



# Configuring Service Profiles

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## Service Profiles that Inherit Server Identity

This hardware-based service profile is the simplest to use and create. This profile uses the default values in the server and mimics the management of a rack-mounted server. It is tied to a specific server and cannot be moved to another server.

You do not need to create pools or configuration policies to use this service profile.

This service profile inherits and applies the identity and configuration information that is present at the time of association, such as the following:

- MAC addresses for the two NICs
- For a converged network adapter or a virtual interface card, the WWN addresses for the two HBAs
- BIOS versions
- Server UUID



#### Important

The server identity and configuration information inherited through this service profile may not be the values burned into the server hardware at manufacture if those values were changed before this profile is associated with the server.

## Service Profiles that Override Server Identity

This type of service profile provides the maximum amount of flexibility and control. This profile allows you to override the identity values that are on the server at the time of association and use the resource pools and policies set up in Cisco UCS Manager to automate some administration tasks.

You can disassociate this service profile from one server and then associate it with another server. This re-association can be done either manually or through an automated server pool policy. The burned-in settings, such as UUID and MAC address, on the new server are overwritten with the configuration in the service profile. As a result, the change in server is transparent to your network. You do not need to reconfigure any component or application on your network to begin using the new server.

This profile allows you to take advantage of and manage system resources through resource pools and policies, such as the following:

- Virtualized identity information, including pools of MAC addresses, WWN addresses, and UUIDs
- Ethernet and Fibre Channel adapter profile policies
- Firmware package policies
- Operating system boot order policies

## Service Profile Templates

With a service profile template, you can quickly create several service profiles with the same basic parameters, such as the number of vNICs and vHBAs, and with identity information drawn from the same pools.



#### Tip

If you need only one service profile with similar values to an existing service profile, you can clone a service profile in the Cisco UCS Manager GUI.

For example, if you need several service profiles with similar values to configure servers to host database software, you can create a service profile template, either manually or from an existing service profile. You then use the template to create the service profiles.

Cisco UCS supports the following types of service profile templates:

- Initial template** Service profiles created from an initial template inherit all the properties of the template. However, after you create the profile, it is no longer connected to the template. If you need to make changes to one or more profiles created from this template, you must change each profile individually.
- Updating template** Service profiles created from an updating template inherit all the properties of the template and remain connected to the template. Any changes to the template automatically update the service profiles created from the template.

## Creating a Service Profile Template

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>create service-profile</b> <i>profile-name</i> { <b>initial-template</b>   <b>updating-template</b> }	Creates the specified service profile template and enters organization service profile mode.  Enter a unique <i>profile-name</i> to identify this service profile template.  This name can be between 2 and 32 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.
<b>Step 3</b>	UCS-A /org/service-profile # <b>set boot-policy</b> <i>policy-name</i>	Associates the specified boot policy with the service profile.
<b>Step 4</b>	UCS-A /org/service-profile # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the service profile.  <b>Note</b> If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any <b>show</b> command output.
<b>Step 5</b>	UCS-A /org/service-profile # <b>set dynamic-vnic-conn-policy</b> <i>policy-name</i>	Associates the specified dynamic vNIC connection policy with the service profile.
<b>Step 6</b>	UCS-A /org/service-profile # <b>set host-fw-policy</b> <i>policy-name</i>	Associates the specified host firmware policy with the service profile.
<b>Step 7</b>	UCS-A /org/service-profile # <b>set identity</b> { <b>dynamic-uuid</b> { <i>uuid</i>   <b>derived</b> }   <b>dynamic-wwnn</b> { <i>wwnn</i>	Specifies how the server acquires a UUID or WWNN. You can do one of the following:

