Virtual Resources

Virtual Resources

The **Virtual Resources** menu option displays a summary of your virtual resources with customizable reports. The Summary page displays an overview of all VDCs and VMs, reports for new VMs and deleted VMs, and trending reports for network usage, CPU usage, memory usage, disk usage.

You can manage the following virtual resources:

- VDCs
- Application Containers
- VMs
- VM Action Requests
- Images
- Port Groups
- DV Port Groups
- Resource Pools
- Datastores
- Datastore Clusters

VDCs

During VM provisioning, you can associate a VM with a virtual data center (VDC). When you create a service request, you can choose the VDC on which the VM is provisioned. You can view a list of VDCs available for a group and choose the required VDC when provisioning the VM.

You can view available VDCs and their details by choosing **vDCs** under **Virtual Resources**.

The VDCs report displays all available VDCs, as well as the following information:

- Cloud
- vDC
- Type
- Lock State
- Total VMs
- Active VMs
- Custom Categories
- Status
- Tag

You can view additional details about a VDC by clicking on the row with the VDC and clicking **View Details**.

Application Containers

Application containers are a templatized approach to provisioning applications for end users. Each application container is a collection of VMware virtual machines (VMs) and/or bare metal servers (BMs) with an internal private network that is based on rules specified by the administrator. An application container can have one or more VMs and BMs and can be secured by a fencing gateway (for example, a Virtual Secure Gateway) to the external or public cloud.

Administrators can create one or more application container templates with the appropriate policies, workflows, and templates. The application container template determines how the application is provisioned for the end user.

You can view all available application containers and all associated VMs, bare metal servers, network tier mappings, L4-L7 services, and contracts. You can view additional details about an application container by clicking the row with the application container and clicking **View Details**.

Viewing Application Container Reports

For each application container, you can generate summary reports, a detailed report with credentials, and a detailed report without credentials. If you choose to generate a report with credentials, the passwords appear in plain text. The report header displays the service request ID used to create the container.

Note Generating a report without credentials hides the passwords in the report.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the row with application container for which you want to view reports.

Step 4 Click **View Reports**.

Step 5 On the **View Container Reports** screen, choose the type of report to generate from the **Select Report Type** drop-down list.

Step 6 Click **Submit**.

Managing an Application Container's Power

You can enable and disable power for an application container.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container that you want to power on or power off.

Step 4 Click **Power On Container** or **Power Off Container**.

Step 5 On the **Power On Container** or the **Power Off Container** screen, select the provisioned VMs to power on or power off.

Step 6 Click **Submit**.

Decommissioning an Application Container

You can decommission an application container that you no longer require. When you decommission an application container, the provisioned VMs are powered off but not deleted.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container that you want to decommission.

Step 4 Click **Decommission Container**.

Step 5 On the **Decommission Container** screen, select the provisioned VMs to power off.

Step 6 Click **Submit**.

Cloning an Application Container

You can clone an existing application container. Cloning an application container retains all of the settings and configuration data with the VMs that are contained in the original application container.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container that you want to clone.

Step 4 Click **Clone Container**.

Step 5 On the **Clone Container** screen, specify the new container name and new container label.
The container label must be unique.

Step 6 Click **Submit**.
The cloned container appears in the Application Container table.

Adding a VM to an Application Container

You can add a VM exclusively to any of the deployed application containers available for you or your group.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container to which you want to add one or more VMs.

Step 4 From the **More Actions** drop-down list, choose **Add VMs**.

Step 5 On the **Manage VMs** screen, choose a row and click the pencil icon.

Step 6 On the **Edit Virtual Machines Entry** screen, enter the number of additional VM instances to provision, and click **Submit**.

Note Your administrator defines the maximum number of VM instances that you can provision. An error message appears if you enter a value higher than the maximum instances allowed.

Step 7 On the **Manage VMs** screen, click **Submit**.

Adding a Bare Metal Server to a Deployed APIC Application Container

Bare metal servers are supported only in APIC containers. You can add a bare metal server to a deployed APIC application container.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container to which you want to add one or more bare metal servers.

Step 4 From the **More Actions** drop-down list, choose **Add BMs**.

Step 5 On the **Add BMs** screen, click **Add** to add a new bare metal server.

Step 6 On the **Add Entry to Bare Metal Application Components** screen, complete the required fields.

Step 7 Click **Submit**.

The newly added bare metal server is added to the **Bare Metal Application Components** list.

Step 8 On the **Add BMs** screen, you can add more bare metal servers or click **Submit**.

Deleting an Application Container

You can delete an application container that you no longer require. When you delete an application container, you also delete the resources that are provisioned for that application container. When the **Delete Container** action is initiated, the application container setup is rolled back, and a service request is created.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container that you want to delete.

Step 4 From the **More Actions** drop-down list, choose **Delete Container**.

Step 5 On the **Delete Container** screen, click **Submit**.

Note If you choose to delete an application container with associated L4-L7 services, the L4-L7 services are also deleted.

Accessing a VM Console

You can view the VM console of a VM associated with an application container.

Before You Begin

VNC must be configured on the VM you want to access.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container for which you want to view the VM console.

Step 4 From the **More Actions** drop-down list, choose **Open Console**.

Step 5 On the **Access VM Console** screen, choose a VM from the **Select VM** drop-down list.

Step 6 Click **Submit**.
The console for the selected VM opens in a new browser window.

Editing Resource Limits

You can edit the resource limits for an application container. You can specify the number of vCPUs, the amount of memory, the limit for maximum storage, and the maximum number of half-width and full-width servers for the container.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container for which you want to edit the resource limits.

Step 4 From the **More Actions** drop-down list, choose **Edit Resource Limits**.

