Sterling Control Center ®

Configuration Management Guide

Version 5.2

Sterling Control Center Server Configuration Management Guide
Version 5.2

First Edition

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Chapter 1

About Configuration Management

Sterling Control Center can manage the following types of Connect:Direct server configuration objects:

✦ Functional authorities (UNIX, Windows, and z/OS)

✦ Initialization parameters (UNIX, Windows, and z/OS)

✦ Netmap nodes (UNIX, Windows, and z/OS)

✦ Netmap modes (Windows)

✦ Netmap communication paths (Windows)

✦ Secure+ nodes (UNIX, Windows, and z/OS)

✦ Secure+ key certificates (UNIX, Windows, and z/OS)

✦ Secure+ trusted certificates (UNIX, Windows, and z/OS)

✦ Secure+ cipher suites (UNIX, Windows, and z/OS)

✦ User proxies (UNIX and Windows)

Control Center stores versions of managed server objects locally. The number and age of versions kept by Control Center is controlled via the Services tab in System Settings. You can set up Control Center, via the Services system settings, to know whether and when it should look for local updates to managed objects, and, if a change is detected by Control Center to those objects, how it should create a new, local version of them.

This chapter discusses the following:

✦ About the Configuration Manager

✦ Work with Templates

✦ Work with the Job Viewer

✦ Search Configuration Objects

✦ Use the Audit Log

✦ Refresh the Control Center Copy with the Copy on the Server

About the Configuration Manager

You manage Connect:Direct server configurations through the Sterling Control Center Configuration Manager. You can reach this window via the **Configure Servers** item on the menu bar.
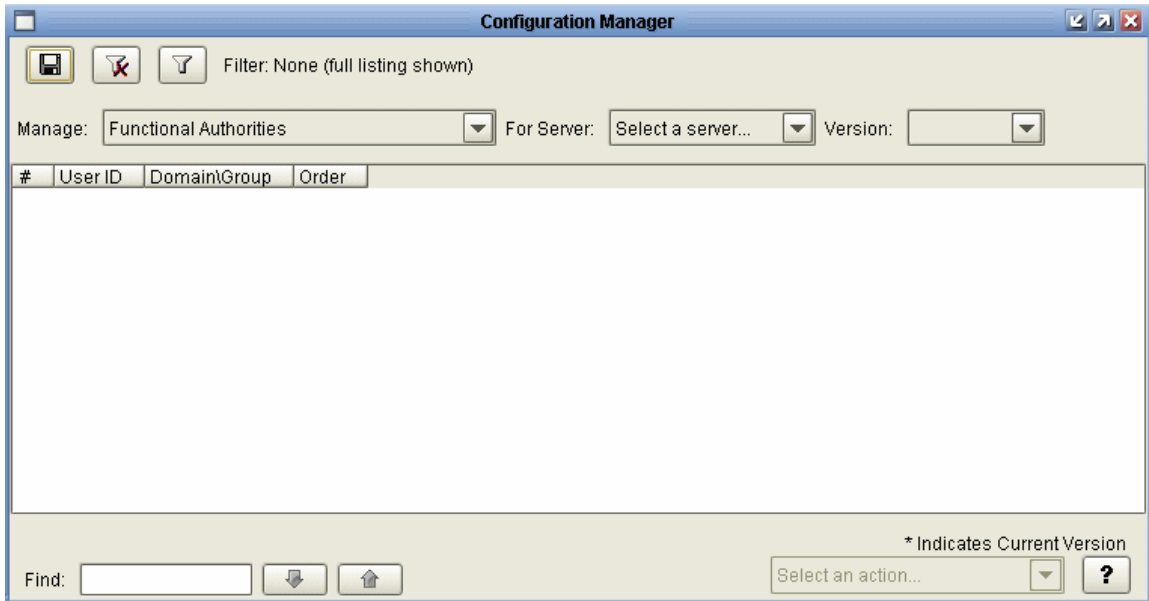
To manage configuration objects, you select the type of object you want to work with using the **Manage** pulldown menu on the Configuration Manager, then select a server with the **For Server** pulldown menu, and finally select the version of the object with the **Version** pulldown menu. An object's current version is indicated with an asterisk (*). Control Center's Filter capability makes working with listings of configuration objects easier to manage.

Based on these choices, you then select an action to take on the object using the **Select an Action** pulldown, located in the window's lower right corner. The actions available for an object vary depending on the type of object, but they include:

✦ Copying an object from one server to another

✦ Copying selected parameters of an object to one on another server

✦ Creating a new object

✦ Duplicating an object (as a quick way of creating a new one on the same server)

✦ Viewing and updating an object's properties

✦ Deleting an object

✦ Comparing two objects

✦ Displaying the available versions of an object and comparing them

✦ Refresh the Control Center Copy with the Copy on the Server

The Compare action is a powerful feature of the Configuration Manager. You can use Compare to compare two different objects, such as two communication paths, or two versions of the same object. When you do a Compare, the Configuration Object Comparison window displays both objects or versions side by side and highlights the differences between them in red.

Work with Templates

You can set up templates for many configuration objects. By setting up a template you can begin with the typical settings for an object, make changes to it, and save the result as a new object. Templates add efficiency to the process of creating new objects.

In this guide, use of templates is covered as it pertains to each of the configuration object types.

Work with the Job Viewer

Changes to configuration objects are submitted as jobs. You can submit a change to an object as a job to be run immediately, or to be placed in the Held Job queue until you run it later. You can also schedule a job to run automatically at a later time. This mechanism allows you to make changes to a job over a period of time—based on your schedule, your need to conduct further research, etc. Once all changes to the object are in place, you can submit the job to accomplish all the changes at once.

The Job Viewer allows you to see what jobs are queued, scheduled, and waiting to be submitted, and what jobs have already completed. For more, see *Use the Job Viewer* on page 483.

You can display the Job Viewer by selecting Queued Configuration Jobs or Completed Configuration Jobs on the Configure Servers menu.

For a queued job (displayed on the Queued tab of the Job Viewer), you can view job properties, make changes to those properties, view and run component job steps, start a job, hold it for later, or cancel it. For a completed job (including a failed one), you can view and make changes to job properties or job step properties, rerun the job, or rerun individual steps.

Search Configuration Objects

You can search on configuration objects for servers managed centrally by Control Center.

Note: Depending on the type of database being used, only the first 4,000 characters of values stored may be searched.

To search on configuration objects:

1. Click **Configure Servers** > **Search**.

2. Choose an option in the **Search For Values That** list:

   ◆ contain

   ◆ match

   ◆ begin with

- end with
- do not match
- do not contain

3. Type a search argument in the text box to the right.

4. Narrow your search by selecting the types of object to search on. Options include:
   - All Objects
   - Netmap Nodes
   - Netmap Modes
   - Netmap Commpaths
   - Functional Authorities
   - User Proxies
   - Secure+

5. Specify whether to search among **Versioned objects only**, **Templates only**, or **Both**.

6. Specify whether to search only **Current** versions or **All** versions of objects.

7. Specify **Other Search Options** by selecting from Parameter, Server, Server Group, or Object ID, then selecting an operator, and entering text to further narrow the search.

8. Click Search to initiate the search. Click Reset to clear all values and reset them to their default state.

Use the Audit Log

The Audit Log provides a clear trail of the changes that have been made to configuration objects. The Audit Log is available on the Tools menu on the menu bar. The Audit Log displays every change made to every configuration object property. The Audit Log makes it possible to track all actions taken on configuration objects on servers Control Center centrally manages. The Audit Log also tracks other, non-configuration objects as well.

To display the Audit Log Viewer:

Click **Tools** > **Audit Log**.

The Audit Log Viewer displays changes made to all objects, including the following information:

- Object ID
- Object Type
- Property Type
- Value Before
- Value After
- Date/Time

✦ Server

✦ User

Refresh the Control Center Copy with the Copy on the Server

Using the Refresh action on the Configuration Manager, you can refresh Control Center's copy of configuration objects, to ensure that Control Center has the latest, most up-to-date version of the object.

Manage Functional Authorities

Functional authorities control user access to Connect:Direct and control which Connect:Direct commands and statements users can employ. You can use Sterling Control Center to view, add, update, or delete functional authority records on z/OS, UNIX or Windows Connect:Direct servers.

Note: Configuration Option authorities are determined by Control Center when it signs on to the Connect:Direct node. If you use Control Center to change the Functional Authority of the userid that Control Center is using, you should pause and resume monitoring of the node after the Functional Authority changes.

This chapter covers the following subtopics:

✦ View Functional Authorities

✦ Create a Functional Authority

✦ Update Functional Authorities for a Server

✦ Copy Functional Authorities Parameters

✦ Copy Functional Authorities from One Server to Another

✦ Duplicate Functional Authorities

✦ Remove Functional Authorities

✦ Functional Authorities Field Definitions

✦ Create a Functional Authority Template

✦ Duplicate a Functional Authority Template

✦ Copy Functional Authority Parameters From a Template to a Server

✦ Delete a Functional Authority Template

View Functional Authorities

You can use Control Center to view functional authorities defined in Connect:Direct, modify values in a functional authorities record, or delete a functional authorities record.

To view functional authorities for a server:

1. Right-click the Connect:Direct server where the functional authorities are located and click **Configure Server > Functional Authorities**.

2. Double-click the functional authorities record to view.

3. Click **Cancel** if you did not make any changes. Refer to *Create a Functional Authority* on page 14 for instructions on updating functional authority values.

Create a Functional Authority

Use Control Center to create a functional authority to control user access to Connect:Direct.

To create a functional authority for a user:

1. In the Control Center window, right-click the server where the functional authority will be created, and click **Configure Server > Functional Authorities**.

2. Select the action **Create New**.

3. Optionally, select one or more Connect:Direct servers or server groups to which to apply the definition. Click **Next**.

4. Do one of the following:

   ◆ To create a functional authority definition by typing all information, select **Enter all new Functional Authority details**.

   ◆ To create a definition by copying a functional authority, select **Start from an existing Functional Authority entry on another server**. Select the server where the definition is located in the **Server** field and the node to copy in the **Functional Authority** field.

   ◆ To create a node definition from an existing template, select **Start from a template** and select the template to copy in the **Template** field.

5. Click **Next**.

6. Define information about the new functional authority. Click **Next** to move through each screen. Refer to *Functional Authorities Field Definitions* on page 19 for field descriptions.

7. To create a functional authority on the destination server even if it already exists there, enable **Overwrite object if it already exists on the server**.

8. Select a timing option for running the job:

   ◆ **Now** to initiate the functional authority creation job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:**   Select Hold for later if you are not ready to initiate the functional authority creation job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Update Functional Authorities for a Server

Use Control Center to update functional authorities for a server.

To update functional authorities:

1. Right-click the Connect:Direct server where the functional authorities are located and click **Configure Server > Functional Authorities**.

2. Double-click the Functional Authorities record to update.

   A tabbed functional authorities Properties window is displayed.

3. Change the values of the functional authorities fields as required. (See *Functional Authorities Field Definitions* on page 19.)

4. Click **Update**.

5. To update the functional authorities record only if it matches the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

6. Select a timing option for running the job:

   ◆ **Now** to update the functional authorities immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the functional authority creation job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **OK**. If you select **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

8. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Copy Functional Authorities Parameters

You can copy parameters from one functional authority to another. You can select which parameters to copy.

To copy parameters from one functional authority to another:

1. Right-click the Connect:Direct server where the functional authority is located and click **Configure Server > Functional Authorities**.

2. Highlight the functional authorities user record to copy parameters from.

3. Select the action **Copy Parameters To**.

4. Select the Connect:Direct server groups or servers to which you wish to apply this copy. Click **Next** to go to the next page.

5. Select the node entry to which to copy the parameters. Click **Next**.

6. Select the functional authorities parameters to copy. Click **Next**.

7. To copy these functional authorities parameters only if the functional authorities object matches Control Center's copy, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

   ◆ **Now** to initiate the functional authority parameter copy job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:**   Select Hold for later if you are not ready to initiate the functional authority copy job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy Functional Authorities from One Server to Another

You can copy functional authorities created on one server to another server of the same type. This method provides a quick way to update functional authorities on additional servers on the same operating system as an initial server.

To copy functional authorities to another server:

1. Right-click the Connect:Direct server where the functional authorities are located and click **Configure Server > Functional Authorities**.

2. Highlight the functional authorities user record to copy.

3. Select the action **Copy To**.

4. Select the Connect:Direct server groups or servers to which you wish to apply this copy. Click **Next** to go to the next page.

5. To copy these functional authorities over ones that already exist on a server, enable **Overwrite object if it already exists on the server**.

6. Select a timing option for running the job:

   ◆ **Now** to initiate the functional authority copy job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the functional authority copy job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Duplicate Functional Authorities

To duplicate functional authorities:

1. Right-click the Connect:Direct server where the functional authorities are located and click **Configure Server > Functional Authorities**.

2. Highlight the functional authorities record to duplicate.

3. Select the action **Duplicate**.

4. Type a unique name for the functional authority in the **User ID** field.

5. If necessary, change functional authority field values on the Process Control, Process Statements, Server Control, Configuration, Overrides, and Directory panels, clicking **Next** to go the next panel. Refer to *Functional Authorities Field Definitions* on page 19 for more information.