	Command or Action	Purpose
	<b>derived}</b>   <b>uuid-pool</b> <i>pool-name</i>   <b>wwnn-pool</b> <i>pool-name</i> }	<ul style="list-style-type: none"> <li>• Create a unique UUID in the form <i>nnnnnnnnn-nnnnn-nnnnnnnnnnnnnnnnn</i>.</li> <li>• Derive the UUID from the one burned into the hardware at manufacture.</li> <li>• Use a UUID pool.</li> <li>• Create a unique WWNN in the form <i>hh : hh : hh : hh : hh : hh : hh : hh</i>.</li> <li>• Derive the WWNN from one burned into the hardware at manufacture.</li> <li>• Use a WWNN pool.</li> </ul>
<b>Step 8</b>	UCS-A /org/service-profile # <b>set ipmi-access-profile</b> <i>profile-name</i>	Associates the specified IPMI access profile with the service profile.
<b>Step 9</b>	UCS-A /org/service-profile # <b>set local-disk-policy</b> <i>policy-name</i>	Associates the specified local disk policy with the service profile.
<b>Step 10</b>	UCS-A /org/service-profile # <b>set mgmt-fw-policy</b> <i>policy-name</i>	Associates the specified management firmware policy with the service profile.
<b>Step 11</b>	UCS-A /org/service-profile # <b>set scrub-policy</b> <i>policy-name</i>	Associates the specified scrub policy with the service profile.
<b>Step 12</b>	UCS-A /org/service-profile # <b>set sol-policy</b> <i>policy-name</i>	Associates the specified serial over LAN policy with the service profile.
<b>Step 13</b>	UCS-A /org/service-profile # <b>set stats-policy</b> <i>policy-name</i>	Associates the specified statistics policy with the service profile.
<b>Step 14</b>	UCS-A /org/service-profile # <b>set vcon</b> {1   2} <b>selection</b> {all   assigned-only   exclude-dynamic   exclude-unassigned}	Specifies the selection preference for the specified vCon.
<b>Step 15</b>	UCS-A /org/service-profile # <b>set vcon-profile</b> <i>policy-name</i>	Associates the specified vNIC/vHBA placement profile with the service profile.  <b>Note</b> You can either assign a vNIC/vHBA placement profile to the service profile, or set vCon selection preferences for the service profile, but you do not need to do both.
<b>Step 16</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example creates a service profile template and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # create service-profile ServTemp2 updating-template
UCS-A /org/service-profile* # set boot-policy BootPol32
UCS-A /org/service-profile* # set descr "This is a service profile example."
```

```

UCS-A /org/service-profile* # set dynamic-vnic-conn-policy MyDynVnicConnPolicy
UCS-A /org/service-profile* # set host-fw-policy Epuser987
UCS-A /org/service-profile* # set identity dynamic-uuid derived
UCS-A /org/service-profile* # set ipmi-access-profile IpmiProf16
UCS-A /org/service-profile* # set local-disk-policy LocalDiskPol133
UCS-A /org/service-profile* # set mgmt-fw-policy MgmtFwPol175
UCS-A /org/service-profile* # set scrub-policy ScrubPol155
UCS-A /org/service-profile* # set sol-policy SolPol12
UCS-A /org/service-profile* # set stats-policy StatsPol14
UCS-A /org/service-profile* # vcon-profile MyVconnProfile
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #

```

### What to Do Next

- (Optional) Configure a boot definition for the service profile. Use this option only if you have not associated a boot policy with the service profile.
- Create a service profile instance from the service profile template.

## Creating a Service Profile Instance from a Service Profile Template

### Before You Begin

Verify that there is a service profile template from which to create a service profile instance.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>create service-profile</b> <i>profile-name</i> <b>instance</b>	Creates the specified service profile instance and enters organization service profile mode.  Enter a unique <i>profile-name</i> to identify this service profile template.  This name can be between 2 and 32 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.
<b>Step 3</b>	UCS-A /org/service-profile # <b>set src-templ-name</b> <i>profile-name</i>	Specifies the source service profile template to apply to the service profile instance. All configuration settings from the service profile template will be applied to the service profile instance.
<b>Step 4</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example creates a service profile instance named ServProf34, applies the service profile template named ServTemp2, and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # create service-profile ServProf34 instance
UCS-A /org/service-profile* # set src-templ-name ServTemp2
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

### What to Do Next

Associate the service profile to a server or server pool.

## Creating a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>create service-profile</b> <i>profile-name</i> <b>instance</b>	Creates the specified service profile instance and enters organization service profile mode.  Enter a unique <i>profile-name</i> to identify this service profile template.  This name can be between 2 and 32 alphanumeric characters. You cannot use spaces or any special characters, and you cannot change this name after the object has been saved.
<b>Step 3</b>	UCS-A /org/service-profile # <b>set boot-policy</b> <i>policy-name</i>	Associates the specified boot policy with the service profile.
<b>Step 4</b>	UCS-A /org/service-profile # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the service profile.  <b>Note</b> If your description includes spaces, special characters, or punctuation, you must begin and end your description with quotation marks. The quotation marks will not appear in the description field of any <b>show</b> command output.
<b>Step 5</b>	UCS-A /org/service-profile # <b>set dynamic-vnic-conn-policy</b> <i>policy-name</i>	Associates the specified dynamic vNIC connection policy with the service profile.
<b>Step 6</b>	UCS-A /org/service-profile # <b>set host-fw-policy</b> <i>epuser-name</i>	Associates the specified host forwarding policy with the service profile.
<b>Step 7</b>	UCS-A /org/service-profile # <b>set identity</b> { <b>dynamic-uuid</b> { <i>uuid</i>   <b>derived</b> }   <b>dynamic-wwnn</b> { <i>wwnn</i>	Specifies how the server acquires a UUID or WWNN. You can do one of the following:

	Command or Action	Purpose
	<b>derived</b>   <b>uuid-pool</b> <i>pool-name</i>   <b>wwnn-pool</b> <i>pool-name</i> }	<ul style="list-style-type: none"> <li>• Create a unique UUID in the form <i>nnnnnnnn-nnnn-nnnn-nnnnnnnnnnnn</i>.</li> <li>• Derive the UUID from the one burned into the hardware at manufacture.</li> <li>• Use a UUID pool.</li> <li>• Create a unique WWNN in the form <i>hh : hh : hh : hh : hh : hh : hh : hh</i>.</li> <li>• Derive the WWNN from one burned into the hardware at manufacture.</li> <li>• Use a WWNN pool.</li> </ul>
<b>Step 8</b>	UCS-A /org/service-profile # <b>set ipmi-access-profile</b> <i>profile-name</i>	Associates the specified IPMI access profile with the service profile.
<b>Step 9</b>	UCS-A /org/service-profile # <b>set local-disk-policy</b> <i>policy-name</i>	Associates the specified local disk policy with the service profile.
<b>Step 10</b>	UCS-A /org/service-profile # <b>set mgmt-fw-policy</b> <i>policy-name</i>	Associates the specified management forwarding policy with the service profile.
<b>Step 11</b>	UCS-A /org/service-profile # <b>set scrub-policy</b> <i>policy-name</i>	Associates the specified scrub policy with the service profile.
<b>Step 12</b>	UCS-A /org/service-profile # <b>set sol-policy</b> <i>policy-name</i>	Associates the specified serial over LAN policy with the service profile.
<b>Step 13</b>	UCS-A /org/service-profile # <b>set stats-policy</b> <i>policy-name</i>	Associates the specified statistics policy with the service profile.
<b>Step 14</b>	UCS-A /org/service-profile # <b>set vcon</b> {1   2} <b>selection</b> {all   assigned-only   exclude-dynamic   exclude-unassigned}	Specifies the selection preference for the specified vCon.
<b>Step 15</b>	UCS-A /org/service-profile # <b>set vcon-profile</b> <i>policy-name</i>	Associates the specified vNIC/vHBA placement policy with the service profile.  <b>Note</b> You can either assign a vNIC/vHBA placement profile to the service profile, or set vCon selection preferences for the service profile, but you do not need to do both.
<b>Step 16</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example creates a service profile instance and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # create service-profile ServInst90 instance
UCS-A /org/service-profile* # set boot-policy BootPol32
UCS-A /org/service-profile* # set descr "This is a service profile example."
```

```

UCS-A /org/service-profile* # set host-fw-policy Epuser987
UCS-A /org/service-profile* # set identity dynamic-uuid derived
UCS-A /org/service-profile* # set ipmi-access-profile IpmiProf16
UCS-A /org/service-profile* # set local-disk-policy LocalDiskPol133
UCS-A /org/service-profile* # set mgmt-fw-policy MgmtFwPol175
UCS-A /org/service-profile* # set scrub-policy ScrubPol155
UCS-A /org/service-profile* # set sol-policy SolPol2
UCS-A /org/service-profile* # set stats-policy StatsPol4
UCS-A /org/service-profile* # vcon-profile MyVconnProfile
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #

```

### What to Do Next

- (Optional) Configure a boot definition for the service profile. Use this option only if you have not associated a boot policy with the service profile.
- Associate the service profile to a server or server pool.

## Configuring a vNIC for a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>create vnic</b> <i>vnic-name</i> [ <b>eth-if</b> <i>eth-if-name</i> ] [ <b>fabric</b> { <b>a</b>   <b>b</b> }]	Creates a vNIC for the specified service profile and enters organization service profile vNIC mode.
<b>Step 4</b>	UCS-A /org/service-profile/vnic # <b>set adaptor-profile</b> <i>policy-name</i>	Specifies the adapter policy to use for the vNIC.
<b>Step 5</b>	UCS-A /org/service-profile/vnic # <b>set identity</b> { <b>dynamic-mac</b> { <i>mac-addr</i>   <b>derived</b> }   <b>mac-pool</b> <i>mac-pool-name</i> }	Specifies the identity (MAC address) for the vNIC. You can set the identity using one of the following options: <ul style="list-style-type: none"> <li>• Create a unique MAC address in the form <i>nn:nn:nn:nn:nn:nn</i>.</li> <li>• Derive the MAC address from one burned into the hardware at manufacture.</li> <li>• Assign a MAC address from a MAC pool.</li> </ul>
<b>Step 6</b>	UCS-A /org/service-profile/vnic # <b>set mtu</b> <i>size-num</i>	Specifies the maximum transmission unit, or packet size, that the vNIC accepts.



