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Connect:Direct® Browser User Interface User's Guide

Sterling Commerce
An IBM Company

PN 00645

Connect:Direct®
Browser User Interface

User's Guide

Version 1.3

Connect:Direct Browser User Interface User's Guide
Version 1.3
First Edition

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Preface

Connect:Direct Browser User Interface User's Guide is for users who create, submit, and monitor Connect:Direct Processes through the Connect:Direct Browser User Interface. It is meant to complement the Browser User Interface Help.

This guide provides step-by-step instructions for using the Browser User Interface with the Connect:Direct OS/390 , Windows, and UNIX platforms. It assumes that you have a working knowledge of these platforms and the related operating environments.

Task Overview

The following table directs you to the information to perform the *Connect:Direct Browser User Interface* tasks documented in this guide:

Task	For More Information, See
Signing on to Connect:Direct Browser User Interface	Chapter 2, *Signing On and Off*
Building Connect:Direct Processes with the Process Builder feature	Chapter 3, *Building Connect:Direct Processes*
Building a Process to copy a file	Chapter 4, *Copying a File*
Submitting a Process	Chapter 5, *Submitting a Process*
Viewing Process information	Chapter 6, *Viewing Process Information*
Viewing Process statistics	Chapter 7, *Viewing Statistics*
Viewing Connect:Direct Message Text	Chapter 8, *Viewing Message Text*
Controlling Processes	Chapter 9, *Controlling Processes*

Connect:Direct Browser User Interface Documentation

The following manuals make up the Connect:Direct Browser User Interface library:

- *Connect:Direct Browser User Interface Configuration Guide* describes how to configure the Browser User Interface property files and how to configure the Browser User Interface for international support.

- *Connect:Direct Browser User Interface User's Guide* describes how to use the Browser User Interface to build, submit, and monitor Connect:Direct Processes.
- *Connect:Direct Browser User Interface System Administration Guide* describes how to use the Browser User Interface to perform Connect:Direct system administration tasks such as setting user authorities and proxies, administering network maps and initialization parameters, and running traces.
- *Connect:Direct Browser User Interface Release Notes* contains product requirements, installation instructions, maintenance updates and important notes.
- *Connect:Direct Process Guide* provides you with the syntax information and examples to use when creating Connect:Direct Processes. These guides are provided on the Connect:Direct Browser User Interface CD-ROM or can be downloaded from the Sterling Commerce Web site.

Connect:Direct Browser User Interface Help

Help is available by clicking **Help** from any Connect:Direct Browser User Interface page.

Getting Support for Sterling Commerce Products

Sterling Commerce provides intuitive technical products and superior Help and documentation to enable you to work independently. However, if you have a technical question about a Sterling Commerce product, use the Sterling Commerce Customer Support Web site.

The Sterling Commerce Customer Support Web site at www.sterlingcommerce.com is the doorway to Web support, information, and tools. This Web site contains several informative links, including a solutions database, an issue tracking system, fix information, documentation, workshop information, contact information, sunset and retirement schedules, and ordering information. Refer to the Customer Support Reference Guide at www.sterlingcommerce.com/customer/tech_support.html for specific information on getting support for Sterling Commerce products.

Chapter 1

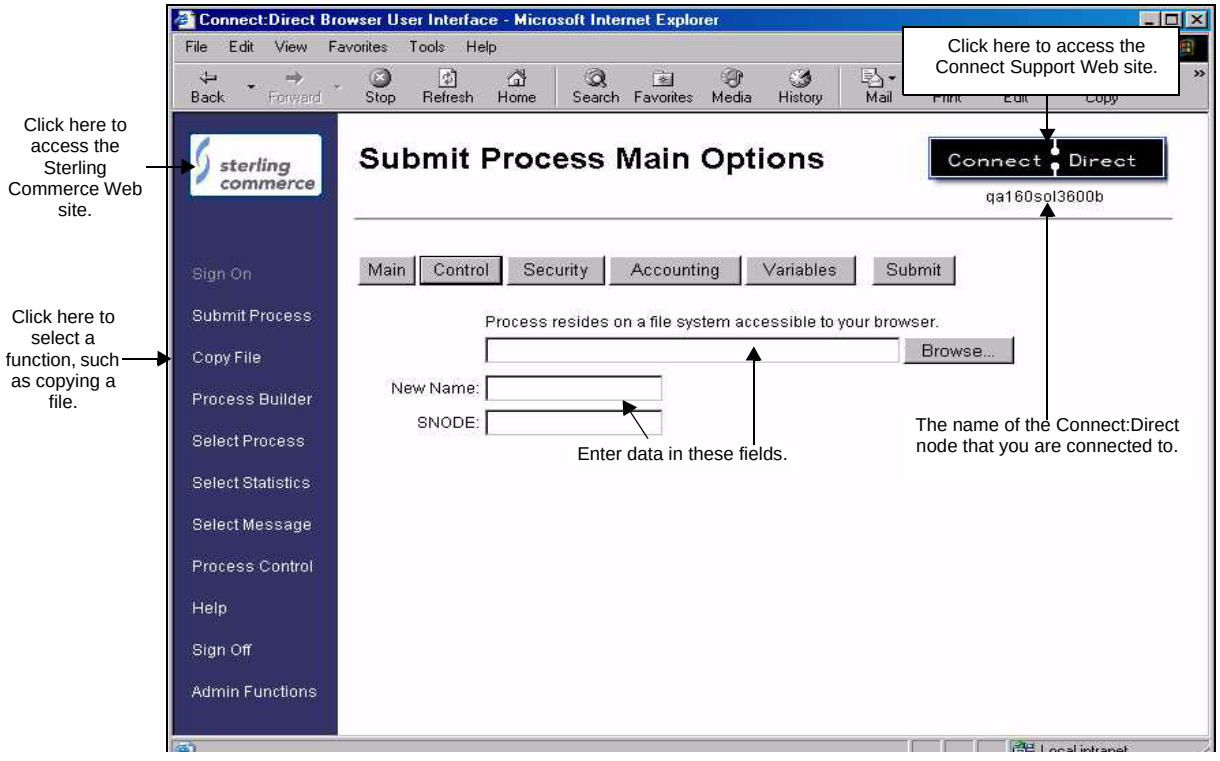
About Connect:Direct Browser User Interface

The Connect:Direct Browser User Interface allows you to create, submit, and monitor Connect:Direct Processes from an Internet browser, such as Microsoft Internet Explorer or Netscape Navigator.

You can also perform Connect:Direct system administration tasks, such as viewing and changing the network map or initialization parameters, from the Browser User Interface if you have the appropriate authority. The specific administration tasks that you can perform depend on the Connect:Direct platform that your browser is signed on to, in addition to your security level.

Browser User Interface Functions

The Connect:Direct Browser User Interface uses standard browser functionality to create, submit, and monitor Processes and perform system administration. The following sample Submit Process page shows the layout of a typical Browser User Interface page.