6. To copy these functional authorities over ones that may already exist on a server, enable **Overwrite object if it already exists on the server**.

7. Select a timing option for running the job:

   ◆ **Now** to initiate the functional authority duplication job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the functional authority duplication job.

     ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Remove Functional Authorities

Use the delete function to remove functional authorities.

To remove functional authorities:

1. Right-click the Connect:Direct server where the functional authorities are located and click **Configure Server > Functional Authorities**.

2. Highlight the functional authorities records to delete. Press and hold the **Ctrl** key to select more than one record.

3. Select the action **Delete**.

4. To identify server groups and servers to delete the specified functional authorities from, double-click the item. Click **Next**.

5. To delete functional authorities only if they match Control Center's copy, enable **Delete only if the object on the server matches Control Center's copy**.

6. Select a timing option for running the job:

     ◆   **Now** to update the file immediately.

     ◆   **Hold for later** to send the job to the job queue with a status of Held.

     ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

7. Review the delete choices you selected and click **Finish**.

8. If you select **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Functional Authorities Field Definitions

Following is a description of the functional authority fields:

Field	Description	Valid Values
Type	The type of functional authority. (Windows)	User | Group
User ID	User identification.	1–64 characters
Phone Number	The phone number associated with the user. (z/OS, UNIX.)	
Contact Name	Name of the user. (UNIX only.)	Alphanumeric string.
Description	Description of the user. (UNIX only.)	Alphanumeric string.
Admin	Determines if the user has administrative privileges. (UNIX, Windows.)	No | Yes
User Name	The full name of the user. (z/OS only.)	1–20 characters.
User Node	The user node of the User record. (z/OS only.)	1–16 character alphanumeric string.
Password	The initial password for the user ID. (z/OS only.)	1–64 character alphanumeric string.
Verify Password	Retype the password to verify the value.(z/OS only.)	1–64 character alphanumeric string.
Security ID	The security ID to identify the file authorization of the user. Security support includes CA-ACF2, CA-TOP SECRET, and IBM RACF. This ID must meet the standards of the security subsystem at the user location. (z/OS only.)	1–64 character security system ID for the user
Security ID Password	The 1–64 character security system password for the user. This password must meet the standards of the security subsystem at the location of the user. (z/OS only.)	1—64 characters.
Security ID Password Verify	Retype the 1–64 character security system password for the user to verify its value. (z/OS only.)	1—64 characters.
Max Signon Attempts	The maximum number of signon attempts the user is allowed per hour. Zero (0) indicates no maximum number. (z/OS only.)	The range is 0–99. The default is 60.
Passticket Data	The values required for the Stage 2 security exit to rewrite a RACF PassTicket password. APPL prof name is the value specified when the profile is defined for the PTICDATA class. (z/OS only.)	The first field is the PassTicket application profile name while the second field is the PassTicket security signon key.

Field	Description	Valid Values
Process Control		
Change	Grants authority to change Processes in the TCQ. Yes specifies that you can change your own Processes; All specifies that you can change anyone's Processes.	No | Yes | All
Copy ulimit	The action taken when the limit on a user output file size is exceeded during a copy operation. The value for this parameter overrides the equivalent value in the initialization parameters file. (UNIX only.)	No | Yes Number of KB Yes honors the user file size limit. If this limit is exceeded during a copy operation, the operation fails. No ignores the limit. The default is n. nnnnnnnn, nnnnnnnnK, nnnnnnnM, or nnnnG establishes a default output file size limit for all copy operations. K denotes 1024 bytes. M denotes 1048576 bytes. G denotes 1073741824 bytes. The maximum value you can specify is 1 TB.
Delete	Grants authority to delete Processes from the TCQ. Yes specifies that you can delete your own Processes; All specifies that you can delete anyone's Processes.	No | Yes | All
Flush	Grants authority to remove an executing Process from the TCQ. (z/OS, UNIX.)	No | Yes | All
Monitor	Grants access to the Process Monitor function. Yes specifies that you can monitor your own Processes; All specifies that you can monitor anyone's Processes. (UNIX, Windows)	No | Yes | All
Statistics	Grants authority to access Process statistics using the Select Statistics command. Yes specifies that you can access statistics for your own Processes; All specifies that you can access statistics for anyone's Processes.	No | Yes | All
Select Process	Grants authority to use the Select Process command. (z/OS only.)	No | Yes
Submit	Grants authority to submit Processes to the TCQ using the Submit Process command. Yes specifies that you can submit your own Processes.	No | Yes

Field	Description	Valid Values
View Processes	Determines if the user can issue the view Process command. No—Prevents the user from issuing the command. The default is No. Yes—Allows the user to issue the command. All—Allows the user to issue the command against targets owned by all users.	No | Yes | All
Process Statements		
Copy	Determines if a user can copy files from one node to another. (z/OS, UNIX)	No | Yes
Copy Receive	Enables receives (UNIX only).	No | Yes
Copy Send	Enables sends (UNIX only).	No | Yes
CRC	Enables the user to override the default settings by using the keyword CRC in a Process statement. No prevents the user from overriding the system's default settings. The default is No. Yes allows the user to override the system's default settings.	No | Yes
Download	Determines if the user can receive files to this local node. If a file open exit is in use, this parameter is passed to the exit, but it is not enforced. (Windows).	No | Yes
Run Job	Grants authority to use run job Process statements.	No | Yes
Run Task	Grants authority to use run task Process statements.	No | Yes
Submit within Process	Grants authority to use submit within another Process statements.	No | Yes
Upload	Determines if the user can send files from this local node. If a file open exit is in use, this parameter is passed to the exit, but it is not enforced. (Windows.)	No | Yes
Modals	Specifies whether the user is allowed to use the modal statements IF, ELSE, EIF, GOTO, and EXIT. (z/OS only.)	No | Yes
Server Control		
Refresh	Windows only. Grants authority to refresh the Connect:Direct server initialization parameters.	No | Yes
Stop	Grants authority to stop a Connect:Direct node. (UNIX, Windows, z/OS.)	No | Yes
Trace	Grants authority to access the Trace utility. (UNIX, Windows, z/OS.)	No | Yes

Field	Description	Valid Values
Secure+ Configuration	Specifies whether the user can update the Secure+ parameters file. (UNIX only.)	No | Yes
Confirm Delete	Display confirmation prompt for Delete, Flush and Suspend commands. (z/OS only.)	No | Yes
Confirm Delete Off	Grants authority to user to turn off display of confirmation prompt for Delete, Flush and Suspend commands. (z/OS only.)	No | Yes
Event Commands	Specifies whether the user is allowed to use the Event Services Support commands. (z/OS only.)	No | Yes
Reset Signon	Grants authority to reset signons. (z/OS only.)	No | Yes
Stat Commands	Grants authority to use the Statistics commands. (z/OS only.)	No | Yes
Trace and Refresh Initialization Parameters	Grants authority to modify initialization parameters. (z/OS only.)	No | Yes
Update Initialization Parameters	Grants authority to update initialization parameters. (z/OS only.)	No | Yes
Configuration		No | Yes
Netmap	Grants authority to update the netmap (Windows only).	No | Yes
Netmap Select	Grants authority to view the network map. (z/OS only.)	No | Yes
Translation Table	Grants authority to update the translation tables. (Windows only.)	No | Yes
User Authority	Grants authority to update local user Connect:Direct functional authorities. (Windows only.)	No | Yes
User Proxy	Grants authority to update user proxies. (Windows only.)	No | Yes
Netmap Update	Specifies whether the user is allowed to update the netmap. (z/OS only.)	No | Yes
Secure+ Admin	Specifies whether the user can update the Secure+ parameters file. (z/OS only.)	No | Yes
Secure Plus	Specifies whether the user can update the Secure+ parameters file. (Windows only.)	No | Yes
Type Delete	Specifies whether the user is allowed to delete type records. (z/OS only.)	No | Yes
Type Insert	Specifies whether the user is allowed to create new type records. (z/OS only.)	No | Yes
Type Select	Specifies whether the user is allowed to select new type records. (z/OS only.)	No | Yes

Field	Description	Valid Values
Type Update	Specifies whether the user is allowed to update type records. (z/OS only.)	No | Yes
Update APKEY	Specifies whether the user is allowed to update the license management key (also known as the asset protection key file). (z/OS only.)	No | Yes
Functional Authority Update	Specifies whether the user can update a user in the Connect:Direct authorization file. (z/OS only.)	No | Yes
Functional Authority Insert	Specifies whether the user can add a user to the Connect:Direct authorization file. (z/OS only.)	No | Yes
Functional Authority Delete	Specifies whether the user can delete a user in the Connect:Direct authorization file. (z/OS only.)	No | Yes
Functional Authority Select	Specifies whether the user can select a user in the Connect:Direct authorization file. (z/OS only.)	No | Yes
Overrides		
ACL Update	Windows only. Grants authority to define access–allowed and access–denied entries in the Access Control List (ACL) for a file created using a **copy** Process.	No | Yes
Execution Priority	Windows only. Grants authority to override the default execution priority in a Process.	No | Yes | All
File Attributes	Windows only. Grants authority to override the system's default file attributes when creating files using a **copy** Process.	No | Yes
Inherent Rights	Windows only.	No | Yes
Remote Node ID	Grants authority to use the remote node ID parameter on the Process statement or when submitting the Process Submit command. (UNIX, Windows)	No | Yes
Trustee Assign	Windows only.	No | Yes
Directory		
Download	Specifies the directory that the user can copy files to and use as a destination directory. (UNIX, Windows.)	
Process	Specifies the directory from which the user can submit a Process. (UNIX, Windows.)	
Program	Specifies the directory from which the user can run a program. (UNIX, Windows.)	
Upload	Specifies the directory that the user can copy files from and use as a source directory. (UNIX, Windows.)	

Create a Functional Authority Template

You can create a functional authority template to define the most commonly used values. Then use the template to quickly create a definition for a server. Create a template by copying a functional authority definition from a server or an existing template or by defining all values in the template.

To create a functional authorities template:

1. From the menu bar, select **Configure Servers > Templates > Functional Authorities**.

2. Select the action **Create New**.

3. Do one of the following:

    ◆ To create a new template and manually type all values, ensure that **Enter new Functional Authority details** is selected.

    ◆ To create a template from an existing definition, select **Start from an existing Functional Authority entry on another server**. Identify the server where the definition is located in the **Server** field and the functional authority entry to copy in the **Functional Authority** field.

    ◆ To create a template from an existing template, select **Start from a template** and select the template to copy in the **Template** field.

4. Click **Next**.

5. Do one of the following:

    ◆ For a new template, define all functional authority fields.

    ◆ For a template created from an existing template or entry, assign a unique name to the template. Change the other field values as necessary.

    Refer to *Functional Authorities Field Definitions* on page 19 for details on the field values.

6. Click **Next** to move through the dialogs for each authority.

7. Review the template details in the Confirm Choices dialog. Click **Finish**.

8. Click **Close**.

Duplicate a Functional Authority Template

To duplicate a functional authority template:

1. From the menu bar, select **Configure Servers > Templates > Functional Authorities**.

2. Highlight the template to duplicate.

3. Select the action **Duplicate**.

4. Type a unique name for the template in the **Template Name** field.

5. If necessary, change functional authority field values and click **Next**. Refer to *Functional Authorities Field Definitions* on page 19 for more information.

6. Review the template details in the Confirm Choices dialog and click **Finish**.

7. Click **Close**.

Copy Functional Authority Parameters From a Template to a Server

To copy functional authority parameters from a template:

1. From the menu bar, select **Configure Servers > Templates > Functional Authorities**.

2. Highlight the template to copy.

3. Select the action **Copy Parameters To**.

4. Select the Connect:Direct server groups or servers to which you wish to apply this copy and click **Next**.

5. In the Destination Node Entry(s) window, select the functional authorities definitions where the parameters will be copied and click **Next**.

6. In the General Details window, select the parameters to copy and click **Next**.

7. To update the values only if the functional authorities file matches the file on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

11. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a Functional Authority Template

To delete a functional authority template:

1. From the menu bar, select **Configure Servers > Templates > Functional Authorities**.

2. Highlight the template to delete.

3. Select the action **Delete**.

4. At the confirmation window, click **OK**.

Chapter 3

Manage Initialization Parameters

Initialization parameters are defined when you install Connect:Direct and determine startup settings for a server and default values for Connect:Direct functions. You can change the default Connect:Direct settings by changing an initialization parameter value.

Use Control Center to view, update, or delete an initialization parameter value on UNIX, Windows, or z/OS servers.

This chapter provides instructions for the following functions:

✦ View Initialization Parameters

✦ Update Initialization Parameters for a Server

✦ Copy Initialization Parameters From One Server to Another

✦ Remove an Initialization Parameters Value

✦ Create an Initialization Parameters Template

✦ Duplicate an Initialization Parameters Template

✦ Copy Initialization Parameters From a Template to a Server

✦ Delete an Initialization Parameters Template

View Initialization Parameters

Initialization parameters are defined when you install Connect:Direct. Use Sterling Control Center to view initialization parameters defined in Connect:Direct, modify parameters in an initialization parameters file, or delete a value assigned to a parameter.

