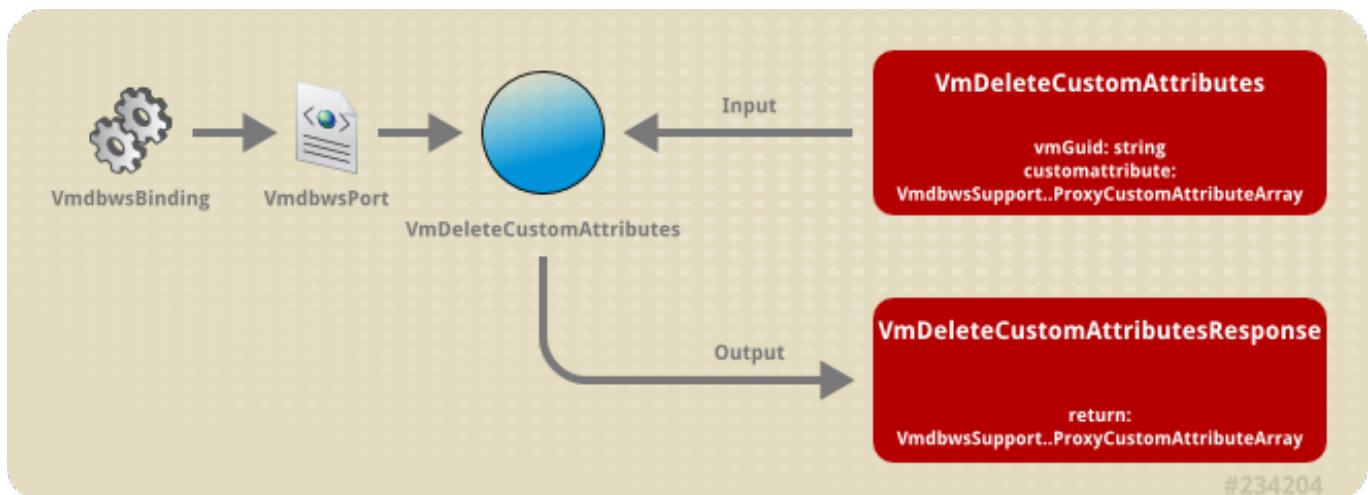
```

region_number      : 0
name              : N2
region_description : Region 0
id                : 95

```

7.24. VmDeleteCustomAttributes

VmDeleteCustomAttributes deletes multiple custom attributes associated with a virtual machine based on the values of the **ProxyCustomAttribute** objects. The method returns the resultant set of custom attributes associated with the virtual machine after the operation has completed.



Syntax

- » *Input:*

```
[{vmGuid => :string},
{:customAttribute=>ProxyCustomAttribute}]
```

- » *Output:*

```
[[ProxyCustomAttribute]]
```

Examples

The following examples demonstrate **VmDeleteCustomAttributes** usage:

Example 7.45. VmDeleteCustomAttributes WSDL

```

<message name="VmDeleteCustomAttributes">
    <part name="vmGuid" type="xsd:string" />
    <part name="customAttribute"
        type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />
</message>
<message name="VmDeleteCustomAttributesResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyCustomAttributeArray" />

```

```

</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttribute">
  <xsd:all>
    <xsd:element name="value" type="xsd:string"/>
    <xsd:element name="section" type="xsd:string"/>
    <xsd:element name="source" type="xsd:string"/>
    <xsd:element name="resource_type" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="resource_id" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>

```

Example 7.46. VmDeleteCustomAttributes Output (Windows PowerShell)

```

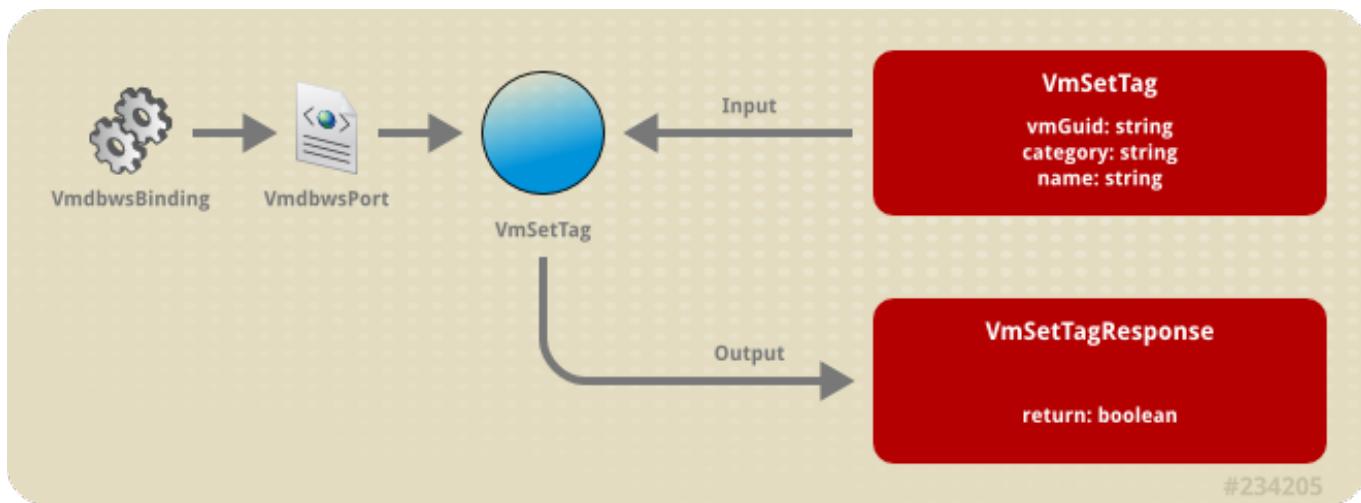
section          :
resource_type   : Vm
value           : V1
resource_id     : 3
source          : EVM
region_number   : 0
name            : N1
region_description : Region 0
id              : 94

section          :
resource_type   : Vm
value           : V2
resource_id     : 3
source          : EVM
region_number   : 0
name            : N2
region_description : Region 0
id              : 95

```

7.25. VmSetTag

VmSetTag applies a tag to a virtual machine. It identifies the tag through a tag **category** and **name**.



Syntax

- » *Input:*

```
[{:vmGuid => :string},
 {:category=>:string},
 {:name=>:string}]
```

- » *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **VmSetTag** usage:

Example 7.47. VmSetTag WSDL

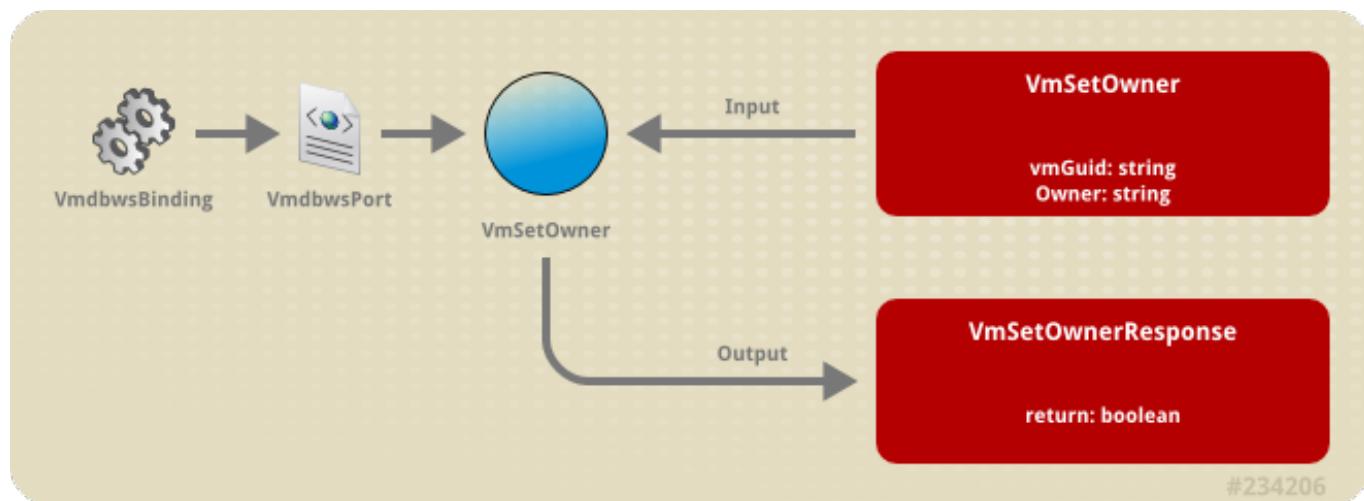
```
<message name="VmSetTag">
    <part name="vmGuid" type="xsd:string" />
    <part name="category" type="xsd:string" />
    <part name="name" type="xsd:string" />
</message>
<message name="VmSetTagResponse">
    <part name="return" type="xsd:boolean" />
</message>
```

Example 7.48. VmSetTag Output (Windows PowerShell)

```
...Result:true
```

7.26. VmSetOwner

VmSetOwner assigns an owner to a virtual machine in the CloudForms Management Engine database. If the owner does not exist in the CloudForms Management Engine database and CloudForms Management Engine is configured to use LDAP, it attempts to look up and add the user to the CloudForms Management Engine database.



Syntax

- » *Input:*

```
[{:vmGuid => :string},
{:owner=>:string}]
```

- » *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **VmSetOwner** usage:

Example 7.49. VmSetOwner WSDL

```
<message name="VmSetOwner">
    <part name="vmGuid" type="xsd:string" />
    <part name="owner" type="xsd:string" />
</message>
<message name="VmSetOwnerResponse">
    <part name="return" type="xsd:boolean" />
</message>
```

Example 7.50. mSetOwner Output (Windows PowerShell)

```
...Result:true
```

Chapter 8. Automate Web Services

This chapter describes web services used by CloudForms Management Engine Automate Feature Set.

At the end of this chapter, you will:

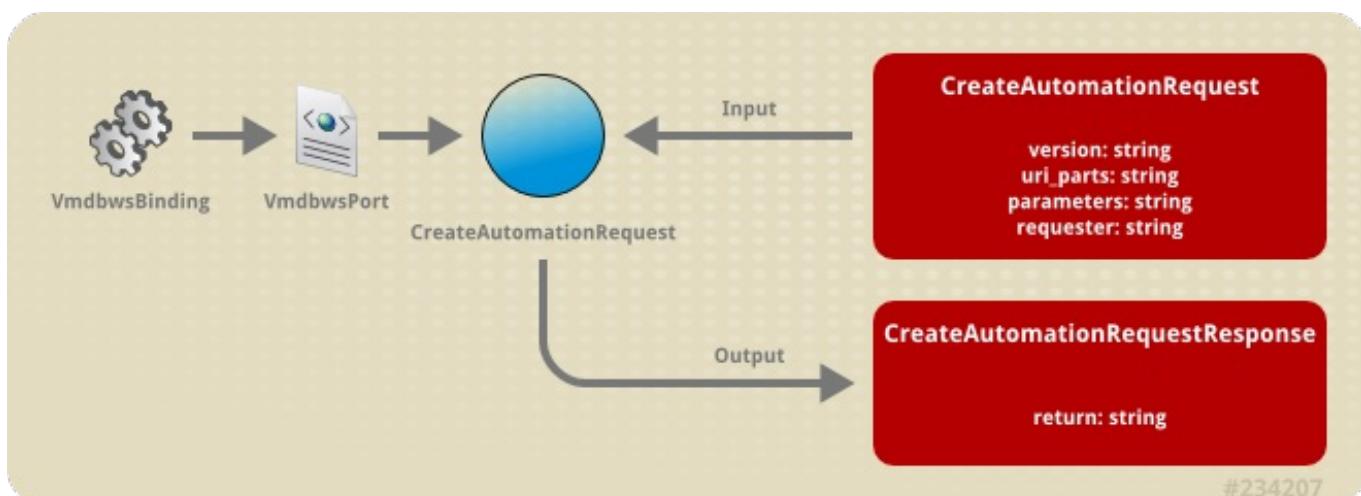
- » Know what web service methods are available to Automate.
- » Be familiar with the parameters that each method can take.
- » See examples of the outputs for each method.

Web Services associated with Automate pertain to creating automated workflows and provisioning. For each Web service, we supply a brief description, input, output, the excerpt from the WSDL, and a sample output.

You can find a full copy of the WSDL file in the WSDL File Appendix.

8.1. CreateAutomationRequest

This method initiates an automation request. Use it to drive an automation workflow and provide feedback to the requester.



Syntax

» Input:

```
[{:version => :string},
 {:uri_parts => :string},
 {:parameters => :string},
 {:requester => :string}]
```

uri_parts example: **namespace=NNN|class=CCC|instance=III|message=MMM**

parameters example: **var1=vvvvv|var2=www|var3=xxxxx**

requester example: **user_name=fred|auto_approve=true**

» Output:

[string]

Examples

The following examples demonstrate **CreateAutomationRequest** usage:

Example 8.1. CreateAutomationRequest WSDL

```
<message name="CreateAutomationRequest">
  <part name="version" type="xsd:string"/>
  <part name="uri_parts" type="xsd:string"/>
  <part name="parameters" type="xsd:string"/>
  <part name="requester" type="xsd:string"/>
</message>
<message name="CreateAutomationRequestResponse">
  <part name="return" type="xsd:string"/>
</message>
```

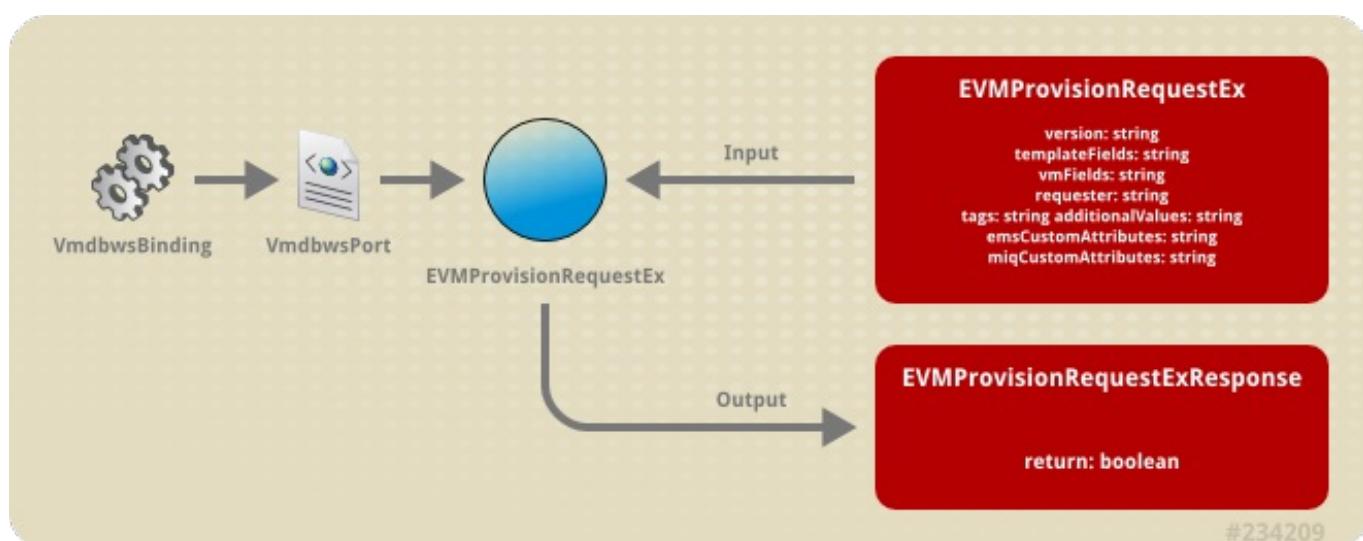
Example 8.2. CreateAutomationRequest Output (Windows PowerShell)

```
CreateAutomationRequest ID:17
done
```

8.2. EVMProvisionRequestEx

EVMProvisionRequestEx initiates a virtual machine provision request. Except for **version**, all fields are strings that allow for multiple values passed using the format **name=value** and separating name-value pairs with the pipe symbol ("|"). For example:

```
number_of_cpus=1|vm_name=test_ws_vm|vm_memory=1024
```



Name	Type	Description
version	string	Interface version. Should be set to 1.1

Name	Type	Description
templateFields	string	Fields used to find template virtual machine. Provide any or all fields. Supply a guid or ems_guid to protect against matching same-named templates on different Providers within CloudForms Management Engine. Supported fields are: name=[VM Template Name] Example: template_1 guid=[guid value from vms table] ems_guid=[uid_ems value from vms table]
vmFields	string	Allows for the setting of properties on the Catalog, Hardware, Network, Customize, and Schedule tabs in the Provisioning dialog.
requester	string	Allows for the setting of properties on the Requester tab in the Provisioning dialog.
tags	string	Tags to apply to newly created VM. Example: network_location=Internal cc=001
additionalValues	string	Additional values are name-value pairs stored with a provision request, but not used by the core provisioning code. These values are usually referenced from automate methods for custom processing. Example: Store a request_id from an external system so the system can be notified during the provisioning process.
emsCustomAttributes	string	Custom attributes applied to the virtual machine through the Provider as part of provisioning.
miqCustomAttributes	string	Custom attributes applied to the virtual machine and stored in the CloudForms Management Engine database as part of provisioning.

Syntax

* Input:

```
[{:version => :string},
{:templateFields => :string},
{:vmFields => :string},
{:requester => :string},
```

```
{:tags => :string},
{:additionalValues => :string},
{:emsCustomAttributes => :string},
{:miqCustomAttributes => :string}]
```

» *Output:*

```
[:boolean]
```

Examples

The following examples demonstrate **EVMProvisionRequestEx** usage:

Example 8.3. EVMProvisionRequestEx WSDL

```
<message name="EVMProvisionRequestEx">
  <part name="version" type="xsd:string" />
  <part name="templateFields" type="xsd:string" />
  <part name="vmFields" type="xsd:string" />
  <part name="requester" type="xsd:string" />
  <part name="tags" type="xsd:string" />
  <part name="additionalValues" type="xsd:string" />
  <part name="emsCustomAttributes" type="xsd:string" />
  <part name="miqCustomAttributes" type="xsd:string" />
</message>
<message name="EVMProvisionRequestExResponse">
  <part name="return" type="xsd:boolean" />
</message>
```

Example 8.4. EVMProvisionRequestEx Output (Windows PowerShell)

```
id          : 110
description : Provision from [WinXP Template] to [test_ws_vm]
state       : pending_approval
resource_type : MiqProvisionRequest
resource_id  : 112
created_on   : 12/16/2010 3:40:48 PM
updated_on   : 12/16/2010 3:40:48 PM
fulfilled_on : 1/1/0001 12:00:00 AM
requester_id : 1
requester_name : Administrator
```

Supported Fields

Table 8.1. Requester

Field	Type	Description
owner_phone	string	Phone
owner_country	string	Country/Region

Field	Type	Description
owner_phone_mobile	string	Mobile phone
owner_title	string	Title
owner_first_name	string	First name
owner_manager	string	Manager name
owner_address	string	Address
owner_company	string	Company
owner_last_name	string	Last name
owner_manager_email	string	Manager e-mail address
owner_city	string	City
owner_department	string	Department
owner_load_ldap	button	Look up LDAP e-mail address
owner_manager_phone	string	Manager phone
owner_state	string	State
owner_office	string	Office
owner_zip	string	Zip code
owner_email	string	E-Mail
request_notes	string	Notes

Table 8.2. Customize

Field	Type	Description
dns_servers	string	DNS server list
sysprep_organization	string	Organization
sysprep_password	string	New Administrator Password
sysprep_custom_spec	string	Name
sysprep_server_license_mode	string	Identification. Values: perServer: Per server, perSeat: Per seat
ldap_ous	string	LDAP Group
sysprep_timezone	string	Timezone
dns_suffixes	string	DNS Suffix list
sysprep_product_id	string	ProductID
sysprep_identification	string	Identification. Values: domain: Domain, workgroup: Workgroup
sysprep_per_server_max_connections	string	Maximum Connections. Default: '5'
sysprep_computer_name	string	Computer Name
sysprep_workgroup_name	string	Workgroup Name. Default: WORKGROUP
sysprep_spec_override	boolean	Override Specification Values. Values: false: 0, true: 1; Default: false
addr_mode	string	Address Mode. Values: static: Static, dhcp: DHCP, Default: dhcp
linux_host_name	string	Computer Name
sysprep_domain_admin	string	Domain Admin
sysprep_change_sid	boolean	Change SID. Values: false: 0, true: 1; Default: true
sysprep_domain_name	string	Domain Name
sysprep_upload_file	string	Upload
gateway	string	Gateway

Field	Type	Description
ip_addr	string	IP Address
linux_domain_name	string	Domain Name
sysprep_domain_password	string	Domain Password
sysprep_auto_logon	boolean	Auto Logon. Values: false: 0, true: 1; Default: true
sysprep_enabled	string	Customize. Default: disabled
sysprep_delete_accounts	boolean	Delete Accounts. Values: false: 0, true: 1; Default: false
sysprep_upload_text	string	Sysprep Text
wins_servers	string	WINS Server list
subnet_mask	string	Subnet Mask
sysprep_full_name	string	Full Name
sysprep_auto_logon_count	integer	Auto Logon Count. Values: 1: '1', 2: '2', 3: '3'; Default: 1
customization_template_id	integer	Script Name
root_password	string	Root Password
hostname	string	Host Name
customization_template_script	string	Script Text

