

A Catalog Manager has rights to create, modify, and delete workload templates. Workload templates must be assigned to organizations by the Cloud Administrator. This Quick Start explains how to perform Catalog Manager tasks in the Cloud Manager console. The information is also available in the Cloud Manager console under *Help > How Do I > Catalog Manager*.

Workload Template Concepts

Workload templates are used to create the workloads for business services. As a Catalog Manager, you are responsible for creating and managing the workload templates from which users can choose when requesting business services. Understanding the following concepts can help you better fulfill this responsibility.

WORKLOAD TEMPLATE COMPONENTS

A workload template consists of the following:

- ◆ **Template name:** This is the display name that Business Service Owners see when selecting from the list of workload templates. You should use a naming scheme that makes sense to the users who consume the template.
- ◆ **Costs:** You can add one-time setup costs and monthly software license costs to the template. The costs are applied to all workloads created from the template.
- ◆ **VM template:** This is the VM template that is used to create the workloads. It is located in one of the Cloud Manager Orchestration repositories.
- ◆ **Custom VM template settings:** The VM template includes default resource settings for CPUs, memory, networks (NICs), and disk space. You can increase or decrease the settings to customize the workload template. For example, if the VM template is configured with one CPU, you can increase the CPU setting to two CPUs. When a workload is created from the workload template, the resulting VM is configured with two CPUs rather than one.
- ◆ **Windows or Linux settings:** If the VM template's operating system is Windows, the template includes Windows settings. If the operating system is Linux, the template includes Linux settings. You can pre-populate any settings that you want to be the same for all workloads created from the template. For example, if you want all workloads to use the same password for

the local Administrator account, you could pre-populate that setting. See the next section, [Pre-Populated Template Settings](#).

PRE-POPULATED TEMPLATE SETTINGS

When a Windows-based workload is created from a template, certain Windows settings, such as the computer name, the domain or workgroup, and the Windows product key, must be supplied. Likewise, when a Linux-based workload is created from a template, certain Linux settings, such as the host name, must be supplied.

If there are settings that will be the same for all workloads created from a template, you can pre-populate those settings. For example, if you want all Windows workloads to use the same Administrator account name, you can provide that name in the template.

Any settings that you do not pre-populate must be filled in when requesting a new business service (by the Business Service Owner) or when performing the pre-build configuration (by a Cloud Administrator or a Build Administrator).

WORKLOAD TEMPLATE CHANGES

You can change workload template settings at any time, even if the template has been used to create workloads. The only restriction is that you cannot specify a different VM template if the workload template is in use by a requested or deployed workload.

Changing a workload template has no immediate effect on deployed workloads. However, if a change is requested for a deployed workload, the workload settings are validated against the new workload template settings. This might require the Business Service Owner to change settings that he or she did not plan to change. For example, suppose that you create a workload template that allocates 4 CPUs. A Business Service Owner creates a workload (with 4 CPUs) from the workload template. You then change the workload template's CPU allocation from 4 to 2. After the

the workload's number of disks. When creating the change request, the Business Service Owner must also change the CPUs from 4 to 2 because 4 CPUs are no longer supported by the new workload template.

VM TEMPLATE CHANGES

VM templates are managed (created, changed, and deleted) through the Cloud Manager Orchestration Server console. If you change a VM template that is referenced by a workload template, the change is not recognized for the workload template until you open the workload template in Edit mode and then save it again. You do not need to change any workload template settings, you only need to save the template again.

WORKLOAD TEMPLATE DELETIONS

You can delete a workload template unless it is currently being used to build a workload. As soon as the workload is built and deployed, you can delete the workload template.

Deleting a workload template has no effect on deployed workloads, even if a change is requested for one of the workloads.

Creating Workload Templates

- 1 On the main navigation bar, click  *Catalog*.
- 2 On the *Workload Templates* tab, click *Create*.
- 3 If your Cloud Manager system has multiple zones, the Select Zone dialog box is displayed. Select the zone that contains the VM template you want, then click *OK* to display the Create Workload Template dialog box.
- 4 In the *General* section, provide the following information for the workload template:

Name: Specify a unique name for the workload template. Business Services owners see this name when selecting the workload templates they use to create their business services.