Use one of the following views to look at or update values in the initialization parameters file:

✦ Table view—Displays details about initialization parameters including a description and its value and details about the syntax of parameters. It is useful for a less experienced operator who needs help to update parameters.

✦ Full text view—If you are experienced with initialization parameters, use Full Text view to view and make changes directly to the initialization parameters file. Syntax checking is also

available in Full Text view. Invalid values are highlighted in red, and tooltip help is provided as with Table view.

Note: When the Connect:Direct for z/OS server is a Connect:Direct/Plex, the global initialization parameters and all of the local initialization parameters are displayed. The global parameters are identified by the section header [GLOBAL], and each member's local initialization parameters are identified by their own header, for example, [LOCAL MANAGER=YES] for the manager and [LOCAL SERVER=SERVER1] for the member called SERVER1.

To view initialization parameters for a server:

1. Right-click the Connect:Direct server where the initialization parameters file is located and click **Configure Server > Initialization Parameters**.

2. Double-click the initialization parameters file to view.

   A table view is displayed.

3. To view the text view, click the Full Text View tab.

4. If the server is a UNIX computer, initialization parameters with no value assigned are not displayed, To view all parameters including those with no value, enable **Show All Parameters**.

5. Click **Cancel**.

Update Initialization Parameters for a Server

In Control Center you can update a server's initialization parameters. If you change a parameter it is validated before the change is applied. If the change is not valid an error message is displayed and the change is not made.

To update initialization parameters values:

1. Right-click the Connect:Direct server where the initialization parameters file is located and click **Configure Server > Initialization Parameters**.

2. Double-click the initialization parameters file to update.

   A table view of the initialization parameters is displayed.

3. To update an initialization parameters field from the table view:

   a. Double-click the parameter to modify.

   b. In the **Value** field, type the new parameter value.

      Refer to the tooltips help in the product or the Connect:Direct documentation for the platform you are updating.

   c. Click **Update** to close the View/Edit Parameter window.

   d. To move to the next initialization parameter in the file, click the down arrow.

4. To update an initialization parameters file from full-text view:

   a. Click the Full Text View tab.

   b. Highlight the parameter to modify and change the value.

     c. To locate a parameter, type the value in the **Find** field. The first value that matches the string you typed is highlighted in green. Click the up or down arrow until you find the parameter to update.

     d. Click **Update** to close the Initialization Parameters Properties window.

5. To update the initialization parameters only if they match the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

6. Select a timing option for running the job:

- ◆ **Now** to update the file immediately.

- ◆ **Hold for later** to send the job to the job queue with a status of Held.

> **Note:** Select Hold for later if you are unsure of your changes or are not finished making changes.

- ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next.**

7. If you select **Hold for later** as the job timing option, write down the job number so you can easily find the job in the job queue when you need to run it at a later time.

8. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Copy Initialization Parameters From One Server to Another

You can copy initialization parameters created on one server to another server. This method provides a quick way to update parameters on additional servers on the same operating system as an initial server.

To copy initialization parameters to another server:

1. Right-click the Connect:Direct server where the initialization parameters file is located and click **Configure Server > Initialization Parameters**.

2. Highlight the initialization parameters file to copy.

3. Select the action **Copy Parameters To**.

4. Select the Connect:Direct server groups or servers to which you wish to copy parameters. Click **Next** to go to the next page.

5. In the Initialization Parameters Details window, select the parameters to copy and click **Next**.

6. To allow values of existing parameters to change only if the initialization parameters file on Control Center matches the file at the Connect:Direct server, click **Update Initialization Parameters only if the object on the server matches Control Center's copy**.

7. Select a timing option for running the job:

- ◆ **Now** to update the file immediately.

- ◆ **Hold for later** to send the job to the job queue with a status of Held.

◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next.**

8. Review the copy parameters you selected and click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can easily find the job in the job queue when you need to run it at a later time.

10. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Remove an Initialization Parameters Value

You can remove a value assigned to an initialization parameter. The parameter is not removed; however, it has no value assigned to it.

To remove an initialization parameters value:

1. Right-click the Connect:Direct server where the initialization parameters file is located and click **Configure Server > Initialization Parameters**.

2. Double-click the initialization parameters file to view. A table view is displayed.

3. Right-click the parameter to clear and click **Remove Parameter Value**.

    On Windows servers, the parameter value is reset to <None>. For UNIX and z/OS servers, the value is removed.

4. Click **Update**.

5. To update the parameter only if the initialization parameters file on Control Center matches the file at the Connect:Direct server, enable **Update only if the object on the server matches Control Center's copy**.

6. Select a timing option for running the job:

    ◆   **Now** to update the file immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

7. If you selected **Hold for later** as the job timing option, write down the job number so you can easily find the job in the job queue when you need to run it at a later time.

8. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Create an Initialization Parameters Template

You can create an initialization parameters template to define the most commonly used initialization parameters values. Then use the template to quickly update initialization parameters for a server. Create a template by copying an initialization parameters file from another server or from an existing template.

To create an initialization parameters template:

1. From the menu bar, select **Configure Servers > Templates > Initialization Parameters**.

2. Select the action **Create New**.

3. Do one of the following:

    ◆   To create a template from an existing initialization parameters file on another server, select **Start from existing initparms on another server**. Select the server where the initialization parameters file is located and the file to copy in the **Node entry** field.

    ◆   To create a template from an existing template, select **Start from an initparms template** and select the template to copy in the **Template entry** field.

4. Click **Next**.

5. Type a name for the template in the **Template Name** field and click **Next**.

    > **Note:** Because you are copying an existing template or initialization parameters file, the operating system associated with the template cannot be changed. Valid initialization parameters vary for each operating system.

6. Update any initialization parameters values as needed and click **Next**.

    Refer to the tooltips help in the product or the Connect:Direct documentation for the platform you are updating.

7. Review the template details in the Confirm Choices dialog. Click **Finish**.

8. Click **Close**.

Duplicate an Initialization Parameters Template

You can duplicate an initialization parameters template to create a new template based on an existing template.

To duplicate an initialization parameters template:

1. From the menu bar, select **Configure Servers > Templates > Initialization Parameters**.

2. Highlight the template to duplicate.

3. Select the action **Duplicate**.

4. Type a unique name for the template in **Template Name** and click **Next**.

> **Note:** Because you are copying an existing template, the operating system associated with the template cannot be changed. Valid initialization parameters vary for each operating system.

5. If necessary update initialization parameters values and click **Next**.

    Refer to the tooltips help in the product or the Connect:Direct documentation for the platform you are updating.

6. Review the template details in the Confirm Choices dialog and click **Finish**.

7. Click **Close**.

Copy Initialization Parameters From a Template to a Server

You can copy initialization parameters created in a template to a server.

To copy an initialization parameters from a template:

1. From the menu bar, select **Configure Servers > Templates > Initialization Parameters**.

2. Highlight the initialization parameters template to copy.

3. Select the action **Copy Parameters To**.

4. Select the Connect:Direct server groups or servers to which you wish to apply this copy. Click **Next** to go to the next page.

5. In the Initialization Parameters Details window, select the parameters to copy. Click **Next**.

6. Select a timing option for running the job:

    ◆ **Now** to update the file immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

7. Review the parameters you selected and click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can easily find the job in the job queue when you need to run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete an Initialization Parameters Template

To delete an initialization parameters template:

1. From the menu bar, select **Configure Servers > Templates > Initialization Parameters**.

2. Highlight the template to delete.

3. Select the action **Delete**.

4. At the confirmation window, click **OK**.

Chapter 4

Managing Netmap Nodes

A Connect:Direct server's network map (netmap) identifies the remote nodes it can communicate with and the communications information needed to establish a connection.

Control Center allows you to view and modify Connect:Direct servers' netmap node definitions, add new ones, delete definitions, and create a netmap node template to use to create new node definitions.

This chapter discusses:

✦ View and Update a Netmap Node Definition

✦ Create a Netmap Node Definition

✦ Copy a Netmap Node Entry

✦ Duplicate a Netmap Node Entry

✦ Delete a Netmap Node Entry

✦ Netmap Node Field Definitions

✦ View a Netmap Node Template

✦ Create a Netmap Node Entry Template

✦ Duplicate a Netmap Node Entry Template

✦ Copy Parameters from a Netmap Node Entry Template to a Node Definition

✦ Delete a Netmap Node Entry Template

View and Update a Netmap Node Definition

Netmap nodes can be viewed and updated in Connect:Direct or in Control Center.

To view and update a netmap node:

1. In the Control Center window, right-click the server where the node is located and click **Configure Server > Netmap > Netmap Nodes**.

2. Double-click the node name.

3. Click tabs to view all netmap node information.

4. Click **Cancel** to close without making changes, or, to update the netmap node definition, make changes and click **Update**. (See *Netmap Node Field Definitions* on page 40.)

5. Select **Update only if the object on the server matches Control Center's copy** if you want to update the node definition only under this condition.

6. Select a timing option for running the job:

    ◆ **Now** to initiate the netmap node update job immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the node update job.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

7. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

8. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Create a Netmap Node Definition

Use Control Center to create a netmap node entry by defining all parameters or by copying parameters from an existing netmap node on another server or from a template.

To create a netmap node entry:

1. In the Control Center window, right-click the server where the netmap node will be created and click **Configure Server > Netmap > Netmap Nodes**.

2. Select the action **Create New**.

3. Select one or more Connect:Direct servers or server groups to which to add the node. Click **Next**.

    > **Note:**   By selecting servers here, Control Center can prompt later for the appropriate parameters.

4. Do one of the following:

    ◆ To create a node definition by typing all information, select **Enter all node details**.

    ◆ To create a node definition by copying an existing node, select **Start from existing node entry on another server**. Select the server where the node definition is located in the **Server** field and the node to copy in the **Node entry** field.

    ◆ To create a node definition from an existing template, select **Start from a Node template** and select the template to copy in the **Template entry** field.

5. Click **Next**.

6. Define information about the new node including Node Name and click **Next**. Refer to *Netmap Node Field Definitions* on page 40 for field descriptions.

7. Define platform-specific information about the new node and click **Next**. Refer to *Netmap Node Field Definitions* on page 40 for field descriptions.

8. To replace an existing netmap node definition on the destination node, enable **Overwrite object if it already exists on the server**.

9. Select a timing option for running the job:

   ◆ **Now** to initiate the netmap node creation immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the netmap node creation job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next.**

10. Click **Finish**.

11. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

12. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy Netmap Node Parameters to a Node

To copy parameters from one node entry to another:

1. In the Control Center window, right-click the server where the nodes will be copied, and click **Configure Server > Netmap > Netmap Nodes**.

2. Highlight the netmap node to copy parameters from.

3. Select the action **Copy Parameters To**.

4. Select one or more Connect:Direct servers or server groups to which to apply the definition. Click **Next**.

5. Select the netmap node entries on which to copy the parameters. Click **Next**.

6. Select the parameters to copy to the destination netmap node entries. You can select parameters individually, a group of parameters by section, or all parameters. Click **Next**.

7. To copy the parameters to the node only if it matches the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

    ◆   **Now** to initiate the netmap node parameter copy immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

> **Note:**   Select Hold for later if you are not ready to initiate the parameter copy.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next.**

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy a Netmap Node Entry

You can copy a full netmap node entry to netmaps in selected servers, and servers within server groups.

To copy a netmap node entry to another server:

1. In the Control Center window, right-click the server where the node is located and click **Configure Server > Netmap > Netmap Nodes**.

2. Select a netmap node entry to copy.

3. Select the action **Copy To**.

4. Select one or more Connect:Direct servers or server groups to which to copy the netmap node entry. Click **Next** on both wizard pages.

5. Make any changes to the basic node entry details and click **Next**. Refer to *Netmap Node Field Definitions* on page 40 for field descriptions.

6. Make any changes to platform-specific node entry details and click **Next**.

7. To update the node entry only if it matches the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

    ◆   **Now** to initiate the netmap node entry copy immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

> **Note:**   Select Hold for later if you are not ready to initiate the netmap node entry copy job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next.**

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Duplicate a Netmap Node Entry

To duplicate a netmap node entry on the same server:

1. In the Control Center window, right-click the server to duplicate and click **Configure Server > Netmap > Netmap Nodes**.

2. Select the netmap node entry to duplicate.

3. Select the action **Duplicate**.

4. On the Basic Node Details screen, type a unique node name in the **Node Name** field. Modify other fields as necessary, and click **Next**. Refer to *Netmap Node Field Definitions* on page 40 for field descriptions.

5. Change platform-specific node entry details as necessary. Click **Next**.

6. To add the duplicated node entry even if it is already defined on the destination node, enable **Overwrite object if it already exists on the server**.

7. Select a timing option for running the job:

   ◆ **Now** to initiate the netmap node duplication job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > Note: Select Hold for later if you are not ready to initiate duplication of the netmap node.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next.**

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Delete a Netmap Node Entry

To delete a netmap node entry:

1. In the Control Center window, right-click the server where the node entry is defined and click **Configure Server > Netmap > Netmap Nodes**.