Table 8.3. Environment

Field	Type	Description
new_datastore_grow_increment	integer	Grow Increment (GB)
new_datastore_create	boolean	Create Datastore. Values: false: 0, true: 1; Default: false
placement_cluster_name	integer	Name
new_datastore_aggregate	string	Aggregate
new_datastore_max_size	integer	Max Size (GB)
new_datastore_storage_controller	string	Controller
cluster_filter	integer	Filter
host_filter	integer	Filter
ds_filter	integer	Filter
new_datastore_volume	string	Volume
placement_host_name	integer	Name
placement_ds_name	integer	Name
new_datastore_fs_type	string	FS Type. Values: NFS: NFS, VMFS: VMFS; Default: NFS
rp_filter	integer	Filter
new_datastore_thin_provision	string	Thin Provision
placement_auto	boolean	Choose Automatically. Values: false: 0, true: 1; Default: false
new_datastore_size	integer	Size (GB)
new_datastore_autogrow	string	Autogrow. Values: false: 0, true: 1; Default: false
placement_folder_name	integer	Name
new_datastore_name	string	Name
placement_rp_name	integer	Name
placement_dc_name	integer	Name

Table 8.4. Service Catalog

Field	Type	Description
number_of_vms	integer	Count. Max: 50; Default: 1
vm_VM Description	string	VM Description. Max length: 100
vm_prefix	string	VM Name Prefix/Suffix
src_vm_id	integer	Name
vm_name	string	VM Name
pxe_image_id	string	Image
pxe_server_id	integer	Server
host_name	string	Host Name
provision_type	string	Provision Type. Default: vmware
linked_clone	boolean	Linked Clone. Values: false: 0, true: 1; Default: false
snapshot	string	Snapshot
vm_filter	integer	Filter

Table 8.5. Schedule

Field	Type	Description
schedule_type	string	When to Provision. Values: schedule: Schedule, immediately: Immediately on Approval; Default: immediately
vm_auto_start	boolean	Power on virtual machines after creation. Values: false: 0, true: 1; Default: true
schedule_time	time	Provision on
retirement	integer	Time until Retirement. Values: 0: Indefinite, 1.month: 1 Month, 3.months: 3 Months, 6.months: 6 Months; Default: 0
retirement_warn	integer	Retirement Warning. Values: 1.week: 1 Week, 2.weeks: 2 Weeks, 30.days: 30 Days; Default: 1.week

Table 8.6. Desktop

Field	Type	Description
vdi_new_desktop_pool_name	string	Name
vdi_farm	string	Farm
vdi_new_desktop_pool_assignment	string	Desktop Pools Assignment
vdi_desktop_pool_create	boolean	Create Desktop Pool Values: false: 0, true: 1; Default: false
vdi_desktop_pool	string	Desktop Pools
vdi_enabled	boolean	Enabled. Values: false: 0, true: 1; Default: false
vdi_desktop_pool_user_list	string	User List

Table 8.7. Network

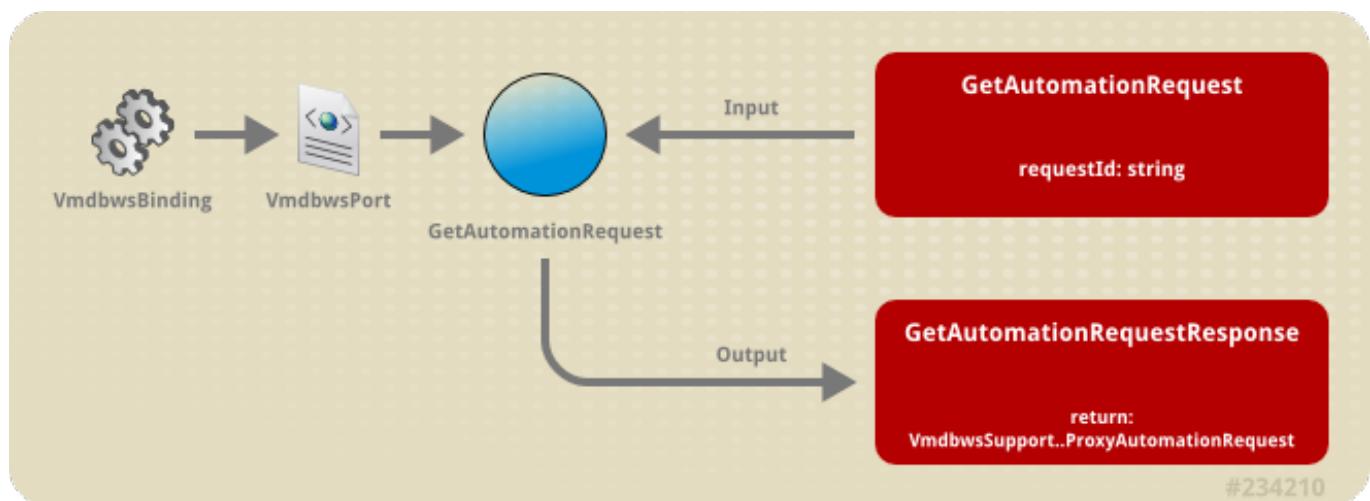
Field	Type	Description
vlan	string	vLan. Values: dvs: true, vlans: true
mac_address	string	MAC Address

Table 8.8. Hardware

Field	Type	Description
disk_format	string	Disk Format. Values: thick: Thick, thin: Thin, unchanged: Default; Default: unchanged
cpu_limit	integer	CPU (MHz)
memory_limit	integer	Memory (MB)
number_of_sockets	integer	Number of Sockets. Values: 1: '1', 2: '2', 4: '4', 8: '8'; Default: 1
cores_per_socket	integer	Cores per Socket. Values: 1: '1', 2: '2', 4: '4', 8: '8'; Default: 1
cpu_reserve	integer	CPU (MHz)
vm_memory	string	Memory (MB). Values: '2048': '2048', '4096': '4096', '1024': '1024'; Default: '1024'
memory_reserve	integer	Memory (MB)
network_adapters	integer	Network Adapters. Values: 1: '1', 2: '2', 3: '3', 4: '4'; Default: 1

8.3. Get AutomationRequest

This method queries the current automation request and returns the request object.



Syntax

- » *Input: [{:requestid => :xsd:string}]*
- » *Output: [VmdbwsSupport..ProxyAutomationRequest]*

Examples

The following examples demonstrate **GetAutomationRequest** usage:

Example 8.5. GetAutomationRequest WSDL

```

<message name="GetAutomationRequest">
  <part name="requestId" type="xsd:string"/>
</message>
<message name="GetAutomationRequestResponse">
  <part name="return"
type="typens:VmdbwsSupport..ProxyAutomationRequest"/>
</message>
...
  <xsd:complexType name="VmdbwsSupport..ProxyAutomationRequest">
    <xsd:all>
      <xsd:element name="description" type="xsd:string"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="status" type="xsd:string"/>
      <xsd:element name="userid" type="xsd:string"/>
      <xsd:element name="state" type="xsd:string"/>
      <xsd:element name="message" type="xsd:string"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="id" type="xsd:string"/>
      <xsd:element name="automation_tasks"
type="typens:VmdbwsSupport..AutomationTaskSummaryArray"/>
    </xsd:all>
  </xsd:complexType>

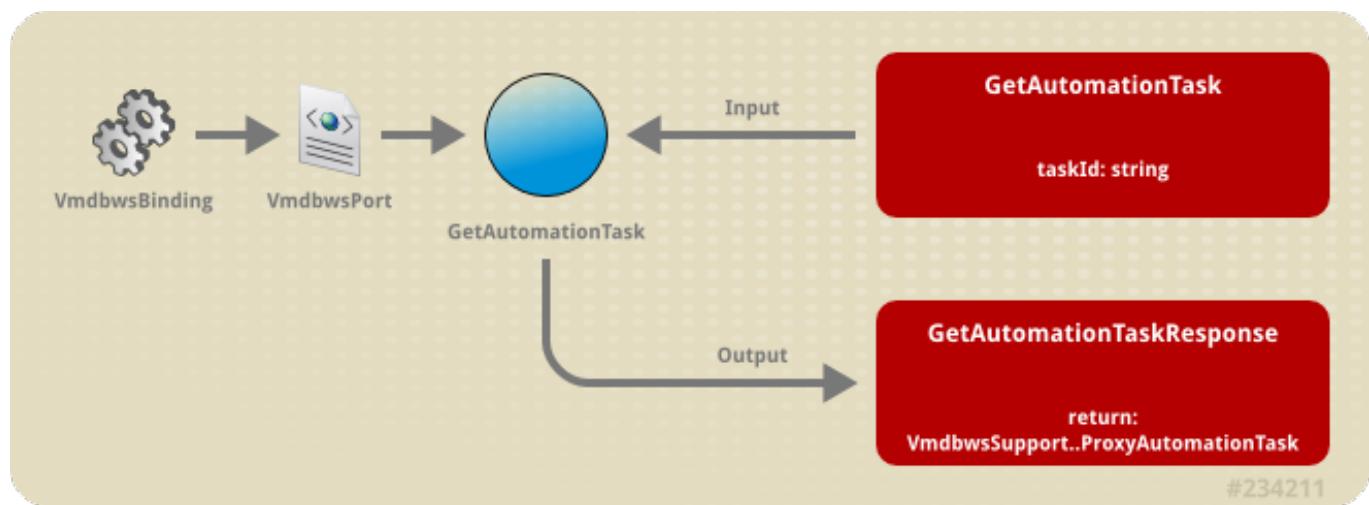
```

Example 8.6. GetAutomationRequest Output (Windows PowerShell)

status	:	Ok
updated_on	:	1/6/2012 5:25:32 AM
description	:	Automation Request
userid	:	admin
message	:	Automation Request completed
region_number	:	0
region_description	:	Region 0
created_on	:	1/6/2012 5:24:56 AM
automation_tasks	:	{8}
id	:	8
state	:	finished

8.4. GetAutomationTask

This method is used to get the individual task details from an automation request.



Syntax

- » *Input:* [{ : taskId => : string }]
- » *Output:* [VmdbwsSupport..ProxyMiqProvisionRequest]

Examples

The following examples demonstrate **GetAutomationTask** usage:

Example 8.7. GetAutomationTask WSDL

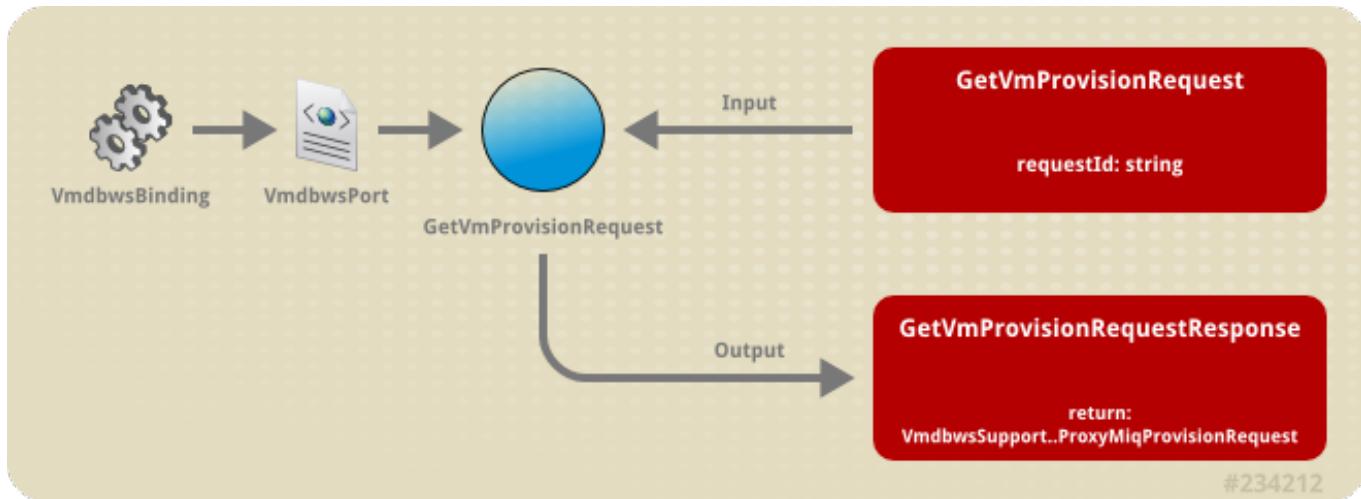
```

<message name="GetAutomationTask">
  <part name="taskId" type="xsd:string"/>
</message>
<message name="GetAutomationTaskResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyAutomationTask"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyAutomationTask">
  <xsd:all>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="userid" type="xsd:string"/>
    <xsd:element name="status" type="xsd:string"/>
    <xsd:element name="automation_request"
      type="typens:VmdbwsSupport..AutomationRequestSummary"/>
      <xsd:element name="state" type="xsd:string"/>
      <xsd:element name="message" type="xsd:string"/>
      <xsd:element name="automation_request_id" type="xsd:string"/>
      <xsd:element name="updated_on" type="xsd:dateTime"/>
      <xsd:element name="id" type="xsd:string"/>
    </xsd:all>
  </xsd:complexType>

```

8.5. GetVmProvisionRequest

This method queries the current request and returns the provision request object.



Syntax

- **Input:** [{: requestId => :xsd:string}]
- **Output:** [VmdbwsSupport..ProxyMiqProvisionRequest]

Examples

The following examples demonstrate **GetVmProvisionRequest** usage:

Example 8.8. GetVmProvisionRequest WSDL

```

<message name="GetVmProvisionRequest">
    <part name="requestId" type="xsd:string"/>
</message>
<message name="GetVmProvisionRequestResponse">
    <part name="return"
        type="typens:VmdbwsSupport..ProxyMiqProvisionRequest"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyMiqProvisionRequest">
    <xsd:all>
        <xsd:element name="request_tags"
            type="typens:VmdbwsSupport..TagArray"/>
            <xsd:element name="src_vm_id" type="xsd:string"/>
            <xsd:element name="created_on" type="xsd:dateTime"/>
            <xsd:element name="description" type="xsd:string"/>
            <xsd:element name="status" type="xsd:string"/>
            <xsd:element name="userid" type="xsd:string"/>
            <xsd:element name="approval_state" type="xsd:string"/>
            <xsd:element name="provision_type" type="xsd:string"/>
            <xsd:element name="request_state" type="xsd:string"/>
            <xsd:element name="state" type="xsd:string"/>
            <xsd:element name="message" type="xsd:string"/>
            <xsd:element name="vms"
                type="typens:VmdbwsSupport..VmListArray"/>
                    <xsd:element name="source"
                        type="typens:VmdbwsSupport..VmList"/>

```

```

<xsd:element name="updated_on" type="xsd:dateTime"/>
<xsd:element name="miq_request_tasks"
type="typens:VmdbwsSupport..MiqProvisionTaskListArray">
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="request_options"
type="typens:VmdbwsSupport..KeyValueStructArray"/>
</xsd:all>
</xsd:complexType>

```

Example 8.9. GetVmProvisionRequest Output (Windows PowerShell)

```

request_tags      : {Cost Center, Network Location}
request_state     : pending
region_description: Region 0
status            : Ok
updated_on        : 9/12/2011 5:41:57 PM
approval_state    : approved
provision_type    : template
vms               : {}
description       : Provision from [WinXP Template] to [test_ws_vm]
src_vm_id         : 33
message           : VM Provisioning - Automation Starting
request_options   : {sysprep_identification, network_adapters,
delivered_on, sysprep_change
                    _sid...}
state              : pending
created_on        : 9/12/2011 5:41:21 PM
miq_request_tasks: {13}
source             : VmdbwsSupport.VmdbwsSupportVmList
id                : 21
userid            : admin
region_number     : 0

```

Example 8.10. GetAutomationTask Output (Windows PowerShell)

```

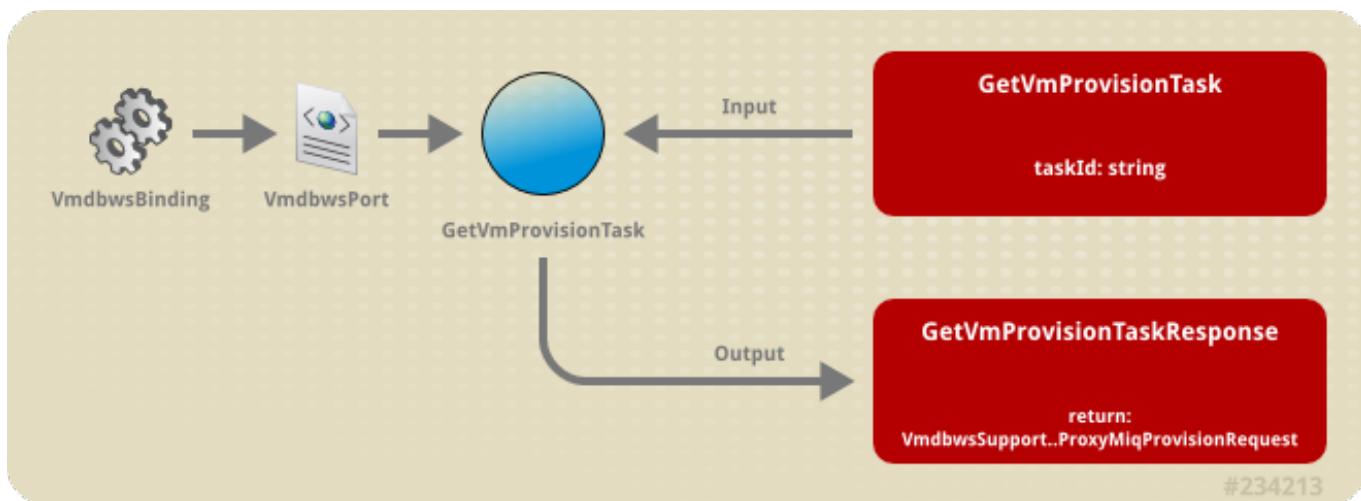
automation_request   :
VmdbwsSupport.VmdbwsSupportAutomationRequestSummary
updated_on           : 1/6/2012 5:25:32 AM
status              : Ok
description         : Automation Request
message             : Automation Request completed
userid              : admin
region_description  : Region 0
id                  : 8
region_number       : 0
state               : finished
automation_request_id: 8

```

8.6. GetVmProvisionTask

This method is used to get the individual task details from a virtual machine provision request. The

miq_request_tasks property returned in the **ProxyMiqProvisionRequest** object contains the array of **task_ids**.



Syntax

- » *Input: [{:taskId => :string}]*
- » *Output: [VmdbsSupport..ProxyMiqProvisionRequest]*

Examples

The following examples demonstrate **GetVmProvisionTask** usage:

Example 8.11. GetVmProvisionTask WSDL

```

<message name="GetVmProvisionTask">
    <part name="taskId" type="xsd:string"/>
</message>
<message name="GetVmProvisionTaskResponse">
    <part name="return"
type="typens:VmdbsSupport..ProxyMiqProvisionTask"/>
</message>
...
<xsd:complexType name="VmdbsSupport..ProxyMiqProvisionTask">
    <xsd:all>
        <xsd:element name="destination"
type="typens:VmdbsSupport..VmList"/>
        <xsd:element name="request_tags"
type="typens:VmdbsSupport..TagArray"/>
            <xsd:element name="created_on" type="xsd:dateTime"/>
            <xsd:element name="src_vm_id" type="xsd:string"/>
            <xsd:element name="vm_id" type="xsd:string"/>
            <xsd:element name="description" type="xsd:string"/>
            <xsd:element name="status" type="xsd:string"/>
            <xsd:element name="userid" type="xsd:string"/>
            <xsd:element name="provision_type" type="xsd:string"/>
            <xsd:element name="state" type="xsd:string"/>
            <xsd:element name="message" type="xsd:string"/>
            <xsd:element name="source"
type="typens:VmdbsSupport..VmList"/>
    
```

```

<xsd:element name="updated_on" type="xsd:dateTime"/>
<xsd:element name="miq_provision_request_id"
type="xsd:string"/>
    <xsd:element name="request_options"
type="typens:VmdbwsSupport..KeyValueStructArray"/>
        <xsd:element name="id" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>

```

Example 8.12. GetVmProvisionTask Output (Windows PowerShell)

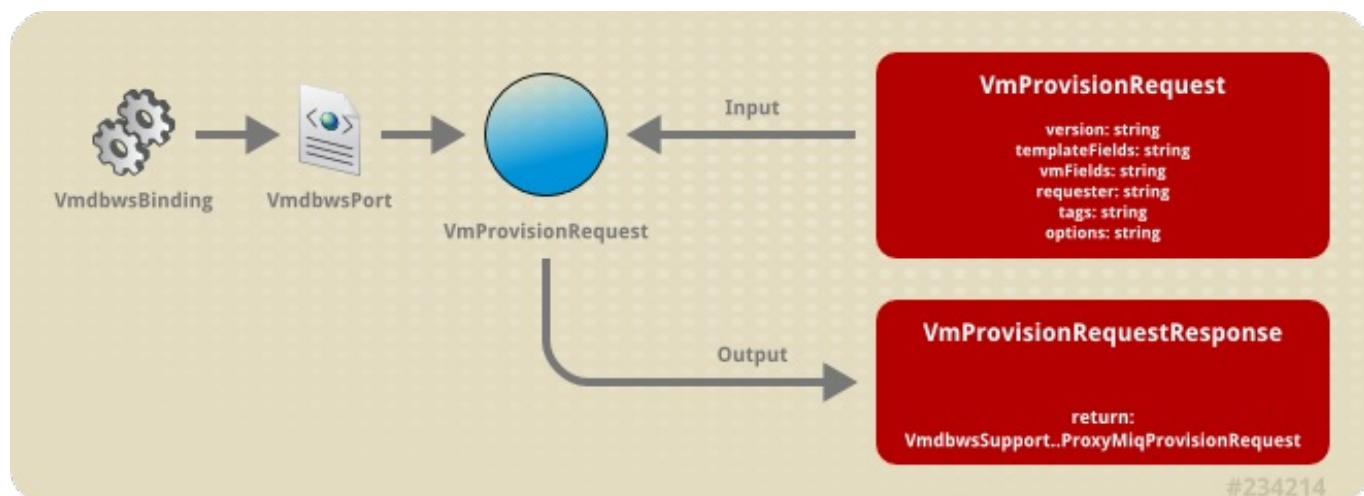
```

request_tags          : {Cost Center, Network Location}
region_description   : Region 0
status                : Ok
updated_on            : 9/12/2011 6:23:35 PM
provision_type        : template
description           : Provision from [WinXP Template] to
[test_ws_vm]
destination           :
request_options       : {sysprep_identification, network_adapters,
delivered_on, sysprep_change_sid...}
src_vm_id             : 33
message               : Created VM
vm_id                 :
state                 : queued
miq_provision_request_id : 27
created_on            : 9/12/2011 6:22:22 PM
source                : VmdbwsSupport.VmdbwsSupportVmList
id                    : 19
userid                : admin
region_number         : 0

```

8.7. VmProvisionRequest

This method initiates a virtual machine provision request. It is different from the **EVMProvisionRequestEx** method in that optional values are provided through the **ProvisionOptions** object and the return value is the **MiqRequest** object generated by the operation. Refer to the **EVMProvisionRequestEx** method for details on each field.



