



## Configuring Service Profiles

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This chapter includes the following sections:

- [Service Profiles that Inherit Server Identity, page 1](#)
- [Service Profiles that Override Server Identity, page 2](#)
- [Service Profile Templates, page 2](#)
- [Configuring a Service Profile Template, page 3](#)
- [Creating a Service Profile Instance from a Service Profile Template, page 4](#)
- [Configuring a Service Profile Instance without Using a Template, page 5](#)
- [Configuring a vNIC for a Service Profile, page 7](#)
- [Configuring a vHBA for a Service Profile, page 8](#)
- [Configuring a Local Disk for a Service Profile, page 9](#)
- [Configuring SOL for a Service Profile, page 10](#)
- [Service Profile Boot Definition Configuration, page 11](#)
- [Associating a Service Profile with a Server or Server Pool, page 16](#)
- [Disassociating a Service Profile from a Server or Server Pool, page 17](#)

### 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 automatically 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 the Cisco UCS CNA M71KR adapters, 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:

- 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.

## Configuring 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.
<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 host-fw-policy</b> <i>policy-name</i>	Associates the specified host firmware policy with the service profile.
<b>Step 6</b>	UCS-A /org/service-profile # <b>set identity</b> { <b>uuid-pool</b> <i>pool-name</i>   <b>wwnn-pool</b> <i>pool-name</i> }	Specifies the pool that the server uses to acquire a UUID or WWNN.
<b>Step 7</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 8</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 9</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 10</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 11</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.

	Command or Action	Purpose
<b>Step 12</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 13</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 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 ScrubPol55
UCS-A /org/service-profile* # set sol-policy SolPol2
UCS-A /org/service-profile* # set stats-policy StatsPol4
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.
<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.

	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 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.

# Configuring a Service Profile Instance without Using a Template

**Procedure**

	Command or Action	Purpose
<b>Step 1</b>	UCS-A# <b>scope org org-name</b>	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 profile-name instance</b>	Creates the specified service profile instance and enters organization service profile mode.
<b>Step 3</b>	UCS-A /org/service-profile # <b>set boot-policy policy-name</b>	Associates the specified boot policy with the service profile.
<b>Step 4</b>	UCS-A /org/service-profile # <b>set descr description</b>	(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 host-fw-policy epuser-name</b>	Associates the specified host forwarding policy with the service profile.
<b>Step 6</b>	UCS-A /org/service-profile # <b>set identity {dynamic-uuid {uuid   derived}   dynamic-wwnn {wwnn   derived}   uuid-pool pool-name   wwnn-pool pool-name}</b>	Specifies how the server acquires a UUID or WWNN. You can do one of the following:  <ul style="list-style-type: none"> <li>• Create a unique UUID in the form <i>nnnnnnnnn-nnnn-nnnn-nnnnnnnnnnnnn</i>.</li> <li>• Derive the UUID from the one burned into the hardware at manufacture.</li> </ul>

	Command or Action	Purpose
		<ul style="list-style-type: none"> <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 7</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 8</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 9</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 10</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 11</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 12</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 13</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 ScrubPol55
UCS-A /org/service-profile* # set sol-policy SolPol2
UCS-A /org/service-profile* # set stats-policy StatsPol4
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 nw-control-policy</b> <i>policy-name</i>	Specifies the network control policy to use for the vNIC.
<b>Step 7</b>	UCS-A /org/service-profile/vnic # <b>set order</b> { <i>order-num</i>   <b>unspecified</b> }	Specifies the PCI scan order for the vNIC.
<b>Step 8</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 9</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 10</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 11</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 12</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 vhba vhba3 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 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* # 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> .
<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 vhba</b> <i>vhba-name</i> [ <b>fabric {a   b}</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 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 6</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 7</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 8</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.

	Command or Action	Purpose
<b>Step 9</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 10</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 11</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 12</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 vhba vhba3 fabric b
UCS-A /org/service-profile/vhba* # set adaptor-profile AdaptPol2
UCS-A /org/service-profile/vhba* # set identity wwpn-pool SanPool17
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> { <b>any-configuration</b>   <b>no-local-storage</b>   <b>no-raid</b>   <b>raid-mirrored</b>   <b>raid-striped</b> }	Specifies the mode for the local disk.

	Command or Action	Purpose
<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>   <b>unspecified</b> }	Specifies the partition size in MBytes.
<b>Step 9</b>	UCS-A /org/service-profile/local-disk-config/partition # <b>set type</b> { <b>ext2</b>   <b>ext3</b>   <b>fat32</b>   <b>none</b>   <b>ntfs</b>   <b>swap</b> }	Specifies the partition type.
<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:

```
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-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 SOL 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</b> <b>sol-config</b>	Creates a serial over LAN (SOL) 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>set</b> <b>admin-state</b> { <b>disable</b>   <b>enable</b> }	Disables or enables the SOL administrative state.

	Command or Action	Purpose
<b>Step 5</b>	UCS-A /org/service-profile/sol-config # <b>set descr</b> <i>description</i>	(Optional) Provides a description for the SOL configuration.
<b>Step 6</b>	UCS-A /org/service-profile/sol-config # <b>set speed</b> {115200   19200   38400   57600   9600}	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 SOL 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 sol-config Sol19600
UCS-A /org/service-profile/sol-config* # set admin-state enable
UCS-A /org/service-profile/sol-config* # set descr "Sets SOL 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.

	Command or Action	Purpose
<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 12."
- 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.
 

Cisco recommends 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 will boot from the exact same operating system image. Therefore, the new server will appear to be the exact 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 13."
- 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 15."

## 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> .

	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 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 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.
<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 configures a LAN boot for a service profile boot definition:

```
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> .

	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>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, then it enters service profile boot definition storage SAN image mode.
<b>Step 7</b>	UCS-A /org/service-profile/boot-definition/storage/san-image # <b>create path</b> {primary   secondary}	Creates a primary or secondary SAN image path and enters service profile boot definition storage SAN image path mode.
<b>Step 8</b>	UCS-A /org/service-profile/boot-definition/storage/san-image/path # <b>set lun</b> <i>lun-num</i>	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</b> <i>vhba-name</i>	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</b> <i>wwn-num</i>	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 configures a storage boot for a service profile boot definition:

```
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/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 configures a read-only virtual media boot for a service profile boot definition:

```
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> .

	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 the specified service.
<b>Step 3</b>	UCS-A /org/service-profile # <b>delete</b> <b>boot-definition</b>	Deletes the boot definition for the service profile.
<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 / slot-id   server-pool</b> <i>pool-name qualifier</i> }	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 #
```

