



# **NSP**

## **Network Services Platform**

Release 21.11

# **Resource Administrator**

## **Application Help**

**3HE-18177-AAAA-TQZZA**

**Issue 1**

**November 2021**

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# 1 Resource Administrator

## 1.1 What is Resource Administrator?

The NSP Resource Administrator application manages resource pools and monitors pool usage. It maintains a list of available resource pools in a network, and allows the user to create and modify pools. This provides you with a quick way to assign IP addresses, numbers, or text strings to ports when you are setting up automated processes in programmable NSP applications, such as Intent Manager.

Resource Administrator supports the following types to resource pools:

- IP Address
- Numerical
- Text String
- Route Distinguisher or Route Target

You can assign utilization alarm thresholds to resource pools so that Warning, Minor, and Major alarms are generated in the Fault Management application when resource pool utilization exceeds a prescribed threshold. Utilization alarm thresholds are assigned to resource pools through threshold policies.

### 1.1.1 Dashboard view

The Dashboard is the default view of the Resource Administrator application. It displays your resource pools as dashlet objects. You can select which type of pools are displayed (IP address, numerical, text string, or route distinguisher/route target). The number of pools displayed in the Dashboard can be controlled by filtering the view based on pool name, scope, description, and threshold policy.

## 1.2 How do I search for a resource pool?

1 \_\_\_\_\_

In the Dashboard view, select the type of resource pool you are searching from the drop-down menu  .

2 \_\_\_\_\_

Type a search string in the text field. As you type your string, matching pool objects appear in the dashboard.

3 \_\_\_\_\_

By default, four searchable pool attributes are enabled. Your search string matches pool objects against any of those attributes.

To narrow the scope of your search, click  **Remove Attribute** on attributes you don't want to search under.

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To add a searchable attribute, click  **Add Filter** and select an attribute from the menu.

4

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If you enable the **Equals** option, the search only returns pool objects with attribute strings that *exactly match* your search string. If the option is disabled, the search returns pool objects that contain your search string as *part of* an attribute string.

END OF STEPS

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## 1.3 How do I view a resource pool?

You can examine configuration and utilization details for a resource pool in the Pool Summary view. Open a pool in one of the following ways, depending on the application view you are working in.

- In the Dashboard view, hover over a resource pool object and click **View**.
- In a resource pool list view, click  **More, View Pool** on a list item.

## 1.4 Pool Summary view

The Pool Summary view displays configuration and utilization data for a resource pool. It also lists reserved resources in the pool.

- **Reserve a resource:** Click  **Reserve Resource**; see [1.10 "How do I reserve resources?" \(p. 10\)](#) for information.
- **Modify the resource pool:** Click  **Edit Pool** and change the pool configuration as needed.
- **Return to the resource pools list:** Click  **Go Up**.

## 1.5 How do I configure an IP address pool?

An IP address pool defines a range of IP addresses that can be applied to specific configurations in programmable NSP applications. The range is defined by an IP mask and an allocation mask.

1



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Verify that the GUI drop-down menu is set to **IP Pools**.

2

---

Do one of the following:

- **Create a new pool:** Click  **Add Pool** .
- **Modify an existing pool:** In the pool list , click  **More, Update Pool** on a list item.

3

---

In the IP Pool form, configure the parameters as required.

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You can specify multiple IPv4 network/mask length values in the format `<ip_address>/<bit_length>`. After typing an address/length pair, click **+** **Add** to add the network to the list.

4

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To assign a threshold policy to the pool, click in the **Threshold Policy** field and select a policy from the Select Threshold Policy form.

5

---

Click **Create** or **Save** to save your changes.

END OF STEPS

---

## 1.6 How do I configure a string pool?

A String pool defines a template for alpha-numeric values, with a defined syntax, length, and maximum capacity. String pools are applied to specific configurations in programmable NSP applications.

In the event that a string pool reaches maximum utilization, you can modify the string length and maximum capacity of the pool to increase its size.

1

---

Verify that the GUI drop-down menu is set to **String Pools**.

2

---

Do one of the following:

- **Create a new pool:** Click **+** **Add Pool** .
- **Modify an existing pool:** In the pool list , click **⋮** **More**, **Update Pool** on a list item.

3

---

In the String Pool form, configure the parameters as required.

Specify the **Pattern** as a regular expression. **String Length** and **Max Capacity** must be integers.

4

---

To assign a threshold policy to the pool, click in the **Threshold Policy** field and select a policy from the Select Threshold Policy form.

5

---

Click **Create** or **Save** to save your changes.

END OF STEPS

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## 1.7 How do I configure an RD-RT pool?

A Route Distinguisher-Route Target (RD-RT) pool defines a range of numerical values that can be applied to specific configurations in programmable NSP applications.

In the event that an RD-RT pool reaches maximum utilization, you can decrease the minimum value and/or increase the maximum value of the pool to increase the pool size.

1 \_\_\_\_\_

Verify that the GUI drop-down menu is set to **RD-RT Pools** .

2 \_\_\_\_\_

Do one of the following:

- **Create a new pool:** Click **+ Add Pool** .
- **Modify an existing pool:** In the pool list , click **⋮ More, Update Pool** on a list item.

