



Creating Resource Pools

This chapter describes how to create Resource Pools using the Cisco IP Solution Center (ISC) GUI.

This chapter contains the following sections:

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Overview of Resource Pools

Before creating a service in ISC, you must define your Resource Pools. From these Resource Pools, ISC can automatically assign some values during the provisioning process. You can also manually assign these values during the provisioning process, but it is not recommended.

ISC allocates numbers from the following pools during the provisioning process:

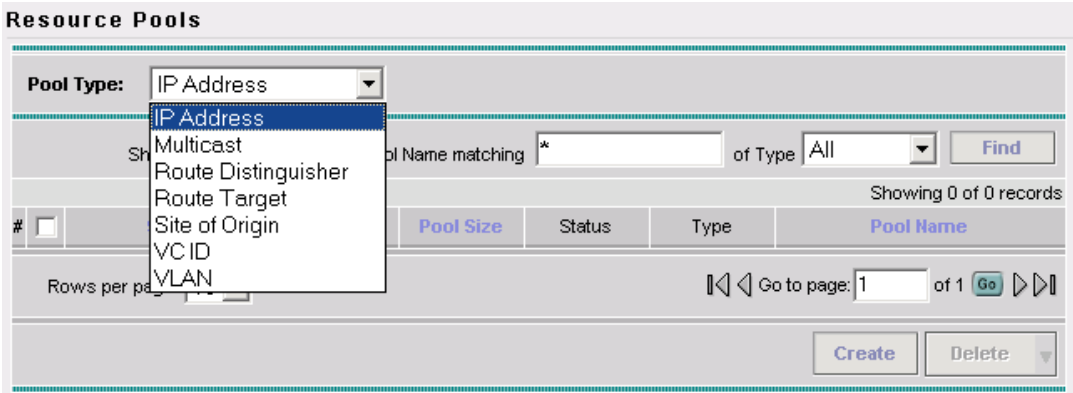
- **IP Address**—Connects PE and CE interfaces, when you define addresses in a Service Request.
- **Multicast**—Class D addresses used with multicast, when building PE to multiple CE links.
- **Route Distinguisher (RD)**—A 64-bit number composed of the Provider AS number and an index number that is prepended to a VPN route. The RD allows the route subnet to be unique across the entire provider MPLS VPN network. It is carried by MP-BGPv4 as a 96-bit VPNv4 address as part of the extended community string.
- **Route Target (RT)**—An import and export feature of a VRF, the RT allows VPN routes to be forwarded between VRFs. It is a 64-bit number, also carried as part of the MP-BGPv4 extended community string, and directly related to each VPNv4 route and its VPN-related IPv4 route.
- **Site of Origin**—Indicates the origin of a BGP update. Depending on the use of two Cisco IOS BGP commands, the Site of Origin will be used by BGP to preclude routing loops.
- **VC ID (Virtual Circuit)**—Used as a Layer 2 circuit identifier across a provider network.
- **VLAN**—Used in a Layer 2 VPN as a circuit identifier within the provider Access Domain.

Create an IP Address Pool

This section describes how to create an IP Address Pool with the ISC GUI.
To create an IP Address Pool with the ISC GUI, follow these steps:

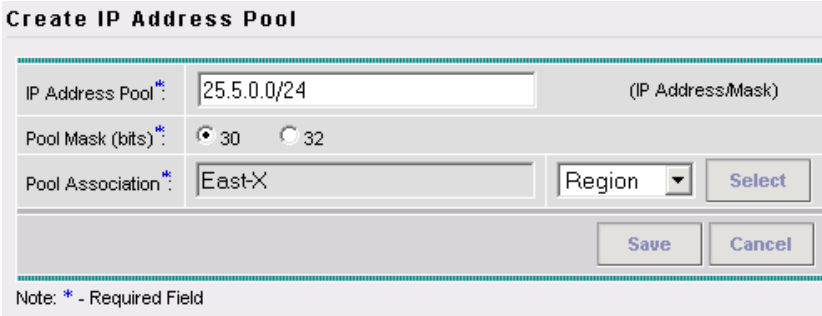
- Step 1
- Log into ISC.
- Step 2
- Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears, as shown in [Figure 3-1](#).

Figure 3-1 Resource Pools



- Step 3
- Go to **IP Address** from the Pool Type window.
- Step 4
- Click **Create**.
The Create IP Address Pool window appears, as shown in [Figure 3-2](#).