2. Highlight the netmap node or nodes to delete.

3. Select the action **Delete**.

4. Select servers or server groups from which to delete the netmap node entry.

5. To delete the node entry only if it matches Control Center's copy, enable **Delete object only if it matches Control Center's copy**.

6. Select a timing option for running the job:

   ◆ **Now** to initiate the netmap node deletion immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:**   Select Hold for later if you are not ready to initiate deletion of the netmap node.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next.**

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

Netmap Node Field Definitions

Following is a description of the fields used in creating a netmap node entry or template. The fields you use depend on the platform on which the node is defined.

Field	Description	Valid Values
Node Name	A name to assign to the node entry.	A one- to 16-character (alphanumeric) string
Description	A description of the node entry.	A one- to 127-character (alphanumeric) string
Contact Name	The name of the Connect:Direct administrator or operator for the node.	A one- to 49-character (alphanumeric) string.

Field	Description	Valid Values
Contact Phone	The phone number of the administrator or operator for the node. Do not use blanks in this string.	A one- to 39-character (alphanumeric) string.
Node Details		
Session Type	The type of communications session used to connect to the remote node.	APPC | TCP/IP | UDT33 | APPC and TCP/IP | APPC and UDT33 | TCP/IP and UDT33 | APPC and TCP/IP and UDT33 z/OS: TCP | SNA | SNUF | CTCA | UDT33
Operating System	The operating system of the remote node.	MVS | Netware | Open VMS | VMS Wrap | OS/390 | OS 400 | HP NonStop | UNIX | VM | VS | VSE | Windows
TCP Address	The host name or IP address of the node. Alias names are not supported.	A numeric value in the format *nnn.nnn.nnn.nnn (IPv4)* or *nnnn:nnnn:nnnn:nnnn:nnnn:nnnn:nnnn: nnnn (IPv6)* or the *host name*.
TCP Port	The port number to use to attempt to connect to the node	A numeric value in the format nnnnn, where nnnnn is a positive integer from 1–65535.
TCP API Address	The host name or IP address to listen for API connections. (UNIX local.node only).	A numeric value in the format *nnn.nnn.nnn.nnn (IPv4)* or *nnnn:nnnn:nnnn:nnnn:nnnn:nnnn:nnnn: nnnn (IPv6)* or the *host name*. **Note:** Separate multiple TCP API addresses with commas.
TCP API Port	The port used to listen for API connections. (UNIX local.node only).	A numeric value in the format nnnnn, where nnnnn is a positive integer from 1–65535. **Note:** Separate multiple TCP API ports with commas.
TCP API Buff Size	The buffer size for transmitting data to and from a Connect:Direct CLI/API.	No limit exists for the size of this value.
TCP API Inactivity Timeout	The maximum time a CMGR waits before exiting when it has not received a command from a client program.	A numeric value in the range of 0–86399.
Max PNODE Sessions	The maximum number of concurrent connections to this node that may be initiated. The maximum number of concurrent sessions is limited to the lesser of the values defined in the initialization parameters file and the network map definition for a given node.	A numeric value from 0–255. The default is 255 for UNIX, 1 for Windows. For a workstation version of Connect:Direct for Windows, maximum PNODE sessions is limited to 1.

Field	Description	Valid Values
Max SNODE Sessions	The maximum number of concurrent connections from this node that may be initiated. The maximum number of concurrent sessions is limited to the lesser of the values defined in the initialization parameters file and the network map definition for a given node.	A numeric value from 0–255. The default is 255 for UNIX, 1 for Windows. For a workstation version of Connect:Direct for Windows, maximum SNODE sessions is limited to 2.
TCP Mode	The Connect:Direct Windows netmap mode.	
Communication Path	Transport and protocol information about the available communication paths and their attributes.	Each communication path definition specifies a default communication mode.
Buffer Size	The buffer size for transmitting data to and from a Connect:Direct for UNIX node. This value overrides the value in the initialization parameters file.	A numeric value in the range of 256–65536. The default is 65535.
LU62 Profile Name	The profile name to identify the name of an SNA configuration profile for the remote connection.	A profile name, up to 8 characters.
Advanced		
Default Class	The default session class used to start session managers. A Process executes on the specified class or any higher session class. This value overrides the equivalent value for this node in the initialization parameters.	A numeric value from 1 to the value of maximum concurrent local node connections (sess.pnode.max). The default value is 1. The value cannot be greater than the maximum number of local sessions with primary control.
Short Term Retries	The number of retry attempts if a short-term connection fails. Long-term retry parameters are used after the number of short-term attempts you specify has been reached.	A numeric value in the range of 1–255. The default is 10 for Windows, 3 for UNIX.
Short Term Retry Interval	The amount of time to wait between each short-term retry attempt. A 24-hour time value formatted as hh:mm:ss.	The maximum value is 23:59:59. The default is 00:00:10 or 10 seconds for Windows, 00:00:30 or 30 seconds for UNIX.
Long Term Retries	The number of retry attempts if a long-term connection fails.	A numeric value in the range of 1–255. The default is 10 for Windows, 6 for UNIX.
Long Term Retry Interval	The amount of time to wait between each long-term retry attempt. A 24-hour time value formatted as hh:mm:ss.	A 24-hour time value formatted as *hh:mm:ss*. The maximum value is 23:59:59. The default is 00:03:00, or 3 minutes, for Windows, 00:10:00, or 10 minutes, for UNIX.

Field	Description	Valid Values
Alt Comm Outbound	Alternate communication address (communication path) used for outbound Processes. This parameter provides the alternate addresses for a remote node that has multiple NIC cards. When the local node is the PNODE, the alternate addresses are tried (starting with the first IP address listed) if an initial attempt to the primary address fails. After a connection has been established, if the connection is subsequently lost, attempts to reestablish it through the retry mechanism use the same address as the initial connection. When the local node is the SNODE, the alternate addresses are used in the netmap check. **Note:** This parameter should not be used in a Connect:Direct for Windows outbound Process if the SNODE is Connect:Direct/Plex.	Fully qualified host name or IP address and port number. A comma separates the list of alternate communication paths as shown in the following example: salmon;9400, 10.20.40.65;9500 The list is processed from left to right.
Alternate Comminfo	Support for establishing netmap-checked sessions with high-availability (especially load balancing) systems with multiple IP addresses, such as Connect:Direct/Plex z/OS. Use this parameter to list all IP addresses or host names that are part of the multiple IP address environment. For Connect:Direct/Plex, this list should include the address of each Connect:Direct/Server with a different IP address from the Connect:Direct/Plex Manager. If a remote node has more than one outgoing IP address (as in a load balancing environment), specify all of the remote node's possible outgoing addresses in the Alternate Comminfo field so that those outgoing IP addresses are contained in the local node's netmap entry for that remote node. This allows netmap checking to succeed when the remote node connects to the local node using any of the possible outgoing IP addresses specified.	hostname1/IP address, hostname2/IP address, hostname3/IP address host name—Host name associated with the IP address. For example: hops (where hops is a machine on the local domain) hops.csg.stercomm.com (fully-qualified host name) nnn.nnn.nnn.nnn or nnnn:nnnn:nnnn:nnnn:nnnn:nnnn:nnnn:nnnn—IP address of a machine running Connect:Direct
APPC Mode	The session type of APPC mode.	APPC Mode
Network Name	Name of the SNA network in which the remote Connect:Direct node resides.	SNA network name

Field	Description	Valid Values
Partner LU	Name of the partner node to be used as the remote connection end point for the LU-to-LU session. This is the VTAM APPLID for host connections or partner LU name for LU 6.2 only.	An 1–8 character alphanumeric string
Conn Retry Exhaust Action	Action to take after the specified short and long-term retries have been used.	hold places Processes in the Hold queue in Held in Error status, after all retry attempts are used. This is the default value. delete causes the Processes to be deleted from the TCQ.
Pacing Send Count	The number of send operations to perform before automatically waiting for a pacing response from the remote node. The value for this parameter has no effect on LU6.2 connections.	No limit exists for the size of this value. The default is **0**, which indicates no pacing of this type.
Pacing Send Delay	The time to wait between send operations to the remote node. The decimal number is the number of milliseconds between the end of one packet and the beginning of the next packet. Time-based pacing does not contribute to network traffic. The value for this parameter has no effect on LU6.2 connections.	The format is *nnn*. The size of this number has no limit. The default is 0, which indicates no pacing of this type.
Runstep Max Time to Wait	The maximum time to wait for remote run steps to complete. Remote run steps include remote run task, run job, or submit statements. This wait time is different from the wait time specified by the tcp.max.time.to.wait parameter. Using runstep.max.time.to.wait prevents a Process from failing when a remote step takes longer to complete than specified in tcp.max.time.to.wait. The value is in seconds.	The default value is 0.
Default Class	The default session class for starting session managers. A Process executes on the specified class or any higher session class. The value for this parameter overrides the equivalent value in the local.node record.	The default is 1.

Field	Description	Valid Values
TCP Max Time To Wait	The maximum time the local node waits for a message from the remote node when using TCP/IP. When the time expires, the Process is moved to the Timer queue and Connect:Direct attempts to re-establish a session with the remote node. When set to 0, wait time is unlimited unless limited by the operating system. **Note:** This parameter also applies to the UDT protocol.	The value is in seconds. The default value is 180.
TCP CRC	Turn on or off the CRC function for TCP/IP processes on the remote node.	Yes | No

View a Netmap Node Template

To view the properties of an existing netmap node entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Nodes**.

2. Double-click the template to view.

3. Click the Summary tab.

4. Click **Cancel**.

Create a Netmap Node Entry Template

You can create a netmap node entry template by typing all information or by copying information from an existing node entry or template.

To create a netmap node entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Nodes**.

2. Select the action **Create New**.

3. Do one of the following:

   ◆ To create a template by typing all the information, select **Enter all node details**.

   ◆ To create a template from an existing node entry, select **Start from an existing node entry on another server**. Select the server name in the **Server** field and the node entry name in the **Node Entry** field.

   ◆ To create a template from an existing template, select **Start from a Node template**. Select the template from the Template entry field.

4. Click **Next**.

5. Type the name of the new template.

6. Type values in the other fields as necessary, and click **Next**.

7. On the Node Details for each platform, type the values in the fields as necessary. Click **Next** to move through each platform detail screen.

8. At the Confirm Choices screen, click **Finish**.

9. Click **Close**.

Duplicate a Netmap Node Entry Template

If you want to create a new template based on an existing template, use the duplicate function.

To duplicate a netmap node entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Nodes**.

2. Highlight the node template to duplicate and select the action **Duplicate**.

3. On the Basic Node Details screen, type a unique node name in the **Node Name** field. Modify other fields as necessary, and click **Next**. Refer to *Netmap Node Field Definitions* on page 40 for field descriptions.

4. On the Node Details for each platform, type the values in the fields as necessary. Click **Next** to move through each platform detail screen.

5. Click **Finish**.

6. Click **Close**.

Copy Parameters from a Netmap Node Entry Template to a Node Definition

After you create a template, you can use the template to update netmap node parameters.

To copy parameters from a netmap node template to a node:

1. On the menu bar, select **Configure Servers > Templates > Netmap Nodes**.

2. Highlight the template to copy.

3. Select the action **Copy Parameters To**.

4. Select one or more Connect:Direct servers or server groups to which to apply the definition. Click **Next**.

5. Select the destination nodes and click **Next**.

6. Select the parameters to copy to the destination nodes. Click **Next**.

7. To update the parameter file only if the netmap node on the server now matches the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate copy of the netmap node parameters to the node definition.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next.**

9. Click **Finish**.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

11. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

Delete a Netmap Node Entry Template

To delete a netmap node entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Nodes**.

2. Highlight the node template to delete.

3. Select the action **Delete**.

4. Click **OK** to confirm the deletion, or click **Cancel**.

Chapter 5

Manage Netmap Modes

Define netmap modes to identify information relating to session characteristics for a Connect:Direct for Windows protocol, such as TCP/IP or APPC mode information. A netmap mode can be associated with one or more communication paths or remote node definitions.

This chapter covers the following subtopics:

✦ View and Update Netmap Mode Properties

✦ Create a Netmap Mode

✦ Duplicate a Netmap Mode

✦ Copy a Mode to a Server or Server Group

✦ Copy Mode Parameters to Other Modes

✦ Delete a Netmap Mode

✦ Netmap Modes Field Definitions

✦ View a Netmap Mode Template

✦ Create a Netmap Mode Entry Template

✦ Duplicate a Netmap Mode Entry Template

✦ Copy Parameters from a Netmap Mode Entry Template to a Mode Definition

✦ Delete a Netmap Mode Entry Template

View and Update Netmap Mode Properties

You can view and update properties associated with a netmap mode.

To view and update a mode's properties:

1. Right-click a Windows Connect:Direct server or server group and select **Configure Server > Netmap > Netmap Modes** to display the modes associated with the selected server or server group.

2. Double-click the mode.

3. Click tabs to view all netmap mode information.

4. Click **Cancel** to close without making changes, or, to update the mode definition, make changes and click **Update**. (See *Netmap Modes Field Definitions* on page 54.)

5. Select **Update only if the object on the server matches Control Center's copy** if you want to update the mode definition only under this condition.