You can use letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, and period. The maximum length is 110 characters.

Setup Cost: Specify the cost associated with setting up the workload. This is a one-time fee.

License Cost: Specify the license costs associated with the workload's software. This cost is per month.

Zone: Displays the zone you selected for the workload template. You cannot change this setting.

Creation Date: Displays the current date. You cannot change this setting.

Description: Provide any additional information to identify the workload template.

- 5 In the *Virtual Machine Settings* section:

- 5a In the *VM Template* list, select a VM template.

After you select a VM template, the template's operating system and hypervisor information is displayed. You cannot change these settings.

The VM template's resource information (CPUs, memory, network interface cards, and disks) is also displayed. You can customize this information as necessary.

- 5b Customize the settings to increase or decrease the workload resources:

Number of CPUs: Select the number of CPUs for the workload. Some hypervisor technologies do not support more than 8 CPUs per workload, so the maximum number allowed is 8.

Memory: Select the megabytes (MB) of RAM to allocate to the workload.

Number of NICs: Select the number of network interface cards (NICs) to allocate to the workload.

Disks Summary: Displays the size of the mandatory workload disks and the number of optional workload disks defined in the template. Mandatory workload disks are always created. They are inherited from the VM template or manually defined on the *Disks* tab. Optional workload disks are available to the user but are created only if the user specifies sizes for the disks.

You add disks on the *Disks* page (see [Step 6](#) below) and the disk information is then displayed in these fields.

- 5c By default, each resource setting is unlocked, which means that a business service requestor can change it when creating a workload from the template. If you want to prevent a user from changing a setting, select the  check box.

- 6 If you want to add disks to the workload template, or if you want to specify whether or not the current disks should be included when calculating the cost of the workload:

- 6a Click the *Disks* tab.

The template can include up to 10 additional disks.

- 6b Click *Add* to add a disk to the list.

- 6c Make sure the disk is selected in the list, then specify a size (in the *Size* field below the list) to make the disk mandatory.

or

Leave the capacity set to 0 to make the disk optional.

The maximum size per disk is 1024 GB (1 TB). If you specify the size when adding a disk, the disk becomes mandatory. Users cannot remove or change a mandatory disk. If you add a disk with the size set to 0, the disk becomes optional. Users can leave the size at 0, in which case the disk is not created with the workload, or they can specify a size and create the disk.

- 6d** In the *Cost* field, select the check box if you want to include the cost of the disk in the workload's total cost.

If you don't enable the *Cost* option, the disk becomes a free disk and is not included when calculating the cost of the workload.

- 7** If the template is a Windows-based template and you want to pre-populate some of the Windows settings, click *Windows Settings*, then complete the following steps.

You might not want to pre-populate some settings, such as *Computer Name*, if the template will be used to create multiple workloads. Any settings that you do not pre-populate must be filled in when requesting a new business service (by the Business Service Owner) or when performing the pre-build configuration (by an administrator).

- 7a** Configure the *Domain Settings*:

Computer Name: Specify the computer name for the virtual machine.

Domain or Workgroup: Select *Domain* or *Workgroup*, then specify the name of the domain or workgroup to which you want the virtual machine added.

Domain Administrator User ID: This applies only if you are adding the virtual machine to a domain. Specify a domain administrator user ID that can be used to add the virtual machine to the domain specified in the *Domain* field.

- 7b** Modify the *Installation Settings*:

Run Once Commands: Specify any Windows RunOnce commands that you want run during the first log in to the virtual machine. For information about Windows RunOnce commands, see the Microsoft Windows documentation.

- 8** If the template is a Windows-based template and you want to pre-populate some of the Windows licensing information, click *Windows Licensing* and fill in the fields.

You might not want to pre-populate some settings, such as *Windows Product Key*, if the template will be used to create multiple workloads and the key does not cover multiple installations. Any settings that you do not pre-populate must be filled in when requesting a

new business service (by the Business Service Owner) or when performing the pre-build configuration (by an administrator).