Figure 3-2 Create IP Address Pool



- Step 5
- Enter an *IP Address and Mask*. (25.5.0.0/24)
- Step 6
- Choose the **Pool Mask (bits)** value. (30)



Note Use 32 for loopback addresses.

- Step 7** Click **Select** to associate the pool with a Region.
The Choose Region window appears, as shown in [Figure 3-3](#).

Figure 3-3 Choose Region

Show Regions with Matching

Showing 1 - 1 of 1 record

#	Region Name	Provider Name
1.	East-X	Provider-X

Rows per page: Go to page: of 1

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- Step 8** Choose a Region.

- Step 9** Click **Select**.

The Create IP Address Pool window appears, as shown in [Figure 3-4](#).

Figure 3-4 Create IP Address Pool

Create IP Address Pool

IP Address Pool*: (IP Address/Mask)

Pool Mask (bits)*: ☒ 30 ☐ 32

Pool Association*:

Note: * - Required Field

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- Step 10** Click **Save**.

The **Resource Pools - IP Address** window appears, as shown in [Figure 3-5](#).

Figure 3-5 Resource Pools - IP Address

Resource Pools

Pool Type: IP Address

Show IP Address Pools with Pool Name matching of Type All Find

Showing 1 - 1 of 1 record

#	Start	Pool Mask	Pool Size	Status	Type	Pool Name
1.	☐ 25.5.0.0	30	62	Available	Region	Provider-X:East-X

Rows per page: 10

Go to page: 1 of 1 Go

Create Delete

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You have saved an IP Address Pool in the Repository.

Create a Multicast Pool

This section describes how to create a Multicast Address Pool with the ISC GUI.

To create a Multicast Pool with the ISC GUI, follow these steps:

- Step 1** Log into ISC.
- Step 2** Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears (not shown).
- Step 3** Choose **Multicast** from the **Pool Type** window.
The **Resource Pools - Multicast** window appears, as shown in [Figure 3-6](#).

Figure 3-6 Resource Pools - Multicast

Resource Pools

Pool Type: Multicast

Refresh

Showing 0 of 0 records

#	Multicast Address	Size	Use Default MDT	Use Data MDT	Status
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Rows per page: 10

Go to page: 1 of 1 Go

Create Delete

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Step 4 Click **Create**.

The **Create Multicast Pool** window appears, as shown in [Figure 3-7](#).

Figure 3-7 Create Multicast Pool

Create Multicast Pool

Multicast Address*: 239.0.0.0/24 (IP Address/Mask)

Use for Default MDT: ☒

Use for Data MDT: ☒

Save Cancel

Note: * - Required Field

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Step 5 Enter an *IP Address* and *Mask*. (239.0.0.0/24)

Step 6 Choose the defaults. (**Default MDT** and **Data MDT**).

Step 7 Click **Save**.

The **Resource Pools - Multicast** window appears, as shown in [Figure 3-6](#).

Figure 3-8 Resource Pools - Multicast

Resource Pools

Pool Type: Multicast

Refresh

Showing 1 - 1 of 1 record

#	Multicast Address	Size	Use Default MDT	Use Data MDT	Status
1.	239.0.0.0	256	true	true	Available

Rows per page: 10 Go to page: 1 of 1 Go

Create Delete

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You have saved a Multicast Address Pool in the Repository.

Create a Route Distinguisher Pool

This section describes how to create a Route Distinguisher Pool with the ISC GUI.

To create a Route Distinguisher Pool with the ISC GUI, follow these steps:

- Step 1** Log into ISC.
- Step 2** Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears (not shown).
- Step 3** Choose **Route Distinguisher** from the **Pool Type** window.
The **Resource Pools - Route Distinguisher** window appears, as shown in [Figure 3-9](#).

Figure 3-9 *Resource Pools - Route Distinguisher*

- Step 4** Click **Create**.
The **Create Route Distinguisher Pool** window appears, as shown in [Figure 3-10](#).

Figure 3-10 *Create Route Distinguisher Pool*

- Step 5** Enter an *RD Pool Start*. (**50000**)
- Step 6** Enter an *RD Pool Size*. (**1000**)
- Step 7** Click **Select**.
The Choose Provider window appears (not shown).

Step 8 Choose a **Provider**.

The **Create Route Distinguisher Pool** window appears, as shown in [Figure 3-11](#).