6. Select a timing option for running the job:

    ◆   **Now** to initiate the mode update job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the mode update job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

7. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Create a Netmap Mode

You can create a new netmap mode.

To create a netmap mode:

1. Right-click a Connect:Direct server or server group (Windows) and select **Configure Server > Netmap > Netmap Modes**.

2. In the Configuration Manager window, choose the action **Create New**. The Create Mode Entry wizard is displayed.

3. Optionally, select one or more Connect:Direct servers or server groups (Windows) to which to apply the definition. Click **Next**.

4. Do one of the following:

    ◆   To create a mode definition by typing all information, select **Enter all Mode details**.

    ◆   To create a definition by copying an existing mode, select **Start from an existing Mode entry on another server**. Select the server where the mode definition is located in the **Server** field and the mode to copy in the **Mode Entry** field.

    ◆   To create a mode definition from an existing template, select **Start from a Mode Template** and select the template to copy in the **Template Entry** field.

5. Click **Next**.

6. Define information about the new mode and click **Next**. Refer to *Netmap Modes Field Definitions* on page 54 for field descriptions.

7. To update an existing mode entry on a server, enable **Overwrite object if it already exists on the server**.

8. Select a timing option for running the job:

    ◆   **Now** to initiate the netmap mode creation job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the mode creation job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Duplicate a Netmap Mode

To create a new mode while avoiding much of the data entry, you can duplicate a netmap mode in the list of modes. You must supply a unique name for the new mode.

To duplicate a netmap mode:

1. Right-click a Windows Connect:Direct server or server group and select **Configure Server > Netmap > Netmap Modes**.

2. From the mode listing, select the mode you want to duplicate.

3. Select the action **Duplicate**. The Duplicate Mode Entry wizard displays values for the mode you chose to duplicate.

4. Enter a unique name in **Mode Name** for the new mode.

5. Change any other entries as needed and click **Next**.

6. To update an existing mode entry on a server, enable **Overwrite object if it already exists on the server**.

7. Select a timing option for running the job:

    ◆   **Now** to initiate the netmap mode duplication job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the mode duplication job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy a Mode to a Server or Server Group

To copy a mode to other servers:

1. Right-click a Windows Connect:Direct server or server group and select **Configure Server > Netmap > Netmap Modes**.

2. Click the mode to copy and select the action **Copy To**.

3. On the Select Server Groups and Select Server wizard pages, select the servers or server groups you want to copy the mode to. Click **Next** to go to the next wizard page.

4. Change any other entries on this and following wizard pages, clicking **Next** to advance to the next page.

5. To update an existing mode entry on a server, enable **Overwrite object if it already exists on the server**.

6. Select a timing option for running the job:

    ◆   **Now** to initiate the netmap mode copy job immediately,.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the mode copy job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy Mode Parameters to Other Modes

You can copy selected mode parameters from one mode to another.

To copy parameters from one mode to another:

1. Select a Connect:Direct server or server group (Windows).

2. Click **Configure Servers > Netmap > Netmap Modes** to display the Configuration Manager and the modes associated with the selected server or server group.

3. To select a mode, select the action **Copy Parameters To**.

4. On the first two pages of the wizard, select the server groups or individual servers to copy the parameters to. Click **Next** to go to the next page.

5. On the Destination Mode Entry(s) page, select the mode entries to which to copy the mode parameters, and click **Next**.

6. Check the parameters you want copied to the modes you selected and click **Next**.

7. Click **Update only if the object on the server matches Control Center's copy** if you do not want the parameters to be copied in case of a disparity in mode parameters between the selected Connect:Direct servers or server groups and Control Center.

8. Select a timing option for running the job:

    ◆ **Now** to update the file immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:** Select Hold for later if you are not ready to initiate the mode parameter copy job.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

9. Click **Finish** to submit the job.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Delete a Netmap Mode

To delete a netmap mode:

1. Right-click a Windows Connect:Direct server or server group and select **Configure Server > Netmap > Netmap Modes**.

2. Highlight the mode to delete in the mode listing.

3. Select the action **Delete**.

4. In the Delete Mode Entry wizard, optionally select one or more server groups or servers to delete the mode from. Click **Next** on both pages.

5. Select **Delete only if the object on the server matches Control Center's copy** if you want to delete the mode only under this condition.

6.   Select a timing option for running the job:

  ◆   **Now** to update the file immediately.

  ◆   **Hold for later** to send the job to the job queue with a status of Held.

  > **Note:**   Select Hold for later if you are not ready to initiate the mode deletion job.

  ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

  Click **Next.**

7.   Confirm your choices and submit the job by clicking **Finish**.

8.   To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Netmap Modes Field Definitions

Following are descriptions of the netmap mode fields.

Field	Description	Valid Values
Mode Name	Name assigned to the mode definition.	
Protocol	Type of communications protocol.	TCP/IP | APPC | UDT33 TCP/IP is the default.
Buffersize	Buffer size for transmitting data to and from the remote Connect:Direct node. This value overrides the value in the initialization parameters file.	A numeric value from 256–65536. The default is 65535.
Pacing Send Count	Number of send operations to perform before automatically waiting for a pacing response from the remote Connect:Direct node. A value of 0 indicates that there is no pacing. This value overrides the value in the initialization parameters file.	A numeric value from 0–63. The default is 0.
Pacing Send Delay	Amount of time Connect:Direct waits before sending each outbound data buffer to the remote node. This can prevent flooding the network. A value of 0 indicates that Connect:Direct sends each data buffer as soon as possible. This value overrides the value in the initialization parameters file.	An integer from 0–86400. The default is 0.

Field	Description	Valid Values
CRC	Turns on CRC checking. The default value for the local node is OFF. The default value for the remote node is blank. The remote node defaults to blank to simplify the use of the crc.override parameter. When crc.override is enabled in the initialization parameter, only the nodes that require a different configuration need to be changed.	OFF | ON | blank
Max Pacing Size	Number of receive units (RUs) that can be received before it needs to send a pacing response. The default is 7. Increasing the pacing above 7 generally provides marginal improvement, and can severely degrade network performance.	
Max RU Size	Maximum size of the receive units (RUs) sent.	
Max Sessions	Maximum number of concurrent sessions for the node (PNODE+SNODE). Default is 255.	

View a Netmap Mode Template

To view the properties of an existing netmap mode entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Modes**.
2. Double-click the template to view.
3. Click the Summary tab.
4. Click **Cancel**.

Create a Netmap Mode Entry Template

You can create a netmap mode entry templates by typing all information or by copying information from an existing node entry or template.

To create a netmap mode entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Modes**.
2. Select the action **Create New**.
3. Do one of the following:

    ◆ To create a template by typing all the information, select **Enter all Mode details**.

◆   To create a template from an existing mode entry, select **Start from an existing Mode entry on another server**. Select the server name in the **Server** field and the mode entry name in the **Mode Entry** field.

◆   To create a template from an existing template, select **Start from a Mode Template**. Select the template from the Template Entry field.

4.   Click **Next**.

5.   Type the name of the new template in the **Mode Name** field.

6.   Type values in the other fields as necessary, and click **Next**.

7.   At the Confirm Choices screen, click **Finish**.

8.   Click **Close**.

Duplicate a Netmap Mode Entry Template

If you want to create a new template based on an existing template, use the duplicate function.

To duplicate a netmap mode entry template:

1.   On the menu bar, select **Configure Servers > Templates > Netmap Modes**.

2.   Highlight the mode template to duplicate.

3.   Select the action **Duplicate**.

4.   On the Mode Details screen, type a unique mode name in the **Mode Name** field. Modify other fields as necessary, and click **Next**. Refer to *Netmap Modes Field Definitions* on page 54 for field descriptions.

5.   Click **Finish**.

6.   Click **Close**.

Copy Parameters from a Netmap Mode Entry Template to a Mode Definition

After you create a template, you can use the template to update netmap mode parameters.

To copy parameters from a netmap mode entry template to a mode:

1.   On the menu bar, select **Configure Servers > Templates > Netmap Modes**.

2.   Highlight the template to copy.

3.   Select the action **Copy Parameters To**.

4.   Select one or more Connect:Direct servers or server groups (Windows) to which to apply the definition. Click **Next**.

5. Select the destination modes and click **Next**.

6. Select the parameters to copy to the destination modes. Click **Next**.

7. To update the parameter only if it matches the copy on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

8. Select a timing option for running the job:

    ◆   **Now** to update the file immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next.**

9. Click **Finish**.

10. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a Netmap Mode Entry Template

To delete a netmap mode entry template:

1. On the menu bar, select **Configure Servers > Templates > Netmap Modes**.

2. Highlight the mode template to delete.

3. Select the action **Delete**.

4. Click **OK** to confirm the deletion.

Manage Netmap Communication Paths

For Connect:Direct for Windows servers, you can define communication paths definitions that identify the transport and protocol information used to establish sessions with a remote Connect:Direct node. If more than one transport is available to a remote node, define additional communication path definitions. Associate all available communication path definitions with a server and place them in the order in which a connection should be attempted. Connect:Direct tries each communication path named, in the order listed, until either a session is established or all paths have been tried.

This chapter provides instructions for the following functions:

✦ View a Communication Path Definition

✦ Create a Communication Path Definition

✦ Update a Communication Path Definition

✦ Duplicate a Communication Path Definition

✦ Copy a Communication Path Definition to a Server

✦ Copy Communication Path Parameters to a Server or Server Group

✦ Delete a Communication Path Definition

✦ Communication Path Field Definitions

✦ Create a Communication Path Definition Template

✦ Duplicate a Communication Path Template

✦ Copy Communication Path Parameters From a Template to a Server

✦ Delete a Communication Path Template

View a Communication Path Definition

To view a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Double-click the definition to view.

3. Click Netmap Communication Path Details to view properties and Summary to view a read-only summary of properties.

4. Click **Cancel** if no changes are made to the definition. Refer to *Update a Communication Path Definition* on page 61 if you made changes.

Create a Communication Path Definition

To define a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Choose the action **Create New**.

3. Optionally, select one or more Connect:Direct for Windows servers or server groups to which to apply the definition. Click **Next**.

4. Do one of the following:

   ◆ To create a communication path definition by typing all information, select **Enter All Netmap Communication Path details**.

   ◆ To create a definition by copying an existing communication path definition, select **Start from an existing Netmap Communication Path entry on another server**. Select the server where the definition is located in the **Server** field and the communication path to copy in the **Netmap Communication Path Entry** field.

   ◆ To create a communication path definition from an existing template, select **Start from a Netmap Communication Path Template entry** and select the template to copy in the **Netmap Communication Path Template Entry** field.

5. Click **Next**.

6. Complete the fields on the Netmap Communication Path Details panel. Refer to *Communication Path Field Definitions* on page 64 for a description of the fields.

7. To overwrite communication path entries that already exist on a specified server, enable **Overwrite object if it already exists on the server.**

8. Select a timing option for running the job:

   ◆ **Now** to initiate the communication path creation job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the communication path job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Update a Communication Path Definition

To update a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Double-click the definition to update.

3. Change values as required. Refer to *Communication Path Field Definitions* on page 64 for details on field values.

4. Click **Update**.

5. Select **Update only if the object on the server matches Control Center's copy** if you want to update the communication path definition only under this condition.

6. Select a timing option for running the job:

   ◆ **Now** to initiate the communication path update job immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the communication path update job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Duplicate a Communication Path Definition

You can duplicate a communication path definition to create a new definition based on an existing one.

To duplicate a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Highlight the communication path to duplicate and select the action **Duplicate**.

3. Assign a unique name to the communication path definition in the **Communication Path Name** field.

4. If necessary, change the value for the protocol and mode and click **Next**.

5. To overwrite a definition that already exists, enable **Overwrite object if it already exists on the server.**

6. Select a timing option for running the job:

    ◆   **Now** to initiate the communication path duplication job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the communication path duplication job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy a Communication Path Definition to a Server

After you create a communication path definition on one server, you can copy it to another server or server group. Copying a definition provides a quick way to create a communication path definition on a server.

To copy a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Highlight the communication path definition to copy.

3. Select the action **Copy To**.

4. Select one or more Connect:Direct for Windows servers or server groups to which to apply the copy step. Click **Next**.

5. Review the Communication Path Details and change any values as required. Refer to *Communication Path Field Definitions* on page 64 for a description of the fields. Click **Next**.

6. To overwrite a communication path definition that already exists, enable **Overwrite object if it already exists on the server.**

7. Select a timing option for running the job:

    ◆   **Now** to initiate the communication path copy job immediately.

◆ **Hold for later** to send the job to the job queue with a status of Held.

> **Note:** Select Hold for later if you are not ready to initiate the communication path copy job.

◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next**.

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy Communication Path Parameters to a Server or Server Group

After you create a communication path definition on one server, you can copy selected parameters from the definition to a communication path definition on another server or server group.

To copy selected communication path definition parameters:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Highlight the communication path to copy and select the action **Copy Parameters To**.

3. Select one or more Connect:Direct for Windows servers and server groups to which the parameters are to be copied. Click **Next**.

4. Select the communication path definitions to update in the Destination Node Entry(s) dialog and click **Next**.

5. On the General Details page, select the communication path parameters to copy to the servers or server groups and click **Next**.

