

Configuring a NIC Scenario (SRC CLI)

The following topics provide procedures for configuring a NIC scenario with the SRC CLI:

- Defining the NIC Configuration to Use on page 1
- Configuring Directory Agents on page 4
- Configuring SAE Client Agents on page 6
- Configuring SAE Plug-In Agents on page 7
- Configuring the SAE to Communicate with SAE Plug-In Agents When You Use NIC Replication on page 9

Defining the NIC Configuration to Use

The OnePop configuration scenario is the default configuration for NIC. If you want to use another configuration scenario, you first clear data for the configuration scenario and change the scenario name that identifies the scenario, see Changing NIC Configurations (SRC CLI).

When you select a NIC configuration scenario, the software adds the default configuration for most properties. You can modify the NIC properties, including those for agents.



CAUTION: We recommend that you change only those statements visible at the basic editing level. Contact Juniper Professional Services or Juniper Customer Support before you change any of the NIC statements not visible at the basic editing level.

To specify a NIC configuration scenario for NIC to use:

1. Make sure that the NIC component is running.

```
user@host> show component
Installed Components
Name              Version              Status
...
nic               Release: 7.0 Build: GATEWAY.A.7.0.0.0168  running
...
```

2. From configuration mode, access the statement that configures a NIC configuration scenario, and specify the name of a scenario.

```
[edit]
user@host# edit shared nic scenario name
```

For example:

```
[edit]
user@host# edit shared nic scenario OnePopLogin
```

3. View the default configuration for the configuration scenario. For example:

```
user@host# show
```

2 ■ Defining the NIC Configuration to Use

```

    }
    PoolVr {
      configuration {
        directory {
          search-base o=Network,<base>;
          search-filter (objectclass=umcVirtualRouter);
          search-scope 2;
          server-url ldap://127.0.0.1:389/;
          backup-servers-url ;
          ' ' ' ' ' ' ' ' ' ' 'principal cn=nic,ou=Components,o=Operators,<base>;
          ' ' ' ' ' ' ' ' ' ' 'credentials *****;
        }
      }
    }
  }
}

```

4. (Optional) Update logging configuration.

See Overview of Logging for SRC Components.

By default, NIC has the following logging enabled for a NIC host:

```

logger file-1 {
  file {
    filter !ConfigMgr,!DES,/debug;
    filename var/log/nicdebug.log;
    rollover-filename var/log/nicdebug.alt;
    maximum-file-size 10000000;
  }
}
logger file-2 {
  file {
    filter /info-;
    filename var/log/nicinfo.log;
  }
}
logger file-3 {
  file {
    filter /error-;
    filename var/log/nicerror.log;
  }
}

```

5. For each agent that the NIC configuration scenario includes, if needed update NIC agent configuration to define properties specific to your environment, such as directory properties.

Each type of agent has different configuration properties. The output from the **show** command identifies the type of agent under the **agents** hierarchy. For example:

```

VrSaeId {
  configuration {
    directory {

```

```

LoginNameVr {
  configuration {
    sae-plug-in {

```

Configuring Directory Agents

Use the following configuration statements to configure NIC directory agents:

```

shared nic scenario name agents agent configuration directory {
  search-base search-base ;
  search-filter search-filter ;
  search-scope (0 | 1 | 2);
  server-url server-url ;
  backup-servers-url backup-servers-url ;
  principal principal ;
  credentials credentials ;
}

```

To configure a directory agent:

1. From configuration mode, access the statement that specifies the configuration for the agent.

```

[edit]
user@host# edit shared nic scenario name agents agent configuration
directory

```

For example:

```

[edit]
user@host# edit shared nic scenario OnePopLogin agents VrSaeId configuration
directory

```

2. Review the default configuration for the agent. For example:

```

[edit shared nic scenario OnePopLogin agents VrSaeId configuration
directory]
user@host# show
search-base o=Network,<base>;
search-filter (objectclass=umcVirtualRouter);
search-scope 2;
server-url ldap://127.0.0.1:389/;
directory-backup-urls ;
principal cn=nic,ou=Components,o=Operators,<base>;
credentials *****;

```

3. (Optional) Change the distinguished name (DN) of the location in the directory from which the agent should read information.

```

[edit shared nic scenario name agents agent configuration directory]
user@host# set search-base search-base

```

For example:

```
[edit shared nic scenario OnePop agents PoolVr configuration directory]
user@host# set search-base o=myNetwork,<base>
```

You can use <base> in the DN to refer to the globally configured base DN.