Figure 3-11 Create Route Distinguisher Pool

Create Route Distinguisher Pool

RD Pool Start *: 50000 (0 - 2147483646)

RD Pool Size *: 1000 (1 - 2147483647)

Provider *: Provider-X

Note: * - Required Field

Step 9 Click **Save**.

The **Resource Pools - Route Distinguisher** window appears, as shown in [Figure 3-12](#).

Figure 3-12 Create Route Distinguisher Pool

Resource Pools

Pool Type: Route Distinguisher

Show Route Distinguisher Pools with Pool Name matching *

Showing 1 - 1 of 1 record

#	Start	Pool Size	Status	Pool Name
1. ☐	50000	1000	Available	99:Provider-X

Rows per page: 10

You have saved a Route Distinguisher Pool in the Repository.

Create a Route Target Pool

This section describes how to create a Route Target Pool with the ISC GUI.

To create a Route Target Pool with the ISC GUI, follow these steps:

Step 1 Log into ISC.

Step 2 Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.

The **Resource Pools** window appears (not shown).

Step 3 Choose **Route Target** from the **Pool Type** window.

The **Resource Pools - Route Target** window appears, as shown in [Figure 3-13](#).

Figure 3-13 Create Route Target Pool

The screenshot shows the 'Resource Pools' window. At the top, 'Pool Type' is set to 'Route Target'. Below this is a search bar with the text 'Show Route Target Pools with Pool Name matching' followed by an asterisk and a text input field, and a 'Find' button. Below the search bar, it says 'Showing 0 of 0 records'. There is a table with columns: '#', 'Start', 'Pool Size', 'Status', and 'Pool Name'. Below the table, there is a 'Rows per page' dropdown set to '10' and a pagination control showing 'Go to page: 1 of 1' with 'Go' and navigation arrows. At the bottom right are 'Create' and 'Delete' buttons. The number '111625' is visible on the right side of the window.

Step 4 Click **Create**.

The **Create Route Target Pool** window appears, as shown in [Figure 3-14](#).

Figure 3-14 Create Route Target Pool

The screenshot shows the 'Create Route Target Pool' window. It has three main input fields: 'RT Pool Start' with a value of '0' and a range '(0 - 2147483646)', 'RT Pool Size' with a value of '0' and a range '(1 - 2147483647)', and 'Provider' with a value of 'Provider-X' and a 'Select' button. At the bottom are 'Save' and 'Cancel' buttons. A note at the bottom left says 'Note: * - Required Field'. The number '111626' is visible on the right side of the window.

Step 5 Enter an *RT Pool Start*. (**50000**)

Step 6 Enter an *RT Pool Size*. (**1000**)

Step 7 Click **Select**.

The Choose Provider window appears (not shown).

Step 8 Choose a **Provider**.

The **Create Route Target Pool** window appears, as shown in [Figure 3-15](#).

Figure 3-15 Create Route Target Pool

Create Route Target Pool

RT Pool Start*: 50000 (0 - 2147483646)

RT Pool Size*: 1000 (1 - 2147483647)

Provider*: Provider-X Select

Save Cancel

Note: * - Required Field

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Step 9 Click **Save**.

The **Resource Pools - Route Target** window appears, as shown in [Figure 3-16](#).

Figure 3-16 Resource Pools - Route Target

Resource Pools

Pool Type: Route Distinguisher

Show Route Distinguisher Pools with Pool Name matching * Find

Showing 1 - 1 of 1 record

#	Start	Pool Size	Status	Pool Name
1. ☐	50000	1000	Available	99:Provider-X

Rows per page: 10 Go to page: 1 of 1 Go

Create Delete

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You have saved a Route Target Pool in the Repository.

Create a Site of Origin Pool

This section describes how to create a Site of Origin Pool with the ISC GUI.

To create a Site of Origin Pool with the ISC GUI, follow these steps:

-
- Step 1** Log into ISC.
 - Step 2** Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears (not shown).
 - Step 3** Choose **Site of Origin** from the **Pool Type** window.
The **Resource Pools - Site of Origin** window appears, as shown in [Figure 3-17](#).

Figure 3-17 Resource Pools - Site of Origin

Resource Pools

Pool Type: Site of Origin

Show Site of Origin Pools with Pool Name matching * Find

Showing 0 of 0 records

#	Start	Pool Size	Status	Pool Name
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Rows per page: 10 Go to page: 1 of 1 Go

Create Delete

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Step 4 Click **Create**.