6. On the Other Options wizard page, select **Update only if the object on the server matches Control Center's copy** if you want to copy parameters only under this condition.

7. Select a timing option for running the job:

◆ **Now** to initiate the parameter copy job immediately.

◆ **Hold for later** to send the job to the job queue with a status of Held.

> **Note:** Select Hold for later if you are not ready to initiate the parameter copy job.

◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next**.

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Delete a Communication Path Definition

To delete a communication path definition:

1. Right-click the Connect:Direct server where the communication path definition is located and click **Configure Server > Netmap > Netmap Communication Paths**.

2. Highlight the communication path to delete and select the action **Delete**.

3. Optionally, select one or more Connect:Direct for Windows servers or server groups to which to apply the deletion. Click **Next**.

4. On the Other Options wizard page, select **Delete only if the object on the server matches Control Center's copy** if you want to delete the definition only under this condition.

5. Select **Now** to initiate the delete job immediately, or **Hold for later** to send the job to the job queue with a status of Held. Click **Next**.

6. Confirm your choices by clicking **Finish**.

7. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Communication Path Field Definitions

Following is an explanation of the communication path fields.

Field	Description	Valid Values
Communication Path Name	The name of the communication path. This field is required.	A one- to 49-character (alphanumeric) string
Protocol	The type of communication protocol.	TCP/IP | APPC | UDT33
Mode	The communication path mode. This field is required.	

Field	Description	Valid Values
Adapter Number	Indicates whether the token ring adapter number to be used for this connection is Primary or Alternate. (APPC only.)	Primary | Alternate
Remote Address	The token ring address of the remote node. This address consists of hexadecimal digits. Enter all zeros if the local node is the same as the remote node. (APPC only.)	Valid remote node token ring address.
Local SNA Network	The SNA network name of the local Connect:Direct node. This name must match the name of the SNA network in which the local Connect:Direct node resides. (APPC only.)	Valid SNA network name
LU Name	The name of a local APPC LU configured within Microsoft SNA Server. Required. (APPC only.)	Valid LU alias name

Create a Communication Path Definition Template

You can create a communication path definition template to define the most commonly used communication path values. Then use the template to quickly create a communication path definition for a server. Create a template by copying a communication path definition from a server or an existing template or by defining all values in the template.

To create a communication path definition template:

1. From the menu bar, select **Configure Servers > Templates > Netmap Communication Paths**.

2. Select the action **Create New**.

3. Do one of the following:

   ◆ To create a new template and manually type all values, ensure that **Enter All Communication Path details** is selected.

   ◆ To create a template from an existing communication paths definition, select **Start from an existing Communication Path entry on another server**. Identify the server where the communication path definition is located in the **Server** field and the communication path entry to copy in the **Communication Path Entry** field.

   ◆ To create a template from an existing template, select **Start from a Communication Path Template entry** and select the template to copy in the **Communication Path Template Entry** field.

4. Click **Next**.

5. Do one of the following:

◆   For a new template, define all communication path fields.

◆   For a template created from an existing template or entry, assign a unique Communication Path Name to the template. Change the communication path field values as necessary.

Refer to *Communication Path Field Definitions* on page 64 for details on the field values.

6. Click **Next**.

7. Review the template details in the Confirm Choices dialog. Click **Finish**.

8. Click **Close**.

Duplicate a Communication Path Template

To duplicate a communication path template:

1. From the menu bar, select **Configure Servers > Templates > Netmap Communication Paths**.

2. Highlight the template to duplicate and select the action **Duplicate**.

3. Type a unique name for the template in the **Communication Path Name** field.

4. If necessary, change communication path field values and click **Next**. Refer to *Communication Path Field Definitions* on page 64 for more information.

5. Review the template details in the Confirm Choices dialog and click **Finish**.

6. Click **Close**.

Copy Communication Path Parameters From a Template to a Server

To copy a communication path parameter from a template:

1. From the menu bar, select **Configure Servers > Templates > Netmap Communication Paths**.

2. Highlight the template to copy and select the action **Copy Parameters To**.

3. Select the Connect:Direct server groups and servers that contain the communication paths to which the parameters are to be copied and click **Next**.

4. In the Destination Nodes Entry(s) window, select the communication paths definitions where the parameters will be copied and click **Next**.

5. In the General Details window, select the communication paths parameters to copy and click **Next**.

6. To update the values only if the communication path file matches the file on Control Center, enable **Update only if the object on the server matches Control Center's copy**.

7. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

10. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a Communication Path Template

To delete a communication path template:

1. From the menu bar, select **Configure Servers > Templates > Netmap Communication Paths**.

2. Highlight the template to delete and select the action **Delete**.

3. At the confirmation window, click **OK**.

Manage Secure+ Nodes

Using the Configuration Manager, you can configure Secure+ Option node entries in your Connect:Direct server configuration.

> **Note:** To configure Secure+ Option objects on a Connect:Direct server, secure the connection between the Control Center engine and the Connect:Direct server. You can configure Secure+ Option over an unsecure connection, but this is not recommended due to the possible security ramifications. The default setting for Connect:Direct servers is to configure the server over a secure connection. For more information, see *Configuring a Secure Connection* in the *Sterling Control Center Getting Started Guide*.

The Secure+ Option parameters file contains information that determines the protocol and encryption method used during security-enabled Connect:Direct operations. To configure Secure+ Option, each site must have a parameters file that contains one local node record and at least one remote node record. The local node record defines the most commonly used security and protocol settings for the node at the site. Each remote node record defines the specific security and protocol used by a trading partner. You create a remote node record in the Secure+ Option parameters file for each Connect:Direct node that you communicate with.

If you want to use a different certificate to authenticate a trading partner or a different trusted root file to validate the identity of the trusted source that issues certificates, you need to add that information to the remote node record.

This chapter covers the following subtopics:

✦ View Secure+ Node Properties

✦ Create a Secure+ Node Entry

✦ Duplicate a Secure+ Node Entry

✦ Copy Parameters Associated with a Secure+ Node Entry to Another Secure+ Node Entry

✦ Copy a Secure+ Node to Another Server

✦ Create a Secure+ Node Alias

✦ Delete a Secure+ Node Entry

✦ Rekey the Secure+ Parameter File

✦ Sync the Secure+ Parameter File

✦ Validate the Secure+ Parameter File

✦   Secure+ Node Field Definitions

✦   Import a Key Certificate

✦   Duplicate a Key Certificate

✦   Import a Trusted Certificate

✦   Duplicate a Trusted Certificate

✦   Copy a Trusted Certificate to Another Secure+ Server

✦   Manage Secure+ Certificate Expiry

View Secure+ Node Properties

You can view the properties of any Secure+ node entry.

To view a node entry's properties:

1. Right-click the Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Double-click the Secure+ node to view in the listing.

3. Click **Cancel** to close the Secure+ Node Entries Properties window.

Create a Secure+ Node Entry

Using Control Center, you can create a Secure+ node entry.

To create a Secure+ node entry:

1. Right-click the Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. In the Configuration Manager window, choose the action **Create New**. The Create Secure+ Node Entry wizard is displayed.

3. On the first two wizard pages, optionally select the Connect:Direct server groups or servers to which you wish to apply this Secure+ node. Normally you can skip these pages because of your selection in step 1. Click **Next** to go to the next page.

4. On the Node Details Options page, select one of the following creation methods:

    ◆   **Enter all node details**

    ◆   **Start from an existing node entry on another server**. For this option, choose a server and one of the Secure+ node entries attached to it.

    ◆   **Start from a Node template**. For this option, choose a template that has been created for the applicable operating system. You can view the template properties by clicking the Properties button.

5. Click **Next**.

6. On the Node Entry Details page, enter a unique name for the Secure+ node entry.

7. Provide values for the remaining fields and click **Next**. Refer to *Secure+ Node Field Definitions* on page 77 for more information.

8. To update a parameter value if the value is already defined on the destination node, enable **Overwrite object if it already exists on the server**.

9. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the Secure+ node entry creation job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

10. Click **Finish**.

11. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

12. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Duplicate a Secure+ Node Entry

To simplify creation of a Secure+ node entry, you can duplicate an existing one. Duplicate works only on the server where the original Secure+ node entry resides. All properties of the existing entry prefill the input fields in the duplicate's creation wizard. You must supply Name with a unique value.

To duplicate a Secure+ node entry:

1. Right-click a Connect:Direct server or server group and click **Configure Server > Secure+ > Secure+ Nodes**.

2. In the Configuration Manager window, choose the action **Duplicate**.

3. Change the Node Name to a unique value. This is the only required change you must make.

4. Make any other changes necessary on this wizard page and click **Next**.

5. To update a parameter value if the value is already defined on the destination node, enable **Overwrite object if it already exists on the server**.

6. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

◆   **Hold for later** to send the job to the job queue with a status of Held.

> **Note:**   Select Hold for later if you are not ready to initiate the Secure+ node entry duplication job.

◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next**.

7.   Click **Finish**.

8.   If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9.   To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Copy Parameters Associated with a Secure+ Node Entry to Another Secure+ Node Entry

You can copy parameters from a Secure+ node entry to another Secure+ node entry on any server in your netmap.

To copy parameters from one Secure+ node entry to another Secure+ node entry:

1.   In the Control Center window, right-click the server to select and click **Configure Server > Secure+ > Secure+ Nodes**.

2.   Highlight the node the parameters of which you want to copy.

3.   Select the action **Copy Parameters To**.

4.   Select one or more Connect:Direct servers or server groups to which to apply the definition. Click **Next**.

5.   Select the node entries on which to copy the parameters on the Destination Node Entries page. Click **Next**.

6.   Select the parameters to copy to the destination node entries. Click **Next**.

7.   To copy parameters to the node entry only if they match Control Center's copy, enable **Update only if the object on the server matches Control Center's copy**.

8.   Select a timing option for running the job:

◆   **Now** to the node entry parameter copy immediately.

◆   **Hold for later** to send the job to the job queue with a status of Held.

> **Note:**   Select Hold for later if you are not ready to initiate the Secure+ node entry parameter copy job.

◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

Click **Next**.

9. Click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

11. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Copy a Secure+ Node to Another Server

You can copy a Secure+ node entry to another server.

To copy a Secure+ node to another server or server group:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Click the node to copy and select the action **Copy To**.

3. On the Select Server or Select Server Group wizard pages select the servers or server groups that contain the node entries to which the parameters are to be copied. Click **Next** to go to the next wizard page.

4. Change any other entries on this wizard page and click **Next**.

5. To update a parameter value if the value is already defined on the destination node, enable **Overwrite object if it already exists on the server**.

6. Select a timing option for running the job:

    ◆ **Now** to update the file immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:** Select Hold for later if you are not ready to initiate the Secure+ node copy job.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Create a Secure+ Node Alias

You can create a Secure+ alias.

To create a Secure+ alias:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Click the node to create an alias for and select the action **Create Alias**.

3. On the Select Server or Select Server Group wizard pages, select the servers or server groups you want to copy the alias to. Click **Next** to go to the next wizard page.

4. Type an alias name in the **Alias Name** field and click **Next**.

5. To update a parameter value if the value is already defined on the destination node, enable **Overwrite object if it already exists on the server**.

6. Select a timing option for running the job:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

      > **Note:**   Select Hold for later if you are not ready to initiate the Secure+ Node Alias creation job

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a Secure+ Node Entry

You can delete a Secure+ node entry.

To delete a Secure+ node entry:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Select a Secure+ node in the node listing and select the action **Delete**.

3. On the Select Server or Select Server Group wizard pages, select the servers or server groups you want to copy the alias to. Click **Next** to go to the next wizard page.

4. Select **Delete only if the object on the server matches Control Center's copy** if you want to delete the mode only under this condition.

5. Select a timing option for running the job:

    ◆ **Now** to update the file immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:** Select Hold for later if you are not ready to initiate the Secure+ Node deletion job.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

6. Confirm your choices and submit the job by clicking **Finish**.

7. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Rekey the Secure+ Parameter File

You can rekey a UNIX or Windows Secure+ parameter file.

> **Note:** You cannot rekey a z/OS Secure+ parameter file.

To rekey the Secure+ parameter file:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Select the action **Re-key Parm File**.

3. Enter at least 32 characters for a passphrase in the window. You don't have to remember these characters for future use. Click **OK**.

Sync the Secure+ Parameter File

You can synchronize a UNIX or Windows Secure+ parameter file with the Secure+ network map to find and resolve differences between the two.

> **Note:** You cannot sync a z/OS Secure+ parameter file.

To sync the Secure+ parameter file with the network map:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. In the Configuration Manager, select the action **Sync Parm File**.

The wizard displays two listings. The first shows entries found in the netmap file but not the parameter file, and the second shows the opposite: entries found in the parameter file but not in the netmap file.

3. In the first listing, check those entries that you wish to add to the parameter file. In the second listing, check the entries you wish to delete from the parameter file.

4. Click **Next**.

5. Select a timing option for running the job:

    ◆   **Now** to submit the job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the Sync parameter file job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

6. Click **Finish** to confirm your choices.

Validate the Secure+ Parameter File

You can validate a UNIX or Windows Secure+ parameter file.