	Command or Action	Purpose
<b>Step 7</b>	UCS-A /org/service-profile/vnic # <b>set nw-control-policy</b> <i>policy-name</i>	Specifies the network control policy to use for the vNIC.
<b>Step 8</b>	UCS-A /org/service-profile/vnic # <b>set order</b> { <i>order-num</i>   <b>unspecified</b> }	Specifies the relative order for the vNIC.
<b>Step 9</b>	UCS-A /org/service-profile/vnic # <b>set pin-group</b> <i>group-name</i>	Specifies the pin group to use for the vNIC.
<b>Step 10</b>	UCS-A /org/service-profile/vnic # <b>set qos-policy</b> <i>policy-name</i>	Specifies the QoS policy to use for the vNIC.
<b>Step 11</b>	UCS-A /org/service-profile/vnic # <b>set stats-policy</b> <i>policy-name</i>	Specifies the stats policy to use for the vNIC.
<b>Step 12</b>	UCS-A /org/service-profile/vnic # <b>set template-name</b> <i>policy-name</i>	Specifies the dynamic vNIC connectivity policy to use for the vNIC.
<b>Step 13</b>	UCS-A /org/service-profile/vnic # <b>set vcon</b> { <b>1</b>   <b>2</b>   <b>any</b> }	Assigns the vNIC to the specified vCon. Use the <b>any</b> keyword to have Cisco UCS Manager automatically assign the vNIC.
<b>Step 14</b>	UCS-A /org/service-profile/vnic # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures a vNIC for a service profile and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # create vnic vnic3 fabric a
UCS-A /org/service-profile/vnic* # set adaptor-profile AdaptPol2
UCS-A /org/service-profile/vnic* # set identity mac-pool MacPool3
UCS-A /org/service-profile/vnic* # set mtu 8900
UCS-A /org/service-profile/vnic* # set nw-control-policy ncp5
UCS-A /org/service-profile/vnic* # set order 0
UCS-A /org/service-profile/vnic* # set pin-group EthPinGroup12
UCS-A /org/service-profile/vnic* # set qos-policy QosPol5
UCS-A /org/service-profile/vnic* # set stats-policy StatsPol2
UCS-A /org/service-profile/vnic* # set template-name VnicConnPol3
UCS-A /org/service-profile/vnic* # set set vcon any
UCS-A /org/service-profile/vnic* # commit-buffer
UCS-A /org/service-profile/vnic #
```

## Configuring a vHBA for a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .

	Command or Action	Purpose
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>create vhma</b> <i>vhba-name</i> [ <b>fabric</b> {a   b}] [ <b>fc-if</b> <i>fc-if-name</i> ]	Creates a vHBA for the specified service profile and enters organization service profile vHBA mode.
<b>Step 4</b>	UCS-A /org/service-profile/vhba # <b>set adaptor-profile</b> <i>policy-name</i>	Specifies the adapter policy to use for the vHBA.
<b>Step 5</b>	UCS-A /org/service-profile/vhba # <b>set admin-vcon</b> {1   2   any}	Assigns the vHBA to one or all virtual network interface connections.
<b>Step 6</b>	UCS-A /org/service-profile/vhba # <b>set identity</b> { <b>dynamic-wwpn</b> { <i>wwpn</i>   <b>derived</b> }   <b>wwpn-pool</b> <i>wwn-pool-name</i> }	Specifies the storage identity (world wide port name [WWPN]) for the vHBA. You can set the storage identity using one of the following options: <ul style="list-style-type: none"> <li>• Create a unique WWPN in the form <i>hh : hh : hh : hh : hh : hh</i>.</li> <li>• Derive the WWPN from one burned into the hardware at manufacture.</li> <li>• Assign a WWPN from a WWN pool.</li> </ul>
<b>Step 7</b>	UCS-A /org/service-profile/vhba # <b>set max-field-size</b> <i>size-num</i>	Specifies the maximum size of the Fibre Channel frame payload (in bytes) that the vHBA supports.
<b>Step 8</b>	UCS-A /org/service-profile/vhba # <b>set order</b> { <i>order-num</i>   <b>unspecified</b> }	Specifies the PCI scan order for the vHBA.
<b>Step 9</b>	UCS-A /org/service-profile/vhba # <b>set pers-bind</b> { <b>disabled</b>   <b>enabled</b> }	Disables or enables persistent binding to Fibre Channel targets.
<b>Step 10</b>	UCS-A /org/service-profile/vhba # <b>set pin-group</b> <i>group-name</i>	Specifies the pin group to use for the vHBA.
<b>Step 11</b>	UCS-A /org/service-profile/vhba # <b>set qos-policy</b> <i>policy-name</i>	Specifies the QoS policy to use for the vHBA.
<b>Step 12</b>	UCS-A /org/service-profile/vhba # <b>set stats-policy</b> <i>policy-name</i>	Specifies the stats policy to use for the vHBA.
<b>Step 13</b>	UCS-A /org/service-profile/vhba # <b>set template-name</b> <i>policy-name</i>	Specifies the vHBA SAN connectivity policy to use for the vHBA.
<b>Step 14</b>	UCS-A /org/service-profile/vhba # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures a vHBA for a service profile and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # create vhma vhma3 fabric b
UCS-A /org/service-profile/vhba* # set adaptor-profile AdaptPol2
UCS-A /org/service-profile/vhba* # set set admin-vcon any
```

```

UCS-A /org/service-profile/vhba* # set admin-vcon any
UCS-A /org/service-profile/vhba* # set identity wwpn-pool SanPool7
UCS-A /org/service-profile/vhba* # set max-field-size 2112
UCS-A /org/service-profile/vhba* # set order 0
UCS-A /org/service-profile/vhba* # set pers-bind enabled
UCS-A /org/service-profile/vhba* # set pin-group FcPinGroup12
UCS-A /org/service-profile/vhba* # set qos-policy QosPol5
UCS-A /org/service-profile/vhba* # set stats-policy StatsPol2
UCS-A /org/service-profile/vhba* # set template-name SanConnPol3
UCS-A /org/service-profile/vhba* # commit-buffer
UCS-A /org/service-profile/vhba #