Windows Product Key: Specify the product key for the workload's Windows operating system.

Registered to Name: Specify an individual, department, company or so forth to whom the Windows operating system software is registered.

- 9** If the template is a Linux-based template and you want to pre-populate some of the Linux settings, click *Linux Settings* and fill in the fields.

You might not want to pre-populate some settings, such as *Hostname*, if the template will be used to create multiple workloads. Any settings that you do not pre-populate must be filled in when requesting a new business service (by the Business Service Owner) or when performing the pre-build configuration (by an administrator).

Hostname: Specify the host name for the workload

Domain Name: Specify the domain for the workload (for example, netiq.com or provo.netiq.com).

- 10** Click *OK*.

Requesting Business Services

Any business service that you want to deploy must start as a request. The request defines the business service, including its name, contract period, and workloads. As soon as you submit the request, it goes through an approval and build process that you can track until the business service is deployed.

- 1** On the main navigation bar, click  *Business Services*, then click the *Requests* tab.
- 2** Click *Create* to display the Create Business Service Request dialog box.
- 3** Provide the following details for the business service:

Service Name: Specify a name that is different than any other business service names for the business group. You can use letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, and period. The name must begin with a letter or number and have a maximum length of 110 characters.

Start Date: Click  to select the date you want the business service to be available.

Expiration Date: Click  to select the date you want the business service to no longer be available. If you don't want the business service to expire, delete the date from the field.

Contract Length: If an expiration date is selected, this field displays the total number of months for the contract.

Organization: Displays the organization of which you are a member.

Business Group: Select the business group for which you are creating the business service.

Creator: Displays your user name.

Business Purpose: Provide details that explain the purpose or justification for the business service. This information is visible to the business service's approvers during the request approval process.

4 Add a workload to the business service:

- 4a** Click *Add* to display the Select Workload Template dialog box.

The dialog box displays a list of workload templates. A template provides the base settings and costs for the workload.

- 4b** Select the workload template from which to create the workload, then click *OK* to display the Configure Workload dialog box.

- 4c** On the *Resources* tab, specify a name for the workload, select a service level, and customize the resources allocated to the workload.

You cannot customize the resources if they are locked. For additional information about the *Resources* settings, click the ? button.

- 4d** Click the *Disks* tab to configure the workload's disks.

The workload's mandatory disks are listed. The mandatory disks are created with the workload and cannot be customized.

If the *Add* action, located above the list, is available, there are optional disks you can create for the workload. Click *Add*, then specify the size for the disk;

For additional information about the *Disks* settings, click the ? button.

- 4e** Click the *Networks* tab (if it is displayed), select a network interface card, then assign the network and configure the network address and name servers.

For additional information about the *Networks* settings, click the ? button.

- 4f** (Optional) Click the *Windows Settings* tab (if it is displayed), then provide an Administrator account password, computer name, and workgroup or domain information.

If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Windows Settings* settings, click the ? button.

- 4g** (Optional) Click the *Windows Licensing* tab (if it is displayed), then provide a Windows product key and registration name.

If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Windows Licensing* settings, click the ? button.

- 4h** (Optional) Click the *Linux Settings* tab (if it is displayed), then provide a host name and domain name.

If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Linux Settings* settings, click the ? button.

- 4i** (Optional) Click the *Console Access* tab, then set the password for VNC access to the workload.

If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Console Access* settings, click the ? button.

- 4j** Click *OK* to save the workload and add it to the *Workloads* list.

5 Add any additional workloads to the business service.

You can add additional workloads by repeating [Step 4](#) or by copying an existing workload and then modifying it as necessary. To copy a workload:

- 5a** Select the workload to copy, then click *Copy*.

- 5b** Select the number of copies to create and provide a unique name for each copy.

- 5c** Click *OK*.

The new workloads are added to the *Workloads* list.

- 5d** Edit each new workload to provide any missing information.