#234214

Syntax

» *Input:*

```
[{:version => :string},
{:templateFields => :string},
{:vmFields => :string},
{:requester => :string},
{:tags => :string},
{:options => ProvisionOptions}]
```

» *Output:*

```
[VmdbwsSupport..ProxyMiqProvisionRequest]
```

Examples

The following examples demonstrate **VmProvisionRequest** usage:

Example 8.13. VmProvisionRequest WSDL

```
<message name="VmProvisionRequest">
  <part name="version" type="xsd:string" />
  <part name="templateFields" type="xsd:string" />
  <part name="vmFields" type="xsd:string" />
  <part name="requester" type="xsd:string" />
  <part name="tags" type="xsd:string" />
  <part name="options" type="typens:VmdbwsSupport..ProvisionOptions" />
</message>
<message name="VmProvisionRequestResponse">
  <part name="return"
    type="typens:VmdbwsSupport..ProxyMiqProvisionRequest"/>
</message>
...
<xsd:complexType name="VmdbwsSupport..ProxyMiqProvisionRequest">
  <xsd:all>
    <xsd:element name="request_tags"
      type="typens:VmdbwsSupport..TagArray"/>
      <xsd:element name="src_vm_id" type="xsd:string"/>
      <xsd:element name="created_on" type="xsd:dateTime"/>
      <xsd:element name="description" type="xsd:string"/>
      <xsd:element name="status" type="xsd:string"/>
      <xsd:element name="userid" type="xsd:string"/>
      <xsd:element name="approval_state" type="xsd:string"/>
      <xsd:element name="provision_type" type="xsd:string"/>
      <xsd:element name="request_state" type="xsd:string"/>
      <xsd:element name="state" type="xsd:string"/>
      <xsd:element name="message" type="xsd:string"/>
      <xsd:element name="vms"
        type="typens:VmdbwsSupport..VmListArray"/>
        <xsd:element name="source"
          type="typens:VmdbwsSupport..VmList"/>
          <xsd:element name="updated_on" type="xsd:dateTime"/>
```

```

<xsd:element name="miq_request_tasks"
type="typens:VmdbwsSupport..MiqProvisionTaskListArray"/>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="request_options"
type="typens:VmdbwsSupport..KeyValueStructArray"/>
</xsd:all>
</xsd:complexType>

```

Example 8.14. VmProvisionRequest Output (Windows PowerShell)

```

request_tags      : {Cost Center, Network Location}
request_state     : pending
region_description: Region 0
status            : Ok
updated_on        : 9/12/2011 5:41:22 PM
approval_state    : pending_approval
provision_type    : template
vms               : {}
description       : Provision from [WinXP Template] to [test_ws_vm]
src_vm_id         : 33
message           : VM Provisioning - Request Created
request_options   : {sysprep_auto_logon_count, number_of_vms,
src_ems_id, cpu_limit...}
state              : pending
created_on        : 9/12/2011 5:41:21 PM
miq_request_tasks: {}
source             : VmdbwsSupport.VmdbwsSupportVmList
id                : 21
userid            : admin
region_number     : 0

```

Examples

This appendix shows examples of how to call the CloudForms Management Engine WSDL. Note that how the WSDL is called is entirely dependent on which web services client you are using.

A.1. Windows PowerShell: List All Provider, Hosts and VMs

This script lists each Provider, Host and virtual machine. It also shows how to access the ws_attributes property which contains an array of name/value/data_type structures containing the virtual column data. For ease of use, a method has been included that converts the ws_attributes array into a hash of key/value pairs which allowing for easier data lookup.

```
$ip, $userid, $password = "https://evm_appl_address", "admin", "smartvm"

# Convert ws_attributes into a hash values
function ws_attributes_to_hash($obj) {
    $result = @{}
    $obj.ws_attributes | foreach {$result[$_.name] = $_.value}
    return $result
}

[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
    $true }

$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)
$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmdbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace VmdbWs
Write-Host "Successfully connected to EVM integrate web-services version:
$([string]::join(".", $miqvmdb.Version()))"

Clear-Host

# Get all Providers
$ems_list = $miqvmdb.GetEmsList()
foreach ($e in $miqvmdb.GetEmsByList($ems_list)) {
    Write-Host "Provider: $($e.emstype_description) - $($e.hostname)"
    $attributes = ws_attributes_to_hash($e)
    $attributes | ft name, value

    foreach ($h in $miqvmdb.GetHostsByList($e.hosts)) {
        Write-Host "    Host: $($h.vmm_vendor):$($h.vmm_product) -
$h.hostname"
        $attributes = ws_attributes_to_hash($h)
        $attributes | ft name, value

        # Print the list of all the VMs attached to this host
        foreach ($v in $h.vms) {Write-Host "        VM: $($v.name)"}

        # Print all the attributes for the first VM on this host
        if ($h.vms.Length -gt 0) {
            $vm = $miqvmdb.FindVmByGuid($h.vms[0].guid)
            Write-Host "`n`n      Printing attributes for VM: $($vm.name)"
            $attributes = ws_attributes_to_hash($vm)
            $attributes | ft name, value
        }
    }
}
```

A.2. Windows PowerShell: VM Provisioning

```
[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
    $true }

$ip, $userid, $password = "https://127.0.0.1", <username>, <password>
$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)

$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmdbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace VmdbWs
Write-Host "Successfully connected to EVM integrate web-services version:
$([string]::join(".", $miqvmdb.Version()))"

$version = "1.1"
$templateFields = "name=Standard Template|ems_guid=423a73ad-97b4-43d1-
462e-6f5b7bbdf38b"
$vmFields = "number_of_cpus=1|vm_name=test_ws_vm|vm_memory=1024"
$requester = "owner_email=tester1@redhat.com|user_name=tester1"
$tags = "network_location=Internal|cc=001"
$additionalValues =
"request_id=874d58c94a36231c000251b8408fae5b|item_id=874d58cc4a36231c0013
b21934aa12b4"
$emsCustomAttributes = $null
$miqCustomAttributes = "CreatedBy=web-service|WS Version=1.1"

$result = $miqvmdb.EVMProvisionRequestEx($version, $templateFields,
$vmFields, $requester, $tags, $additionalValues, $emsCustomAttributes,
$miqCustomAttributes)
```

A.3. Windows PowerShell: Get VMProvisionRequest

```
[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
    $true }

$ip, $userid, $password = "https://evm_appl_address", "admin", "smartvm"
$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)

Write-Host "Connecting to EVM integrate web-services at
$(($ip)/vmdbws/wsdl"
$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmdbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace VmdbWs
Write-Host "Successfully connected to EVM integrate web-services version:
$([string]::join(".", $miqvmdb.Version()))"

$param1 = "name=Test Template"
$param2 = "vm_name=ws_test"
$param3 =
"owner_email=test@redhat.com|owner_last_name=admin|owner_first_name=admi
n"
```

```
$param4 = "network_location=Internal|cc=001"
$prov_options = New-Object VmdbWs.VmdbwsSupportProvisionOptions

$result = $miqvmdb.VmProvisionRequest("1.1", $param1, $param2, $param3,
$param4, $prov_options)
Write-Host "VM Provision request created."
$result | ft

do {
    Sleep(10)
    $result = $miqvmdb.GetVmProvisionRequest($result.id)
    Write-Host "Status: $($result.status) ReqState:
 $($result.request_state) ApprovalState: $($result.approval_state)
LastMsg: $($result.message)"
} while ($result.request_state -ne "finished" -and $result.status -ne
"Error")

Write-Host "Provision Request VM list"
$result.vms | ft

$vms = $miqvmdb.GetVmsByList($result.vms[0])
Write-Host "VM Properties"
$vms | fl

Write-Host "done"
```

A.4. Windows PowerShell: CreateAutomationRequest

```
[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
$true }

$ip = "https://evm_appl_address"
$userid, $password = "admin", "smartvm"
$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)

trap {Write-Host $Error[0]; break}

$Error.Clear()
Write-Host "Connecting to EVM integrate web-services at
 $($ip)/vmbws/wsdl"
$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace Vmbws
Write-Host "Successfully connected to EVM integrate web-services"

#####
#
# Parameter1 - version
#
#####
$version = "1.1"

#####
#
#
```

```

# Parameter2 - uri_parts
#
#####
$uri_parts = @()
$uri_parts += "namespace=Sample"
$uri_parts += "class=Methods"
$uri_parts += "instance=InspectME"
$uri_parts += "message=create"
$uri_parts = [string]::join("|", $uri_parts)

#####
#
# Parameter3 - parameters
#
#####
$parameters = @()
$parameters += "parm1=1"
$parameters += "parm2=2"
$parameters = [string]::join("|", $parameters)

#####
#
# Parameter4 - requester
#
#####
$requester = @()
$requester += "owner_email=kmorey@redhat.com"
$requester += "user_name=admin"
$requester += "auto_approve=true"
$requester = [string]::join("|", $requester)

$result = $miqvldb.CreateAutomationRequest($version, $uri_parts,
$parameters, $requester)
Write-Host "CreateAutomationRequest ID:" $result

Write-Host "done"

```

A.5. Windows PowerShell: Get AutomationRequest

```

[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
    $true }

$ip = "https://evm_appl_address"
$userid, $password = "admin", "smartvm"
$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)

trap {Write-Host $Error[0]; break}

$error.Clear()
Write-Host "Connecting to EVM integrate web-services at
 $($ip)/vmdbws/wsdl"
$miqvldb = New-WebServiceProxy -uri "$($ip)/vmdbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace VmdbWs

```

```

Write-Host "Successfully connected to EVM integrate web-services"

#####
#
# Parameter1 - request
#
#####
$request = @()
$request += "9"
$request = [string]::join("|", $request)

$result = $miqvmdb.GetAutomationRequest($request)
Write-Host "Results:"
$result |fl

Write-Host "done"

```

A.6. Windows PowerShell: Get AutomationTask

```

[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
$true }

$ip = "https://evm_appl_address"
$userid, $password = "admin", "smartvm"
$cred = New-Object System.Management.Automation.PsCredential $userid,
(convertto-securestring $password -asplaintext -force)

trap {Write-Host $Error[0]; break}

$error.Clear()
Write-Host "Connecting to EVM integrate web-services at
 $($ip)/vmbws/wsdl"
$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace Vmbws
Write-Host "Successfully connected to EVM integrate web-services"

#####
#
# Parameter1 - task
#
#####
$task = @()
$task += "2"
$task = [string]::join("|", $task)

$result = $miqvmdb.GetAutomationTask($task)
Write-Host "Results:"
$result |fl

Write-Host "done"

```

Advanced Provisioning Values

This appendix shows parameters that only apply to web-service initiated provisioning. Note that these variables cannot be found in the CloudForms Management Engine provisioning dialogs.

B.1. Defining new vLans adapters during provisioning

This value allows you to add new vLan adapters during the provisioning web service.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

```
network##=<network_name>
Optional:
network##.mac_address=<mac_address>
network##.deviceType=<> Default: VirtualPCNet32
(VirtualEthernetCard types: VirtualE1000, VirtualPCNet32, VirtualVmxnet)

network##.connectable.allowGuestControl = <true/false> Default: true
network##.connectable.startConnected = <true/false> Default: true
network##.connectable.connected = <true/false> Default: true
```

Example:

```
network0=VM Network
network0.mac_address=00:50:56:57:58:59
```

B.2. Defining new SCSI Controller during provisioning

The SCSI Controller section is optional. If a controller is required, it will be added with the defined defaults. These settings are only required if you need to override a default value.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

```
ctrlscsi## = <device type> Default: VirtualLsiLogicController
(VirtualSCSIController types: VirtualBusLogicController,
VirtualLsiLogicController)
ctrlscsi##.sharedBus = Default: noSharing
(VirtualSCSISharing types: noSharing, physicalSharing, virtualSharing)
(Note: The ## value defines the controller bus number.)
```

Example:

```
ctrlscsi00=VirtualBusLogicController
ctrlscsi00.sharedBus=virtualSharing
```

B.3. Defining new disks during provisioning

This parameter value and its options allow you to add disks as part of the provisioning web service.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

```
diskscsi##=<controller_#>:<controller_position_#>:<size_in_mb>
Optional:
diskscsi##.datastore=<datastore name>
diskscsi##.filename =<filename>

diskscsi##.connectable.allowGuestControl = <true/false> Default: false
diskscsi##.connectable.startConnected = <true/false> Default: true
diskscsi##.connectable.connected = <true/false> Default: true

diskscsi##.backing.diskmode = <> Default: persistent
(diskMode types: persistent, independent_persistent,
independent_nonpersistent, nonpersistent)
diskscsi##.backing.split = <true/false> Default: false
diskscsi##.backing.thinProvisioned = <true/false> Default: false
diskscsi##.backing.writeThrough = <true/false> Default: false
```

Example:

```
diskscsi0=0:0:10
diskscsi1=0:0:8
diskscsi1.datastore=storage1
diskscsi1.backing.diskmode=independent_persistent
```

B.4. Changing Provisioning Requester

The default Requester for provisioning is the user used to authenticate the web-service transaction. This field allows the requester to be changed to a different user.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

Property Name: user_name

Parameter: 4 requester

Example:

```
owner_email=tester@redhat.com|user_name=prov_tester
```

B.5. Cloning Type

This parameters value sets the type of cloning request, either clone to vm or clone to template.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

Property Name: request_type

Parameter: 2 templateFields

Supported Values: clone_to_vm, clone_to_template

Example:

```
name=Template1|request_type=clone_to_template
```

B.6. Limit template selection

This parameters value limits template selection to the Datacenters contained in the specified cluster.

Usable in these Methods: EVMProvisionRequestEx, VmProvisionRequest.

Property Name: cluster

Parameter: 6 additionalValues

Example:

```
request_id=874d58|cluster=sales_prod
```

This example limits the templates available by tag.

```
Clear-Host
[System.Net.ServicePointManager]::ServerCertificateValidationCallback = {
    $true }
$ip = "https://192.168.253.42"

$userid = "admin"
$password = "smartvm"
$cred = New-Object System.Management.Automation.PsCredential $userid,
(ConvertTo-SecureString $password -AsPlainText -Force)

trap {Write-Host $Error[0]; break}

$Error.Clear()
Write-Host "Connecting to EVM integrate web-services at
 $($ip)/vmdbws/wsdl"
$miqvmdb = New-WebServiceProxy -uri "$(($ip)/vmdbws/wsdl" -Credential
$cred -ErrorAction Stop -Namespace VmdbWs
Write-Host "Successfully connected to EVM integrate web-services"

$vms = $miqvmdb.GetTemplatesByTag("prov_scope/all")

foreach ($vm in $vms) {
    $idx = $idx + 1
    Write-Host "$($idx). VM: $($vm.name) - GUID: $($vm.guid)"
}

Write-Host "done"
```

Output example:

```
Connecting to EVM integrate web-services at
https://192.168.253.42/vmdbws/wsdl
Successfully connected to EVM integrate web-services
1. VM: TinyVM - GUID: 2e1b5a54-4480-11e2-a836-005056910000
2. VM: rhel63server - GUID: 95d1550a-449d-11e2-9ae3-005056910000
done
```


Model Properties

The tables below show data returned via web services.

C.1. Providers

These are the ws_attributes for Providers.

Providers Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
aggregate_cpu_speed	19152	MHz	Total CPU Speed
aggregate_logical_cpus	8	Number	Total Number of Logical CPUs
aggregate_memory	48251	MB	Total Memory
aggregate_physical_cpus	1	Number	Total Number of Physical CPUs
aggregate_vm_cpus	15	Number	Aggregate VM Cpus
aggregate_vm_memory	49152	MB	Aggregate VM Memory
authentication_status	Valid	Text	Authentication Status
cpu_usagemhz_rate_averaged_over_time_period	1557.939422	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Avg
cpu_usagemhz_rate_averaged_high_over_time_period	1859.498564	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day High Avg
cpu_usagemhz_rate_averaged_low_over_time_period	1256.380281	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Low Avg
derived_memory_used_averaged_over_time_period	13090.82021	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Avg
derived_memory_used_high_over_time_period	13172.3163	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day High Avg
derived_memory_used_low_over_time_period	13009.32411	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Low Avg
emstype_description	Red Hat Virtualization Manager	Text	Type
max_cpu_usage_rate_averaged_over_time_period	5.680555556	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg

Providers Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
max_cpu_usage_rate_averagel_over_time_period_without_overhead	5.530555556	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg
max_cpu_usage_rate_averagel_high_over_time_period	8.137319022	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg
max_cpu_usage_rate_averagel_high_over_time_period_without_overhead	7.987319022	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg
max_cpu_usage_rate_averagel_low_over_time_period	3.223792089	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg
max_cpu_usage_rate_averagel_low_over_time_period_without_overhead	3.073792089	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
max_mem_usage_absolute_average_avg_over_time_period	27.50416667	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Avg
max_mem_usage_absolute_average_avg_over_time_period_without_overhead	25.49416667	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Avg
max_mem_usage_absolute_average_high_over_time_period	28.00003501	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day High Avg
max_mem_usage_absolute_average_high_over_time_period_without_overhead	25.99003501	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day High Avg
max_mem_usage_absolute_average_low_over_time_period	27.00829832	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Low Avg
max_mem_usage_absolute_average_low_over_time_period_without_overhead	24.99829832	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Low Avg
region_description	Worker	Text	Region Description
region_number	0	Number	Region Number
total_clusters	1	Number	Total Clusters

Providers Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
total_hosts	1	Number	Total Hosts
total_miq_templates	2	Number	Total MIQ Templates
total_storages	3	Number	Total Storages
total_vms	10	Number	Total Vms
total_vms_and_templates	12	number	Total Vms And Templates
zone_name	default	Text	EVM Zone

C.2. Clusters

These are the ws_attributes that are derived values that do not come directly from the Cluster VMDB table.