When you sign on to the Browser User Interface, functions are displayed on the left side of the page. The functions displayed vary according to the following criteria:

- The Connect:Direct authority for the user ID that you signed on with. For example, if the user ID does not have authority to submit Processes, the **Submit Process** function is not displayed.
- The Connect:Direct platform and release you are signed on to. For example, Connect:Direct OS/390 administrators cannot update user proxies.
- Whether you are signed on. Most functions are not displayed until you sign on.

The following table shows the user functions. This table also shows the applicable platforms for each function.

Function	Description	Connect:Direct OS/390	Connect:Direct Windows	Connect:Direct UNIX
Sign On	Signs you on to the Connect:Direct server, so you can use the interface.	X	X	X
Submit Process	Submits a predefined Process. You can specify various processing options, such as start date and start time, processing priority, security and accounting information, and variables.	X	X	X
Copy File	Builds and submits a Process to transmit a file from one Connect:Direct node to another. You can then save the Process for future use.	X	X	X
Process Builder	A graphical interface that you use to build new Processes or modify existing ones.	Release 4.4.00	Release 4.2.00	Release 3.6.00
Select Process	Shows summary and detail status for one or more Processes. You can also change, delete, or suspend a Process from this function.	X	X	X
Select Statistics	Shows summary and detail Process statistical information.	X	X	X
Select Message	Displays the short and long message text for a specified message ID.	X	X	X
Process Control	Enables you to change Process parameters, suspend Processes, or delete Processes.	X	X	X
Help	Displays Browser User Interface Help.	X	X	X
Sign Off	Disconnects you from the Connect:Direct server.	X	X	X
Admin Functions	Displays the system administration functions.	X	X	X

Clicking **Admin Functions** displays the following system administration functions. This table also shows the applicable platforms for each function.

Function	Description	Connect:Direct OS/390	Connect:Direct Windows	Connect:Direct UNIX
Netmap	Displays network map (Netmap) information.	X Release 4.3.00 (with maintenance) or later	X	X Release 3.5.00 or later only
	Adds, changes, or deletes network map information.	X Release 4.3.00 (with maintenance) or later	X	X Release 3.5.00 or later only
	Adds, changes, or deletes communications modes.		X	
	Adds, changes, or deletes communications path information.		X	
Initparm	Displays initialization parameters.	X Release 4.3.00 (with maintenance) or later	X	X Release 3.5.00 or later only
	Updates initialization parameters.		X	X Release 3.5.00 or later only
Native Command	Issues Connect:Direct commands.	X Release 4.3.00 (with maintenance) or later		
User Auth	Displays, adds, changes, or deletes user authorities.	X Release 4.3.00 (with maintenance) or later	X	X Release 3.6.00 or later only
Proxy	Displays, adds, changes, or deletes user proxies.		X	X Release 3.6.00 or later only
Tracing	Displays and updates Connect:Direct tracing parameters.	X Release 4.3.00 (with maintenance) or later	X	X
Trans. Table	Displays, adds, and changes a Connect:Direct translation table.		X	
Help	Displays Browser User Interface Help.	X	X	X
Configuration	Configures the Browser User Interface. Access to this function is restricted by user ID and password.	X	X	X
User Functions	Returns to the user functions.	X	X	X

International Language Support

Browser User Interface is distributed with English language displays, messages, and Help. Support for additional languages can be downloaded from the Browser User Interface Web site. The *Connect:Direct Browser User Interface Configuration Guide* describes how to add support for additional languages.

About Processes

A Connect:Direct Process is a series of statements that allows you to transfer files, run programs, and submit jobs or other Processes.

Processes contain parameters that control Process attributes such as Process name, Process execution start time, user notification, security, and accounting data. These Process parameters can be specified within the actual Process or you can specify them when you submit the Process. Any parameters you provide when you submit a Process override the parameters coded in the Process.

You can submit a Process to any Connect:Direct node. Typically, the primary node (PNODE) is where the Process resides. The secondary node (SNODE) is the other node that the Process connects to. The two nodes work together to execute the Process.

You can use a Connect:Direct Process to:

- Exchange text or binary files with other Connect:Direct nodes using the COPY statement.
- Start executables or send jobs to queues on an OS/390, OpenVMS, OS/400, Tandem NonStop Kernel, Windows, or UNIX server using the RUN JOB or RUN TASK statements coded within a Process.
- Execute Windows or UNIX commands as if they were entered on the system console by using the RUN TASK statement coded within a Process.
- Submit a Process to another Connect:Direct node.

See the *Connect:Direct Process Guide* for Process examples.

User Security and the Browser User Interface

The Browser User Interface has its own user ID/password security that can control what nodes a user can access. This security also controls who can use the configuration feature. However, the Browser User Interface security does not control what Connect:Direct tasks a user can perform. That function is provided by the Connect:Direct security system.

For example, if Connect:Direct OS/390 security does not permit a user to perform a SELECT STATISTICS task in Connect:Direct OS/390, that user cannot perform the same task through the Browser User Interface. The Connect:Direct security must be modified to give the user the necessary permissions.

For more information about Connect:Direct user security, see the documentation for the appropriate Connect:Direct platform.

Getting Help

Click **Help** on the left side of the page to display Help.

On a Browser User Interface Help page, highlighted and underlined words have associated Help information. Move your cursor over these words to display a pop-up window with Help text. Click once on an underlined term to jump to the glossary for additional information, such as a list of codes.

The box on the left of the Help page displays three tabs. The Contents tab displays a Help tree structure. Click the book symbol to expand the structure, then click any topic title to move to that Help topic.

You can also use the Index tab to find specific topics or use the Search tab to search for a specific word or text string in the Help.

PDF versions of the Help information are installed in the Browser User Interface installation directory. The PDF manuals are also available from the Sterling Commerce Customer Support Web site at www.sterlingcommerce.com.

Sterling Commerce Customer Support Web Site

Click the Connect:Direct logo in the upper right corner of the Browser User Interface pages to access the Sterling Commerce Customer Support Web site. This site provides a knowledge database, documentation, and the latest software patches. You can obtain access to this site by following the registration instructions on the Customer Support Home page.

Chapter 1

Chapter 2

Signing On and Off

To sign on to a Connect:Direct node using the Connect:Direct Browser User Interface:

1. Click **Sign On**.
2. Select the Connect:Direct node to sign on to from the Select Node box, or type the node name.

   Note: The node must be configured on the Configure Node Properties page, and the Display Configured Nodes selection on the Configure System Properties page must be **Yes**, for a node to display the Select Node box. See *Changing a System Property File* on page 2-3 of the *Connect:Direct Browser User Interface Configuration Guide* for more information.

3. Type the IP address or host name of the Connect:Direct system that you want to sign on to.
4. Type the port number of the Connect:Direct system that you want to sign on to.
5. Type your user ID.
6. Type your password.

   Note: Your system administrator may configure your system so that only the user ID is required.

7. Click **Sign On**.

   You can open a new browser window if you want an additional Connect:Direct sign on. Each browser window is limited to one signon.