```

## Configuring a Local Disk for a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
<b>Step 3</b>	UCS-A /org/service-profile # <b>create local-disk-config</b>	Creates a local disk configuration for the service profile and enters organization service profile local disk configuration mode.
<b>Step 4</b>	UCS-A /org/service-profile/local-disk-config # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the local disk configuration.
<b>Step 5</b>	UCS-A /org/service-profile/local-disk-config # <b>set mode</b> { <i>any-configuration</i>   <i>no-local-storage</i>   <i>no-raid</i>   <i>raid-0-striped</i>   <i>raid-1-mirrored</i>   <i>raid-5-striped-parity</i>   <i>raid-6-striped-dual-parity</i>   <i>raid-10-mirrored-and-striped</i> }	Specifies the mode for the local disk.
<b>Step 6</b>	UCS-A /org/service-profile/local-disk-config # <b>create partition</b>	Creates a partition for the local disk and enters organization service profile local disk configuration partition mode.
<b>Step 7</b>	UCS-A /org/service-profile/local-disk-config/partition # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the partition.
<b>Step 8</b>	UCS-A /org/service-profile/local-disk-config/partition # <b>set size</b> { <i>size-num</i>   <i>unspecified</i> }	Specifies the partition size in MBytes.
<b>Step 9</b>	UCS-A /org/service-profile/local-disk-config/partition # <b>set type</b> { <i>ext2</i>   <i>ext3</i>   <i>fat32</i>   <i>none</i>   <i>ntfs</i>   <i>swap</i> }	Specifies the partition type.

	Command or Action	Purpose
<b>Step 10</b>	UCS-A /org/service-profile/local-disk-config/partition # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures a local disk for a service profile and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
UCS-A /org/service-profile # scope boot-definition
UCS-A /org/service-profile # create local-disk-config
UCS-A /org/service-profile/local-disk-config* # set mode raid-1-mirrored
UCS-A /org/service-profile/local-disk-config* # create partition
UCS-A /org/service-profile/local-disk-config/partition* # set size 1000000
UCS-A /org/service-profile/local-disk-config/partition* # set type ntfs
UCS-A /org/service-profile/local-disk-config/partition* # commit-buffer
UCS-A /org/service-profile/local-disk-config/partition #
```

## Configuring Serial over LAN for a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>create sol-config</b>	Creates a serial over LAN configuration for the service profile and enters organization service profile SoL configuration mode.
<b>Step 4</b>	UCS-A /org/service-profile/sol-config # { <b>disable</b>   <b>enable</b> }	Disables or enables the serial over LAN configuration for the service profile.
<b>Step 5</b>	UCS-A /org/service-profile/sol-config # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the serial over LAN configuration.
<b>Step 6</b>	UCS-A /org/service-profile/sol-config # <b>set speed</b> { <b>115200</b>   <b>19200</b>   <b>38400</b>   <b>57600</b>   <b>9600</b> }	Specifies the serial baud rate.
<b>Step 7</b>	UCS-A /org/service-profile/sol-config # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures serial over LAN for the service profile named ServInst90 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
```

```

UCS-A /org/service-profile # create sol-config
UCS-A /org/service-profile/sol-config* # enable
UCS-A /org/service-profile/sol-config* # set descr "Sets serial over LAN to 9600 baud."
UCS-A /org/service-profile/sol-config* # set speed 9600
UCS-A /org/service-profile/sol-config* # commit-buffer
UCS-A /org/service-profile/sol-config #