Clusters Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
aggregate_cpu_speed	51048	MHz	Total CPU Speed
aggregate_logical_cpus	24	Number	Total Number of Logical CPUs
aggregate_memory	172002	MB	Total Memory
aggregate_physical_cpus	6	Number	Total Number of Physical CPUs
aggregate_vm_cpus	220	Number	Aggregate Vm Cpus
aggregate_vm_memory	480528	MB	Aggregate Vm Memory
capacity_profile_1_available_host_memory	161777451008		Capacity - Profile 1 - Total Memory with HA
capacity_profile_1_available_host_vcpu	24	Number	Capacity - Profile 1 - Total CPU with HA
capacity_profile_1_memory_commitment_ratio	1.2	Number	Capacity - Profile 1 - Memory Commitment Ratio
capacity_profile_1_memory_maximum			Capacity - Profile 1 - Maximum Memory per VM
capacity_profile_1_memory_method	Average of Allocated Memory	Text	Capacity - Profile 1 - Memory Calculation Method
capacity_profile_1_memory_minimum			Capacity - Profile 1 - Minimum Memory per VM
capacity_profile_1_memory_per_vm	3936485376.0		Capacity - Profile 1 - Memory per VM
capacity_profile_1_memory_per_vm_with_min_max	3936485376.0		Capacity - Profile 1 - Memory per VM Used in Calculation
capacity_profile_1_projected_vm_count_base_d_on_all	28	Number	Capacity - Profile 1 - VM Count (combined)

Clusters Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
capacity_profile_1_projected_vm_count_base_d_on_memory	50	Number	Capacity - Profile 1 - VM Count based on Memory
capacity_profile_1_projected_vm_count_base_d_on_vcpu	28	Number	Capacity - Profile 1 - VM Count based on vCPU
capacity_profile_1_remaining_host_memory	309737186918.4		Capacity - Profile 1 - Available Memory for New VMs
capacity_profile_1_remaining_host_vcpu	-172.0	Number	Capacity - Profile 1 - Available vCPUs for New VMs
capacity_profile_1_remaining_vm_count_based_on_all	-100	Number	Capacity - Profile 1 - Available VM Count (combined)
capacity_profile_1_remaining_vm_count_based_on_memory	-78	Number	Capacity - Profile 1 - Available VM Count based on Memory
capacity_profile_1_remaining_vm_count_based_on_vcpu	-100	Number	Capacity - Profile 1 - Available VM Count based on vCPU
capacity_profile_1_vcpr_u_commitment_ratio	2.0	Number	Capacity - Profile 1 - vCPU Commitment Ratio
capacity_profile_1_vcpr_u_maximum		Number	Capacity - Profile 1 - Maximum vCPU per VM
capacity_profile_1_vcpr_u_method	Average of Allocated vCPU	Text	Capacity - Profile 1 - vCPU Calculation Method
capacity_profile_1_vcpr_u_minimum		Number	Capacity - Profile 1 - Minimum vCPU per VM
capacity_profile_1_vcpr_u_per_vm	1.71875	Number	Capacity - Profile 1 - Number of vCPUs per VM
capacity_profile_1_vcpr_u_per_vm_with_min_max	1.71875	Number	Capacity - Profile 1 - Number of vCPUs per VM Used in Calculation
capacity_profile_2_available_host_memory	161777451008		Capacity - Profile 2 - Memory Effective with HA
capacity_profile_2_available_host_vcpu	45622	Number	Capacity - Profile 2 - CPU Effective with HA
capacity_profile_2_memory_commitment_ratio	1.0	Number	Capacity - Profile 2 - Memory Commitment Ratio
capacity_profile_2_memory_maximum		Number	Capacity - Profile 2 - Maximum Memory per VM

Clusters Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
capacity_profile_2_memory_method	High Normal Range of Allocated Memory	Text	Capacity - Profile 2 - Memory Calculation Method
capacity_profile_2_memory_minimum			Capacity - Profile 2 - Minimum Memory per VM
capacity_profile_2_memory_per_vm	1263886336.0		Capacity - Profile 2 - Memory per VM
capacity_profile_2_memory_per_vm_with_min_max	1263886336.0		Capacity - Profile 2 - Memory per VM Used in Calculation
capacity_profile_2_projected_vm_count_base_d_on_all	128	Number	Capacity - Profile 2 - VM Count (combined)
capacity_profile_2_projected_vm_count_base_d_on_memory	128	Number	Capacity - Profile 2 - VM Count based on Memory
capacity_profile_2_projected_vm_count_base_d_on_vcpu	128	Number	Capacity - Profile 2 - VM Count based on vCPU
capacity_profile_2_remaining_host_memory	0.0		Capacity - Profile 2 - Available Memory for New VMs
capacity_profile_2_remaining_host_vcpu	0.0		Capacity - Profile 2 - Available vCPUs for New VMs
capacity_profile_2_remaining_vm_count_base_d_on_all	0	Number	Capacity - Profile 2 - Available VM Count (combined)
capacity_profile_2_remaining_vm_count_base_d_on_memory	0	Number	Capacity - Profile 2 - Available VM Count based on Memory
capacity_profile_2_remaining_vm_count_base_d_on_vcpu	0	Number	Capacity - Profile 2 - Available VM Count based on vCPU
capacity_profile_2_vcpu_commitment_ratio	1.0	Number	Capacity - Profile 2 - vCPU Commitment Ratio
capacity_profile_2_vcpu_maximum		Number	Capacity - Profile 2 - Maximum vCPU per VM
capacity_profile_2_vcpu_method	High Normal Range of Allocated vCPU	Text	Capacity - Profile 2 - vCPU Calculation Method
capacity_profile_2_vcpu_minimum		Number	Capacity - Profile 2 - Minimum vCPU per VM
capacity_profile_2_vcpu_per_vm	356.421875		Capacity - Profile 2 - CPU Peak Avg per VM
capacity_profile_2_vcpu_per_vm_with_min_max	356.421875		Capacity - Profile 2 - CPU Peak Avg per VM Used in Calculation

Clusters Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
cpu_usagemhz_rate_average_avg_over_time_period		Mhz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Avg
cpu_usagemhz_rate_average_high_over_time_period		Mhz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day High Avg
cpu_usagemhz_rate_average_low_over_time_period		Mhz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Low Avg
derived_memory_used_avg_over_time_period			Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Avg
derived_memory_used_high_over_time_period		MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day High Avg
derived_memory_used_low_over_time_period		MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Low Avg
first_drift_state_timestamp		Time	First Drift State Timestamp
last_drift_state_timestamp		Time	Last Drift State Timestamp
last_scan_on		Time	Last Analysis Time
max_cpu_usage_rate_average_avg_over_time_period		%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg (%)
max_cpu_usage_rate_average_avg_over_time_period_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg (%)
max_cpu_usage_rate_average_high_over_time_period		%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg (%)
max_cpu_usage_rate_average_high_over_time_period_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg (%)

Clusters Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
max_cpu_usage_rate_average_low_over_time_period		%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg (%)
max_cpu_usage_rate_average_low_over_time_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
max_mem_usage_absolute_average_avg_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Avg (%)
max_mem_usage_absolute_average_avg_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Avg (%)
max_mem_usage_absolute_average_high_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day High Avg (%)
max_mem_usage_absolute_average_high_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day High Avg (%)
max_mem_usage_absolute_average_low_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Low Avg (%)
max_mem_usage_absolute_average_low_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
region_description	Region 0	Text	Region Description
region_number	0	Number	Region Number
total_hosts	3	Number	Total Hosts
total_miq_templates	5	Number	Total Miq Templates
total_vms	128	Number	Total Vms
v_cpu_vr_ratio	9.200000000000001	Number	CPU Cores Virtual to Real Ratio
v_parent_datacenter	Prod	Text	Parent Datacenter
v_qualified_desc	Testing-Production Cluster in Prod	Text	Cluster in Datacenter
v_ram_vr_ratio	2.8000000000000003	Number	Memory Virtual to Real Ratio

1.5. Hosts

These are the ws_attributes that are derived values that do not come directly from the **Host** VMDB table.

Hosts Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
all_enabled_ports	22 123 427 443 902 32 60 5988 5989	Text	All Enabled Ports
authentication_status	Valid	Text	Authentication Status
cpu_usagemhz_rate_a verage_avg_over_time _period	1557.939422	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Avg
cpu_usagemhz_rate_a verage_high_over_time _period	1859.498564	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day High Avg
cpu_usagemhz_rate_a verage_low_over_time _period	1256.380281	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Low Avg
derived_memory_used _avg_over_time_perio d	13090.82021	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Avg
derived_memory_used _high_over_time_perio d	13172.3163	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day High Avg
derived_memory_used _low_over_time_period	13009.32411	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Low Avg
enabled_inbound_ports	22 427 5988 5989	Text	Enabled Inbound Ports
enabled_outbound_ports	123 427 443 902 3260	Text	Enabled Outbound Ports
enabled_run_level_0_services		Text	Enabled Run Level 0 Services
enabled_run_level_1_services	acpid auditd cgconfig crond cups ip6tables l vm2-monitor md...	Text	Enabled Run Level 1 Services
enabled_run_level_2_services	acpid auditd cgconfig crond cups ip6tables l vm2-monitor md...	Text	Enabled Run Level 2 Services
enabled_run_level_3_services	abrt-ccpp abrt- oops abrtd acpid atd a uditd autofs cgconfig...	Text	Enabled Run Level 3 Services

Hosts Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
enabled_run_level_4_services	acpid atd auditd autofs cgconfig crond cups haldaemon ip6t...	Text	Enabled Run Level 4 Services
enabled_run_level_5_services	abrt-ccpp abrt-oops abrttd acpid atd auditd autofs cgconfig...	Text	Enabled Run Level 5 Services
enabled_run_level_6_services		Text	Enabled Run Level 6 Services
enabled_tcp_inbound_ports	22 427 5988 5989	Text	Enabled Tcp Inbound Ports
enabled_tcp_outbound_ports	427 443 902 3260	Text	Enabled Tcp Outbound Ports
enabled_udp_inbound_ports	427	Text	Enabled Udp Inbound Ports
enabled_udp_outbound_ports	123 427 902	Text	Enabled Udp Outbound Ports
first_drift_state_timestamp	7/23/12	Date	First Drift State Timestamp
ipmi_enabled	FALSE	Text	Ipmi Enabled
last_compliance_status		Text	Last Compliance Status
last_compliance_timestamp		Time	Last Compliance Timestamp
last_drift_state_timestamp	7/24/12	Date	Last Drift State Timestamp
last_scan_on	7/24/12	Date	Last Analysis Time
max_cpu_usage_rate_average_avg_over_time_period	5.680555556	% CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg (%)	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg (%)
max_cpu_usage_rate_average_avg_over_time_period_without_overhead	5.530555556	% CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg
max_cpu_usage_rate_average_high_over_time_period	8.137319022	% CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg
max_cpu_usage_rate_average_high_over_time_period_without_overhead	7.987319022	% CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg
max_cpu_usage_rate_average_low_over_time_period	3.223792089	% CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg

Hosts Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
max_cpu_usage_rate_averagelow_over_time_period_without_overhead	3.073792089	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Low Avg
max_mem_usage_absolute_average_avg_over_time_period	27.50416667	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Avg
max_mem_usage_absolute_average_avg_over_time_period_without_overhead	25.49416667	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Avg
max_mem_usage_absolute_average_high_over_time_period	28.00003501	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day High Avg
max_mem_usage_absolute_average_high_over_time_period_with_overhead	25.99003501	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day High Avg
max_mem_usage_absolute_average_low_over_time_period	27.00829832	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Low Avg
max_mem_usage_absolute_average_low_over_time_period_without_overhead	24.99829832	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Low Avg
os_image_name	linux_generic	Text	OS Name
platform	linux	Text	Platform
region_description	Worker Region	Text	Region Description
region_number	0	Number	Region Number
service_names	abrt-ccpp abrt-oops abrtd acpid atd audited autofs certmong..	Text	Service Names
v_annotation		Text	Annotation
v_owning_cluster	Pod1	Text	Parent cluster
v_owning_datacenter	Default	Text	Parent datacenter
v_owning_folder	Datacenters	Text	Parent Folder (hosts & clusters)
v_total_miq_templates	0	Number	Total Miq Templates
v_total_storages	3	Number	Total Datastores
v_total_vms	2	Number	Total VMs

C.4. Host Hardware Attributes

These are the attributes returned from **Hosts Hardware** table.

Host Hardware Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
annotation		Text	Annotation
bios		Text	BIOS
bios_location		Text	BIOS Location
config_version		Text	Config Version
cores_per_socket	4	Number	Cores Per Socket
cpu_speed	2400	MHz	CPU Speed
cpu_type	Intel(R) Xeon(R) CPU X3220 @ 2.40GHz	Text	CPU Type
cpu_usage	4290	%	CPU Usage
disk_capacity	0		Disk Capacity
disk_free_space	0	B	Disk Free Space
guest_os	ESX	Text	Guest OS
guest_os_full_name	ESX	Text	Guest OS Full Name
host_id	1000000000001	Number	Host Id
hostnames		Text	Host Names
id	1000000000001	Number	Id
ipaddresses	{10.1.1.69, 192.168.254.50}	Text	IP Addresses
logical_cpus	4	Number	Number of CPU Cores
manufacturer	Dell Inc.	Text	Manufacturer
memory_console	800	MB	Memory Console
memory_cpu	8191	MB	RAM
memory_usage	5305	MB	Memory Usage
model	PowerEdge R200	Text	Model
number_of_nics	2	Number	Number Of Nics
numvcpus	1	Number	Number of CPUs
size_on_disk	0	B	Size On Disk
time_sync		Text	Time Sync
virtual_hw_version		Text	Virtual Hardware Version
vm_id		NA	Vm Id
vmotion_enabled	1	Text	Vmotion Enabled

C.5. Resource Pools

These are the ws_attributes that are derived values that do not come directly from the **Resource Pool** VMDB table.

Resource Pools Returned Attribute	Returned Value Example	Returned Value Units	Description
aggregate_cpu_speed	51048	MHz	Total CPU Speed

Resource Pools Returned Attribute	Returned Value Example	Returned Value Units	Description
aggregate_logical_cpus	24	Number	Total Number of Logical CPUs
aggregate_memory	172002	MB	Total Memory
aggregate_physical_cpus	6	Number	Total Number of Physical CPUs
aggregate_vm_cpus	213	Number	Aggregate Vm Cpus
aggregate_vm_memory	467728	MB	Aggregate Vm Memory
region_description	Region	Text	Region Description
region_number	0	Number	Region Number
v_direct_miq_template	0	Number	Direct Miq Templates
v_direct_vms	9	Number	Direct VMs
v_parent_cluster	Testing	Text	Parent Cluster
v_parent_datacenter	Prod	Text	Parent Datacenter
v_parent_folder	Datacenter	Text	Parent Folder
v_parent_host		Text	Parent Host
v_parent_resource_pool		Text	Parent Resource Pool
v_total_miq_templates	0	Number	Total Miq Templates
v_total_vms	126	Number	Total VMs

C.6. Datastores

These are the ws_attributes that are derived values that do not come directly from the **Datastore** VMDB table.

Storage Returned Attribute	Returned Value Example	Returned Value Units	Description
count_of_vmdk_disk_files	0	Number	Count of VMDK Disk Files
cpu_usagemhz_rate_average_avg_over_time_period		MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Avg
cpu_usagemhz_rate_average_high_over_time_period		MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day High Avg
cpu_usagemhz_rate_average_low_over_time_period		MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Low Avg
debris_size	0	B	Debris Size

Storage Returned Attribute	Returned Value Example	Returned Value Units	Description
derived_memory_used_avg_over_time_period		MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Avg
derived_memory_used_high_over_time_period		MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day High Avg
derived_memory_used_low_over_time_period		MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Low Avg
disk_size	0	B	Disk Size
max_cpu_usage_rate_average_avg_over_time_period		% %	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg (%)
max_cpu_usage_rate_average_avg_over_time_period_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg (%)
max_cpu_usage_rate_average_high_over_time_period		%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg (%)
max_cpu_usage_rate_average_high_over_time_period_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg (%)
max_cpu_usage_rate_average_low_over_time_period		%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg (%)
max_cpu_usage_rate_average_low_over_time_period_without_overhead		%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
max_mem_usage_absolute_average_avg_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Avg (%)
max_mem_usage_absolute_average_avg_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Avg (%)

Storage Returned Attribute	Returned Value Example	Returned Value Units	Description
max_mem_usage_absolute_average_high_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day High Avg (%)
max_mem_usage_absolute_average_high_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day High Avg (%)
max_mem_usage_absolute_average_low_over_time_period		%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Low Avg (%)
max_mem_usage_absolute_average_low_over_time_period_without_overhead		%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
region_description	Region 0	Text	Region Description
region_number	0	Number	Region Number
snapshot_size	0	B	Snapshot Size
total_managed_registered_vms	0	Number	Total Managed Registered Vms
total_managed_unregistered_vms	0	Number	Total Managed Unregistered Vms
total_unmanaged_vms	0	Number	Total Unmanaged Vms
v_debris_percent_of_used	0	%	Non-VM Files Percent of Used
v_disk_percent_of_used	0	%	Disk Files Percent of Used
v_free_space_percent_of_total	18.5	%	Free Space Percent of Total
v_memory_percent_of_used	0	%	VM Memory Files Percent of Used
v_provisioned_percent_of_total	81.5	%	Provisioned Space Percent of Total
v_snapshot_percent_of_used	0	%	Snapshot Files Percent of Used
v_total_debris_size	0	B	Size of Non-VM Files
v_total_hosts	4	Number	Total Hosts
v_total_memory_size	0	B	Size of VM Memory Files
v_total_provisioned	115181363200	B	Total Provisioned Space
v_total_snapshot_size	0	B	Size of VM Snapshot Files
v_total_vm_misc_size	0	B	Size of Other VM Files
v_total_vms	0	Number	Total VMs
v_used_space	115181363200	B	Used Space

Storage Returned Attribute	Returned Value Example	Returned Value Units	Description
v_used_space_percent_of_total	81.5	%	Used Space Percent of Total
v_vm_misc_percent_of_used	0	%	Other VM Files Percent of Used
vm_misc_size	0		Vm Misc Size
vm_ram_size	0		Vm Ram Size

C.7. Virtual Machines

These are the ws_attributes that are derived values that do not come directly from the **Virtual Machine** VMDB table.

Virtual Machines Returned Attribute	Returned Value Example	Returned Value Units	Description
aggressive_mem_recommended_change	4232	MB	Memory - Aggressive Recommendation Savings
aggressive_mem_recommended_change_pct	68.9	%	Memory - Aggressive Recommendation Savings (%)
aggressive_recommended_mem	1912	MB	Memory - Aggressive Recommendation
aggressive_recommended_vcpus	1	Number	CPU - Aggressive Recommendation
aggressive_vcpus_recommended_change	1	Number	CPU - Aggressive Recommendation Savings
aggressive_vcpus_recommended_change_pct	50	%	CPU - Aggressive Recommendation Savings (%)
allocated_disk_storage	6442450944	B	Allocated Disk Storage
archived	FALSE	Text	Archived
conservative_mem_recommended_change	304	MB	Memory - Conservative Recommendation Savings
conservative_mem_recommended_change_pct	4.9	%	Memory - Conservative Recommendation Savings (%)
conservative_recommended_mem	5840	MB	Memory - Conservative Recommendation
conservative_recommended_vcpus	3	Number	CPU - Conservative Recommendation
conservative_vcpus_recommended_change	-1	Number	CPU - Conservative Recommendation Savings

Virtual Machines	Returned Value Example	Returned Value Units	Description
Returned Attribute			
conservative_vcpus_recommended_change_pct	-50	%	CPU - Conservative Recommendation Savings (%)
cpu_usagemhz_rate_average_avg_over_time_period	651.6342141	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Avg
cpu_usagemhz_rate_average_high_over_time_period	937.0011231	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day High Avg
cpu_usagemhz_rate_average_low_over_time_period	366.2673051	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Low Avg
cpu_usagemhz_rate_average_max_over_time_period	1053.934933	MHz	CPU - Aggregate Usage Rate for Child VMs for Collected Intervals 30 Day Max
debris_size	15114072	B	Debris Size
derived_memory_used_avg_over_time_period	1377.763556	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Avg
derived_memory_used_high_over_time_period	2522.695426	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day High Avg
derived_memory_used_low_over_time_period	232.8316856	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Low Avg
derived_memory_used_max_over_time_period	3234.033778	MB	Memory - Aggregate Used for Child VMs for Collected Intervals 30 Day Max
disconnected	FALSE	Text	Disconnected
disk_1_disk_type	thick	Text	Disk 1 Disk Type
disk_1_mode	persistent	Text	Disk 1 Mode
disk_1_partitions_aligned	False	Text	Disk 1 Partitions Aligned
disk_1_size	4294967296	B	Disk 1 Size (As labeled in CloudForms Management Engine Console)

Virtual Machines Returned Attribute	Returned Value Example	Returned Value Units	Description
disk_1_size_on_disk	4294967296	B	Disk 1 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_1_used_percent_of_provisioned	100.0	%	Disk 1 Used Percent Of Provisioned
disk_2_disk_type	thin	Text	Disk 2 Disk Type
disk_2_mode	persistent	Text	Disk 2 Mode
disk_2_partitions_aligned	TRUE	Text	Disk 2 Partitions Aligned
disk_2_size	2147483648	B	Disk 2 Size (As labeled in CloudForms Management Engine Console)
disk_2_size_on_disk		B	Disk 2 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_2_used_percent_of_provisioned	0	%	Disk 2 Used Percent Of Provisioned
disk_3_disk_type		Text	Disk 3 Disk Type
disk_3_mode		Text	Disk 3 Mode
disk_3_partitions_aligned	TRUE	Text	Disk 3 Partitions Aligned
disk_3_size		B	Disk 3 Size (As labeled in CloudForms Management Engine Console)
disk_3_size_on_disk		B	Disk 3 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_3_used_percent_of_provisioned	0	%	Disk 3 Used Percent Of Provisioned
disk_4_disk_type		Text	Disk 4 Disk Type
disk_4_mode		Text	Disk 4 Mode
disk_4_partitions_aligned	TRUE	Text	Disk 4 Partitions Aligned
disk_4_size		B	Disk 4 Size (As labeled in CloudForms Management Engine Console)

Virtual Machines Returned Attribute	Returned Value Example	Returned Value Units	Description
disk_4_size_on_disk	B		Disk 4 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_4_used_percent_0 of_provisioned	% 	%	Disk 4 Used Percent Of Provisioned
disk_5_disk_type	Text		Disk 5 Disk Type
disk_5_mode	Text		Disk 5 Mode
disk_5_partitions_aligned	FALSE ned	Text	Disk 5 Partitions Aligned
disk_5_size	B		Disk 5 Size (As labeled in CloudForms Management Engine Console)
disk_5_size_on_disk	B		Disk 5 Size On (As labeled in CloudForms Management Engine Console)
disk_5_used_percent_0 of_provisioned	%	%	Disk 5 Used Percent Of Provisioned
disk_6_disk_type	Text		Disk 6 Disk Type
disk_6_mode	Text		Disk 6 Mode
disk_6_partitions_aligned	Text		Disk 6 Partitions Aligned
disk_6_size	B		Disk 6 Size (As labeled in CloudForms Management Engine Console)
disk_6_size_on_disk	B		Disk 6 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_6_used_percent_0 of_provisioned	%	%	Disk 6 Used Percent Of Provisioned
disk_7_disk_type	Text		Disk 7 Disk Type
disk_7_mode	Text		Disk 7 Mode
disk_7_partitions_aligned	Text		Disk 7 Partitions Aligned
disk_7_size	B		Disk 7 Size (As labeled in CloudForms Management Engine Console)
disk_7_size_on_disk	B		Disk 7 Size On Disk (As labeled in CloudForms Management Engine Console)