4. (Optional) Change the directory search filter that the agent should use.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set search-filter search-filter
```

For example:

```
[edit shared nic scenario OnePop agents PoolVr configuration directory]
user@host# set search-filter objectclass=umcVirtualRouter
```

5. (Optional) Change the location in the directory relative to the base DN from which the NIC agent can retrieve information.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set search-scope (0 | 1 | 2)
```

where:

- 0—Entry specified in the **search-base** statement
 - 1—Entry specified in the **search-base** statement and objects that are subordinate by one level
 - 2—Subtree of entry specified in the **search-base** statement
6. For an installation on a Solaris platform, specify the location of the directory in URL string format.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set server-url ldap:// host:portNumber
```

For example, to specify the directory on a C-series Controller:

```
[edit shared nic scenario OnePop agents PoolVr configuration directory]
user@host# set server-url ldap://127.0.0.1:389/
```

7. List the URLs of redundant directories. Separate URLs with semicolons.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set directory-backup-urls backup-servers-urls
```

8. Specify the DN that contains the username that the directory server uses to authenticate the NIC agent.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set principal principal
```

For example:

```
[edit shared nic scenario OnePop agents PoolVr configuration directory]
```

```
user@host# set principal cn=nic,ou=Components,o=Operators,<base>
```

9. Specify the password that the directory server uses to authenticate the NIC agent.

```
[edit shared nic scenario name agents name configuration directory]
user@host# set credentials credentials
```

10. Restart the NIC agent.

```
user@host>request nic restart agent name name
```

Configuring SAE Client Agents

Use the following configuration statements to configure NIC SAE client agents:

```
shared nic scenario nameagents nameconfiguration sae-client {
  principal principal;
  credentials credentials;
  subscriber-id (user-ip-address | dn | login-name | interface-name | primary-user-name);
  search-base search-base;
  search-filter search-filter;
  search-scope (object | one-level | sub-tree);
  server-url server-url;
  directory-backup-urlsdirectory-backup-urls ;
}
```

To configure an SAE client agent:

1. From configuration mode, access the statement that specifies the configuration for the agent.

```
[edit]
user@host# edit shared nic scenario name agents agent configuration
sae-client
```

For example:

```
[edit]
user@host# edit shared nic scenario OnePopLoginPull agents IpSaeId
configuration sae-client
```

2. Review the default configuration for the agent. For example:

```
[edit shared nic scenario OnePopLoginPull agents IpSaeId configuration sae-client]
user@host# show
principal cn=umcadmin,<base>;
credentials *****;
subscriber-id user-ip-address;
search-base ou=sspadmurls,o=Servers,;
search-filter (objectclass=corbaObjectReference);
search-scope sub-tree;
server-url ldap://127.0.0.1:389/; directory-backup-urls "";
```

3. (Optional) Change the authentication DN.

For example:

```
[edit edit shared nic scenario OnePopLoginPull agents IpSaeld configuration
sae-client ]
user@host# set principal cn=umcadmin, <base>
```

4. (Optional) Change the password that the NIC uses to access the directory. For example:

```
[edit edit shared nic scenario OnePopLoginPull agents IpSaeld configuration
sae-client ]
user@host# set credentials —
```

5. Specify the part of the directory that you want the network publisher to search.

```
[edit edit shared nic scenario OnePopLoginPull agents IpSaeld configuration
sae-client ]
user@host# set search-base search-base
```

6. (Optional) Change the URL that identifies the primary Juniper Networks database to which the NIC agent connects.

```
[edit edit shared nic scenario OnePopLoginPull agents IpSaeld configuration
sae-client ]
user@host# set server-url server-url
```

7. Specify the type of subscriber ID that the agent uses to identify the subscriber. The type can be `user-ip-address`, `dn`, `login-name`, or `interface-name`. For example, to specify an IP address:

```
[edit edit shared nic scenario OnePopLoginPull agents IpSaeld configuration
sae-client ]
user@host# set subscriber-id use-ip-address
```

Configuring SAE Plug-In Agents

By default, the CORBA naming server on a C-series Controller uses port 2809. The NIC host is configured to communicate with this naming server; you do not need to change JacORB properties.

Use the following configuration statements to configure NIC SAE plug-in agents:

```
shared nic scenario name agents agent configuration sae-plugin-in{
  event-filter event-filter ;
  number-of-events number-of-events ;
}
```

If you plan to change the event filter for the agent, make sure that you are familiar with:

- Plug-in attributes and values

See Types of Tracking Plug-Ins.

■ Filter syntax

See the documentation for the SAE CORBA Remote API in the SAE Core API documentation on the Juniper Networks Web site at:

<http://www.juniper.net/techpubs/software/management/src/api-index.html>

To configure an SAE plug-in agent:

1. From configuration mode, access the statement that specifies the configuration for the agent.