   See the online Help or *Glossary* for field descriptions.

Click **Sign Off** to sign off from the Browser User Interface.

Chapter 3

Building Connect:Direct Processes

This chapter contains the following information:

- About Processes
- The Process Builder
- Building a New Process
- Sample Processes
- Using the Connect:Direct Process Guide to Create Processes

About Processes

A Connect:Direct Process is a series of statements that enable you to transfer files, run programs, and submit jobs or other Processes.

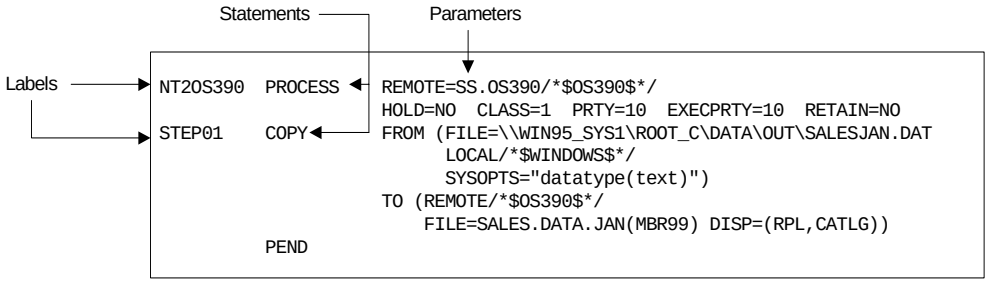
A Process contains some or all of the following types of statements.

Statement	Description
Process	The first statement in a Process. The Process statement defines general Process characteristics, including Process name, primary and secondary nodes, execution date and time, security parameters, accounting data, and symbolic variables. All Processes must have a Process statement.
Copy	A statement that transfers a file from one Connect:Direct node to another. Copy statement parameters include source and destination file names and attributes.
Run Job	A statement that submits a job to the host operating system. This job executes concurrently with the Process. Any Process statements following the Run Job statement execute without waiting for the Run Job results. The job can execute on either the local or remote node.
Run Task	A statement that executes an external program or command. The program or command must complete before any further statements in the Process are executed. Run Task produces a return code as the exit code for the program it calls.
Submit	A statement within a Process that submits another Process. The Process can execute on either the PNODE or SNODE.
Conditional (If, Else, Endif, Goto)	A statement that controls Process execution by testing Process step return codes and directing the next step.
Comment	A statement that contains a descriptive comment.

Statement	Description
Pend	A statement that indicates the end of a Process. The Pend statement is only used in Connect:Direct UNIX and Connect:Direct Windows Processes. There are no parameters for the Pend statement.

Each statement uses parameters to control Process activities such as execution start time, user notification, security, or accounting data. These parameters can be specified within the Process or you can specify them when you submit the Process. The parameters for a statement vary according to platform.

The following is a text example of a Process that copies a file from a Connect:Direct Windows node to a Connect:Direct OS/390 node. This Process that uses the Process, Copy, and Pend statements. Note that the statements are preceded by an identifying label and followed by parameters.



You can submit a Process to any Connect:Direct node in your network. Typically, the primary node (PNODE) is where the Process resides. The secondary node (SNODE) is the other node that the Process connects to. The two nodes work together to execute the Process.

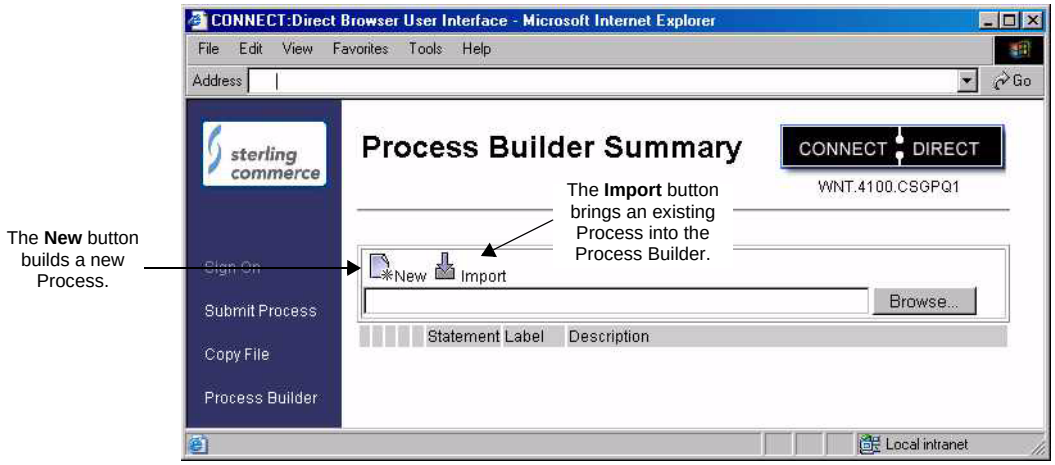
See the *Connect:Direct Process Guide* for Process syntax and examples.

The Process Builder

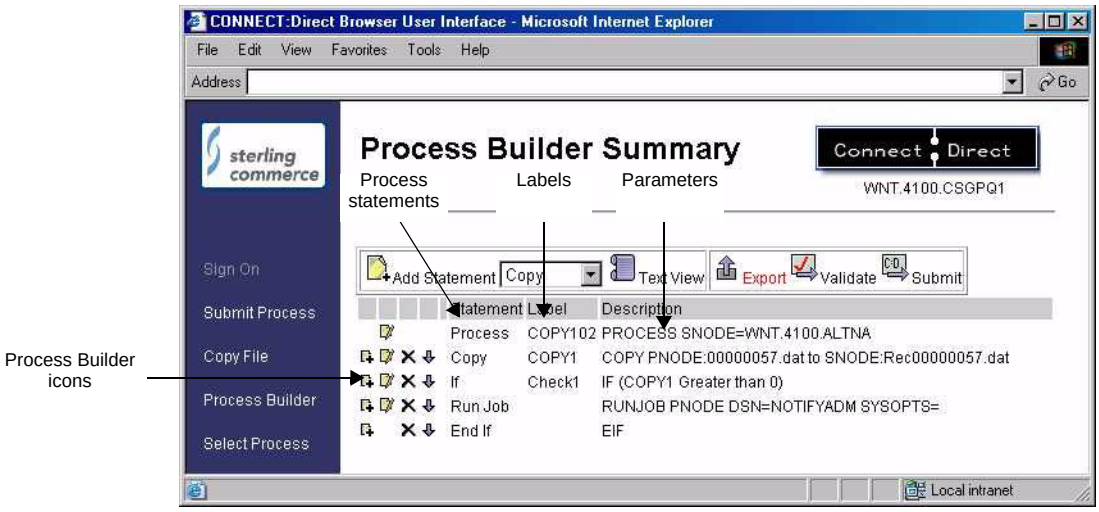
The Process Builder is a graphical interface that enables you to build, modify, and save Processes. The Process Builder handles Connect:Direct Process syntax rules automatically, such as inserting quotes in SYSOPTS statements. The Process Builder eliminates the typographical mistakes made when creating Processes with a text editor. You can also validate Process syntax and submit completed Processes from the Process Builder.