Virtual Machines	Returned Value Example	Returned Value Units	Description
Returned Attribute			
disk_7_used_percent_of_provisioned		%	Disk 7 Used Percent Of Provisioned
disk_8_disk_type		Text	Disk 8 Disk Type
disk_8_mode		Text	Disk 8 Mode
disk_8_partitions_aligned		Text	Disk 8 Partitions Aligned
disk_8_size		B	Disk 8 Size (As labeled in CloudForms Management Engine Console)
disk_8_size_on_disk		B	Disk 8 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_8_used_percent_of_provisioned		%	Disk 8 Used Percent Of Provisioned
disk_9_disk_type		Text	Disk 9 Disk Type
disk_9_mode		Text	Disk 9 Mode
disk_9_partitions_aligned		Text	Disk 9 Partitions Aligned
disk_9_size		B	Disk 9 Size (As labeled in CloudForms Management Engine Console)
disk_9_size_on_disk		B	Disk 9 Size On Disk (As labeled in CloudForms Management Engine Console)
disk_9_used_percent_of_provisioned		%	Disk 9 Used Percent Of Provisioned
disk_size	0	B	Disk Size (As labeled in CloudForms Management Engine Console)
disks_aligned	FALSE	Text	Disks Aligned
ems_cluster_name	Pod1	Text	Cluster
evm_owner_email		Text	Evm Owner Email
evm_owner_name		Text	Evm Owner Name
evm_owner_userid		Text	Evm Owner Userid
first_drift_state_timestamp	7/24/12 20:12	Time	First Drift State Timestamp
has_active_vdi_session	FALSE	Text	Has Active Vdi Session
has_rdm_disk	FALSE	Text	Has an RDM Disk?
host_name	ESX5.miq.net	Text	Parent Host
Hostnames	prod_gxf_D3	Text	Host Names
Ipaddresses	192.168.252.15	Text	IP Addresses

Virtual Machines	Returned Value Example	Returned Value Units	Description
Returned Attribute			
is_evm_appliance	FALSE	Text	Is an EVM Appliance?
last_compliance_status			Last Compliance Status
last_compliance_timestamp			Last Compliance Timestamp
last_drift_state_timestamp	7/24/12 20:12	Time	Last Drift State Timestamp
mac_addresses	00:1a:4a:0a:01:00	Text	MAC Addresses
max_cpu_usage_rate_average_avg_over_time_period	24.77638889	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Avg (%)
max_cpu_usage_rate_average_avg_over_time_period_without_overhead	24.77638889	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Avg (%)
max_cpu_usage_rate_average_high_over_time_period (%)	44.02290027	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day High Avg (%)
max_cpu_usage_rate_average_high_over_time_period_without_overhead	44.02290027	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day High Avg (%)
max_cpu_usage_rate_average_low_over_time_period	5.529877511	%	CPU - Peak Usage Rate Avg for Collected Intervals 30 Day Low Avg (%)
max_cpu_usage_rate_average_low_over_time_period_without_overhead	5.529877511	%	CPU - Peak Usage Rate Avg for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
max_cpu_usage_rate_average_max_over_time_period	100	%	CPU - Peak Usage Rate for Collected Intervals 30 Day Max (%)
max_mem_usage_absolute_average_avg_over_time_period	31.08472222	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Avg (%)
max_mem_usage_absolute_average_avg_over_time_period_without_overhead	31.08472222	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Avg (%)

Virtual Machines	Returned Value Example	Returned Value Units	Description
Returned Attribute			
max_mem_usage_abs_oluate_average_high_over_time_period	55.17875591	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day High Avg (%)
max_mem_usage_abs_oluate_average_high_over_time_period_with_overhead	55.17875591	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day High Avg (%)
max_mem_usage_abs_oluate_average_low_over_time_period	6.990688531	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Low Avg (%)
max_mem_usage_abs_oluate_average_low_over_time_period_without_overhead	6.990688531	%	Memory - Peak Usage of Allocated for Collected Intervals Without Host Overhead 30 Day Low Avg (%)
max_mem_usage_abs_oluate_average_max_over_time_period	95	%	Memory - Peak Usage of Allocated for Collected Intervals 30 Day Max (%)
mem_cpu	6144	MB	Memory
moderate_mem_recommended_change	2752	MB	Memory - Moderate Recommendation Savings
moderate_mem_recommended_change_pct	44.8	%	Memory - Moderate Recommendation Savings (%)
moderate_recommend_ed_mem	3392	MB	Memory - Moderate Recommendation
moderate_recommend_ed_vcpus	1	Number	CPU - Moderate Recommendation
moderate_vcpus_recommended_change	1	Number	CPU - Moderate Recommendation Savings
moderate_vcpus_recommended_change_pct	50	%	CPU - Moderate Recommendation Savings (%)
num_cpu	2	Number	Number of CPUs
num_disks	5	Number	Number of Disks
num_hard_disks	5	Number	Number of Hard Disks
Orphaned	FALSE	Text	Orphaned
os_image_name	linux_centos	Text	OS Name
overallocated_mem_pct	68.9	%	Memory - % Overallocated
overallocated_vcpus_pct	50	%	CPU - % Overallocated

Virtual Machines	Returned Value Example	Returned Value Units	Description
Returned Attribute			
owned_by_current_lda_p_group	FALSE	Text	In My LDAP Group?
owned_by_current_user	FALSE	Text	Owned by Me?
owning_ldap_group		Text	LDAP Group
paravirtualization			Paravirtualization
parent_blue_folder_1_name	DC1	Text	Folder Name (VMs & Templates) 1
parent_blue_folder_2_name	DIV1	Text	Folder Name (VMs & Templates) 2
parent_blue_folder_3_name	Engineering	Text	Folder Name (VMs & Templates) 3
parent_blue_folder_4_name	SelfService	Text	Folder Name (VMs & Templates) 4
parent_blue_folder_5_name		Text	Folder Name (VMs & Templates) 5
parent_blue_folder_6_name		Text	Folder Name (VMs & Templates) 6
parent_blue_folder_7_name		Text	Folder Name (VMs & Templates) 7
parent_blue_folder_8_name		Text	Folder Name (VMs & Templates) 8
parent_blue_folder_9_name		Text	Folder Name (VMs & Templates) 9
Platform	linux	Text	Platform
provisioned_storage	6442450944	B	Total Provisioned Space
recommended_mem	1912	MB	Memory - Recommendation
recommended_vcpus	1	Number	CPU - Recommendation
region_description	Region 0	Text	Region Description
region_number	0	Number	Region Number
snapshot_size (B)	47286	B	Snapshot Size (As labeled in CloudForms Management Engine Console)
storage_name	Demo2San1	Text	Storage Name
thin_provisioned	true	Text	Thin Provisioned
uncommitted_storage	2147483648	B	Uncommitted Space (As labeled in CloudForms Management Engine Console)
used_disk_storage	6442450944	B	Total Used Disk Space (As labeled in CloudForms Management Engine Console)

Virtual Machines Returned Attribute	Returned Value Example	Returned Value Units	Description
used_storage	6442450944	B	Used Storage (As labeled in CloudForms Management Engine Console)
used_storage_by_statt e	6442450944	B	Currently Used Space (As labeled in CloudForms Management Engine Console)
v_annotation	Production V5 EVM appliance (iSCSI scanning)	Text	Annotation
v_datastore_path	MTCRHDS001/17830c 59-6ae4-420f-af5c- f6898c6c5b27.ovf	Text	Datastore Path
v_host_vmm_product	RHEV-H	Text	Parent Host Platform
v_is_a_template	FALSE	Text	Is a Template
v_owning_blue_folder	vm	Text	Parent Folder (VMs & Templates)
v_owning_blue_folder _path	Datacenters/Default/v m	Text	Parent Folder Path (VMs & Templates)
v_owning_cluster	Pod1	Text	Parent Cluster
v_owning_datacenter	Default	Text	Parent Datacenter
v_owning_folder	Datacenters	Text	Parent Folder (Hosts & Clusters)
v_owning_folder_path	Datacenters	Text	Parent Folder Path (Hosts & Clusters)
v_owning_resource_p ool	Default for Cluster Pod1	Text	Parent Resource Pool
v_pct_free_disk_space	39.67	%	Pct Free Disk
v_pct_used_disk_spac e	60.33	%	Pct Used Disk
v_snapshot_newest_d escription	_ActiveImage_PRDv5E VM002_Tue Jun 19 17:13:11 EDT 2012	Text	Snapshot Newest Description
v_snapshot_newest_n ame	Active Image	Text	Snapshot Newest Name
v_snapshot_newest_t imestamp	6/19/12 14:04	Time	Snapshot Newest Timestamp
v_snapshot_newest_to tal_size		B	Snapshot Newest Total Size
v_snapshot_oldest_de scription	_ActiveImage_PRDv5E VM002_Tue Jun 19 17:13:11 EDT 2012	Text	Snapshot Oldest Description
v_snapshot_oldest_na me	Active Image	Text	Snapshot Oldest Name
v_snapshot_oldest_tim estamp	6/19/12 14:04	Time	Snapshot Oldest Timestamp

Virtual Machines Returned Attribute	Returned Value Example	Returned Value Units	Description
v_snapshot_oldest_total_size	B		Snapshot Oldest Total Size (As labeled in CloudForms Management Engine Console)
v_total_snapshots	1	Number	Total Snapshots
vdi_available	FALSE	Text	Vdi Available
vdi_connection_dns_name -	RETIRED	NA	Vdi Connection Dns Name
vdi_connection_logon_server -	RETIRED	NA	Vdi Connection Logon Server
vdi_connection_name -	RETIRED	NA	Vdi Connection Name
vdi_connection_remote_ip_address -	RETIRED	NA	Vdi Connection Remote Ip Address
vdi_connection_session_name -	RETIRED	NA	Vdi Connection Session Name
vdi_connection_session_type -	RETIRED	NA	Vdi Connection Session Type
vdi_connection_url	RETIRED	NA	Vdi Connection Url
vdi_endpoint_ip_address	RETIRED	NA	Vdi Endpoint Ip Address
vdi_endpoint_mac_address	RETIRED	NA	Vdi Endpoint Mac Address
vdi_endpoint_name	RETIRED	NA	Vdi Endpoint Name
vdi_endpoint_type	RETIRED	NA	Vdi Endpoint Type
vdi_user_appdata	RETIRED	NA	Vdi User Appdata
vdi_user_dns_domain	RETIRED	NA	Vdi User Dns Domain
vdi_user_domain	RETIRED	NA	Vdi User Domain
vdi_user_home_drive	RETIRED	NA	Vdi User Home Drive
vdi_user_home_path	RETIRED	NA	Vdi User Home Path
vdi_user_home_share	RETIRED	NA	Vdi User Home Share
vdi_user_logon_time	RETIRED	NA	Vdi User Logon Time
vdi_user_name	RETIRED	NA	Vdi User Name
vm_misc_size	782765	B	Vm Misc Size
vm_ram_size	2684363244	B	Vm Ram Size
vmsafe_agent_addresses		Text	VMsafe Agent Address
vmsafe_agent_port		Text	VMsafe Agent Port
vmsafe_enable		Text	VMsafe Enable
vmsafe_fail_open		Text	VMsafe Fail Open
vmsafe_immutable_vm		Text	VMsafe Immutable VM
vmsafe_timeout_ms		Ms	VMsafe Timeout (ms)

C.8. Virtual Machines Hardware Attributes

These are the attributes returned from **Virtual Machines Hardware** table.

Virtual Machine Hardware Returned Attribute	Returned Value Example	Returned Value Units	Returned Value Description
annotation	VM has RawDevice attached	Text	Annotation
bios	422434f1-6185-71ef-9726-376292f56c3c	Text	BIOS
bios_location	564dfe81-2d72-b1c3-299a-2914b4a02c86	Text	BIOS Location
config_version	vmx-07	Text	Config Version
cores_per_socket	0	Number	Cores Per Socket
cpu_speed	0	MHz	CPU Speed
cpu_type		Text	CPU Type
cpu_usage	0	%	CPU Usage
disk_capacity	8589934592	B	Disk Capacity
disk_free_space	3407292416	B	Disk Free Space
guest_os	winnetstandard	Text	Guest OS
guest_os_full_name	Microsoft Windows Server 2003, Standard Edition (32-bit)	Text	Guest OS Full Name
host_id		Text	Host Id
hostnames	{prod_sf_D2}	Text	Host Names
id	1000000000041	Text	Id
ipaddresses	{192.168.255.25}	Text	IP Addresses
logical_cpus	0	Number	Number of CPU Cores
manufacturer		Text	Manufacturer
memory_console	0	MB	Memory Console
memory_cpu	2048	MB	RAM
memory_usage	0	MB	Memory Usage
model		Text	Model
number_of_nics	1	Number	Number Of Nics
numvcpus	1	Number	Number of CPUs
size_on_disk	19930439179	B	Size On Disk
time_sync		Text	Time Sync
virtual_hw_version		Text	Virtual Hardware Version
vm_id	1000000000039	Text	Vm Id
vmotion_enabled	0	Text	Vmotion Enabled

WSDL File

This appendix includes the contents of the entire WSDL file. It can be found on the CloudForms Management Engine Appliance by going to: https://<cfmeserver_ip>/vmbws/wsdl.

```

<?xml version="1.0" encoding="UTF-8"?>
<definitions name="" targetNamespace="urn:ActionWebService"
  xmlns:typens="urn:ActionWebService"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns="http://schemas.xmlsoap.org/wsdl/">
  <types>
    <xsd:schema xmlns="http://www.w3.org/2001/XMLSchema"
      targetNamespace="urn:ActionWebService">
      <xsd:complexType name="VmdbwsSupport..VmListArray">
        <xsd:complexContent>
          <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..VmList[]"/>
          </xsd:restriction>
        </xsd:complexContent>
      </xsd:complexType>
      <xsd:complexType name="VmdbwsSupport..HostListArray">
        <xsd:complexContent>
          <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..HostList[]"/>
          </xsd:restriction>
        </xsd:complexContent>
      </xsd:complexType>
      <xsd:complexType name="VmdbwsSupport..ClusterListArray">
        <xsd:complexContent>
          <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ClusterList[]"/>
          </xsd:restriction>
        </xsd:complexContent>
      </xsd:complexType>
      <xsd:complexType name="VmdbwsSupport..ResourcePoolListArray">
        <xsd:complexContent>
          <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ResourcePoolList[]"/>
          </xsd:restriction>
        </xsd:complexContent>
      </xsd:complexType>
      <xsd:complexType name="VmdbwsSupport..DatastoreListArray">
        <xsd:complexContent>
          <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..DatastoreList[]"/>
          </xsd:restriction>
        </xsd:complexContent>
      </xsd:complexType>
    </xsd:schema>
  </types>

```

```

        </xsd:complexContent>
    </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmSoftwareArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..VmSoftware[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmAccountsArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..VmAccounts[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="HostArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:Host[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ClusterArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..Cluster[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="ResourcePoolArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:ResourcePool[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..DatastoreArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..Datastore[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:Vm[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>

```

```

        </xsd:complexContent>
    </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..EventListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..EventList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ConditionListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ConditionList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ActionListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ActionList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..PolicyListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..PolicyList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..EmsListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..EmsList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..WSAttributesArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..WSAttributes[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="StringArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="xsd:string[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>

```

```

        </xsd:complexContent>
    </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyHostArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyHost[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyCustomAttributeArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyCustomAttribute[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyClusterArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyCluster[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyDatastoreArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyDatastore[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyResourcePoolArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyResourcePool[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyVmArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyVm[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType
name="VmdbwsSupport..ProxyExtManagementSystemArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..ProxyExtManagementSystem[]"/>

```

```

        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..MiqProvisionTaskListArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..MiqProvisionTaskList[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..KeyValueStructArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..KeyValueStruct[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..TagArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..Tag[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..AutomationTaskSummaryArray">
    <xsd:complexContent>
        <xsd:restriction base="soapenc:Array">
            <xsd:attribute ref="soapenc:arrayType"
wsdl:arrayType="typens:VmdbwsSupport..AutomationTaskSummary[]"/>
        </xsd:restriction>
    </xsd:complexContent>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmList">
    <xsd:all>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..HostList">
    <xsd:all>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ClusterList">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ResourcePoolList">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>

```

```

        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..DatastoreList">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmSoftware">
    <xsd:all>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmAccounts">
    <xsd:all>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="Host">
    <xsd:all>
        <xsd:element name="id" type="xsd:int"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="hostname" type="xsd:string"/>
        <xsd:element name="ipaddress" type="xsd:string"/>
        <xsd:element name="vmm_vendor" type="xsd:string"/>
        <xsd:element name="vmm_version" type="xsd:string"/>
        <xsd:element name="vmm_product" type="xsd:string"/>
        <xsd:element name="vmm_buildnumber" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:int"/>
        <xsd:element name="user_assigned_os" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="smart" type="xsd:int"/>
        <xsd:element name="settings" type="xsd:string"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="connection_state" type="xsd:string"/>
        <xsd:element name="ssh_permit_root_login" type="xsd:string"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="admin_disabled" type="xsd:boolean"/>
        <xsd:element name="service_tag" type="xsd:string"/>
        <xsd:element name="asset_tag" type="xsd:string"/>
        <xsd:element name="ipmi_address" type="xsd:string"/>
        <xsd:element name="mac_address" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="failover" type="xsd:boolean"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
        <xsd:element name="hyperthreading" type="xsd:boolean"/>
        <xsd:element name="ems_cluster_id" type="xsd:int"/>
    </xsd:all>
</xsd:complexType>

```

```

        <xsd:element name="next_available_vnc_port" type="xsd:int"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..Cluster">
    <xsd:all>
        <xsd:element name="id" type="xsd:int"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:int"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="ha_enabled" type="xsd:boolean"/>
        <xsd:element name="ha_admit_control" type="xsd:boolean"/>
        <xsd:element name="ha_max_failures" type="xsd:int"/>
        <xsd:element name="drs_enabled" type="xsd:boolean"/>
        <xsd:element name="drs_automation_level" type="xsd:string"/>
        <xsd:element name="drs_migration_threshold" type="xsd:int"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="effective_cpu" type="xsd:int"/>
        <xsd:element name="effective_memory" type="xsd:int"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="ResourcePool">
    <xsd:all>
        <xsd:element name="id" type="xsd:int"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:int"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="memory_reserve" type="xsd:int"/>
        <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="memory_limit" type="xsd:int"/>
        <xsd:element name="memory_shares" type="xsd:int"/>
        <xsd:element name="memory_shares_level" type="xsd:string"/>
        <xsd:element name="cpu_reserve" type="xsd:int"/>
        <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="cpu_limit" type="xsd:int"/>
        <xsd:element name="cpu_shares" type="xsd:int"/>
        <xsd:element name="cpu_shares_level" type="xsd:string"/>
        <xsd:element name="is_default" type="xsd:boolean"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="vapp" type="xsd:boolean"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..Datastore">
    <xsd:all>
        <xsd:element name="id" type="xsd:int"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="store_type" type="xsd:string"/>
        <xsd:element name="total_space" type="xsd:int"/>
        <xsd:element name="free_space" type="xsd:int"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>

```

```

<xsd:element name="updated_on" type="xsd:dateTime"/>
<xsd:element name="multiplehostaccess" type="xsd:int"/>
<xsd:element name="location" type="xsd:string"/>
<xsd:element name="last_scan_on" type="xsd:dateTime"/>
<xsd:element name="uncommitted" type="xsd:int"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="directory_hierarchy_supported"
type="xsd:boolean"/>
    <xsd:element name="thin_provisioning_supported"
type="xsd:boolean"/>
        <xsd:element name="raw_disk_mappings_supported"
type="xsd:boolean"/>
            <xsd:element name="master" type="xsd:boolean"/>
            <xsd:element name="ems_ref" type="xsd:string"/>
            <xsd:element name="storage_domain_type" type="xsd:string"/>
        </xsd:all>
    </xsd:complexType>
<xsd:complexType name="Vm">
    <xsd:all>
        <xsd:element name="id" type="xsd:int"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="format" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="location" type="xsd:string"/>
        <xsd:element name="config_xml" type="xsd:string"/>
        <xsd:element name="autostart" type="xsd:string"/>
        <xsd:element name="host_id" type="xsd:int"/>
        <xsd:element name="last_sync_on" type="xsd:dateTime"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="storage_id" type="xsd:int"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:int"/>
        <xsd:element name="last_scan_on" type="xsd:dateTime"/>
        <xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="retires_on" type="xsd:date"/>
        <xsd:element name="retired" type="xsd:boolean"/>
        <xsd:element name="boot_time" type="xsd:dateTime"/>
        <xsd:element name="tools_status" type="xsd:string"/>
        <xsd:element name="standby_action" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="state_changed_on" type="xsd:dateTime"/>
        <xsd:element name="previous_state" type="xsd:string"/>
        <xsd:element name="connection_state" type="xsd:string"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="blackbox_exists" type="xsd:boolean"/>
        <xsd:element name="blackbox_validated" type="xsd:boolean"/>
        <xsd:element name="registered" type="xsd:boolean"/>
        <xsd:element name="busy" type="xsd:boolean"/>
        <xsd:element name="smart" type="xsd:boolean"/>
        <xsd:element name="memory_reserve" type="xsd:int"/>
        <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
    </xsd:all>

```

```

<xsd:element name="memory_limit" type="xsd:int"/>
<xsd:element name="memory_shares" type="xsd:int"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:int"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:int"/>
<xsd:element name="cpu_shares" type="xsd:int"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:int"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:int"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ems_cluster_id" type="xsd:int"/>
<xsd:element name="retirement_warn" type="xsd:int"/>
<xsd:element name="retirement_last_warn" type="xsd:dateTime"/>
<xsd:element name="vnc_port" type="xsd:int"/>
<xsd:element name="flavor_id" type="xsd:int"/>
<xsd:element name="availability_zone_id" type="xsd:int"/>
<xsd:element name="cloud" type="xsd:boolean"/>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmCmdResult">
  <xsd:all>
    <xsd:element name="result" type="xsd:string"/>
    <xsd:element name="reason" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="MiqPolicy">
  <xsd:all>
    <xsd:element name="id" type="xsd:int"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="expression" type="xsd:string"/>
    <xsd:element name="towhat" type="xsd:string"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="created_by" type="xsd:string"/>
    <xsd:element name="updated_by" type="xsd:string"/>
    <xsd:element name="notes" type="xsd:string"/>
    <xsd:element name="active" type="xsd:boolean"/>
    <xsd:element name="mode" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..EventList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>