The **Create Site of Origin Pool** window appears, as shown in [Figure 3-18](#).

Figure 3-18 Create Site of Origin Pool

Create Site of Origin Pool

SOO Pool Start*: 50000 (0 - 2147483646)

SOO Pool Size*: 1000 (1 - 2147483647)

Provider*: Provider-X Select

Save Cancel

Note: * - Required Field

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Step 5 Enter an *SOO Pool Start*. (**50000**)

Step 6 Enter an *SOO Pool Size*. (**1000**)

Step 7 Click **Select**.

The Choose Provider window appears (not shown).

Step 8 Choose a **Provider**.

The Create Route Target Pool window appears, as shown in [Figure 3-19](#).

Figure 3-19 Resource Pools - Site of Origin

Resource Pools

Pool Type:

Show Site of Origin Pools with Pool Name matching

Showing 1 - 1 of 1 record

#	Start	Pool Size	Status	Pool Name
1.	50000	1000	Available	99:Provider-X

Rows per page:

Go to page: of 1

You have saved a Site of Origin Pool in the Repository.

Create a VC ID Pool

This section describes how to create a Virtual Circuit ID (VC ID) Pool with the ISC GUI.

To create a VC ID Pool with the ISC GUI, follow these steps:

- Step 1** Log into ISC.
- Step 2** Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears (not shown).
- Step 3** Choose **VC ID** from the **Pool Type** window.
The **Resource Pools - VC ID** window appears, as shown in [Figure 3-20](#).

Figure 3-20 Resource Pools - VC ID

Resource Pools

Pool Type:

Showing 0 of 0 records

#	Start	Pool Size	Status
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Rows per page:

Go to page: of 1

- Step 4** Click **Create**.
The **Create VC ID Pool** window appears, as shown in [Figure 3-21](#).

Figure 3-21 Create VC ID Pool

Create VC ID Pool

VC Pool Start : 50000 (1 - 2147483646)

VC Pool Size : 1000 (1 - 2147483646)

Save Cancel

Note: * - Required Field

Step 5 Enter an *VC Pool Start*. (50000).

Step 6 Enter an *VC Pool Size*. (1000).

Step 7 Click **Save**.

The **Resource Pools - VC ID** window appears, as shown in [Figure 3-22](#).

Figure 3-22 Resource Pools - VC ID

Resource Pools

Pool Type: VCID

Refresh

Showing 1 - 1 of 1 record

#	Start	Pool Size	Status
1.	50000	1000	Available

Rows per page: 10

Go to page: 1 of 1

Create Delete

You have saved a VC ID Pool in the Repository.

Create a VLAN Pool

This section describes how to create a VLAN (VC ID) Pool with the ISC GUI.

To create a VLAN Pool with the ISC GUI, follow these steps:

- Step 1** Log into ISC.
- Step 2** Go to **Service Inventory > Inventory and Connection Manager > Resource Pools**.
The **Resource Pools** window appears (not shown).
- Step 3** Choose **VLAN** from the **Pool Type** window.
The **Resource Pools - VLAN** window appears, as shown in [Figure 3-23](#).

Figure 3-23 Resource Pools - VLAN

- Step 4** Click **Create**.
The **Create VLAN Pool** window appears, as shown in [Figure 3-24](#).

Figure 3-24 Choose Device

- Step 5** Enter an *VLAN Pool Start*. (**500**)
- Step 6** Enter an *VLAN Pool Size*. (**100**)

Step 7 Click **Select**.

The Choose Access Domain window appears, as shown in [Figure 3-25](#).

Figure 3-25 Choose Access Domain

#	Access Domain Name	Provider Name
1.	AD-North-X	Provider-X

Step 8 Choose an **Access Domain**.**Step 9** Click **Select**.

The Create VLAN Pool window appears, as shown in [Figure 3-26](#).

Figure 3-26 Create VLAN Pool

Step 10 Click **Save**.

The Resource Pools - VLAN window appears, as shown in [Figure 3-27](#).

Figure 3-27 Resource Pools - VLAN

Resource Pools

Pool Type:

Show VLAN Pools with Pool Name matching

Showing 1 - 1 of 1 record

#	☐	Start	Pool Size	Status	Pool Name
1.	☐	500	100	Allocated	Provider-X:AD-North-X

Rows per page:

Go to page: of 1

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You have saved a VLAN Pool in the Repository.