> **Note:**   You cannot validate a z/OS Secure+ parameter file.

To validate the Secure+ parameter file:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Nodes**.

2. Select the action **Validate Parm File**.

3. Select a timing option for running the job:

    ◆   **Now** to submit the job immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the Validate Parameter file job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

4. Click **Go to Job Viewer** to see the job submitted and view the results of the validation, or click **Close**.

Manage Secure+ Certificate Expiry

You can setup Control Center to notify you when your Secure+ trusted or key certificates are going to expire. You accomplish this by defining the following:

✦ The number of days before expiry that Control Center will begin generating events using the "Start certificate expiry notification" parameter in the system settings (global setting for the system) or in the server settings (server-by-server basis). For more information, see *Manage Servers* and *Sterling Control Center System Settings* in the *Sterling Control Center System Administration Guide*.

✦ Rules to notify you when certificate expiry warning events are generated. Control Center ships with a predefined Certificate Expiry Warning rule to assist you in setting up notification for these events. For more information, see *How Can I Know When My Secure+ Certificates Are About To Expire?* in the *Sterling Control Center How-To Guide.*

Secure+ Node Field Definitions

Following are descriptions of the Secure+ Node fields:

Field	Description	Valid Values
Node Name	The node name.	.local– the local node record
		.client–the client api record
		.seaserver (or .easerver)–the External Authorization record
		.password–the strong password record
		None of these records can be deleted.
Enabled Protocol	The security protocol to use to ensure that data is securely transmitted.	TLS | SSL | None | Default to Local Node
Override	Enables the ability to override values in the local node record with values in the remote node record.	Yes | No | Default to Local Node
Authentication Timeout	The maximum time, in seconds, that the system waits to receive Connect:Direct control blocks exchanged during the Secure+ Option authentication process. If you specify a value of 0, Connect:Direct waits indefinitely to receive the next message. Specify a time to prevent malicious entry from taking as much time as necessary to attack the authentication process.	A numeric value equal to or greater than 0, ranging from 0 to 3600. The default is **120 seconds**.

Field	Description	Valid Values
Type	The current record type.	L for local record, R for remote record, A for Alias. This is not an editable field.
Certificate Label	A label to identify the certificate being imported.	1–900 characters
Passphrase	The passphrase you specified when you created the certificate.	
Trusted Cert Label	A label to identify the trusted certificate being imported.	1–900 characters
Cipher Suites	The cipher suites to enable.	Select from list | Default to local node
Node Entry Details Advanced		
FIPS Enabled	Enable FIPS mode. (Windows and UNIX only)	Yes | No | Default to Local Node
Client Authentication	Enable client authentication.	Yes | No | Default to Local Node
Common Name	To perform common name checking, type a common name to check for.	
Use External Authentication	Determine if Sterling External Authentication is used for certificate authentication.	Yes |No | Default to Local Node
Certificate Validation Definition	The name of the CVD defined in Sterling External Authentication.	The name of a CVD defined in EA.
Host Name	Host name for External Authentication.	Valid EA host name
Port Number	Port where External Authentication is listening. The default is 61366.	Valid EA port number

Import a Key Certificate

If you want to use a different certificate to authenticate a trading partner, you need to import that information into the remote node record. Sterling Control Center supports the following certificates:

✦ Windows and UNIX—Base64-encoded key certificate file

✦ z/OS—Base64-encoded PKCS12

To import a key certificate:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Key Certificates**.

2. In the Configuration Manager, select the action **Import**.

3. Select one or more Connect:Direct servers or server groups to which to import the certificates. Click **Next**.

4. Do one of the following:

   ◆ To identify all certificate information, select **Enter Key Certificate details**.

   ◆ To import a certificate that exists on another server, select **Start from an existing Key Certificate on another server**. Identify the server where the certificate is located and the name of the certificate.

5. Click **Next**.

6. Provide a label name for the certificate and type the passphrase.

7. Click **File** and locate the certificate. Click **Next**.

8. To update a parameter value if the value is already defined on the destination node, enable **Overwrite Key Certificate if it already exists on the server**.

9. Identify when the certificate will be imported:

   ◆ **Now** to import the certificate immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the Import certificate job.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

10. Click **Finish**.

11. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

12. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Duplicate a Key Certificate

To simplify creation of a Secure+ key certificate, you can duplicate an existing one. Duplicate works only on the server where the original Secure+ certificate resides. All properties of the existing entry prefill the input fields in the duplicate's creation wizard. You must supply Label Name with a unique value.

Note: You cannot create a duplicate key certificate on z/OS.

To duplicate a Secure+ key certificate:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Key Certificates**.

2. Select the certificate to duplicate and choose the action **Duplicate**.

3. Change the Label Name to a unique value. Type the passphrase for the certificate.

4. Make any other changes necessary on this and following wizard pages, clicking **Next** to advance to the next page.

5. To update a parameter value if the value is already defined on the destination node, enable **Overwrite Key Certificate if it already exists on the server**.

6. Identify when the certificate will be duplicated:

   ◆ **Now** to duplicate the certificate immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   Note: Select Hold for later if you are not ready to initiate the Duplicate Key certificate job

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Import a Trusted Certificate

If you want to use a different trusted root file to validate the identity of the trusted source who issues certificates, you need to import that information to the remote node record. Sterling Control Center supports Base64-encoded key certificate files.

To import one or more trusted certificates:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Trusted Certificates**.

2. Highlight the trusted certificates to import and select the action **Import**.

3. Select one or more Connect:Direct servers or server groups to which to import the certificates. Click **Next**.

4. Do one of the following:

   ◆ To identify all certificate information, select **Enter Trusted Certificate details**.

   ◆ To import a certificate that exists on another server, select **Start from an existing Trusted Certificate on another server**. Identify the server where the certificate is located and the name of the certificate.

5. Click **Next**.

6. Provide a label name for the certificate and type the passphrase.

7. Click **File** and locate the certificate. Click **Next**.

8. To update a parameter value if the value is already defined on the destination node, enable **Overwrite Trusted Certificate if it already exists on the server**.

9. Identify when the certificate will be imported:

   ◆ **Now** to import the certificate immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the Import trusted certificate job

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

10. Click **Finish**.

11. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

12. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Duplicate a Trusted Certificate

To simplify creation of a Secure+ trusted certificate, you can duplicate an existing one. Duplicate works only on the server where the original Secure+ certificate resides. All properties of the existing entry prefill the input fields in the duplicate's creation wizard. You must supply Label Name with a unique value.

Note: You cannot create a duplicate trusted certificate on z/OS.

To duplicate a Secure+ trusted certificate:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Trusted Certificates**.

2. Select the trusted certificates to import and select the action **Duplicate**. The Duplicate Secure+ Trusted Certificate wizard is displayed.

3. Change Label Name to a unique value. This is the only required change you must make.

4. Make any other changes necessary on this and wizard page and click **Next**.

5. To update a parameter value if the value is already defined on the destination node, enable **Overwrite Trusted Certificate if it already exists on the server**.

6. Identify when the certificate will be imported:

   ◆ **Now** to import the certificate immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

      Note: Select Hold for later if you are not ready to initiate the Duplicate trusted certificate job

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   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Copy a Trusted Certificate to Another Secure+ Server

You can copy a Secure+ trusted certificate to another Secure+ node on any server in your netmap.

To copy a Secure+ trusted certificate to another node:

1. Right-click a Connect:Direct server or server group and select **Configure Server > Secure+ > Secure+ Trusted Certificates**.

2. Highlight the trusted certificate to copy and select the action **Copy To**.

3. Select one or more Connect:Direct servers or server groups to which to apply the update. Click **Next**.

4. To update a parameter value if the value is already defined on the destination node, enable **Overwrite Trusted Certificate if it already exists on the server**.

5. Identify the node will be updated:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   > **Note:** Select Hold for later if you are not ready to initiate the Copy trusted certificate job

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

6. Click **Finish**.

7. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

8. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Chapter 8

Manage User Proxies

User proxies control remote user access to Connect:Direct and determine which Connect:Direct commands and statements remote users can use. User proxies also map remote Connect:Direct users on remote nodes to local Connect:Direct users on the local server.

Use Sterling Control Center to view, update, or delete user proxy records on UNIX or Windows servers.

This chapter provides instructions for the following functions:

✦ View a User Proxy

✦ Create a User Proxy Definition

✦ Update User Proxies for a Server

✦ Copy a User Proxy from One Server to Another

✦ Duplicate a User Proxy

✦ Copy User Proxy Parameters

✦ Remove a User Proxy

✦ User Proxy Field Definitions

✦ Create a User Proxy Template

✦ Duplicate a User Proxy Template

✦ Copy User Proxy Parameters from a Template to a Server

✦ Delete a User Proxy Template

View a User Proxy

You can use Control Center to view user proxies that have been defined in Connect:Direct.

To view user proxies for a server:

1. Right-click the Connect:Direct server where the user proxies are located and click **Configure Server > User Proxies**.

2. Double-click the user proxy record to view. A tabbed User Proxy Properties window is displayed.

3. Click **OK**.

Create a User Proxy Definition

To create a user proxy definition:

1. Right-click the Connect:Direct server where the user proxy will be defined and click **Configure Server > User Proxies**.

2. Choose the action **Create User Proxy**.

3. Optionally, select one or more Connect:Direct servers or server groups on which to create the definition. Click **Next**.

4. Do one of the following:

    ◆   To create a user proxy definition by typing all information, select **Enter all User Proxy details**.

    ◆   To create a definition by copying an existing user proxy, select **Start from an existing User Proxy entry on another server**. Select the server where the definition is located in the **Server** field and the user proxy to copy in the **User Proxy** field.

    ◆   To create a user proxy definition from an existing template, select **Start from a User Proxy template** and select the template to copy in the **Template entry** field.

5. Complete the user proxy definition fields. Refer to *User Proxy Field Definitions* on page 90 for a description of the fields. Click **Next** to move through the definition panels.

6. To overwrite entries that already exist, enable **Overwrite User Proxy entry if it already exists on the server.**

7. Identify when the proxy definition will be created:

    ◆   **Now** to update the file immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

        Note: Select Hold for later if you are not ready to initiate the User Proxy creation job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

8. Click **Finish**.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Update User Proxies for a Server

Use Control Center to update user proxy records for a server. If you change a value, it is validated before the change is applied. If the change is not valid, an error message is displayed and the change is not made.

To update user proxy records:

1. Right-click the Connect:Direct server where the user proxies are located and click **Configure Server > User Proxies**.

2. Double-click the user proxy record to update.

   A tabbed User Proxy Properties window is displayed.

3. Change the value of the user proxy record fields as required. Refer to *User Proxy Field Definitions* on page 90.

4. Click **Update** to close the User Proxy Properties window.

5. To update the user proxy record only if it matches the copy in Control Center, enable **Update only if the object on the server matches Control Center's copy**.

6. Identify when the user proxies will be updated:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

7. Click **Finish**.

8. If you select **Hold for later**, write down the job number so that you can run it at a later time.

9. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Copy a User Proxy from One Server to Another

You can copy user proxies created on one server to another server of the same type. This method provides a quick way to update user proxies on additional servers on the same operating system.

To copy user proxies to another server:

1. Right-click the Connect:Direct server where the User Proxies are located and click **Configure Server > User Proxies**.

2. Highlight the user proxy records to copy.

3. Select the action **Copy To**.

4. Select the Connect:Direct server groups or servers (of the same type) to which you wish to apply this copy. Click **Next** to go to the next panel.

5. To overwrite user proxies that already exist, enable **Overwrite User Proxy entry if it already exists on the server**.

6. Identify when the user proxy will be copied:

    ◆   **Now** to update the file immediately.

    ◆   **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:**   Select Hold for later if you are not ready to initiate the user proxy copy job.

    ◆   **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

7. Click **Finish**.

8. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

9. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Duplicate a User Proxy

You can duplicate a user proxy to create a new one based on an existing user proxy.

To duplicate a user proxy:

1. Select a Connect:Direct server or server group and click **Configure Server > User Proxies** to display the Configuration Manager and the proxies associated with the selected server or server group.

2. Highlight a user proxy record and select the Action **Duplicate**.

3. Type a unique name for the user proxy in the **Remote User ID** field.

4. Update any user proxy values as necessary. Refer to *User Proxy Field Definitions* on page 90 for information.

5. Review the details in the Confirm Choices dialog. Click **Finish**.

6. Click **Close**.

Copy User Proxy Parameters

You can copy selected user proxy parameters from one node to another as long as the nodes are of the same type.

To copy user proxy parameters from one node to another:

1. Select a Connect:Direct server or server group and click **Configure Server > User Proxies** to display the Configuration Manager and the proxies associated with the selected server or server group.

2. Highlight a user proxy record and select the Action **Copy Parameters To**.

3. On the first two pages of the wizard that displays, select the server groups and individual servers to copy the parameters to. Click **Next** to go to the next page.

4. On the Destination Node Entry(s) page, select the node entries to which to copy the user proxy parameters.

5. Check the parameters you want copied to the nodes you selected and click **Next**.

6. If you do not want parameters to be copied in case of a disparity in parameters between the selected Connect:Direct servers or server groups and Control Center, click **Update only if the object on the server matches Control Center's copy**.