3 \_\_\_\_\_

In the RD-RT Pool form, configure the parameters as required.

**Minimum Value** and **Maximum Value** must be integers.

4 \_\_\_\_\_

To assign a threshold policy to the pool, click in the **Threshold Policy** field and select a policy from the Select Threshold Policy form.

5 \_\_\_\_\_

Click **Create** or **Save** to save your changes.

END OF STEPS \_\_\_\_\_

## 1.8 How do I configure a Numeric pool?

A Numeric pool defines a range of numerical values that can be applied to specific configurations in programmable NSP applications.

In the event that a numeric pool reaches maximum utilization, you can decrease the minimum value and/or increase the maximum value of the pool to increase the pool size.

1 \_\_\_\_\_

Verify that the GUI drop-down menu is set to **Numeric Pools**.

2 \_\_\_\_\_

Do one of the following:

- **Create a new pool:** Click **+ Add Pool** .
- **Modify an existing pool:** In the pool list , click **⋮ More, Update Pool** on a list item.

---

3

In the Numeric Pool form, configure the parameters as required.

**Minimum Value** and **Maximum Value** must be integers.

4

To assign a threshold policy to the pool, click in the **Threshold Policy** field and select a policy from the Select Threshold Policy form.

5

Click **Create** or **Save** to save your changes.

END OF STEPS

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## 1.9 How do I obtain a resource?

Use the Obtain Resource command to allocate pool resources in batches, where you need a specified number of resources but do not need to specify precisely which ones. The Obtain Resource command returns resources from whatever is available in the pool. The Obtain Resource command is available for Numeric, IP Address, and RD-RT pools.

You can obtain resources from a resource pool in the Pool Summary view.

1

With a resource pool open in the Pool Summary view, click **+ Obtain Resource**.

2

In the Obtain Resource form, specify the resource **Reference** and **Owner** in their respective fields.

3

Enable the **Confirmed** option to indicate that the resources are allocated and in use.

If the Confirmed option is not enabled, the resources are reserved with the implication that they will be in use.

4

Specify the number of resources you are obtaining in the **Total Number of Resources** field.

5

Enable the **All Or Nothing** option if you want the Obtain function to go ahead only if the specified number of resources are available to be obtained.

If the All Or Nothing option is disabled, Resource Administrator obtains as many resources as are available.

---

6

Click **Submit** to obtain the resources.

END OF STEPS

---

## 1.10 How do I reserve resources?

You reserve a pool resource to allocate it for a specific task. You can reserve a resource from a resource pool in the Pool Summary view.

1

With a resource pool open in the Pool Summary view, click **+ Reserve Resource**.

2

In the Reserve Resource form, specify the resource **Reference** and **Owner** in their respective fields.

3

Enable the **Confirmed** option to indicate that the resources are allocated and in use.

If the Confirmed option is not enabled, the resources are reserved with the implication that they will be in use.

4

Specify the resource values you are reserving in the **Reserve Values** field.

You can specify multiple resource values. After typing a value, click **+ Add** to add it to the list.

5

Enable the **All Or Nothing** option if you want the resource reservation to go ahead only if all of the specified resources are available to be reserved.

If the All Or Nothing option is disabled, Resource Administrator reserves all specified resources that are available.

6

Click **Submit** to reserve the resources.

END OF STEPS

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## 1.11 How do I release a resource?

You can release a resource back to a resource pool in the Pool Summary view, based on values in its **Reference** or **Owner** fields.

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1 \_\_\_\_\_  
With a resource pool open in the Pool Summary view, click **⋮ More, Release By Reference or Release By Owner**.

2 \_\_\_\_\_  
Specify a **Reference** or **Owner** string value, as required.

3 \_\_\_\_\_  
Click **Submit**.

END OF STEPS \_\_\_\_\_

## 1.12 What are threshold policies?

Threshold policies define a set of numerical thresholds that are used to generate utilization alarms for resource pools. Depending on their intended usage, threshold policies can be configured to define Warning, Minor, and Major alarm thresholds as percentages or integer counts. When you configure a resource pool, you can associate it with a threshold policy.

## 1.13 How do I configure a threshold policy?

This procedure describes how to create a new threshold policy.

1 \_\_\_\_\_  
Verify that the GUI drop-down menu is set to **Threshold Policies**.

2 \_\_\_\_\_  
Do one of the following:

- **Create a new policy:** Click **+ Create Threshold Policy** .
- **Modify an existing policy:** In the policy list , click **⋮ More, ⋮ Edit Threshold Policy** on a list item.

3 \_\_\_\_\_  
In the Threshold Policy form, select a **Threshold Type** from the drop-down menu.

4 \_\_\_\_\_  
Configure **Warning, Minor** and **Major** threshold values.

For a Utilization % threshold policy, the threshold values must be percentages, ascending from the Warning to Major levels.

For a Free Count threshold policy, the threshold values must be integers, ascending from the Warning to Major levels.

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5

Click **Create** or **Save** to save your changes.

**END OF STEPS**

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