```
[edit]
user@host# edit shared nic scenario name agents agent configuration
sae-plug-in
```

For example:

```
[edit]
user@host# edit shared nic scenario OnePopLogin agents LoginNameVr
configuration sae plug-in
```

2. Review the default configuration for the agent. For example:

```
[edit shared nic scenario OnePopLogin agents LoginNameVr configuration sae-plug-in]
user@host# show
event-filter "(&(!(PA_USER_TYPE=INTF))(!(PA_LOGIN_NAME=[None])))";
number-of-events-sent-in-a-synchronization-call 50;
```

3. (Optional) Change an LDAP filter that change the events that the agent collects.

```
[edit shared nic scenario name agents agent configuration sae-plug-in]
user@host# set event-filter event-filter
```

Typically, you do not need to change this value. If you do want to filter other events, use the format *pluginAttribute=attributeValue* format for event filters, where:

- *pluginAttribute* —Plug-in attribute name
- *attributeValue* —Value of filter

For example:

```
[edit shared nic scenario name agents agent configuration sae-plug-in]
user@host# set event-filter PA_USER_TYPE=INTF
```

4. Specify the number of events that the SAE sends to the agent at one time during state synchronization.

```
[edit shared nic scenario name agents agent configuration sae-plug-in]
user@host# set number-of-events number-of-events
```

For example:


```
[edit shared nic scenario OnePopLogin agents LoginNameVr configuration sae
plug-in]
user@host# set number-of-events 50
```

Configuring the SAE to Communicate with SAE Plug-In Agents When You Use NIC Replication

For each NIC host that uses SAE plug-in agents, configure a corresponding external plug-in for the SAE. By default, the SAE plug-in agents share events with the single SAE plug-in. You must also configure the SAE to communicate with the SAE plug-in agent in each NIC host that you use in the NIC replication.

For information about configuring an external plug-in for the SAE, see *Configuring the SAE for External Plug-Ins*.

To configure an external plug-in:

1. From configuration mode, access the statement that specifies the configuration for an external plug-in for the SAE that communicates with the agent, and assign the plug-in a unique name.

```
[edit]
user@host# shared sae configuration plug-ins name name
```

2. Configure CORBA object reference for the plug-in.

```
[shared sae configuration plug-ins name name external]
user@host# corba-object-reference corba-object-reference
```

For the CORBA object reference, use the following syntax:

host : port-number /NameService# plugInName

where:

- *host* —IP address or name of the machine on which you installed the NIC host that supports the agent

For local host, use the IP address 127.0.0.1.

- *port-number* —Port on which the name server runs

The default port number is 2809.

- *plugInName* —Name under which the agent is registered in the naming service

Use the format *nicxae_ groupname /saePort* where *groupname* is the name of the replication group. (When replication is not used, the format is *nicxae/saePort*.)

For example:

```
[shared sae configuration plug-ins name name external]
user@host# set corba-object-reference
corbaname::127.0.0.1:2809/NameService#nicxae/saePort
```

3. Configure attributes that are sent to the external plug-in for a NIC host. Because the SAE plug-in agents share the event by default, you configure only one for a NIC host.

```
[shared sae configuration plug-ins name name external]  
user@host# set attr  
[( router-name | user-dn | session-id | user-type | user-ip-address | login-name)]
```

Specify the plug-in options that the agent uses. You must specify the options **session-id** and **router-name**, and other options that you specified for the agent's network data types and the agent's event filter. Do not specify attributes options of the PAT_OPAQUE attribute type, such as the option **dhcp-packet**.



NOTE: Do not include attributes that are not needed.

4. Reference the NIC as a subscriber tracking plug-in.

```
[edit shared sae group name configuration plugins event-publishers]  
user@host# set subscriber-tracking pool-name
```

For example, for a pool named **nic**:

```
[edit shared sae group name configuration plugins event-publishers]  
user@host# set subscriber-tracking nic
```