The Process Builder feature is only available if you are signed on to a Connect:Direct OS/390 4.3.00 system (with latest maintenance) or later or a Connect:Direct UNIX 3.6.00 or later system.

The following page is displayed when you select the Process Builder feature:



The following illustration shows a Process on the Process Builder Summary page:



Process Builder Summary Page Icons

The following table explains the icons on the Process Builder Summary pages:

Button	Description
New	Displays the Process Builder Process Statement Main Options page to create a new Process.
Import	Imports the specified Process into the Process Builder.
Add Statement	Displays a data entry page for the statement type specified in the list box.
Text View	Switches from a graphical view of the Process to a text view.

Button	Description
	Saves the Process in text format in a specified location.
	Sends the Process to the Connect:Direct server for Process syntax validation.
	Submits the Process to a Connect:Direct server.
	Adds a new Process statement using the parameters from the current statement.
	Edits the statement.
	Deletes the statement.
	Moves the statement down in the Process.
	Indicates that the Process statement contains invalid syntax.

Building a New Process

The Process Builder feature of the Browser User Interface enables you to build, save, and submit a Process using a graphical interface. You can also edit existing Processes with the Process Builder.

If you want to create and save a Process that performs only a file copy, you can also use the Copy File feature (see Chapter 4, *Copying a File*).

Building a Process consist of the following tasks:

- Analyzing the business task you want to accomplish
- Creating a Process statement
- Adding statements for the tasks you want to accomplish
- Validating the Process
- Executing the Process

These are explained in the following sections.

Analyzing the Business Task You Want to Accomplish

The first, and probably most important, step in creating a Process is to analyze the business task you want to accomplish. Most Connect:Direct Processes copy files from one location to another (although Processes can also call external programs or even other Processes). Among the factors you need to consider are:

- What files do you want to copy?
- Where do you want to copy the files from, and where to?
- What Connect:Direct platforms are involved in the transfer?
- Will the Process run at regularly scheduled dates and times?

- What security is required to access the Connect:Direct servers that will execute the Process?
- Should the files be compressed during transmission?
- Do you want to perform checkpoint/restart on the transmission, enabling the transmission to resume at a defined point in case of failure?
- Will the Process call an external program?
- Will the Process include branching that performs additional processing depending on Process results?

You may find it helpful to create a flow chart of the Process before using the Process Builder to create it.

Creating a Process Statement

Every Process begins with a Process statement that defines general Process information. In the Browser User Interface, the Process statement consist of five pages of options that define various processing options, such as when and where the Process is submitted, if a user is notified when a task completes, who can run the Process, and symbolic variables to be substituted in the Process.

Process Statement Main Options

To complete the Process Builder Process Statement Main Options page:

1. Click **Process Builder** to display the Process Builder Summary page.
2. Click

to display the Process Builder Process Statement Main Options page.

   Asterisks indicate required fields on this page.
3. Type a name for the Process.
4. Type the PNODE for the Process.

   This field already contains the node that you are signed on to. You can change it to any defined node. You do not need to be signed onto the node to specify it.
5. Select the PNODE platform.
6. Type the SNODE for the Process.
7. Select the SNODE platform.
8. Select another Process Statement option, or click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Process Statement Control Options

To complete the Process Builder Process Statement Control Options page:

1. Click **Control** to display the Process Builder Process Statement Control Options page.

   All fields on this page are optional.
2. Type the Start Date if you want to the process to execute on a particular day or date.
3. Type the Start Time if you want to the process to execute at a particular time.
4. Select the Hold Status.

Note: If you submit a Process with Hold set to Yes, it waits in a Hold queue, even if you specify a start time. Connect:Direct ignores the start time until the Hold is removed.

---

5. Select the Priority for the Process.

6. Select the Retain Option.

Note: If you send or receive a file with the Retain parameter set to Yes and Hold set to No or Call, Connect:Direct ignores the Hold parameter.

---

7. Select the class.
8. Type the user ID of the person to notify when the Process finishes.
9. Select another Process Statement option, or click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Process Statement Security Options

Security options specify the user IDs and passwords that can access the PNODE and the SNODE.

To use the Process Builder Process Statement Security Options page:

1. Click **Security** to display the Process Builder Process Statement Security Options page.

   All fields on this page are optional.
2. Type the PNODE User ID.
3. Type the PNODE Password.
4. Type the SNODE User ID.
5. Type the SNODE password.
6. Select another Process Statement option, or click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Process Statement Accounting Data

Accounting data is a free-form information that you define and use to track Process execution and data transfers. You can track data transfers by cost centers, department numbers, satellite locations, or any other type of code or identification that would benefit the management of data tracking.

To use the Process Builder Process Statement Accounting Data page:

1. Click **Accounting** to display the Process Builder Process Statement Accounting Data page.

   All fields on this page are optional.
2. Type a text string to use as accounting information for the PNODE. You can enter up to 256 characters.
3. Type a text string to use as accounting information for the SNODE. You can enter up to 256 characters.
4. Select another Process Statement option, or click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Process Statement Symbolic Variables

You use the Symbolic Variables page to specify or override symbolic variables when submitting a Process. Connect:Direct substitutes the assigned value for the variable during Process execution.

To use the Process Builder Process Statement Symbolic Variables page:

1. Click **Variables** to display the Process Builder Process Statement Symbolic Variables page.

   All fields on this page are optional.

2. Type the variable names and values you have created.
3. Select another Process Statement option, or click to return to the Process Builder Summary page.

Creating a Copy Statement

The Copy statement copies a file from one Connect:Direct node to another. The Copy Statement page contains several subpages that allow you to specify copy options. Copy options vary according to platform.

Copy Statement Main Options

To add a Copy statement to a Process:

1. From the Process Builder Summary page, select **Copy** and

to display the Process Builder Copy Statement Main Options page.

   Asterisks indicate required fields on this page.
2. Type a label for the Copy step.
3. Select the Copy Direction.
4. Type the Source File name. If the file is on the PNODE, you can click to browse to the file.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

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5. Select the Source DISP.
6. Type the Destination File name. If the file is on the PNODE, you can click to browse to the file.
7. Select the Destination DISP.
8. Select the Compression characteristics if you want to compress the file during transmission.
9. Select the Checkpoint/Restart characteristics if you want Connect:Direct to set checkpoints when it transmits the file.
10. Select another Copy Statement option, or click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Copy Statement From Options

You use the Copy Statement From page to specify additional copy options for the platform that you are copying a file from. Based on the operating system that you are copying the file from, you are presented with options for one of the following Connect:Direct platforms:

- OpenVMS Copy From Options
- OS/390 Copy From Options
- OS/400 Copy From Options
- Tandem NonStop Kernel Copy From Options
- VM Copy From Options
- VSE Copy From Options
- Windows and UNIX Copy From Options

The Source File and Source Disposition fields contain the data you specified on the Process Builder Copy Statement Main Options page.