Each new workload contains as much of the original information as possible, but some information such as network addresses, Windows computer names, and Linux host names are not copied because they need to be unique for each workload.

6 (Optional) Give other users ownership rights to the business service.

The *Users* list lets you see any users who have been explicitly assigned ownership rights to the business service. It does not show users who inherit ownership rights to the business service through their roles.

Depending on the rights you have, you might only be able to view the list of users, or you might be able to add users. If you have rights and want to add a user:

- 6a** Click the *Users* tab, then click *Add*.

- 6b** Select users from the two lists.

The *Members* list displays all users who are members of the business service's organization. The *System Users* list displays users who are not members of the organization.

You can Shift-click and Ctrl-click to select multiple users (or user groups).

6c Click *OK*.

The users are added to the list.

7 Click *Save* to add the request to the *Requested Services* list without submitting it.

or

Click *Submit* to add the request and submit it for approval.

Managing Deployed Business Services

You can cycle (start, suspend, stop) a deployed business service's workloads, open a remote console to a workload, and give other users access to the business service.

STARTING, SUSPENDING, OR SHUTTING DOWN A WORKLOAD

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service with the workload you want to cycle, then click *Manage*.
- 3 In the *Workloads* list, select the workload.
- 4 Click one of the following controls:
 - ▶ Start the workload.
 - || Suspend the workload.
 - Shut down the workload.
- 5 Click *Close*.

OPENING A WORKLOAD CONSOLE

Cloud Manager provides remote access to workloads via a VNC console.

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service with the workload you want to access, then click *Manage*.
- 3 In the *Workloads* list, select the workload, then click *Console*.

If the *Console* action is not available, your Cloud Administrator has not enabled remote console access.
- 4 Specify the console password to log in.

After you log in, a remote console session is opened to the workload. Most functions of the remote console work the same as the local console. However, if you need to use special key sequences such as

Ctrl+Alt+Del, you must select them from the *Send Special Key Sequence* menu located at the top of the console.

- 5 When you are finished, close the browser window to end the session.

DELEGATING OWNERSHIP OF A BUSINESS SERVICE

By default, the following users have ownership rights to a business service:

- ◆ The creator of the business service
- ◆ All Business Service Owners for the business group that the business service belongs to
- ◆ All Business Service Owners for the organization
- ◆ All Organization Managers

If necessary, you can delegate ownership to other users. When you do so, the user receives rights to view, manage, and change the business service.

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service to which you want to give another user access, then click *Manage*.
- 3 Click the *Users* tab to display the *Business Service Owner* list.
- 4 Click *Add*, select the users or user groups you want to give access to the business service, then click *OK*.

You can Shift-click and Ctrl-click to select multiple users and user groups.

If the *Add* action is not available, you do not have rights to give access to other users.

Changing Deployed Business Services

You can change a business service's details (expiration date and business purpose) and workloads. Any change (including changing the expiration date and business purpose) generates a change request that must be approved before the changed business service can be redeployed.

CHANGING A BUSINESS SERVICE'S DETAILS

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service, then click *Change*.
- 3 Modify the details for the business service:
 - Expiration Date:** Specify the date you want the business service to no longer be available.
 - Business Purpose:** Provide details that explain the purpose or justification for the change to the business service.

- 4 Click *Submit* to submit your business service change request.

or

If you don't want to submit the change request at this time, click *Save* to save the change request.

A change icon  is added next to the business service name in the *Deployed* list to indicate that a change request has been generated and added to the *Requests* list. If you saved the change request rather than submitting it, you must go to the *Requests* list to edit the request or submit it.

REASSIGNING A BUSINESS SERVICE TO A DIFFERENT BUSINESS GROUP

You can reassign a business service to a different business group if 1) you have rights to the other business group and 2) the business group's resources (hypervisor, service levels, and so forth) support the business service's workloads.

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service, then click *Change*.
- 3 In the *Business Group* list, select the target business group.
- 4 Click *Submit* to submit your business service change request.

or

If you don't want to submit the change request at this time, click *Save* to save the change request.