Step 5 On the **Container Limits** screen, check **Configure Resource Limit**.

Step 6 Complete the required fields and click **Submit**.

Editing a Cost Model

A cost model is used to define the unit level costs of virtual resources such as CPU, RAM, and storage. These costs are used for chargeback calculations of VMs within the virtual infrastructure. Your administrator can map a cost model to an application container template. You can edit the cost model for an application container.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container for which you want to edit the cost model.

Step 4 From the **More Actions** drop-down list, choose **Edit Cost Model**.

Step 5 On the **Container Cost Model** screen, choose a cost model from the **Cost Model** drop-down list.
The drop-down list displays the available cost models mapped to the application container.

Step 6 Click **Submit**.

Adding an Application Container Contract

Contracts are policies that enable inter-End Point Group (inter-EPG) communication. These policies are the rules that specify communication between application tiers.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Application Containers**.

Step 3 Click the application container to which you want to add a contract.

Step 4 Click **View Details**.

Step 5 On the detail page for the application container, click **Contracts**.

Step 6 Click **Add Contract**.

Step 7 On the **Add Contract** screen, complete the required fields, including the following:

a) Choose the source network and destination network to which you want to apply the contract rule.
If the contract is between the tiers of the same container, you can choose the tiers that belong to the same container, otherwise, you can choose the tiers from different containers.

b) Check **Create Rule** to create a filter rule.
If **Create Rule** is not checked, only an empty contract is created.

c) Choose the protocol to use for communication.
If you choose **TCP** or **UDP**, additional fields for the starting and ending range for the source port and destination port appear.

d) Check **Apply Both Directions** to apply the contract to the traffic from the source to the destination, and the traffic from the destination to the source.

e) From the **Action** drop-down list, choose the action to be taken for the traffic that matches the contract.

Step 8 Click **Submit**.

VMs

You can perform post-provisioning lifecycle management actions that are permitted by your administrator. You can view the entire list of VMs provisioned using service requests under a user group. You can view the VMs report by choosing **VMs** under **Virtual Resources**.

The VMs report lists all available VMs, as well as the following information:

- Cloud
- Request ID
- VM-ID
- VM Label
- VM Name
- Host Name

- IP Address
- Power State
- VDC
- Category
- Provisioned Time
- Scheduled Termination Time
- Guest OS Type
- Assigned To User
- vCenter VM ID
- vCenter IP
- Users Can Access

You can view additional details about a VM by clicking the row with the VM and clicking **View Details**.

Requesting Inventory Collection on a VM

You can request on-demand inventory collection for a VM.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **VMs**.

Step 3 Click the row with the VM for which you want to collect inventory.

Step 4 From the **More Actions** drop-down list, choose **Inventory Collection Request for VM**.

Step 5 On the **Request VM Inventory Collection** screen, click **Submit**.
The VMs report and the VM's detail page are refreshed with updated information from the inventory collection request.

VM Action Requests

You can view all available VM action requests and their details by choosing **VM Action Requests** under **Virtual Resources**.

You can also view VM action requests associated with a specific VM by choosing **VM Action Requests** on the VM's details page.

The VM Action Requests report displays all available VM action requests, as well as the following information:

- VM ID
- Action ID
- User Name

- Comment
- Schedule Time
- Status

Images

An image is a template that can be used to create and provision virtual machines (VMs). An image typically includes a specified operating system and a configuration that provides virtual counterparts to hardware components. Images offer a secure way of preserving a VM's configuration that you want to deploy multiple times.

You can view all available VM images and their details by choosing **Images** under **Virtual Resources**. The image IDs in the Images report have been assigned to you or your group. You can use an image ID to provision a new VM. Additionally you can select and delete any image IDs that you do not require.

The Images report displays all available images, as well as the following information:

- ID
- Cloud
- Image ID
- Parent Node
- Datacenter
- Guest OS
- VMware Tools Installed
- VMware Tools Version
- VM Version
- Platform
- Architechture
- Number of CPUs
- Memory (MB)
- Provisioned Disk (GB)
- Image Location
- CPU Reservation (MHz)
- CPU Limit (MHz)
- CPU Shares
- Memory Reservation (MHz)
- Memory Limit (MHz)
- Memory Shares
- Uncommitted Storage (GB)

- Group/User

Converting an Image to a VM

You can use an image ID that is assigned to you or your group to provision a new VM. When you convert an image to a VM, a service request is created.

You can view the associated service request by choosing **Services** from the menu, selecting the **Service Request ID**, and clicking **View Details**.

Step 1 From the menu, choose **Virtual Resources**.

Step 2 On the **Virtual Resources** page, click **Images**.

Step 3 Click the row with the image that you want to convert to a VM.

Step 4 From the **More Actions** drop-down list, choose **Convert as VM**.

Step 5 On the **Convert Image as VM** screen, check **Assign VM** to select the user group to which you want to assign the VM. If unchecked, the VM will be assigned to the default group and default VDC.

Step 6 Complete the fields, including the VDC and category, and click **Submit**.

Resource Pools

You can view available clouds and related configuration information. The resource details are at the host node level. You can view the Resource Pools report by choosing **Resource Pools** under **Virtual Resources**.

The Resource Pools report displays all available resource pools, as well as the following information:

- ID
- Cloud
- Datacenter Name
- Owner
- Resource Pool Name
- Parent
- Status
- CPU Configured Reservation (MHz)
- CPU Limit (MHz)
- CPU Used Reservation (MHz)
- CPU Expandable Reservation
- Memory Configured Reservation
- Memory Limit (MHz)

- Memory Used Reservation (MHz)
- Memory Expandable Reservation
- Group/User
- Tag