```

# Service Profile Boot Definition Configuration

## Configuring a Boot Definition for a Service Profile

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>create boot-definition</b>	Creates a boot definition for the service profile and enters organization service profile boot definition mode.
<b>Step 4</b>	UCS-A /org/service-profile/boot-definition # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the boot definition.
<b>Step 5</b>	UCS-A /org/service-profile/boot-definition # <b>set reboot-on-update</b> {no   yes}	(Optional) Specifies whether to automatically reboot all servers that use this boot definition after changes are made to the boot order. By default, the reboot on update option is disabled.
<b>Step 6</b>	UCS-A /org/service-profile/boot-definition # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example configures a boot definition for a service profile and commits the transaction:

```

UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # create boot-definition
UCS-A /org/service-profile/boot-definition* # set descr "This boot definition reboots on update."
UCS-A /org/service-profile/boot-definition* # set reboot-on-update yes
UCS-A /org/service-profile/boot-definition* # commit-buffer
UCS-A /org/service-profile/boot-definition #

```

### What to Do Next

Configure one or more of the following boot options for the boot definition and set their boot order:

- **LAN Boot**—Boots from a centralized provisioning server. It is frequently used to install operating systems on a server from that server.

If you choose the LAN Boot option, continue to [Configuring a LAN Boot for a Service Profile Boot Definition](#), page 14.

- **Storage Boot**—Boots from an operating system image on the SAN. You can specify a primary and a secondary SAN boot. If the primary boot fails, the server attempts to boot from the secondary.

We recommend that you use a SAN boot, because it offers the most service profile mobility within the system. If you boot from the SAN, when you move a service profile from one server to another, the new server boots from exactly the same operating system image. Therefore, the new server appears to be exactly the same server to the network.

If you choose the Storage Boot option, continue to [Configuring a Storage Boot for a Service Profile Boot Definition](#), page 15.

- **Virtual Media Boot**—Mimics the insertion of a physical CD into a server. It is typically used to manually install operating systems on a server.

If you choose the Virtual Media boot option, continue to [Configuring a Virtual Media Boot for a Service Profile Boot Definition](#), page 16.

## Configuring a LAN Boot for a Service Profile Boot Definition

### Before You Begin

Configure a boot definition for a service profile.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
<b>Step 3</b>	UCS-A /org/service-profile # <b>scope boot-definition</b>	Enters organization service profile boot definition mode.
<b>Step 4</b>	UCS-A /org/service-profile/boot-definition # <b>create lan</b>	Creates a LAN boot for the service profile boot definition and enters service profile boot definition LAN mode.
<b>Step 5</b>	UCS-A /org/service-profile/boot-definition/lan # <b>set order</b> {1   2   3   4}	Specifies the boot order for the LAN boot.
<b>Step 6</b>	UCS-A /org/service-profile/boot-definition/lan # <b>create path</b> {primary   secondary}	Creates a primary or secondary LAN boot path and enters service profile boot definition LAN path mode.
<b>Step 7</b>	UCS-A /org/service-profile/boot-definition/lan/path # <b>set vnic</b> <i>vnic-name</i>	Specifies the vNIC to use for the LAN image path.