```

```

</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ConditionList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ActionList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..PolicyList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..VmRsop">
  <xsd:all>
    <xsd:element name="result" type="xsd:string"/>
    <xsd:element name="reason" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..EmsList">
  <xsd:all>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyExtManagementSystem">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="name" type="xsd:string"/>
    <xsd:element name="port" type="xsd:string"/>
    <xsd:element name="hostname" type="xsd:string"/>
    <xsd:element name="ipaddress" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="guid" type="xsd:string"/>
    <xsd:element name="zone_id" type="xsd:string"/>
    <xsd:element name="type" type="xsd:string"/>
    <xsd:element name="api_version" type="xsd:string"/>
    <xsd:element name="uid_ems" type="xsd:string"/>
    <xsd:element name="host_default_vnc_port_start"
      type="xsd:double"/>
      <xsd:element name="host_default_vnc_port_end"
      type="xsd:double"/>
        <xsd:element name="hosts"
      type="typens:VmdbwsSupport..HostListArray"/>
        <xsd:element name="clusters"
      type="typens:VmdbwsSupport..ClusterListArray"/>
        <xsd:element name="resource_pools"
      type="typens:VmdbwsSupport..ResourcePoolListArray"/>

```

```

        <xsd:element name="vms"
type="typens:VmdbwsSupport..VmListArray"/>
            <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
                <xsd:element name="datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
                    </xsd:all>
            </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..WSAttributes">
    <xsd:all>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="data_type" type="xsd:string"/>
        <xsd:element name="value" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyHost">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="hostname" type="xsd:string"/>
        <xsd:element name="ipaddress" type="xsd:string"/>
        <xsd:element name="vmm_vendor" type="xsd:string"/>
        <xsd:element name="vmm_version" type="xsd:string"/>
        <xsd:element name="vmm_product" type="xsd:string"/>
        <xsd:element name="vmm_buildnumber" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="guid" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="user_assigned_os" type="xsd:string"/>
        <xsd:element name="power_state" type="xsd:string"/>
        <xsd:element name="smart" type="xsd:double"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="connection_state" type="xsd:string"/>
        <xsd:element name="ssh_permit_root_login" type="xsd:string"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="admin_disabled" type="xsd:boolean"/>
        <xsd:element name="service_tag" type="xsd:string"/>
        <xsd:element name="asset_tag" type="xsd:string"/>
        <xsd:element name="ipmi_address" type="xsd:string"/>
        <xsd:element name="mac_address" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="failover" type="xsd:boolean"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
        <xsd:element name="hyperthreading" type="xsd:boolean"/>
        <xsd:element name="ems_cluster_id" type="xsd:string"/>
        <xsd:element name="next_available_vnc_port"
type="xsd:double"/>
            <xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
                <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
                    <xsd:element name="parent_cluster"
type="typens:VmdbwsSupport..ClusterList"/>
                        <xsd:element name="resource_pools"

```

```

type="typens:VmDbwsSupport..ResourcePoolListArray"/>
    <xsd:element name="default_resource_pool"
type="typens:VmDbwsSupport..ResourcePoolList"/>
    <xsd:element name="datastores"
type="typens:VmDbwsSupport..DatastoreListArray"/>
    <xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
    <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
    <xsd:element name="hardware"
type="typens:VmDbwsSupport..ProxyHardware"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmDbwsSupport..ProxyCustomAttribute">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="section" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="value" type="xsd:string"/>
        <xsd:element name="resource_type" type="xsd:string"/>
        <xsd:element name="resource_id" type="xsd:string"/>
        <xsd:element name="source" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmDbwsSupport..ProxyHardware">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="config_version" type="xsd:string"/>
        <xsd:element name="virtual_hw_version" type="xsd:string"/>
        <xsd:element name="guest_os" type="xsd:string"/>
        <xsd:element name="numvcpus" type="xsd:double"/>
        <xsd:element name="bios" type="xsd:string"/>
        <xsd:element name="bios_location" type="xsd:string"/>
        <xsd:element name="time_sync" type="xsd:string"/>
        <xsd:element name="annotation" type="xsd:string"/>
        <xsd:element name="vm_or_template_id" type="xsd:string"/>
        <xsd:element name="memory_cpu" type="xsd:double"/>
        <xsd:element name="host_id" type="xsd:string"/>
        <xsd:element name="cpu_speed" type="xsd:double"/>
        <xsd:element name="cpu_type" type="xsd:string"/>
        <xsd:element name="size_on_disk" type="xsd:double"/>
        <xsd:element name="manufacturer" type="xsd:string"/>
        <xsd:element name="model" type="xsd:string"/>
        <xsd:element name="number_of_nics" type="xsd:double"/>
        <xsd:element name="cpu_usage" type="xsd:double"/>
        <xsd:element name="memory_usage" type="xsd:double"/>
        <xsd:element name="cores_per_socket" type="xsd:double"/>
        <xsd:element name="logical_cpus" type="xsd:double"/>
        <xsd:element name="vmotion_enabled" type="xsd:boolean"/>
        <xsd:element name="disk_free_space" type="xsd:double"/>
        <xsd:element name="disk_capacity" type="xsd:double"/>
        <xsd:element name="guest_os_full_name" type="xsd:string"/>
        <xsd:element name="memory_console" type="xsd:double"/>
        <xsd:element name="bitness" type="xsd:double"/>
        <xsd:element name="ipaddresses" type="typens:StringArray"/>
        <xsd:element name="hostnames" type="typens:StringArray"/>
    </xsd:all>
</xsd:complexType>

```

```

        </xsd:all>
    </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyCluster">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="ha_enabled" type="xsd:boolean"/>
        <xsd:element name="ha_admit_control" type="xsd:boolean"/>
        <xsd:element name="ha_max_failures" type="xsd:double"/>
        <xsd:element name="drs_enabled" type="xsd:boolean"/>
        <xsd:element name="drs_automation_level" type="xsd:string"/>
        <xsd:element name="drs_migration_threshold" type="xsd:double"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="effective_cpu" type="xsd:double"/>
        <xsd:element name="effective_memory" type="xsd:double"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
        <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
            <xsd:element name="hosts"
type="typens:VmdbwsSupport..HostListArray"/>
                <xsd:element name="resource_pools"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
                    <xsd:element name="default_resource_pool"
type="typens:VmdbwsSupport..ResourcePoolList"/>
                        <xsd:element name="vms"
type="typens:VmdbwsSupport..VmListArray"/>
                            <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
                                <xsd:element name="datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
                                    </xsd:all>
    </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyDatastore">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="store_type" type="xsd:string"/>
        <xsd:element name="total_space" type="xsd:double"/>
        <xsd:element name="free_space" type="xsd:double"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="multiplehostaccess" type="xsd:double"/>
        <xsd:element name="location" type="xsd:string"/>
        <xsd:element name="last_scan_on" type="xsd:dateTime"/>
        <xsd:element name="uncommitted" type="xsd:double"/>
        <xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="directory_hierarchy_supported"
type="xsd:boolean"/>
            <xsd:element name="thin_provisioning_supported"
type="xsd:boolean"/>

```

```

        <xsd:element name="raw_disk_mappings_supported"
type="xsd:boolean"/>
            <xsd:element name="master" type="xsd:boolean"/>
            <xsd:element name="ems_ref" type="xsd:string"/>
            <xsd:element name="storage_domain_type" type="xsd:string"/>
            <xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
                <xsd:element name="all_vms"
type="typens:VmDbwsSupport..VmListArray"/>
                    <xsd:element name="hosts"
type="typens:VmDbwsSupport..HostListArray"/>
                        <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
                            <xsd:element name="ext_management_systems"
type="typens:VmDbwsSupport..EmsListArray">
                                </xsd:all>
                            </xsd:complexType>
<xsd:complexType name="VmDbwsSupport..ProxyResourcePool">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>
        <xsd:element name="ems_id" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="uid_ems" type="xsd:string"/>
        <xsd:element name="memory_reserve" type="xsd:double"/>
        <xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="memory_limit" type="xsd:double"/>
        <xsd:element name="memory_shares" type="xsd:double"/>
        <xsd:element name="memory_shares_level" type="xsd:string"/>
        <xsd:element name="cpu_reserve" type="xsd:double"/>
        <xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
        <xsd:element name="cpu_limit" type="xsd:double"/>
        <xsd:element name="cpu_shares" type="xsd:double"/>
        <xsd:element name="cpu_shares_level" type="xsd:string"/>
        <xsd:element name="is_default" type="xsd:boolean"/>
        <xsd:element name="ems_ref_obj" type="xsd:string"/>
        <xsd:element name="vapp" type="xsd:boolean"/>
        <xsd:element name="ems_ref" type="xsd:string"/>
        <xsd:element name="vms"
type="typens:VmDbwsSupport..VmListArray"/>
            <xsd:element name="ext_management_system"
type="typens:VmDbwsSupport..EmsList"/>
                <xsd:element name="ws_attributes"
type="typens:VmDbwsSupport..WSAttributesArray"/>
                    <xsd:element name="parent_cluster"
type="typens:VmDbwsSupport..ClusterList"/>
                        </xsd:all>
                    </xsd:complexType>
<xsd:complexType name="VmDbwsSupport..ProxyVm">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="vendor" type="xsd:string"/>
        <xsd:element name="format" type="xsd:string"/>
        <xsd:element name="version" type="xsd:string"/>
        <xsd:element name="name" type="xsd:string"/>

```

```

<xsd:element name="description" type="xsd:string"/>
<xsd:element name="location" type="xsd:string"/>
<xsd:element name="config_xml" type="xsd:string"/>
<xsd:element name="autostart" type="xsd:string"/>
<xsd:element name="host_id" type="xsd:string"/>
<xsd:element name="last_sync_on" type="xsd:dateTime"/>
<xsd:element name="created_on" type="xsd:dateTime"/>
<xsd:element name="updated_on" type="xsd:dateTime"/>
<xsd:element name="storage_id" type="xsd:string"/>
<xsd:element name="guid" type="xsd:string"/>
<xsd:element name="ems_id" type="xsd:string"/>
<xsd:element name="last_scan_on" type="xsd:dateTime"/>
<xsd:element name="last_scan_attempt_on" type="xsd:dateTime"/>
<xsd:element name="uid_ems" type="xsd:string"/>
<xsd:element name="retires_on" type="xsd:date"/>
<xsd:element name="retired" type="xsd:boolean"/>
<xsd:element name="boot_time" type="xsd:dateTime"/>
<xsd:element name="tools_status" type="xsd:string"/>
<xsd:element name="standby_action" type="xsd:string"/>
<xsd:element name="power_state" type="xsd:string"/>
<xsd:element name="state_changed_on" type="xsd:dateTime"/>
<xsd:element name="previous_state" type="xsd:string"/>
<xsd:element name="connection_state" type="xsd:string"/>
<xsd:element name="last_perf_capture_on" type="xsd:dateTime"/>
<xsd:element name="blackbox_exists" type="xsd:boolean"/>
<xsd:element name="blackbox_validated" type="xsd:boolean"/>
<xsd:element name="registered" type="xsd:boolean"/>
<xsd:element name="busy" type="xsd:boolean"/>
<xsd:element name="smart" type="xsd:boolean"/>
<xsd:element name="memory_reserve" type="xsd:double"/>
<xsd:element name="memory_reserve_expand" type="xsd:boolean"/>
<xsd:element name="memory_limit" type="xsd:double"/>
<xsd:element name="memory_shares" type="xsd:double"/>
<xsd:element name="memory_shares_level" type="xsd:string"/>
<xsd:element name="cpu_reserve" type="xsd:double"/>
<xsd:element name="cpu_reserve_expand" type="xsd:boolean"/>
<xsd:element name="cpu_limit" type="xsd:double"/>
<xsd:element name="cpu_shares" type="xsd:double"/>
<xsd:element name="cpu_shares_level" type="xsd:string"/>
<xsd:element name="cpu_affinity" type="xsd:string"/>
<xsd:element name="ems_created_on" type="xsd:dateTime"/>
<xsd:element name="template" type="xsd:boolean"/>
<xsd:element name="evm_owner_id" type="xsd:string"/>
<xsd:element name="ems_ref_obj" type="xsd:string"/>
<xsd:element name="miq_group_id" type="xsd:string"/>
<xsd:element name="vdi" type="xsd:boolean"/>
<xsd:element name="linked_clone" type="xsd:boolean"/>
<xsd:element name="fault_tolerance" type="xsd:boolean"/>
<xsd:element name="type" type="xsd:string"/>
<xsd:element name="ems_ref" type="xsd:string"/>
<xsd:element name="ems_cluster_id" type="xsd:string"/>
<xsd:element name="retirement_warn" type="xsd:double"/>
<xsd:element name="retirement_last_warn" type="xsd:dateTime"/>
<xsd:element name="vnc_port" type="xsd:double"/>
<xsd:element name="flavor_id" type="xsd:string"/>
<xsd:element name="availability_zone_id" type="xsd:string"/>

```

```

<xsd:element name="cloud" type="xsd:boolean"/>
<xsd:element name="ipaddresses" type="typens:StringArray"/>
<xsd:element name="hostnames" type="typens:StringArray"/>
<xsd:element name="custom_attributes"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
    <xsd:element name="host"
type="typens:VmdbwsSupport..HostList"/>
        <xsd:element name="ext_management_system"
type="typens:VmdbwsSupport..EmsList"/>
            <xsd:element name="parent_cluster"
type="typens:VmdbwsSupport..ClusterList"/>
                <xsd:element name="datastores"
type="typens:VmdbwsSupport..DatastoreListArray"/>
                    <xsd:element name="ws_attributes"
type="typens:VmdbwsSupport..WSAttributesArray"/>
                        <xsd:element name="hardware"
type="typens:VmdbwsSupport..ProxyHardware"/>
                            <xsd:element name="parent_resource_pool"
type="typens:VmdbwsSupport..ResourcePoolList"/>
                                </xsd:all>
                            </xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProvisionOptions">
    <xsd:all>
        <xsd:element name="values" type="xsd:string"/>
        <xsd:element name="ems_custom_attributes" type="xsd:string"/>
        <xsd:element name="miq_custom_attributes" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyMiqProvisionRequest">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="approval_state" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="fulfilled_on" type="xsd:dateTime"/>
        <xsd:element name="requester_id" type="xsd:string"/>
        <xsd:element name="requester_name" type="xsd:string"/>
        <xsd:element name="request_type" type="xsd:string"/>
        <xsd:element name="request_state" type="xsd:string"/>
        <xsd:element name="message" type="xsd:string"/>
        <xsd:element name="status" type="xsd:string"/>
        <xsd:element name="userid" type="xsd:string"/>
        <xsd:element name="source_id" type="xsd:string"/>
        <xsd:element name="source_type" type="xsd:string"/>
        <xsd:element name="destination_id" type="xsd:string"/>
        <xsd:element name="destination_type" type="xsd:string"/>
        <xsd:element name="source"
type="typens:VmdbwsSupport..VmList"/>
            <xsd:element name="vms"
type="typens:VmdbwsSupport..VmListArray"/>
                <xsd:element name="miq_request_tasks"
type="typens:VmdbwsSupport..MiqProvisionTaskListArray"/>
                    <xsd:element name="request_options"
type="typens:VmdbwsSupport..KeyValueStructArray"/>

```

```

        <xsd:element name="request_tags"
type="typens:VmdbwsSupport..TagArray"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..MiqProvisionTaskList">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..KeyValueStruct">
    <xsd:all>
        <xsd:element name="key" type="xsd:string"/>
        <xsd:element name="value" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..Tag">
    <xsd:all>
        <xsd:element name="category" type="xsd:string"/>
        <xsd:element name="category_display_name" type="xsd:string"/>
        <xsd:element name="tag_name" type="xsd:string"/>
        <xsd:element name="tag_display_name" type="xsd:string"/>
        <xsd:element name="tag_path" type="xsd:string"/>
        <xsd:element name="display_name" type="xsd:string"/>
    </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyMiqProvisionTask">
    <xsd:all>
        <xsd:element name="id" type="xsd:string"/>
        <xsd:element name="description" type="xsd:string"/>
        <xsd:element name="state" type="xsd:string"/>
        <xsd:element name="request_type" type="xsd:string"/>
        <xsd:element name="userid" type="xsd:string"/>
        <xsd:element name="created_on" type="xsd:dateTime"/>
        <xsd:element name="updated_on" type="xsd:dateTime"/>
        <xsd:element name="message" type="xsd:string"/>
        <xsd:element name="status" type="xsd:string"/>
        <xsd:element name="type" type="xsd:string"/>
        <xsd:element name="miq_request_id" type="xsd:string"/>
        <xsd:element name="source_id" type="xsd:string"/>
        <xsd:element name="source_type" type="xsd:string"/>
        <xsd:element name="destination_id" type="xsd:string"/>
        <xsd:element name="destination_type" type="xsd:string"/>
        <xsd:element name="miq_request_task_id" type="xsd:string"/>
        <xsd:element name="phase" type="xsd:string"/>
        <xsd:element name="source"
type="typens:VmdbwsSupport..VmList"/>
            <xsd:element name="destination"
type="typens:VmdbwsSupport..VmList"/>
                <xsd:element name="request_options"
type="typens:VmdbwsSupport..KeyValueStructArray"/>
                    <xsd:element name="request_tags"
type="typens:VmdbwsSupport..TagArray"/>
                        </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyAutomationRequest">
```

```

<xsd:all>
  <xsd:element name="id" type="xsd:string"/>
  <xsd:element name="description" type="xsd:string"/>
  <xsd:element name="approval_state" type="xsd:string"/>
  <xsd:element name="type" type="xsd:string"/>
  <xsd:element name="created_on" type="xsd:dateTime"/>
  <xsd:element name="updated_on" type="xsd:dateTime"/>
  <xsd:element name="fulfilled_on" type="xsd:dateTime"/>
  <xsd:element name="requester_id" type="xsd:string"/>
  <xsd:element name="requester_name" type="xsd:string"/>
  <xsd:element name="request_type" type="xsd:string"/>
  <xsd:element name="request_state" type="xsd:string"/>
  <xsd:element name="message" type="xsd:string"/>
  <xsd:element name="status" type="xsd:string"/>
  <xsd:element name="userid" type="xsd:string"/>
  <xsd:element name="source_id" type="xsd:string"/>
  <xsd:element name="source_type" type="xsd:string"/>
  <xsd:element name="destination_id" type="xsd:string"/>
  <xsd:element name="destination_type" type="xsd:string"/>
  <xsd:element name="automation_tasks"
type="typens:VmdbwsSupport..AutomationTaskSummaryArray"/>
</xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..AutomationTaskSummary">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..ProxyAutomationTask">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>
    <xsd:element name="state" type="xsd:string"/>
    <xsd:element name="request_type" type="xsd:string"/>
    <xsd:element name="userid" type="xsd:string"/>
    <xsd:element name="created_on" type="xsd:dateTime"/>
    <xsd:element name="updated_on" type="xsd:dateTime"/>
    <xsd:element name="message" type="xsd:string"/>
    <xsd:element name="status" type="xsd:string"/>
    <xsd:element name="type" type="xsd:string"/>
    <xsd:element name="miq_request_id" type="xsd:string"/>
    <xsd:element name="source_id" type="xsd:string"/>
    <xsd:element name="source_type" type="xsd:string"/>
    <xsd:element name="destination_id" type="xsd:string"/>
    <xsd:element name="destination_type" type="xsd:string"/>
    <xsd:element name="miq_request_task_id" type="xsd:string"/>
    <xsd:element name="phase" type="xsd:string"/>
    <xsd:element name="automation_request"
type="typens:VmdbwsSupport..AutomationRequestSummary"/>
  </xsd:all>
</xsd:complexType>
<xsd:complexType name="VmdbwsSupport..AutomationRequestSummary">
  <xsd:all>
    <xsd:element name="id" type="xsd:string"/>
    <xsd:element name="description" type="xsd:string"/>

```

```

    </xsd:all>
  </xsd:complexType>
  <xsd:complexType name="VmdbwsSupport..VmInvokeTasksOptions">
    <xsd:all>
      <xsd:element name="ids" type="typens:StringArray"/>
      <xsd:element name="task" type="xsd:string"/>
      <xsd:element name="userid" type="xsd:string"/>
    </xsd:all>
  </xsd:complexType>
</xsd:schema>
</types>
<message name="EVMGet">
  <part name="token" type="xsd:string"/>
  <part name="uri" type="xsd:string"/>
</message>
<message name="EVMGetResponse">
  <part name="return" type="xsd:string"/>
</message>
<message name="EVMSet">
  <part name="token" type="xsd:string"/>
  <part name="uri" type="xsd:string"/>
  <part name="value" type="xsd:string"/>
</message>
<message name="EVMSetResponse">
  <part name="return" type="xsd:string"/>
</message>
<message name="EVMPing">
  <part name="data" type="xsd:string"/>
</message>
<message name="EVMPingResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMVmList">
  <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMVmListResponse">
  <part name="return" type="typens:VmdbwsSupport..VmListArray"/>
</message>
<message name="EVMHostList">
</message>
<message name="EVMHostListResponse">
  <part name="return" type="typens:VmdbwsSupport..HostListArray"/>
</message>
<message name="EVMClusterList">
</message>
<message name="EVMClusterListResponse">
  <part name="return" type="typens:VmdbwsSupport..ClusterListArray"/>
</message>
<message name="EVMResourcePoolList">
</message>
<message name="EVMResourcePoolListResponse">
  <part name="return"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>
<message name="EVMDatastoreList">
</message>