A change icon  is added next to the business service name in the *Deployed* list to indicate that a change request has been generated and added to the *Requests* list. If you saved the change request rather than submitting it, you must go to the *Requests* list to edit the request or submit it.

ADDING A WORKLOAD

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service to which you want to add a workload, then click *Change*.
- 3 On the *Workloads* tab, click *Add* to display the Select Workload Template dialog box.
The dialog box displays a list of workload templates. A template is the basis for a workload, providing basic workload settings and costs.
- 4 Select the workload template from which to create the workload, then click *OK* to display the Configure Workload dialog box.
- 5 On the *Resources* tab, specify a name for the workload, select a service level, and customize the resources allocated to the workload.

If the resources are locked, you cannot customize them. For additional information about the *Resources* settings, click the  button.

- 6 Click the *Disks* tab to configure the workload's disks.
The workload's mandatory disks are listed. The mandatory disks are created with the workload and cannot be customized.
If the *Add* action, located above the list, is available, there are optional disks you can create for the workload. Click *Add*, then specify the size for the disk.
For additional information about the *Disks* settings, click the  button.
- 7 Click the *Networks* tab (if it is displayed), select a network interface card, then assign the network and configure the network address and name servers.
For additional information about the *Networks* settings, click the  button.
- 8 (Optional) Click the *Windows Settings* tab (if it is displayed), then provide an Administrator account password, computer name, and workgroup or domain information.
If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Windows Settings* settings, click the  button.
- 9 (Optional) Click the *Windows Licensing* tab (if it is displayed), then provide a Windows product key, and registration name.
If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Windows Licensing* settings, click the  button.
- 10 (Optional) Click the *Linux Settings* tab (if it is displayed), then provide a host name and domain name.
If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Linux Settings* settings, click the  button.
- 11 (Optional) Click the *Console Access* tab, then set the password for VNC access to the workload.
If you do not provide this information, a Cloud Administrator will provide it before the workload is built. For additional information about the *Console Access* settings, click the  button.
- 12 Click *OK* to save the workload and add it to the *Workloads* list.
- 13 Click *Submit* to submit your business service change request.

or

If you don't want to submit the change request at this time, click *Save* to save the change request.

A change icon  is added next to the business service name in the *Deployed* list to indicate that a change request has been generated and added to the *Requests* list. If you saved the change request rather than submitting it, you must go to the *Requests* list to edit the request or submit it.

MODIFYING A WORKLOAD

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service with the workload you want to modify, then click *Change*.
- 3 On the *Workloads* tab, select the workload to modify, then click *Edit*.
- 4 Modify the workload settings as desired.
For information about the workload settings, click the  button.
- 5 Click *OK* to save the workload changes.
- 6 Click *Submit* to submit your business service change request.
or
If you don't want to submit the change request at this time, click *Save* to save the change request.

REMOVING A WORKLOAD

- 1 On the main navigation bar, click  *Business Services*, then click *Deployed*.
- 2 Select the business service with the workload you want to remove, then click *Change*.

- 3 On the *Workloads* tab, select the workload, then click *Remove*.
- 4 Click *Yes* to confirm the action.
- 5 Click *Submit* to submit your business service change request.
or
If you don't want to submit the change request at this time, click *Save* to save the change request.

Generating Reports

You can generate reports showing the costs for your business services.

- 1 On the main navigation bar, click  *Reports*.
- 2 Click *Generate* to display the Reports dialog box.
- 3 In the *Report Templates* list, select the report you want to generate and the format you want, then click *Next*.
- 4 In the Report Parameters dialog box, select your organization, then click *Generate*.

A report window appears. Depending on the amount of data to be collected, the report might be completed quickly or it might take a while. As soon as the report is completed, it is displayed in the report window, saved to your computer, opened in an associated application, or you are prompted about which action you want to take (depending on your browser configuration).

If the report is taking a while, you can close the report window and the report continues to generate. If you close the report, its status is shown in the *My Reports* list. As soon as it is complete, you can view it.

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