	Command or Action	Purpose
<b>Step 8</b>	UCS-A /org/service-profile/boot-definition/lan/path # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example enters the service profile named ServInst90, creates a LAN boot for the service profile boot definition, sets the boot order to 2, creates a primary path, and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # scope boot-definition
UCS-A /org/service-profile/boot-definition* # create lan
UCS-A /org/service-profile/boot-definition/lan* # set order 2
UCS-A /org/service-profile/boot-definition/lan* # create path primary
UCS-A /org/service-profile/boot-definition/lan/path* # set vnic vnic3
UCS-A /org/service-profile/boot-definition/lan/path* # commit-buffer
UCS-A /org/service-profile/boot-definition/lan/path #
```

## Configuring a Storage Boot for a Service Profile Boot Definition

### Before You Begin

Configure a boot definition for a service profile.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>scope boot-definition</b>	Enters organization service profile boot definition mode.
<b>Step 4</b>	UCS-A /org/service-profile/boot-definition # <b>create storage</b>	Creates a storage boot for the service profile boot definition and enters service profile boot definition storage mode.
<b>Step 5</b>	UCS-A /org/service-profile/boot-definition/storage # <b>set order</b> {1   2   3   4}	Specifies the boot order for the storage boot.
<b>Step 6</b>	UCS-A /org/service-profile/boot-definition/storage # <b>create</b> {local   san-image {primary   secondary}}	Creates a local storage boot or a SAN image boot. If a SAN image boot is created, it enters service profile boot definition storage SAN image mode.

	Command or Action	Purpose
<b>Step 7</b>	UCS-A /org/service-profile/boot-definition/storage/san-image # <b>create path {primary   secondary}</b>	Creates a primary or secondary SAN image path and enters service profile boot definition storage SAN image path mode.  The use of the terms primary or secondary boot devices does not imply a boot order. The effective order of boot devices within the same device class is determined by PCIe bus scan order.
<b>Step 8</b>	UCS-A /org/service-profile/boot-definition/storage/san-image/path # <b>set lun lun-num</b>	Specifies the LUN used for the SAN image path.
<b>Step 9</b>	UCS-A /org/service-profile/boot-definition/storage/san-image/path # <b>set vhba vhba-name</b>	Specifies the vHBA used for the SAN image path.
<b>Step 10</b>	UCS-A /org/service-profile/boot-definition/storage/san-image/path # <b>set wwn wwn-num</b>	Specifies the WWN used for the SAN image path.
<b>Step 11</b>	UCS-A /org/service-profile/boot-definition/storage/san-image/path # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example enters the service profile named ServInst90, creates a storage boot for the service profile boot definition, sets the boot order to 2, creates a primary path, and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # scope boot-definition
UCS-A /org/service-profile/boot-definition* # create storage
UCS-A /org/service-profile/boot-definition/storage* # create san-image primary
UCS-A /org/service-profile/boot-definition/storage* # set order 2
UCS-A /org/service-profile/boot-definition/storage/san-image* # create path primary
UCS-A /org/service-profile/boot-definition/storage/san-image/path* # set lun 27512
UCS-A /org/service-profile/boot-definition/storage/san-image/path* # set vhba vhba3
UCS-A /org/service-profile/boot-definition/storage/san-image/path* # set wwn
20:00:00:00:20:00:00:23
UCS-A /org/service-profile/boot-definition/storage/san-image/path* # commit-buffer
UCS-A /org/service-profile/boot-definition/storage/san-image/path #
```

## Configuring a Virtual Media Boot for a Service Profile Boot Definition

### Before You Begin

Configure a boot definition for a service profile.