```

```

<message name="EVMDatastoreListResponse">
    <part name="return" type="typens:VmDbwsSupport..DatastoreListArray"/>
</message>
<message name="EVMVmSoftware">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMVmSoftwareResponse">
    <part name="return" type="typens:VmDbwsSupport..VmSoftwareArray"/>
</message>
<message name="EVMVmAccounts">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMVmAccountsResponse">
    <part name="return" type="typens:VmDbwsSupport..VmAccountsArray"/>
</message>
<message name="EVMGetHost">
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMGetHostResponse">
    <part name="return" type="typens:Host"/>
</message>
<message name="EVMGetHosts">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EVMGetHostsResponse">
    <part name="return" type="typens:HostArray"/>
</message>
<message name="EVMGetCluster">
    <part name="clusterId" type="xsd:string"/>
</message>
<message name="EVMGetClusterResponse">
    <part name="return" type="typens:VmDbwsSupport..Cluster"/>
</message>
<message name="EVMGetClusters">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EVMGetClustersResponse">
    <part name="return" type="typens:VmDbwsSupport..ClusterArray"/>
</message>
<message name="EVMGetResourcePool">
    <part name="resourcepoolId" type="xsd:string"/>
</message>
<message name="EVMGetResourcePoolResponse">
    <part name="return" type="typens:ResourcePool"/>
</message>
<message name="EVMGetResourcePools">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EVMGetResourcePoolsResponse">
    <part name="return" type="typens:ResourcePoolArray"/>
</message>
<message name="EVMGetDatastore">
    <part name="datastoreId" type="xsd:string"/>
</message>
<message name="EVMGetDatastoreResponse">
    <part name="return" type="typens:VmDbwsSupport..Datastore"/>

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```

</message>
<message name="EVMGetDatastores">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EVMGetDatastoresResponse">
    <part name="return" type="typens:VmdbwsSupport..DatastoreArray"/>
</message>
<message name="EVMGetVm">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMGetVmResponse">
    <part name="return" type="typens:Vm"/>
</message>
<message name="EVMGetVms">
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMGetVmsResponse">
    <part name="return" type="typens:VmArray"/>
</message>
<message name="EVMDelteVmByName">
    <part name="vmName" type="xsd:string"/>
</message>
<message name="EVMDelteVmByNameResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMSmartStart">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMSmartStartResponse">
    <part name="return" type="typens:VmdbwsSupport..VmCmdResult"/>
</message>
<message name="EVMSmartStop">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMSmartStopResponse">
    <part name="return" type="typens:VmdbwsSupport..VmCmdResult"/>
</message>
<message name="EVMSmartSuspend">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="EVMSmartSuspendResponse">
    <part name="return" type="typens:VmdbwsSupport..VmCmdResult"/>
</message>
<message name="EVMGetPolicy">
    <part name="policyName" type="xsd:string"/>
</message>
<message name="EVMGetPolicyResponse">
    <part name="return" type="typens:MiqPolicy"/>
</message>
<message name="EVMEventList">
    <part name="policyGuid" type="xsd:string"/>
</message>
<message name="EVMEventListResponse">
    <part name="return" type="typens:VmdbwsSupport..EventListArray"/>
</message>
<message name="EVMConditionList">

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<part name="policyGuid" type="xsd:string"/>
</message>
<message name="EVMConditionListResponse">
    <part name="return" type="typens:VmdbwsSupport..ConditionListArray"/>
</message>
<message name="EVMActionList">
    <part name="policyGuid" type="xsd:string"/>
</message>
<message name="EVMActionListResponse">
    <part name="return" type="typens:VmdbwsSupport..ActionListArray"/>
</message>
<message name="EVMPolicyList">
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMPolicyListResponse">
    <part name="return" type="typens:VmdbwsSupport..PolicyListArray"/>
</message>
<message name="EVMVmRsop">
    <part name="vmGuid" type="xsd:string"/>
    <part name="policyName" type="xsd:string"/>
</message>
<message name="EVMVmRsopResponse">
    <part name="return" type="typens:VmdbwsSupport..VmRsop"/>
</message>
<message name="EVMAssignPolicy">
    <part name="policyGuid" type="xsd:string"/>
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMAssignPolicyResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMUnassignPolicy">
    <part name="policyGuid" type="xsd:string"/>
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="EVMUnassignPolicyResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMAAddLifecycleEvent">
    <part name="event" type="xsd:string"/>
    <part name="status" type="xsd:string"/>
    <part name="message" type="xsd:string"/>
    <part name="vmGuid" type="xsd:string"/>
    <part name="vmLocation" type="xsd:string"/>
    <part name="createdBy" type="xsd:string"/>
</message>
<message name="EVMAAddLifecycleEventResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMProvisionRequest">
    <part name="sourceName" type="xsd:string"/>
    <part name="targetName" type="xsd:string"/>
    <part name="autoApprove" type="xsd:boolean"/>
    <part name="tags" type="xsd:string"/>
    <part name="additionalValues" type="xsd:string"/>
</message>

```

```

<message name="EVMPublicProvisionRequestResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMPublicProvisionRequestEx">
  <part name="version" type="xsd:string"/>
  <part name="templateFields" type="xsd:string"/>
  <part name="vmFields" type="xsd:string"/>
  <part name="requester" type="xsd:string"/>
  <part name="tags" type="xsd:string"/>
  <part name="additionalValues" type="xsd:string"/>
  <part name="emsCustomAttributes" type="xsd:string"/>
  <part name="miqCustomAttributes" type="xsd:string"/>
</message>
<message name="EVMPublicProvisionRequestExResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMPublicHostProvisionRequest">
  <part name="version" type="xsd:string"/>
  <part name="templateFields" type="xsd:string"/>
  <part name="hostFields" type="xsd:string"/>
  <part name="requester" type="xsd:string"/>
  <part name="tags" type="xsd:string"/>
  <part name="additionalValues" type="xsd:string"/>
  <part name="emsCustomAttributes" type="xsd:string"/>
  <part name="miqCustomAttributes" type="xsd:string"/>
</message>
<message name="EVMPublicHostProvisionRequestResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMVmScanByProperty">
  <part name="property" type="xsd:string"/>
  <part name="value" type="xsd:string"/>
</message>
<message name="EVMVmScanByPropertyResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="EVMVmEventByProperty">
  <part name="property" type="xsd:string"/>
  <part name="value" type="xsd:string"/>
  <part name="eventType" type="xsd:string"/>
  <part name="eventMessage" type="xsd:string"/>
  <part name="eventTime" type="xsd:string"/>
</message>
<message name="EVMVmEventByPropertyResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<message name="GetEmsList">
</message>
<message name="GetEmsListResponse">
  <part name="return" type="typens:VmdbwsSupport..EmsListArray"/>
</message>
<message name="GetHostList">
  <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetHostListResponse">
  <part name="return" type="typens:VmdbwsSupport..HostListArray"/>

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</message>
<message name="GetClusterList">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetClusterListResponse">
    <part name="return" type="typens:VmdbwsSupport..ClusterListArray"/>
</message>
<message name="GetResourcePoolList">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetResourcePoolListResponse">
    <part name="return"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>
<message name="GetDatastoreList">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="GetDatastoreListResponse">
    <part name="return" type="typens:VmdbwsSupport..DatastoreListArray"/>
</message>
<message name="GetVmList">
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="GetVmListResponse">
    <part name="return" type="typens:VmdbwsSupport..VmListArray"/>
</message>
<message name="FindEmsByGuid">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="FindEmsByGuidResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyExtManagementSystem"/>
</message>
<message name="FindHostsByGuid">
    <part name="hostGuids" type="typens:StringArray"/>
</message>
<message name="FindHostsByGuidResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyHostArray"/>
</message>
<message name="FindHostByGuid">
    <part name="hostGuid" type="xsd:string"/>
</message>
<message name="FindHostByGuidResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyHost"/>
</message>
<message name="FindClustersById">
    <part name="clusterIds" type="typens:StringArray"/>
</message>
<message name="FindClustersByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
<message name="FindClusterById">
    <part name="clusterId" type="xsd:string"/>
</message>
<message name="FindClusterByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyCluster"/>

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```

</message>
<message name="FindDatastoresById">
    <part name="datastoreIds" type="typens:StringArray"/>
</message>
<message name="FindDatastoresByIdResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>
<message name="FindDatastoreById">
    <part name="datastoreId" type="xsd:string"/>
</message>
<message name="FindDatastoreByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyDatastore"/>
</message>
<message name="FindResourcePoolsById">
    <part name="resourcepoolIds" type="typens:StringArray"/>
</message>
<message name="FindResourcePoolsByIdResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyResourcePoolArray"/>
</message>
<message name="FindResourcePoolById">
    <part name="resourcepoolId" type="xsd:string"/>
</message>
<message name="FindResourcePoolByIdResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyResourcePool"/>
</message>
<message name="FindVmsByGuid">
    <part name="vmGuids" type="typens:StringArray"/>
</message>
<message name="FindVmsByGuidResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>
<message name="FindVmByGuid">
    <part name="vmGuid" type="xsd:string"/>
</message>
<message name="FindVmByGuidResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyVm"/>
</message>
<message name="GetEmsByList">
    <part name="emsList" type="typens:VmdbwsSupport..EmsListArray"/>
</message>
<message name="GetEmsByListResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyExtManagementSystemArray"/>
</message>
<message name="GetHostsByList">
    <part name="hostList" type="typens:VmdbwsSupport..HostListArray"/>
</message>
<message name="GetHostsByListResponse">
    <part name="return" type="typens:VmdbwsSupport..ProxyHostArray"/>
</message>
<message name="GetClustersByList">
    <part name="clusterList"
type="typens:VmdbwsSupport..ClusterListArray"/>
</message>

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```

<message name="GetClustersByListResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
<message name="GetDatastoresByList">
  <part name="datastoreList"
type="typens:VmdbwsSupport..DatastoreListArray"/>
</message>
<message name="GetDatastoresByListResponse">
  <part name="return"
type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>
<message name="GetResourcePoolsByList">
  <part name="resourcepoolList"
type="typens:VmdbwsSupport..ResourcePoolListArray"/>
</message>
<message name="GetResourcePoolsByListResponse">
  <part name="return"
type="typens:VmdbwsSupport..ProxyResourcePoolArray"/>
</message>
<message name="GetVmsByList">
  <part name="vmList" type="typens:VmdbwsSupport..VmListArray"/>
</message>
<message name="GetVmsByListResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>
<message name="GetVmsByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetVmsByTagResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>
<message name="GetTemplatesByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetTemplatesByTagResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyVmArray"/>
</message>
<message name="GetClustersByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetClustersByTagResponse">
  <part name="return" type="typens:VmdbwsSupport..ProxyClusterArray"/>
</message>
<message name="GetResourcePoolsByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetResourcePoolsByTagResponse">
  <part name="return"
type="typens:VmdbwsSupport..ProxyResourcePoolArray"/>
</message>
<message name="GetDatastoresByTag">
  <part name="tag" type="xsd:string"/>
</message>
<message name="GetDatastoresByTagResponse">
  <part name="return"
type="typens:VmdbwsSupport..ProxyDatastoreArray"/>
</message>

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```

</message>
<message name="VmAddCustomAttributeByFields">
    <part name="vmGuid" type="xsd:string"/>
    <part name="name" type="xsd:string"/>
    <part name="value" type="xsd:string"/>
    <part name="section" type="xsd:string"/>
    <part name="source" type="xsd:string"/>
</message>
<message name="VmAddCustomAttributeByFieldsResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmAddCustomAttribute">
    <part name="vmGuid" type="xsd:string"/>
    <part name="customAttribute"
type="typens:VmdbwsSupport..ProxyCustomAttribute"/>
</message>
<message name="VmAddCustomAttributeResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmAddCustomAttributes">
    <part name="vmGuid" type="xsd:string"/>
    <part name="customAttribute"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmAddCustomAttributesResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmDeleteCustomAttribute">
    <part name="vmGuid" type="xsd:string"/>
    <part name="customAttribute"
type="typens:VmdbwsSupport..ProxyCustomAttribute"/>
</message>
<message name="VmDeleteCustomAttributeResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmDeleteCustomAttributes">
    <part name="vmGuid" type="xsd:string"/>
    <part name="customAttribute"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="VmDeleteCustomAttributesResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyCustomAttributeArray"/>
</message>
<message name="Version">
</message>
<message name="VersionResponse">
    <part name="return" type="typens:StringArray"/>
</message>
<message name="VmProvisionRequest">
    <part name="version" type="xsd:string"/>
    <part name="templateFields" type="xsd:string"/>

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<part name="vmFields" type="xsd:string"/>
<part name="requester" type="xsd:string"/>
<part name="tags" type="xsd:string"/>
<part name="options" type="typens:VmdbwsSupport..ProvisionOptions"/>
</message>
<message name="VmProvisionRequestResponse">
<part name="return"
      type="typens:VmdbwsSupport..ProxyMiqProvisionRequest"/>
</message>
<message name="VmSetOwner">
<part name="vmGuid" type="xsd:string"/>
<part name="owner" type="xsd:string"/>
</message>
<message name="VmSetOwnerResponse">
<part name="return" type="xsd:boolean"/>
</message>
<message name="VmSetTag">
<part name="vmGuid" type="xsd:string"/>
<part name="category" type="xsd:string"/>
<part name="name" type="xsd:string"/>
</message>
<message name="VmSetTagResponse">
<part name="return" type="xsd:boolean"/>
</message>
<message name="VmGetTags">
<part name="vmGuid" type="xsd:string"/>
</message>
<message name="VmGetTagsResponse">
<part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="HostSetTag">
<part name="hostGuid" type="xsd:string"/>
<part name="category" type="xsd:string"/>
<part name="name" type="xsd:string"/>
</message>
<message name="HostSetTagResponse">
<part name="return" type="xsd:boolean"/>
</message>
<message name="HostGetTags">
<part name="hostGuid" type="xsd:string"/>
</message>
<message name="HostGetTagsResponse">
<part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="ClusterSetTag">
<part name="clusterId" type="xsd:string"/>
<part name="category" type="xsd:string"/>
<part name="name" type="xsd:string"/>
</message>
<message name="ClusterSetTagResponse">
<part name="return" type="xsd:boolean"/>
</message>
<message name="ClusterGetTags">
<part name="clusterId" type="xsd:string"/>
</message>
<message name="ClusterGetTagsResponse">

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```

<part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="EmsSetTag">
    <part name="emsGuid" type="xsd:string"/>
    <part name="category" type="xsd:string"/>
    <part name="name" type="xsd:string"/>
</message>
<message name="EmsSetTagResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="EmsGetTags">
    <part name="emsGuid" type="xsd:string"/>
</message>
<message name="EmsGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="DatastoreSetTag">
    <part name="datastoreId" type="xsd:string"/>
    <part name="category" type="xsd:string"/>
    <part name="name" type="xsd:string"/>
</message>
<message name="DatastoreSetTagResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="DatastoreGetTags">
    <part name="datastoreId" type="xsd:string"/>
</message>
<message name="DatastoreGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="ResourcePoolSetTag">
    <part name="resourcepoolId" type="xsd:string"/>
    <part name="category" type="xsd:string"/>
    <part name="name" type="xsd:string"/>
</message>
<message name="ResourcePoolSetTagResponse">
    <part name="return" type="xsd:boolean"/>
</message>
<message name="ResourcePoolGetTags">
    <part name="resourcepoolId" type="xsd:string"/>
</message>
<message name="ResourcePoolGetTagsResponse">
    <part name="return" type="typens:VmdbwsSupport..TagArray"/>
</message>
<message name="GetVmProvisionRequest">
    <part name="requestId" type="xsd:string"/>
</message>
<message name="GetVmProvisionRequestResponse">
    <part name="return"
type="typens:VmdbwsSupport..ProxyMiqProvisionRequest"/>
</message>
<message name="GetVmProvisionTask">
    <part name="taskId" type="xsd:string"/>
</message>
<message name="GetVmProvisionTaskResponse">
    <part name="return"

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type="typens:VmDbwsSupport..ProxyMiqProvisionTask"/>
</message>
<message name="CreateAutomationRequest">
  <part name="version" type="xsd:string"/>
  <part name="uri_parts" type="xsd:string"/>
  <part name="parameters" type="xsd:string"/>
  <part name="requester" type="xsd:string"/>
</message>
<message name="CreateAutomationRequestResponse">
  <part name="return" type="xsd:string"/>
</message>
<message name="GetAutomationRequest">
  <part name="requestId" type="xsd:string"/>
</message>
<message name="GetAutomationRequestResponse">
  <part name="return"
type="typens:VmDbwsSupport..ProxyAutomationRequest"/>
</message>
<message name="GetAutomationTask">
  <part name="taskId" type="xsd:string"/>
</message>
<message name="GetAutomationTaskResponse">
  <part name="return"
type="typens:VmDbwsSupport..ProxyAutomationTask"/>
</message>
<message name="VmInvokeTasks">
  <part name="options"
type="typens:VmInvokeTasksOptions"/>
</message>
<message name="VmInvokeTasksResponse">
  <part name="return" type="xsd:boolean"/>
</message>
<portType name="VmDbwsPort">
  <operation name="EVMGet">
    <input message="typens:EVMGet"/>
    <output message="typens:EVMGetResponse"/>
  </operation>
  <operation name="EVMSet">
    <input message="typens:EVMSet"/>
    <output message="typens:EVMSetResponse"/>
  </operation>
  <operation name="EVMPing">
    <input message="typens:EVMPing"/>
    <output message="typens:EVMPingResponse"/>
  </operation>
  <operation name="EVMVmList">
    <input message="typens:EVMVmList"/>
    <output message="typens:EVMVmListResponse"/>
  </operation>
  <operation name="EVMHostList">
    <input message="typens:EVMHostList"/>
    <output message="typens:EVMHostListResponse"/>
  </operation>
  <operation name="EVMClusterList">
    <input message="typens:EVMClusterList"/>
    <output message="typens:EVMClusterListResponse"/>
  </operation>

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</operation>
<operation name="EVMDResourcePoolList">
  <input message="typens:EVMDResourcePoolList"/>
  <output message="typens:EVMDResourcePoolListResponse"/>
</operation>
<operation name="EVMDDatastoreList">
  <input message="typens:EVMDDatastoreList"/>
  <output message="typens:EVMDDatastoreListResponse"/>
</operation>
<operation name="EVMVmSoftware">
  <input message="typens:EVMVmSoftware"/>
  <output message="typens:EVMVmSoftwareResponse"/>
</operation>
<operation name="EVMVmAccounts">
  <input message="typens:EVMVmAccounts"/>
  <output message="typens:EVMVmAccountsResponse"/>
</operation>
<operation name="EVMDGetHost">
  <input message="typens:EVMDGetHost"/>
  <output message="typens:EVMDGetHostResponse"/>
</operation>
<operation name="EVMDGetHosts">
  <input message="typens:EVMDGetHosts"/>
  <output message="typens:EVMDGetHostsResponse"/>
</operation>
<operation name="EVMDGetCluster">
  <input message="typens:EVMDGetCluster"/>
  <output message="typens:EVMDGetClusterResponse"/>
</operation>
<operation name="EVMDGetClusters">
  <input message="typens:EVMDGetClusters"/>
  <output message="typens:EVMDGetClustersResponse"/>
</operation>
<operation name="EVMDGetResourcePool">
  <input message="typens:EVMDGetResourcePool"/>
  <output message="typens:EVMDGetResourcePoolResponse"/>
</operation>
<operation name="EVMDGetResourcePools">
  <input message="typens:EVMDGetResourcePools"/>
  <output message="typens:EVMDGetResourcePoolsResponse"/>
</operation>
<operation name="EVMDGetDatastore">
  <input message="typens:EVMDGetDatastore"/>
  <output message="typens:EVMDGetDatastoreResponse"/>
</operation>
<operation name="EVMDGetDatastores">
  <input message="typens:EVMDGetDatastores"/>
  <output message="typens:EVMDGetDatastoresResponse"/>
</operation>
<operation name="EVMDGetVm">
  <input message="typens:EVMDGetVm"/>
  <output message="typens:EVMDGetVmResponse"/>
</operation>
<operation name="EVMDGetVms">
  <input message="typens:EVMDGetVms"/>
  <output message="typens:EVMDGetVmsResponse"/>

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```
</operation>
<operation name="EVMDelteVmByName">
  <input message="typens:EVMDelteVmByName"/>
  <output message="typens:EVMDelteVmByNameResponse"/>
</operation>
<operation name="EVMSmartStart">
  <input message="typens:EVMSmartStart"/>
  <output message="typens:EVMSmartStartResponse"/>
</operation>
<operation name="EVMSmartStop">
  <input message="typens:EVMSmartStop"/>
  <output message="typens:EVMSmartStopResponse"/>
</operation>
<operation name="EVMSmartSuspend">
  <input message="typens:EVMSmartSuspend"/>
  <output message="typens:EVMSmartSuspendResponse"/>
</operation>
<operation name="EVMPolicyGet">
  <input message="typens:EVMPolicyGet"/>
  <output message="typens:EVMPolicyGetResponse"/>
</operation>
<operation name="EVMEventList">
  <input message="typens:EVMEventList"/>
  <output message="typens:EVMEventListResponse"/>
</operation>
<operation name="EVMConditionList">
  <input message="typens:EVMConditionList"/>
  <output message="typens:EVMConditionListResponse"/>
</operation>
<operation name="EVMActionList">
  <input message="typens:EVMActionList"/>
  <output message="typens:EVMActionListResponse"/>
</operation>
<operation name="EVMPolicyList">
  <input message="typens:EVMPolicyList"/>
  <output message="typens:EVMPolicyListResponse"/>
</operation>
<operation name="EVMVmRsop">
  <input message="typens:EVMVmRsop"/>
  <output message="typens:EVMVmRsopResponse"/>
</operation>
<operation name="EVMAssignPolicy">
  <input message="typens:EVMAssignPolicy"/>
  <output message="typens:EVMAssignPolicyResponse"/>
</operation>
<operation name="EVMUnassignPolicy">
  <input message="typens:EVMUnassignPolicy"/>
  <output message="typens:EVMUnassignPolicyResponse"/>
</operation>
<operation name="EVMAAddLifecycleEvent">
  <input message="typens:EVMAAddLifecycleEvent"/>
  <output message="typens:EVMAAddLifecycleEventResponse"/>
</operation>
<operation name="EVMProvisionRequest">
  <input message="typens:EVMProvisionRequest"/>
  <output message="typens:EVMProvisionRequestResponse"/>
```