The following sections describe the Copy From options for each platform.

OpenVMS Copy From Options

To specify OpenVMS Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Select the disposition of the source file.
3. Type the System Operations (SYSOPTS).
4. Type any Data Exit information.
5. Type the selection criteria to select files to copy.
6. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

OS/390 Copy From Options

To specify OS/390 Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the Data Control Block (DCB).
3. Select the disposition of the source file using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Type the Unit address.
5. Type the Volume number.
6. Type the Label.
7. Type the SYSOPTS.
8. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

OS/400 Copy From Options

To specify OS/400 Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the SYSOPTS.
3. Select the disposition of the source file using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

Tandem NonStop Kernel Copy From Options

To specify Tandem NonStop Kernel Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the SYSOPTS.
3. Type the DCB information.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term
5. Type the Typekey.
6. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

VM Copy From Options

To specify VM Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

2. Type the File Type.
3. Type the link information in the following four fields:
   - User ID
   - Password
   - Access Mode
   - CUU
4. Type the DCB information.
5. Type the Unit address.
6. Type the Volume number.
7. Type the Label.
8. Type the Typekey.
9. Select the source disposition.
10. Select if you want to use the date value from the file to be copied as the creation date for the new file.
11. Select if you want to replace destination files with the same name as the files being sent.
12. Specify any selection criteria for files to send.
13. Specify any exclusion criteria for files to send.
14. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

VSE Copy From Options

To specify VSE Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

2. Type the DCB information.
3. Type the SYSOPTS.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term

5. Type the Space value.
6. Type the Unit address.
7. Type the Volume number.
8. Type the Label.
9. Specify the VSAM catalog where the VSAM files reside.
10. Type the Typekey.
11. Type the number of I/O buffers.
12. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

Windows and UNIX Copy From Options

The Windows and UNIX platforms use the same Copy From options. To specify these options:

1. Type the Source File Name. If the file is on the PNODE, you can click ... to browse to the file.
2. Select the Source Disposition.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

3. Type the SYSOPTS.
4. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy To to display the Process Builder Copy Statement To Options page.

See the online Help or *Glossary* for field descriptions.

Copy Statement To Options

Use the Copy Statement To page to specify options for the platform that you are copying a file to. Depending on the operating system you are copying to, you are presented with options for one of the following Connect:Direct platforms:

- OpenVMS Copy To Options
- OS/390 Copy To Options
- OS/400 Copy To Options
- Tandem NonStop Kernel Copy To Options
- VM Copy To Options
- VSE Copy To Options
- Windows/UNIX/Unknown Copy To Options

The following sections describe the Copy To options for each platform.

OpenVMS Copy To Options

To specify OpenVMS Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

2. Select the disposition of the destination file.
3. Type the SYSOPTS.
4. Type the DCB information.
5. Type any Data Exit information for the copy.
6. Type the Typekey.
7. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

OS/390 Copy To Options

To specify OS/390 Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

2. Type the Data Control Block (DCB).
3. Select the destination file disposition using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Type the Space value.
5. Type the Unit address.
6. Type the Volume number.
7. Type the Label.
8. Type the Typekey.
9. Type the SYSOPTS.
10. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

OS/400 Copy To Options

To specify OS/400 Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the SYSOPTS.
3. Type the Unit address.
4. Select the disposition of the destination file.
5. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

Tandem NonStop Kernel Copy To Options

To specify Tandem NonStop Kernel Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the SYSOPTS.
3. Type the DCB information.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term
5. Type the Space value.
6. Type the Typekey.
7. Do one of the following:
   - Click to return to the Process Builder Summary page
   - Click Main to return to the Process Builder Copy Statement Main Options page.
   - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

VM Copy To Options

To specify VM Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

> **Note:** The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the File Type.
3. Type the link information using the following four fields:
   - User ID
   - Password
   - Access Mode
   - CUU
4. Select the disposition of the destination file.
5. Select if you want to create an IBM RACF profile for the new file.
6. Type the DCB information.
7. Type the Unit address.
8. Type the Volume number.
9. Type the Label.
10. Type the Typekey.
11. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

VSE Copy To Options

To specify VSE Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

> **Note:** The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Type the DCB information.
3. Type the SYSOPTS.
4. Select the disposition of the destination file using the following two subfields:
   - Access
   - Normal Term
5. Type the Space value.
6. Type the Unit address.

7. Type the Volume number.
8. Type the Label.
9. Specify the VSAM catalog where the VSAM files reside.
10. Type the Typekey.
11. Type the number of I/O buffers.
12. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

Windows/UNIX/Unknown Copy To Options

The Windows and UNIX platforms use the same Copy To options. The Unknown platform selection also uses these options. To specify these options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to the file.

> **Note:** The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

2. Select the Destination Disposition.
3. Type the SYSOPTS.
4. Do one of the following:
    - Click to return to the Process Builder Summary page
    - Click Main to return to the Process Builder Copy Statement Main Options page.
    - Click Copy From to display the Process Builder Copy Statement From Options page.

See the online Help or *Glossary* for field descriptions.

Creating a Run Task Statement

The Run Task statement calls external programs to run on a Connect:Direct node. The Process waits until the external program completes before continuing. When the external program completes, the Run Task returns a completion code that indicates program success. This completion code can be used by subsequent Process conditional statements (see *Creating Conditional Statements* on page 3-17).

You can pass parameters to the external program as Run Task statement SYSOPTS.

The following are items to remember when writing programs called by Run Task statements:

- Do not specify programs in the Run Task statement that require user intervention.
- Do not use a completion code of 16 in the external program, or the Process will fail.

To create a Run Task statement:

1. From the Process Builder Summary page, select **Run Task** and

to display the Process Builder Run Task Statement page.
2. Type a label for the Run Task step.
3. Select whether the Run Task is submitted from the PNODE or on the SNODE.
4. Type the full path to the external program. If the program is on the PNODE, you can click to browse to it.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

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5. Type the System Operations (SYSOPTS) or any optional parameters to pass to the program.

   Run Task parameters will vary by platform. See the *Connect:Direct Process Guide* for information about platform-specific parameters.
6. Click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Creating a Run Job Statement

The Run Job statement executes external programs or commands to run on a Connect:Direct node. These programs run concurrently with the Process. Unlike the Run Task statement (see *Creating a Run Task Statement* on page 3-15), the Process does not wait for the program to finish.

When the Run Job statement completes, it returns a completion code. This completion code indicates the success of the Run Job statement, and not the success of the program or command.

You can pass parameters to the external program as Run Job statement SYSOPTS.

To create a Run Job statement:

1. From the Process Builder Summary page, select **Run Job** and

to access the Process Builder Run Job Statement page.
2. Type a label for the Run Job step.
3. Select whether the Run Job is submitted from the PNODE or on the SNODE.
4. Type the full path to the external program. If the program is on the PNODE, you can click to browse to it.

Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.

---

5. Type the System Operations (SYSOPTS) or any optional parameters to pass to the program.

   Run Job parameters will vary by platform. See the *Connect:Direct Process Guide* for information about platform-specific parameters.
6. Click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Creating Conditional Statements

Conditional statements are used to branch processing within a Process, based on the result of a previous Process step. For example, when a Process performs a file copy, a conditional statement can test if the copy was successful. If the copy was successful, the Process continues processing subsequent statements. If the copy was unsuccessful, the Process can call a user-defined program that sends an error to the console operator and stops processing.

Conditional statements test against the completion code of a previous step. (Completion codes are also known as return codes or condition codes.) If the step being tested is a Run Task or a Run Job that calls an external program, the completion code indicates if the Run Task or Run Job was successful. It does not indicate if the program called by the Run Task or Run Job was successful.

See the Help or *Glossary* for a list of completion codes.

The following table lists the conditional statements:

Statement	Description

If	Specifies that the Process execute a block of statements based on the completion code of a previous Process step.
	
	Each If statement must be closed with an Endif statement. For example:
	`step05 IF (step03 lt 4)`
	`step06 copy from (file=myfile2 local)`
	`to (file=yourfile2 remote)`
	`EIF`

Else	Specifies a block of statements to execute when the if . . . then condition is not satisfied.
	
	For example:
	`step02 IF (step01 gt 4)`
	`goto step07`
	`else`
	`step03 runjob dsn=WINxx`
	`sysopts="pgm(testwin.exe)"`
	`EIF`

Endif	Specifies the end of an If Then statement.

Goto	Specifies that processing move to the block of statements indicated by the step label. For example:
	`step02 IF (step01 gt 4)`
	`goto step07`
	`else`
	`exit`
	`EIF`
	
	indicates that if Process step01 completes with a completion code greater than 4, the Process should execute the statements defined in step07.

Exit	Ends the Process and bypasses all remaining steps in the Process.

Conditional statements can be nested so that a Process can test for multiple results and react accordingly.

Creating a Simple Conditional Statement

This procedure shows how to create a simple conditional statement that tests if a copy was successful. If the copy was successful, the Process executes the next statement. If the copy was not successful, the Process executes a Run Task that calls another program.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5).
2. Create a Copy statement and label it STEP1 (see *Creating a Copy Statement* on page 3-7).

3. From the Process Builder Summary page, select **If** and Add Statement to access the Process Builder If Statement page.
4. Type a label for the If step.
5. Select the label that you want to test against from the list box (STEP1 in this example).

   You can also type the name in the Label field, if you have not created the label yet.
6. Select **GT** (greater than) from the Operator field.
7. Select **4** from the Value field.
8. Click to return to the Process Builder Summary page.

   The If statement is added to the Process. Note that Process Builder appends Then to the end of the statement.
9. From the Process Builder Summary page, select **Run Task** and Add Statement to access the Process Builder Run Task Statement page.
10. Create a Run Task statement that calls another program (*Creating a Run Task Statement* on page 3-15).
11. Click to return to the Process Builder Summary page.
12. Select **Endif** and Add Statement.

    The conditional statement is completed. You can continue adding other statements as necessary to continue processing.

Creating a Multi-Conditional Statement

This procedure describes how to create a Connect:Direct Windows Process containing several conditional statements. The results of the conditional statements tests determine subsequent processing.

A multi-conditional statement requires more planning than a simple conditional statement because you must determine the branch paths before creating the Process. In the example in this procedure, the following activities should occur:

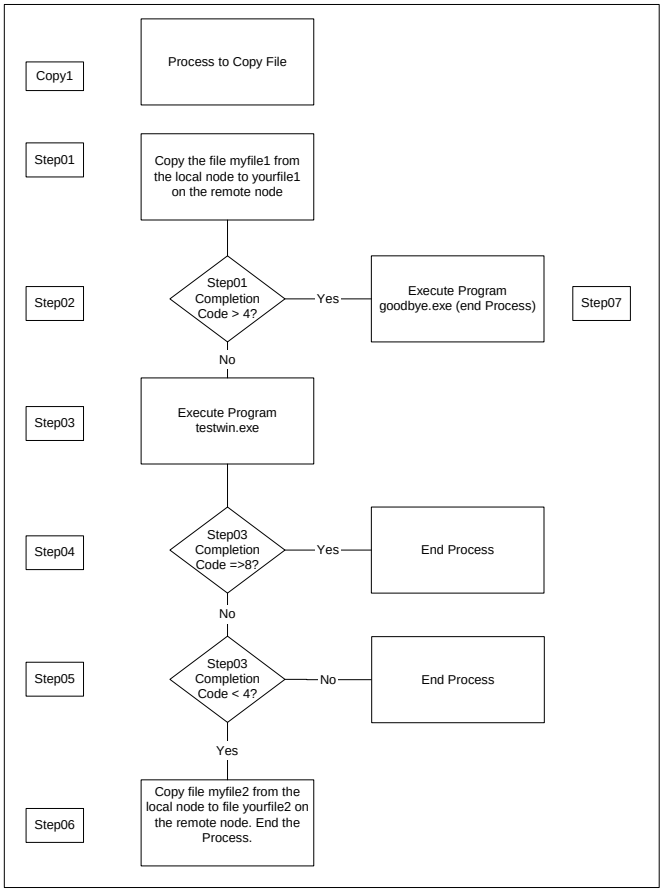
- Copy a file named myfile1 from the local node to a file named yourfile1 on the remote node.
- If the copy is successful, (completion code of 4 or less) execute an external program named testwin.exe.

  If the copy fails (completion code greater than 4) execute an external program called goodbye.exe
- If the completion code from the step calling the testwin.exe program indicates success (less than 4) copy a file named myfile2 from the local node to a file named yourfile2 on the remote node, and end the Process.

  If the completion code from the step calling the testwin.exe program indicates failure (completion code 8 or greater) end the Process.

Flow Chart of Sample Process

A flow chart of the Process would look like the following diagram:



Note that step labels are assigned to each activity. This is important because conditional statements use the step labels for branching instructions.

Creating a Multi-Conditional Process

To create this multi-conditional Process:

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5).
2. Create a Copy statement to copy a file named myfile1 from the local node to a file named yourfile1 on the remote node, and label it **Step01** (see *Creating a Copy Statement* on page 3-7).
3. From the Process Builder Summary page, select **If** and

to access the Process Builder If Statement page.
4. Type **Step02** for the If step label.
5. Select **Step01** from the list box, **GT** (greater than) from the **Operator** field, and **4** from the Value field.

   Step01 is the step you will test against.
6. Click to return to the Process Builder Summary page.

   The If statement is added to the Process
7. Select **Goto** and

to access the Process Builder Goto Statement page.
8. Type **Step07** for the Target Label.
9. Click to return to the Process Builder Summary page.

The Goto statement is added to the Process.