**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>scope boot-definition</b>	Enters organization service profile boot definition mode.
<b>Step 4</b>	UCS-A /org/service-profile/boot-definition # <b>create virtual-media</b> { <b>read-only</b>   <b>read-write</b> }	Creates a read-only or read-write virtual media boot for the service profile boot definition and enters service profile boot definition virtual media mode.
<b>Step 5</b>	UCS-A /org/service-profile/boot-definition/virtual-media # <b>set order</b> { <b>1</b>   <b>2</b>   <b>3</b>   <b>4</b> }	Specifies the boot order for the virtual media boot.
<b>Step 6</b>	UCS-A /org/service-profile/boot-definition/virtual-media # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example enters the service profile named ServInst90, creates a virtual media boot with read-only privileges for the service profile boot definition, sets the boot order to 3, and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServInst90
UCS-A /org/service-profile* # scope boot-definition
UCS-A /org/service-profile/boot-definition* # create virtual-media read-only
UCS-A /org/service-profile/boot-definition/virtual-media* # set order 1
UCS-A /org/service-profile/boot-definition/virtual-media* # commit-buffer
UCS-A /org/service-profile/boot-definition/virtual-media #
```

## Deleting a Boot Definition for a Service Profile

**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>delete boot-definition</b>	Deletes the boot definition for the service profile.

	Command or Action	Purpose
<b>Step 4</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example deletes the boot definition for a service profile and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
UCS-A /org/service-profile # delete boot-definition
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

## Associating a Service Profile with a Server or Server Pool

Follow this procedure if you did not associate the service profile with a server or server pool when you created it, or to change the server or server pool with which a service profile is associated.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
<b>Step 3</b>	UCS-A /org/service-profile # <b>associate</b> { <b>server chassis-id</b>   <b>slot-id</b>   <b>server-pool pool-name qualifier</b> }	Associates the service profile with a single server, or to the specified server pool with the specified server pool policy qualifications.
<b>Step 4</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example associates the service profile named ServProf34 with the server in slot 4 of chassis 1 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServProf34
UCS-A /org/service-profile* # associate server 1/4
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

# Disassociating a Service Profile from a Server or Server Pool

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
<b>Step 3</b>	UCS-A /org/service-profile # <b>disassociate</b>	Disassociates the service profile from a server.
<b>Step 4</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

The following example disassociates the service profile named ServProf34 from the server to which it was associated and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServProf34
UCS-A /org/service-profile # disassociate
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

# Resetting the UUID Assigned to a Service Profile from a Pool in a Service Profile Template

If you change the UUID suffix pool assigned to an updating service profile template, Cisco UCS Manager does not change the UUID assigned to a service profile created with that template. If you want Cisco UCS Manager to assign a UUID from the newly assigned pool to the service profile, and therefore to the associated server, you must reset the UUID. You can only reset the UUID assigned to a service profile and its associated server under the following circumstances:

- The service profile was created from an updating service profile template and includes a UUID assigned from a UUID suffix pool.
- The UUID suffix pool name is specified in the service profile. For example, the pool name is not empty.
- The UUID value is not 0, and is therefore not derived from the server hardware.

## Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters the command mode for the organization for which you want to reset the UUID. If the system does not

	Command or Action	Purpose
		include multi-tenancy, type / as the <i>org-name</i> to enter the root organization.
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters the service profile that requires the UUID for the associated server to be reset to a different UUID suffix pool.
<b>Step 3</b>	UCS-A /org/service-profile # <b>set identity dynamic-uuid derived</b>	Specifies that the service profile will obtain a UUID dynamically from a pool.
<b>Step 4</b>	UCS-A /org/service-profile # <b>commit-buffer</b>	Commits the transaction to the system configuration.

This example resets the UUID of a service profile to a different UUID suffix pool:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
UCS-A /org/service-profile # set identity dynamic-uuid derived
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

## Resetting the MAC Address Assigned to a vNIC from a Pool in a Service Profile Template

If you change the MAC pool assigned to an updating service profile template, Cisco UCS Manager does not change the MAC address assigned to a service profile created with that template. If you want Cisco UCS Manager to assign a MAC address from the newly assigned pool to the service profile, and therefore to the associated server, you must reset the MAC address. You can only reset the MAC address assigned to a service profile and its associated server under the following circumstances:

- The service profile was created from an updating service profile template and includes a MAC address assigned from a MAC pool.
- The MAC pool name is specified in the service profile. For example, the pool name is not empty.
- The MAC address value is not 0, and is therefore not derived from the server hardware.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters the command mode for the organization that contains the service profile for which you want to reset the MAC address. If the system does not include multi-tenancy, type / as the <i>org-name</i> to enter the root organization.

	Command or Action	Purpose
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters the command mode for the service profile that requires the MAC address of the associated server to be reset to a different MAC address.
<b>Step 3</b>	UCS-A /org/service-profile # <b>scope vnic</b> <i>vnic-name</i>	Enters the command mode for the vNIC for which you want to reset the MAC address.
<b>Step 4</b>	UCS-A /org/service-profile/vnic # <b>set identity dynamic-mac derived</b>	Specifies that the vNIC will obtain a MAC address dynamically from a pool.
<b>Step 5</b>	UCS-A /org/service-profile/vnic # <b>commit-buffer</b>	Commits the transaction to the system configuration.

This example resets the MAC address of a vNIC in a service profile:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
UCS-A /org/service-profile # scope vnic dynamic-prot-001
UCS-A /org/service-profile/vnic # set identity dynamic-mac derived
UCS-A /org/service-profile/vnic* # commit-buffer
UCS-A /org/service-profile/vnic #
```

## Resetting the WWPN Assigned to a vHBA from a Pool in a Service Profile Template

If you change the WWPN pool assigned to an updating service profile template, Cisco UCS Manager does not change the WWPN assigned to a service profile created with that template. If you want Cisco UCS Manager to assign a WWPN from the newly assigned pool to the service profile, and therefore to the associated server, you must reset the WWPN. You can only reset the WWPN assigned to a service profile and its associated server under the following circumstances:

- The service profile was created from an updating service profile template and includes a WWPN assigned from a WWPN pool.
- The WWPN pool name is specified in the service profile. For example, the pool name is not empty.
- The WWPN value is not 0, and is therefore not derived from the server hardware.

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org</b> <i>org-name</i>	Enters the command mode for the organization that contains the service profile for which you want to reset the WWPN. If the system does not include multi-tenancy, type / as the <i>org-name</i> to enter the root organization.

	Command or Action	Purpose
<b>Step 2</b>	UCS-A /org # <b>scope service-profile</b> <i>profile-name</i>	Enters the service profile of the vHBA for which you want to reset the WWPN.
<b>Step 3</b>	UCS-A /org/service-profile # <b>scope vhma</b> <i>vhba-name</i>	Enters the command mode for vHBA for which you want to reset the WWPN.
<b>Step 4</b>	UCS-A /org/service-profile/vhba # <b>set identity dynamic-wwpn derived</b>	Specifies that the vHBA will obtain a WWPN dynamically from a pool.
<b>Step 5</b>	UCS-A /org/service-profile/vhba # <b>commit-buffer</b>	Commits the transaction to the system configuration.

This example resets the WWPN of a vHBA in a service profile:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServInst90
UCS-A /org/service-profile # scope vhma vhma3
UCS-A /org/service-profile/vhma # set identity dynamic-wwpn derived
UCS-A /org/service-profile/vhma* # commit-buffer
UCS-A /org/service-profile/vhma #
```