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</operation>
<operation name="EVMProvisionRequestEx">
  <input message="typens:EVMProvisionRequestEx"/>
  <output message="typens:EVMProvisionRequestExResponse"/>
</operation>
<operation name="EVMHostProvisionRequest">
  <input message="typens:EVMHostProvisionRequest"/>
  <output message="typens:EVMHostProvisionRequestResponse"/>
</operation>
<operation name="EVMVmScanByProperty">
  <input message="typens:EVMVmScanByProperty"/>
  <output message="typens:EVMVmScanByPropertyResponse"/>
</operation>
<operation name="EVMVmEventByProperty">
  <input message="typens:EVMVmEventByProperty"/>
  <output message="typens:EVMVmEventByPropertyResponse"/>
</operation>
<operation name="GetEmsList">
  <input message="typens:GetEmsList"/>
  <output message="typens:GetEmsListResponse"/>
</operation>
<operation name="GetHostList">
  <input message="typens:GetHostList"/>
  <output message="typens:GetHostListResponse"/>
</operation>
<operation name="GetClusterList">
  <input message="typens:GetClusterList"/>
  <output message="typens:GetClusterListResponse"/>
</operation>
<operation name="GetResourcePoolList">
  <input message="typens:GetResourcePoolList"/>
  <output message="typens:GetResourcePoolListResponse"/>
</operation>
<operation name="GetDatastoreList">
  <input message="typens:GetDatastoreList"/>
  <output message="typens:GetDatastoreListResponse"/>
</operation>
<operation name="GetVmList">
  <input message="typens:GetVmList"/>
  <output message="typens:GetVmListResponse"/>
</operation>
<operation name="FindEmsByGuid">
  <input message="typens:FindEmsByGuid"/>
  <output message="typens:FindEmsByGuidResponse"/>
</operation>
<operation name="FindHostsByGuid">
  <input message="typens:FindHostsByGuid"/>
  <output message="typens:FindHostsByGuidResponse"/>
</operation>
<operation name="FindHostByGuid">
  <input message="typens:FindHostByGuid"/>
  <output message="typens:FindHostByGuidResponse"/>
</operation>
<operation name="FindClustersById">
  <input message="typens:FindClustersById"/>
  <output message="typens:FindClustersByIdResponse"/>
```

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</operation>
<operation name="FindClusterById">
  <input message="typens:FindClusterById"/>
  <output message="typens:FindClusterByIdResponse"/>
</operation>
<operation name="FindDatastoresById">
  <input message="typens:FindDatastoresById"/>
  <output message="typens:FindDatastoresByIdResponse"/>
</operation>
<operation name="FindDatastoreById">
  <input message="typens:FindDatastoreById"/>
  <output message="typens:FindDatastoreByIdResponse"/>
</operation>
<operation name="FindResourcePoolsById">
  <input message="typens:FindResourcePoolsById"/>
  <output message="typens:FindResourcePoolsByIdResponse"/>
</operation>
<operation name="FindResourcePoolById">
  <input message="typens:FindResourcePoolById"/>
  <output message="typens:FindResourcePoolByIdResponse"/>
</operation>
<operation name="FindVmsByGuid">
  <input message="typens:FindVmsByGuid"/>
  <output message="typens:FindVmsByGuidResponse"/>
</operation>
<operation name="FindVmByGuid">
  <input message="typens:FindVmByGuid"/>
  <output message="typens:FindVmByGuidResponse"/>
</operation>
<operation name="GetEmsByList">
  <input message="typens:GetEmsByList"/>
  <output message="typens:GetEmsByListResponse"/>
</operation>
<operation name="GetHostsByList">
  <input message="typens:GetHostsByList"/>
  <output message="typens:GetHostsByListResponse"/>
</operation>
<operation name="GetClustersByList">
  <input message="typens:GetClustersByList"/>
  <output message="typens:GetClustersByListResponse"/>
</operation>
<operation name="GetDatastoresByList">
  <input message="typens:GetDatastoresByList"/>
  <output message="typens:GetDatastoresByListResponse"/>
</operation>
<operation name="GetResourcePoolsByList">
  <input message="typens:GetResourcePoolsByList"/>
  <output message="typens:GetResourcePoolsByListResponse"/>
</operation>
<operation name="GetVmsByList">
  <input message="typens:GetVmsByList"/>
  <output message="typens:GetVmsByListResponse"/>
</operation>
<operation name="GetVmsByTag">
  <input message="typens:GetVmsByTag"/>
  <output message="typens:GetVmsByTagResponse"/>
```

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</operation>
<operation name="GetTemplatesByTag">
  <input message="typens:GetTemplatesByTag"/>
  <output message="typens:GetTemplatesByTagResponse"/>
</operation>
<operation name="GetClustersByTag">
  <input message="typens:GetClustersByTag"/>
  <output message="typens:GetClustersByTagResponse"/>
</operation>
<operation name="GetResourcePoolsByTag">
  <input message="typens:GetResourcePoolsByTag"/>
  <output message="typens:GetResourcePoolsByTagResponse"/>
</operation>
<operation name="GetDatastoresByTag">
  <input message="typens:GetDatastoresByTag"/>
  <output message="typens:GetDatastoresByTagResponse"/>
</operation>
<operation name="VmAddCustomAttributeByFields">
  <input message="typens:VmAddCustomAttributeByFields"/>
  <output message="typens:VmAddCustomAttributeByFieldsResponse"/>
</operation>
<operation name="VmAddCustomAttribute">
  <input message="typens:VmAddCustomAttribute"/>
  <output message="typens:VmAddCustomAttributeResponse"/>
</operation>
<operation name="VmAddCustomAttributes">
  <input message="typens:VmAddCustomAttributes"/>
  <output message="typens:VmAddCustomAttributesResponse"/>
</operation>
<operation name="VmDeleteCustomAttribute">
  <input message="typens:VmDeleteCustomAttribute"/>
  <output message="typens:VmDeleteCustomAttributeResponse"/>
</operation>
<operation name="VmDeleteCustomAttributes">
  <input message="typens:VmDeleteCustomAttributes"/>
  <output message="typens:VmDeleteCustomAttributesResponse"/>
</operation>
<operation name="Version">
  <input message="typens:Version"/>
  <output message="typens:VersionResponse"/>
</operation>
<operation name="VmProvisionRequest">
  <input message="typens:VmProvisionRequest"/>
  <output message="typens:VmProvisionRequestResponse"/>
</operation>
<operation name="VmSetOwner">
  <input message="typens:VmSetOwner"/>
  <output message="typens:VmSetOwnerResponse"/>
</operation>
<operation name="VmSetTag">
  <input message="typens:VmSetTag"/>
  <output message="typens:VmSetTagResponse"/>
</operation>
<operation name="VmGetTags">
  <input message="typens:VmGetTags"/>
  <output message="typens:VmGetTagsResponse"/>

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</operation>
<operation name="HostSetTag">
  <input message="typens:HostSetTag"/>
  <output message="typens:HostSetTagResponse"/>
</operation>
<operation name="HostGetTags">
  <input message="typens:HostGetTags"/>
  <output message="typens:HostGetTagsResponse"/>
</operation>
<operation name="ClusterSetTag">
  <input message="typens:ClusterSetTag"/>
  <output message="typens:ClusterSetTagResponse"/>
</operation>
<operation name="ClusterGetTags">
  <input message="typens:ClusterGetTags"/>
  <output message="typens:ClusterGetTagsResponse"/>
</operation>
<operation name="EmsSetTag">
  <input message="typens:EmsSetTag"/>
  <output message="typens:EmsSetTagResponse"/>
</operation>
<operation name="EmsGetTags">
  <input message="typens:EmsGetTags"/>
  <output message="typens:EmsGetTagsResponse"/>
</operation>
<operation name="DatastoreSetTag">
  <input message="typens:DatastoreSetTag"/>
  <output message="typens:DatastoreSetTagResponse"/>
</operation>
<operation name="DatastoreGetTags">
  <input message="typens:DatastoreGetTags"/>
  <output message="typens:DatastoreGetTagsResponse"/>
</operation>
<operation name="ResourcePoolSetTag">
  <input message="typens:ResourcePoolSetTag"/>
  <output message="typens:ResourcePoolSetTagResponse"/>
</operation>
<operation name="ResourcePoolGetTags">
  <input message="typens:ResourcePoolGetTags"/>
  <output message="typens:ResourcePoolGetTagsResponse"/>
</operation>
<operation name="GetVmProvisionRequest">
  <input message="typens:GetVmProvisionRequest"/>
  <output message="typens:GetVmProvisionRequestResponse"/>
</operation>
<operation name="GetVmProvisionTask">
  <input message="typens:GetVmProvisionTask"/>
  <output message="typens:GetVmProvisionTaskResponse"/>
</operation>
<operation name="CreateAutomationRequest">
  <input message="typens>CreateAutomationRequest"/>
  <output message="typens>CreateAutomationRequestResponse"/>
</operation>
<operation name="GetAutomationRequest">
  <input message="typens:GetAutomationRequest"/>
  <output message="typens:GetAutomationRequestResponse"/>

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</operation>
<operation name="GetAutomationTask">
    <input message="typens:GetAutomationTask"/>
    <output message="typens:GetAutomationTaskResponse"/>
</operation>
<operation name="VmInvokeTasks">
    <input message="typens:VmInvokeTasks"/>
    <output message="typens:VmInvokeTasksResponse"/>
</operation>
</portType>
<binding name="VmdbwsBinding" type="typens:VmdbwsPort">
    <soap:binding style="rpc"
transport="http://schemas.xmlsoap.org/soap/http"/>
    <operation name="EVMGet">
        <soap:operation soapAction="/vmdbws/api/EVMGet"/>
        <input>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </input>
        <output>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </output>
    </operation>
    <operation name="EVMSet">
        <soap:operation soapAction="/vmdbws/api/EVMSet"/>
        <input>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </input>
        <output>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </output>
    </operation>
    <operation name="EVMPing">
        <soap:operation soapAction="/vmdbws/api/EVMPing"/>
        <input>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </input>
        <output>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </output>
    </operation>
    <operation name="EVMVmList">
        <soap:operation soapAction="/vmdbws/api/EVMVmList"/>
        <input>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </input>
        <output>
            <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
        </output>
    </operation>

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</operation>
<operation name="EVMHostList">
  <soap:operation soapAction="/vmdbws/api/EVMHostList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMClusterList">
  <soap:operation soapAction="/vmdbws/api/EVMClusterList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMResourcePoolList">
  <soap:operation soapAction="/vmdbws/api/EVMResourcePoolList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMDatasoreList">
  <soap:operation soapAction="/vmdbws/api/EVMDatasoreList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMVmSoftware">
  <soap:operation soapAction="/vmdbws/api/EVMVmSoftware"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>

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<operation name="EVMVmAccounts">
  <soap:operation soapAction="/vmdbws/api/EVMVmAccounts"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </output>
</operation>
<operation name="EVMGethost">
  <soap:operation soapAction="/vmdbws/api/EVMGethost"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </output>
</operation>
<operation name="EVMGethosts">
  <soap:operation soapAction="/vmdbws/api/EVMGethosts"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </output>
</operation>
<operation name="EVMGetCluster">
  <soap:operation soapAction="/vmdbws/api/EVMGetCluster"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </output>
</operation>
<operation name="EVMGetClusters">
  <soap:operation soapAction="/vmdbws/api/EVMGetClusters"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
  </output>
</operation>
<operation name="EVMGetResourcePool">

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<soap:operation soapAction="/vmdbws/api/EVMGetResourcePool"/>
<input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="EVMGetResourcePools">
    <soap:operation soapAction="/vmdbws/api/EVMGetResourcePools"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMGetDatastore">
    <soap:operation soapAction="/vmdbws/api/EVMGetDatastore"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMGetDatastores">
    <soap:operation soapAction="/vmdbws/api/EVMGetDatastores"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMGetVm">
    <soap:operation soapAction="/vmdbws/api/EVMGetVm"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMGetVms">
    <soap:operation soapAction="/vmdbws/api/EVMGetVms"/>

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<input>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="EVMDeleteVmByName">
  <soap:operation soapAction="/vmdbws/api/EVMDeleteVmByName"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMSmartStart">
  <soap:operation soapAction="/vmdbws/api/EVMSmartStart"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMSmartStop">
  <soap:operation soapAction="/vmdbws/api/EVMSmartStop"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMSmartSuspend">
  <soap:operation soapAction="/vmdbws/api/EVMSmartSuspend"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMGetPolicy">
  <soap:operation soapAction="/vmdbws/api/EVMGetPolicy"/>
  <input>

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        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="EVMEventList">
    <soap:operation soapAction="/vmdbws/api/EVMEventList"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="EVMConditionList">
    <soap:operation soapAction="/vmdbws/api/EVMConditionList"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="EVMActionList">
    <soap:operation soapAction="/vmdbws/api/EVMActionList"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="EVMPolicyList">
    <soap:operation soapAction="/vmdbws/api/EVMPolicyList"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="EVMVmRsop">
    <soap:operation soapAction="/vmdbws/api/EVMVmRsop"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"

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encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMAssignPolicy">
    <soap:operation soapAction="/vmdbws/api/EVMAssignPolicy"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMUnassignPolicy">
    <soap:operation soapAction="/vmdbws/api/EVMUnassignPolicy"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMAAddLifecycleEvent">
    <soap:operation soapAction="/vmdbws/api/EVMAAddLifecycleEvent"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMP provisionRequest">
    <soap:operation soapAction="/vmdbws/api/EVMP provisionRequest"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EVMP provisionRequestEx">
    <soap:operation soapAction="/vmdbws/api/EVMP provisionRequestEx"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
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</input>
<output>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="EVMHostProvisionRequest">
  <soap:operation soapAction="/vmdbws/api/EVMHostProvisionRequest"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMVmScanByProperty">
  <soap:operation soapAction="/vmdbws/api/EVMVmScanByProperty"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="EVMVmEventByProperty">
  <soap:operation soapAction="/vmdbws/api/EVMVmEventByProperty"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetEmsList">
  <soap:operation soapAction="/vmdbws/api/GetEmsList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetHostList">
  <soap:operation soapAction="/vmdbws/api/GetHostList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>

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<output>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="GetClusterList">
  <soap:operation soapAction="/vmdbws/api/GetClusterList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetResourcePoolList">
  <soap:operation soapAction="/vmdbws/api/GetResourcePoolList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetDatastoreList">
  <soap:operation soapAction="/vmdbws/api/GetDatastoreList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetVmList">
  <soap:operation soapAction="/vmdbws/api/GetVmList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="FindEmsByGuid">
  <soap:operation soapAction="/vmdbws/api/FindEmsByGuid"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>

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<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="FindHostsByGuid">
<soap:operation soapAction="/vmdbws/api/FindHostsByGuid"/>
<input>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="FindHostByGuid">
<soap:operation soapAction="/vmdbws/api/FindHostByGuid"/>
<input>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="FindClustersById">
<soap:operation soapAction="/vmdbws/api/FindClustersById"/>
<input>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="FindClusterById">
<soap:operation soapAction="/vmdbws/api/FindClusterById"/>
<input>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="FindDatastoresById">
<soap:operation soapAction="/vmdbws/api/FindDatastoresById"/>
<input>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
<soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
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encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="FindDatastoreById">
    <soap:operation soapAction="/vmdbws/api/FindDatastoreById"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="FindResourcePoolsById">
    <soap:operation soapAction="/vmdbws/api/FindResourcePoolsById"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="FindResourcePoolById">
    <soap:operation soapAction="/vmdbws/api/FindResourcePoolById"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="FindVmsByGuid">
    <soap:operation soapAction="/vmdbws/api/FindVmsByGuid"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="FindVmByGuid">
    <soap:operation soapAction="/vmdbws/api/FindVmByGuid"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
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</output>
</operation>
<operation name="GetEmsByList">
  <soap:operation soapAction="/vmdbws/api/GetEmsByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetHostsByList">
  <soap:operation soapAction="/vmdbws/api/GetHostsByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetClustersByList">
  <soap:operation soapAction="/vmdbws/api/GetClustersByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetDatastoresByList">
  <soap:operation soapAction="/vmdbws/api/GetDatastoresByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetResourcePoolsByList">
  <soap:operation soapAction="/vmdbws/api/GetResourcePoolsByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
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</operation>
<operation name="GetVmsByList">
  <soap:operation soapAction="/vmdbws/api/GetVmsByList"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetVmsByTag">
  <soap:operation soapAction="/vmdbws/api/GetVmsByTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetTemplatesByTag">
  <soap:operation soapAction="/vmdbws/api/GetTemplatesByTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetClustersByTag">
  <soap:operation soapAction="/vmdbws/api/GetClustersByTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="GetResourcePoolsByTag">
  <soap:operation soapAction="/vmdbws/api/GetResourcePoolsByTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>

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<operation name="GetDatastoresByTag">
  <soap:operation soapAction="/vmdbws/api/GetDatastoresByTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmAddCustomAttributeByFields">
  <soap:operation
soapAction="/vmdbws/api/VmAddCustomAttributeByFields"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmAddCustomAttribute">
  <soap:operation soapAction="/vmdbws/api/VmAddCustomAttribute"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmAddCustomAttributes">
  <soap:operation soapAction="/vmdbws/api/VmAddCustomAttributes"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmDeleteCustomAttribute">
  <soap:operation soapAction="/vmdbws/api/VmDeleteCustomAttribute"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
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<operation name="VmDeleteCustomAttributes">
  <soap:operation soapAction="/vmdbws/api/VmDeleteCustomAttributes"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="Version">
  <soap:operation soapAction="/vmdbws/api/Version"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmProvisionRequest">
  <soap:operation soapAction="/vmdbws/api/VmProvisionRequest"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmSetOwner">
  <soap:operation soapAction="/vmdbws/api/VmSetOwner"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmSetTag">
  <soap:operation soapAction="/vmdbws/api/VmSetTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="VmGetTags">

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<soap:operation soapAction="/vmdbws/api/VmGetTags"/>
<input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="HostSetTag">
    <soap:operation soapAction="/vmdbws/api/HostSetTag"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="HostGetTags">
    <soap:operation soapAction="/vmdbws/api/HostGetTags"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="ClusterSetTag">
    <soap:operation soapAction="/vmdbws/api/ClusterSetTag"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="ClusterGetTags">
    <soap:operation soapAction="/vmdbws/api/ClusterGetTags"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
    </output>
</operation>
<operation name="EmsSetTag">
    <soap:operation soapAction="/vmdbws/api/EmsSetTag"/>

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<input>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
  <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="EmsGetTags">
  <soap:operation soapAction="/vmdbws/api/EmsGetTags"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="DatastoreSetTag">
  <soap:operation soapAction="/vmdbws/api/DatastoreSetTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="DatastoreGetTags">
  <soap:operation soapAction="/vmdbws/api/DatastoreGetTags"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="ResourcePoolSetTag">
  <soap:operation soapAction="/vmdbws/api/ResourcePoolSetTag"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </input>
  <output>
    <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
  </output>
</operation>
<operation name="ResourcePoolGetTags">
  <soap:operation soapAction="/vmdbws/api/ResourcePoolGetTags"/>
  <input>

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        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="GetVmProvisionRequest">
    <soap:operation soapAction="/vmdbws/api/GetVmProvisionRequest"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="GetVmProvisionTask">
    <soap:operation soapAction="/vmdbws/api/GetVmProvisionTask"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="CreateAutomationRequest">
    <soap:operation soapAction="/vmdbws/api/CreateAutomationRequest"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="GetAutomationRequest">
    <soap:operation soapAction="/vmdbws/api/GetAutomationRequest"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>
<operation name="GetAutomationTask">
    <soap:operation soapAction="/vmdbws/api/GetAutomationTask"/>
    <input>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </input>
    <output>
        <soap:body use="encoded" namespace="urn:ActionWebService"
encodingStyle="http://schemas.xmlsoap.org/soap/encoding://" />
    </output>
</operation>

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encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
  <soap:body use="encoded" namespace="urn:ActionWebService">
<encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
<operation name="VmInvokeTasks">
  <soap:operation soapAction="/vmdbws/api/VmInvokeTasks"/>
  <input>
    <soap:body use="encoded" namespace="urn:ActionWebService">
<encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</input>
<output>
  <soap:body use="encoded" namespace="urn:ActionWebService">
<encodingStyle="http://schemas.xmlsoap.org/soap/encoding/" />
</output>
</operation>
</binding>
<service name="Service">
  <port name="VmdbwsPort" binding="typens:VmdbwsBinding">
    <soap:address
location="http://cfmedev.usersys.redhat.com/vmdbws/api"/>
  </port>
</service>
</definitions>
```

Revision History

Revision 0.0.0-5
Initial book creation

Fri Sep 19 2014

CloudForms Docs Team