10. Select **Else** and to add an Else statement.
11. Select **Run Job** and to access the Process Builder Run Job Statement page.
12. Type **Step03** as the Run Job statement.
13. Complete a Run job statement to call the testwin.exe program. (*Creating a Run Job Statement* on page 3-16).
14. Click to return to the Process Builder Summary page.

    The Run Job statement is added to the Process
15. Select **Endif** and to add an Endif statement. This closes the first conditional test.
16. Select **If** and to access the Process Builder If Statement page.
17. Type **Step04** for the If step label.
18. Select **Step03** from the list box, **GE** (greater than or equal to) from the **Operator** field, and **8** from the Value field.

    Step03 is the step you will test against.
19. Click to return to the Process Builder Summary page.

    The If statement is added to the Process
20. Select **Exit** and .
21. Select **Endif** and .
22. Select **If** and to access the Process Builder If Statement page.
23. Type **Step05** for the If step label.
24. Select **Step03** from the list box, **LT** (less than) from the Operator field, and **4** from the Value field.

    Step03 is the step you will test against.
25. Click to return to the Process Builder Summary page.

    The If statement is added to the Process
26. Create a Copy statement to copy a file named myfile2 from the local node to a file named yourfile2 on the remote node, and label it **Step06** (see *Creating a Copy Statement* on page 3-7).
27. Click to return to the Process Builder Summary page.
28. Select **Endif** and .
29. Select **Exit** and .
30. Select **Run Task** and to access the Process Builder Run Task Statement page.
31. Assign the Run Task statement the label **Step07**.
32. Complete a Run Task statement to call the goodbye.exe program. (*Creating a Run Task Statement* on page 3-15).
33. Click to return to the Process Builder Summary page.
34. Select **Exit** and .

Adding a Comment to a Process

To add a comment to a Process:

1. Select **Comment** and

to display the Process Builder Comment Statement page.
2. Type the comment text.
3. Click to return to the Process Builder Summary page.

   The Comment statement is added to the Process

Creating a Submit Statement

The Submit statement submits another Process from within a Process. The submitted Process can execute on either the PNODE or SNODE.

To create a Submit statement:

1. From the Process Builder Summary page, select **Submit** and

to display the Process Builder Submit Statement page.
2. Type a label for the Submit step.
3. Select whether the Process is submitted from the PNODE or on the SNODE.
4. Type the full path and name of the Process. If the Process is on the PNODE, you can click to browse to it.

   Note: The browse feature is only available on Connect:Direct OS/390 4.4, Connect:Direct UNIX 3.6, and Connect:Direct Windows 4.1 or later releases.
5. Type a new 1-8 character name for the submitted Process, if you want to rename it when it executes.
6. Click to return to the Process Builder Summary page.

See the online Help or *Glossary* for field descriptions.

Validating Process Syntax

To validate Process syntax, click

from the Process Builder Summary page.

The Process is sent to the Connect:Direct server for syntax validation. If the Process syntax is valid, the message *Validation completed successfully* is displayed.

If the Process syntax is not valid, an error message is displayed. Investigate and correct any errors before submitting the Process.

Saving a Process

To save a Process:

1. From the Process Builder Summary page, click

.

   The Process Save page is displayed.
2. Click the file name **Link** to display the Save As window.

Note: On some Web servers, clicking the file name **Link** displays the Process instead of the Save As window. If this happens, click the browser's **Back** button to return to the Process Save page. Then right-click the file name **Link** and select **Save Target As**.

3. From the Save As window, select a location to save the Process file, rename the file if desired, and click **Save**.

Submitting a Process

To submit a Process syntax, click Submit from the Process Builder Summary page.

The Process is submitted to the Connect:Direct server.

Viewing a Process in Text Format

To view a Process in text format:

1. From the Process Builder Summary page, click Text View.

   The Process is displayed in text format. This view is read-only. You cannot make changes in this view.

Note: Browser User Interface adds a /*BEGIN_REQUESTER_COMMENTS comment block to the beginning of the Process. This block contains operating system and PNODE/SNODE information. This comment block maintains compatibility with Processes built with the Connect:Direct Requester.

2. Click to return to the Process Builder Summary page.

Editing a Process

To edit an existing Process:

1. From the Process Builder Summary page, click Browse... to navigate to and select the Process.
2. Click Import.

   The Process statements are displayed.
3. Click one of the following icons next to a Process statement to edit that statement:

Icon	Description
	Adds a new Process statement using the parameters from the current statement.
	Edits the statement.
	Deletes the statement.

Icon	Description
	Moves the statement down in the Process.

4. When finished, click to save the file.

Sample Processes

This section describes how to build the following sample Processes:

- Copying a File from Connect:Direct UNIX to Connect:Direct Windows
- Copying a File from Connect:Direct Windows to Connect:Direct UNIX and Running a Program on Connect:Direct Windows
- Calling an External Program from a Connect:Direct OS/390 Process
- Calling an External Program from a Connect:Direct Windows Process
- Using a Conditional in a Connect:Direct OS/390 to Connect:Direct Tandem Copy Process

Copying a File from Connect:Direct UNIX to Connect:Direct Windows

This example creates a Process to copy a file name from a Connect:Direct UNIX node to a Connect:Direct Windows node. The parameters in this example are:

- UNIX node name–UNT.3500.PROD1
- Windows node name–WNT.4100.ALTNA
- Source file–/usr/datat/out/invoi01.dat

This example also uses a SYSOPTS statement that converts the data to binary format on the Connect:Direct Windows node.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5) with the following values:

Field	Value
Process Name	UX2NT
PNODE	UNT.3500.PROD1
PNODE Platform	UNIX
SNODE	WNT.4100.ALTNA
SNODE Platform	Windows
Hold	No
Retain	No

2. Add a Copy statement (see *Creating a Copy Statement* on page 3-7) with the following values:

Field	Value
Step Label	copy1
Direction	Send
Source File	/usr/datat/out/invoi01.dat
Source Disposition	SHR
Destination File	c:\users\data\in\invoi01.dat
Copy To SYSOPTS	datatype(binary)

3. Validate and save the Process.

Copying a File from Connect:Direct Windows to Connect:Direct UNIX and Running a Program on Connect:Direct Windows

This Process copies a binary file from a Connect:Direct Windows node to a Connect:Direct UNIX node. If the copy is successful, the Connect:Direct Windows node performs a Run Task statement to delete the source file on the Connect:Direct Windows node. (The SYSOPTS **cmd(del &file1)** parameter deletes the source file.)