7. Identify when the parameter job will be copied:

    ◆ **Now** to update the file immediately.

    ◆ **Hold for later** to send the job to the job queue with a status of Held.

    > **Note:** Select Hold for later if you are not ready to initiate the parameter copy job.

    ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

    Click **Next**.

8. Click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

Remove a User Proxy

You can use Control Center to delete a user proxy record.

To remove a user proxy:

1. Right-click the Connect:Direct server where the user proxy is located and click **Configure Server > User Proxies**.

2. Highlight the user proxy record or records to delete. Press and hold the **Ctrl** key to select more than one record.

3. Selection the action **Delete**.

4. Select the Connect:Direct server groups or servers to which you wish to apply the delete. Click **Next** to go to the next page.

5. To delete only user proxies that match Control Center's copy, enable **Delete only if the object on the server matches Control Center's copy**.

6. Select **Now** to initiate the job immediately, or **Hold for later** to send the job to the job queue with a status of Held. Click **OK**.

7. Identify when the user proxy will be removed:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

8. Review the delete choices you made and click **Finish**.

9. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

10. To rerun the job, or a step within the job, or to view information about the completed job, click **Go To Job Viewer**; otherwise click **Close**.

User Proxy Field Definitions

Following is an explanation of the user proxy fields:

Field	Description	Valid Values
Remote User ID	The remote node user ID or select <ANY USER> to define a generic user ID. Required.	
Remote Node	The name of the remote node. Required.	
Local User ID	The local user ID to map to the remote node or a specific user ID. Required. (Windows.)	
Local Password	The password associated with the local user ID to which the proxy is mapped. Required. (Windows.)	

Field	Description	Valid Values
Verify Password	Retype the password to verify it. Required. (Windows.)	
Description	Description. (UNIX.)	
Process Permissions		
Copy Send	Identifies whether the proxy user has permission to perform **Copy Send** operations (Yes | No), or if the permissions for the proxy user are the same as for the real user (User). (Windows.)	No | Yes | User
Copy Receive	Identifies whether the proxy user has permission to perform **Copy Receive** operations (Yes | No), or if the permissions for the proxy user are the same as for the real user (User). (Windows)	No | Yes | User
Copy	Specifies whether the user can issue the copy command (Yes | No), or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Upload	Specifies whether the user can upload files or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Download	Specifies whether the user can download files or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Run Job	Specifies whether the user can issue the run job statement or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Run Task	Specifies whether the user can issue the run task statement or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Submit	Specifies whether the user can issue the submit statement or if the permissions for the proxy user are the same as for the real user (User). (UNIX.)	No | Yes | Default to Local User ID
Directory Restrictions		
Download Directory	The directory the user can use to copy files to and use a destination directory. If no directory is specified, restriction defaults to the local user ID specified for the proxy. (Windows, UNIX.)	
Process Directory	The directory containing the Processes the user has authority to submit. If no directory is specified, restriction defaults to the local user ID specified for the proxy. (Windows, UNIX.)	
Program Directory	The directory containing the programs the user has authority to run. If no directory is specified, restriction defaults to the local user ID specified for the proxy. (Windows, UNIX.)	

Field	Description	Valid Values
Upload Directory	The directory the user can use to copy files from and use as a source directory. If no directory is specified, restriction defaults to the local user ID specified for the proxy (Windows, UNIX.)	

Create a User Proxy Template

You can create a user proxy template to define the most commonly used user proxies values. Then use the template to quickly update user proxies for a server. Create a template by copying a user proxies file from another server or from an existing template.

To create a user proxy template:

1. From the menu bar, select **Configure Servers > Template > User Proxies**.

2. Select the action **Create New**.

3. Do one of the following:

   ◆ To create a template by typing all information, select **Enter user proxy details**.

   ◆ To create a template from an existing user proxies file on another server, select **Start from an existing User Proxy entry on another server**. Select the server where the user proxies file is located in the **Server** field and the user proxy to copy in the **Node entry** field.

   ◆ To create a template from an existing template, select **Start from a User Proxy template** and select the template to copy in the **Template entry** field.

4. Click **Next**.

5. Type a name for the template in the **Template Name** field and click **Next**.

   > **Note:** Because you are copying an existing template or user proxies file, the operating system associated with the template cannot be changed. Valid user proxies vary for each operating system.

6. Update any user proxy values. Refer to *User Proxy Field Definitions* on page 90 for more information. Click **Next**.

7. Review the template details in the Confirm Choices dialog. Click **Finish**.

8. Click **Close**.

Duplicate a User Proxy Template

You can duplicate a user proxy template to create a new template based on an existing one.

To duplicate a user proxy template:

1. From the menu bar, select **Configure Servers > Templates > User Proxies**.

2. Highlight the template to duplicate.

3. Select the action **Duplicate**.

4. Type a unique name for the template in the **Template Name** field.

> **Note:** Because you are copying an existing template, the operating system associated with the template cannot be changed. Valid User Proxies vary for each operating system.

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5. Update any user proxy values as necessary. Refer to *User Proxy Field Definitions* on page 90 for information.

6. Review the template details in the Confirm Choices dialog. Click **Finish**.

7. Click **Close**.

Copy User Proxy Parameters from a Template to a Server

You can copy user proxy parameters created in a template to a server. You must select a server group or server.

To copy a user proxy parameter from a template:

1. From the menu bar, select **Configure Servers > Templates > User Proxies**.

2. Highlight the template to copy.

3. Select the action **Copy Parameters To**.

4. Select the Connect:Direct server groups or servers to which you wish to apply this copy. Click **Next** to go to the next page.

5. In the Copy User Proxy Parameters window, select the destination nodes. Click **Next**.

6. In the General Details window, select the parameters to copy. Click **Next**.

7. To change the user proxies that already exist, enable **Overwrite object if it already exists on the server**.

8. Identify when the user proxy parameters will be copied:

   ◆ **Now** to update the file immediately.

   ◆ **Hold for later** to send the job to the job queue with a status of Held.

   ◆ **Schedule for later** and then specify a time zone and date/time when the job will run. This option sends the job to the job queue with a status of Scheduled.

   Click **Next**.

9. Review the parameters you selected and click **Finish**.

10. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

11. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a User Proxy Template

Delete a user proxy template when it is no longer useful.

To delete a user proxy template:

1. From the menu bar, select **Configure Servers > Templates > User Proxies**.
2. Highlight the template to delete.
3. Select the action **Delete**.
4. At the confirmation window, click **OK**.

Chapter 9

Use the Job Viewer

When you create, update, or delete a configuration item, including initialization parameters, a netmap, a Secure+ component, a functional authority, a communication path definition, or a user proxy, you have the option to initiate the change immediately, create a job for the hold queue that you can start later, or schedule a job for later.

Sometimes you initially know only some of the changes you want to make. When this is the case, make the changes you know and then hold the job until it can be updated and started later. If you select **Hold for later**, be sure to write down the job number so you can run the job at a convenient time.

This chapter provides instructions for the following functions:

✦ Run a Job
✦ View Completed Jobs
✦ View Queued Jobs
✦ Update Queued Jobs
✦ Cancel Queued Jobs

Run a Job

If you create a configuration update and enable the job option **Hold for later**, you must manually start the job at a later time in order for it to run.

To run a job that has been queued:

1. Select **Configure Servers > Queued Configuration Jobs**.
2. Highlight the job to run and click **Start**.

View Completed Jobs

After a configuration job has been run, you can view the job details.

To view a completed job:

1. Select **Configure Servers > Completed Configuration Jobs**.

2. Highlight the job to view and click **View Steps**.

   The following job information is displayed:

Field	Description
#	Row number in the table.
Operation	The operation that took place in the step.
Server ID	The server affected by the job.
Started	The date and time the step began.
Completed	The date and time the step completed.
Object ID	The name of the object affected by the step.
Object Type	The type of configuration object affected by the step.
Message ID	The message ID assigned to the step. For more information on message IDs, see the *Sterling Control Center System Administration Guide*.
Message Text	The message text associated with the message ID.
Return Code	The return code assigned to the step.
User ID	The ID of the user who requested the configuration change.

3. Double-click the step to view all step information.

4. Click **Close**.

View Queued Jobs

To view a list of queued jobs, jobs that were held, or jobs that have yet to complete:

From the menu bar, select **Configure Servers > Queued Configuration Jobs**. The Queued Job Viewer is displayed.

The following information is displayed:

✦ Row number

✦ Job ID

✦ Object IDs

✦ Server IDs

✦ Operation Type

✦ Object Type

✦ Percent Complete

✦ Submitting Time

✦ Scheduled Time

✦ Message ID

✦ Message

✦ Return Code

✦ User

✦ Status

Update Queued Jobs

Jobs that have been held to run later may be updated before running.

To update a queued job:

1. On the Queued tab of the Job Viewer, select a job with a status of Job Held.

2. Click **Properties**.

3. Make changes to the properties of the job as needed.

4. Click **Update**.

Cancel Queued Jobs

Jobs that have been held to run later may be cancelled before they run.

To cancel a queue job:

1. On the Queued tab of the Job Viewer, select a job with a status of Job Held.

2. Click **Cancel Job**.

The job is cancelled immediately.

Managing Object Versions

Sterling Control Center keeps versions of the configuration objects it can manage for the servers it manages. When a local update to a configuration object is made and Control Center finds out, a version of the objects of that type is made. For example, if a netmap node is updated locally, or via Control Center, a version of the set of netmap nodes on the affected server is created.

The number of versions of each object type kept by Control Center is controlled via System Settings. Also, authorized users can make Control Center automatically check for local updates made to managed servers' configuration objects via System Settings.

You can manage versions of netmap nodes, netmap modes, netmap communication paths, initialization parameters, Secure+ nodes, Secure+ key certificates, Secure+ trusted certificates, Secure+ cipher suites, functional authorities, and user proxies.

This chapter covers the following:

✦   Compare Versions

✦   Make a Version the Current Version

✦   Delete a Version

✦   View Version Properties

Compare Versions

To determine differences between versions of configuration objects, use the compare function.

To compare versions of configuration objects on a server:

1. Right-click the Connect:Direct server for which you want to compare configuration objects and click **Configure Server >** *configuration object*.

2. Select the action **Versions**.

3. Highlight the versions you want to compare. Hold down **Ctrl** to highlight versions.

4. Select the action **Compare**. The Configuration Object Comparison window displays the objects in each version. Parameters that differ between versions are highlighted in red. An

entire row is highlighted in red for objects that differ due to a change in their parameters (add, delete, or update). Objects with no counterpart to compare with are also shown in red.

> **Note:**   This step is not necessary if you are comparing initialization parameter versions.

5. To select a configuration object to compare to another configuration object or template:

    a.   Click **Entry**.

    b.   Highlight the server where the configuration object is located.

    c.   The current version of the configuration object is automatically selected. To view an older version, select it in the **Select a Version** drop-down.

    d.   Highlight the configuration object to view and click **OK**.

6. To select a template to compare to another template or configuration object:

    a.   Click **Template**.

    b.   Highlight the template to view and click **OK**.

> **Note:**   Templates are not available for Secure+ key certificates, Secure+ trusted certificates, or Secure+ cipher suites.

7. In the second window, repeat step 5 and step 6 to identify the configuration object or template you want to compare to the first item selected.

8. To display only configuration objects that are different, enable **Show only rows with differences**.

9. To remove a configuration object or template selected for comparison, click **Remove**.

10. To change which items you are comparing, do one of the following:

    ◆   Click **Entry** to select another configuration object for comparison.

    ◆   Click **Template** to select a different template for comparison.

Make a Version the Current Version

You can make a previous version of a configuration object the current version. Changing to a previous version changes all parameters of the object back to their status in the earlier version.

To change the current version of a configuration object on a server:

1. Right-click the Connect:Direct server for which you want to make a configuration object version the current version and click **Configure Server > *configuration object***.

2. Select the action **Versions**.

3. Highlight the version you want to make the current version.

4. Select the action **Make Current**.

5. To make the selected version of the configuration object the current version only if it matches the copy on Control Center, enable **Make current only if the Version on the server matches Control Center's copy**.

6. Select **Now** to update the file immediately, or **Hold for later** to send the job to the job queue with a status of Held. Click **OK**. If you selected **Hold for later** as the job timing option, write down the job number so that you can run it at a later time.

7. To run the job or view information about the completed job, click **Go To Job Viewer** or click **Close**.

Delete a Version

You can delete a specific version of a configuration object.

To delete a version of a configuration object:

1. Right-click the Connect:Direct server for which you want to delete a configuration object and click **Configure Server > *configuration object***.

2. Select the action **Versions**.

3. Highlight the version or versions you want to delete.

4. Select the action **Delete**.

5. At the confirmation window, click **OK**.

View Version Properties

To view version properties of a configuration object on a server:

1. Right-click the Connect:Direct server for which you want to view the properties of a configuration objects and click **Configure Server > *configuration object***.

2. Select the action **Versions**.

3. Highlight the version for which you want to view object properties.

4. Select the action **Properties**.

   The Configuration Manager window is displayed with the version selected.

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