The Copy and Run Task statements use symbolic variables. The Connect:Direct Windows desktop parameter is set to **No** because no user input is required for the delete command.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5) with the following values:

Field	Value
Process Name	proc1
PNODE	CD.UNIX
PNODE Platform	UNIX
SNODE	CD.NT
SNODE Platform	Windows
Variables	&file1="d:\data\out\reprts01.dat" &file2="/data/in/reprts01.dat"

2. Add a Copy statement (see *Creating a Copy Statement* on page 3-7) with the following values:

Field	Value
Step Label	copy1
Direction	Receiver
Source File	&file1
Destination File	&file2
Copy From SYSOPTS	datatype(binary)

3. Add an If statement (see *Creating Conditional Statements* on page 3-17) with the following values:

Field	Value
Label	copy1
Operator	Equal to
Value	0

4. Add a Run Task statement (see *Creating a Run Task Statement* on page 3-15) with the following values:

Field	Value
Step Label	run1
Submit Node	SNODE
SYSOPTS	cmd(del &file1)desktop(no)

5. Add an End if statement.
6. Validate and save the Process.

Calling an External Program from a Connect:Direct OS/390 Process

This Process calls an external program named MYTASK on an SNODE and passes the program a list of three parameter addresses.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5) with the following values:

Field	Value
Process Name	proc1
PNODE	CD.390.101
PNODE Platform	OS390
SNODE	CD.390.02
SNODE Platform	OS390

2. Add a Run Task statement (see *Creating a Run Task Statement* on page 3-15) with the following values:

Field	Value
Step Label	STEP1
Submit Node	SNODE
Program Name	MYTASK
SYSOPTS	(PARM=(CL44'DATA.BASE.P1', F'0010', XL8'FFA8'))

3. Validate and save the Process.

Calling an External Program from a Connect:Direct Windows Process

This Process calls an external program named testwin.exe and waits for it to finish. It passes the external program parameters through the SYSOPTS statement.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5) with the following values:

Field	Value
Process Name	CallProg
PNODE	CD.WIN.ALPHA
PNODE Platform	Windows
SNODE	CD.WIN.BETA
SNODE Platform	Windows

2. Add a Run Task statement (see *Creating a Run Task Statement* on page 3-15) with the following values:

Field	Value
Step Label	RTSTEP
Submit Node	SNODE
Program Name	WINNT
SYSOPTS	pgm(C:\winnt35\system32\testwin.exe)

3. Validate and save the Process.

Using a Conditional in a Connect:Direct OS/390 to Connect:Direct Tandem Copy Process

This Process copies a file from a Connect:Direct OS/390 node to a Connect:Direct Tandem node. If the copy is successful, the Process then executes an external program named NEXTPROG on the Tandem node and passes parameters to it as SYSOPTS. If the copy is not successful, the Process terminates.

1. Use the Process Builder to create a new Process (see *Creating a Process Statement* on page 3-5) with the following values:

Field	Value
Process Name	PROC1
PNODE	CD.390
PNODE Platform	OS390
SNODE	CD.TAN

Field	Value
SNODE Platform	Tandem
SNODE User ID	117.202
SNODE Password	PSWRD

2. Add a Copy statement (see *Creating a Copy Statement* on page 3-7) with the following values:

Field	Value
Step Label	STEP01
Direction	Send
Source File	JSMITH.GENPROC.LIB(COPY)
Source Disposition	SHR
Destination File	$B.ROGER.ACCTJAN
Destination Disposition	RPL

3. Add an If statement (see *Creating Conditional Statements* on page 3-17) with the following values:

Field	Value
Step Label	STEP02
Label	STEP01
Operator	Greater Than
Value	0

4. Add an Exit statement.
5. Add an EndIF statement.
6. Add a Run Task statement (see *Creating a Run Task Statement* on page 3-15) with the following values:

Field	Value
Step Label	STEP03
Submit Node	SNODE
Program Name	NEXTPROG
SYSOPTS	(/IN $USER.BGK.T1, TERM $ZTNP1.#PTH001H/)

7. Validate and save the Process.

Using the *Connect:Direct Process Guide* to Create Processes

The *Connect:Direct Process Guide* contains many sample Processes. You can use this manual as a guide to create Processes with the Process Builder. Find the sample Process you want to use as a template in the *Connect:Direct Process Guide*, then use the Process Builder to create the Process labels and statements, substituting your own values for the parameters. *About Processes* on page 3-1 shows the layout of a Process.

The *Connect:Direct Process Guide* is provided on the Browser User Interface installation CD-ROM or can be downloaded from the Sterling Commerce Web site.

Chapter 4

Copying a File

You use the Copy File page to create a Process that copies a data file from one Connect:Direct node to another. The Copy File page contains several subpages that allow you to specify copy options. After creating the Copy File Process, you can save it for future use.

Because the copy options vary according to platform, you must specify the remote platform.

This feature enables you to build only Copy Processes. If you want to build a Process that performs additional Connect:Direct tasks, such as Run Task or Run Job, use the Process Builder feature (see *Building Connect:Direct Processes* on page 3-1).

You do not have to complete all of the options to copy a file. After you submit a Copy File Process, a message is displayed if the submit was successful. See Appendix A, *Messages*, for a description of messages.

Copying a File—Main Options

To copy a file:

1. Click **Copy File** to access the Copy File Main menu.
2. Select the Copy Direction.
3. Select the Connect:Direct platform of the SNODE.
4. Type the SNODE.
5. Type the Process Name.
6. Type the Source File. If the file is on the PNODE, you can click to browse to it.
7. Type the Source DISP.
8. Type the Destination File. If the file is on the PNODE, you can click to browse to it.
9. Type the Destination DISP.
10. Select the Compression characteristics.
11. Select the Checkpoint/Restart characteristics.
12. Click one of the options buttons at the top of the page to specify more information.

See the online Help or *Glossary* for field descriptions.

Copying a File—Control Options

You use the Copy File Control Options page to specify additional options when copying a file.

To use the Copy File Control Options page:

1. Type the Start Date.
2. Type the Start Time.
3. Select the Hold status.

> **Note:** If you submit a Copy File with Hold set to Yes, it is placed on the Hold queue even if you specify a start time. Connect:Direct ignores the start time until the Hold is removed.

4. Select the Priority.
5. Select the Retain option.

> **Note:** If you set the Retain parameter to Yes and set Hold to No or Call, Connect:Direct ignores the Hold parameter.

6. Select the Class.
7. Type the user ID of the person to notify when the copy finishes.
8. If you want to submit the Copy now, click **Submit**.

If you want to specify more information, click one of the options buttons at the top of the page.

See the online Help or *Glossary* for field descriptions.

Copying a File—Security Options

You use the Copy File Security Options page to specify security options when copying a file. Connect:Direct encrypts the Process before sending it.

To use the Copy File Security Options page:

1. Type the PNODE User ID.
2. Type the PNODE Password.
3. Type the SNODE User ID.
4. Type the SNODE Password.
5. If you want to submit the Copy now, click **Submit**.
6. If you want to specify more information, click one of the options buttons at the top of the page.

See the online Help or *Glossary* for field descriptions.

Copying a File—Accounting Data Options

You use the Copy File Accounting Data page to specify accounting data.

To use the Copy File Accounting Data page:

1. Type a text string to use as accounting information for the PNODE. You can enter up to 256 characters.
2. Type a text string to use as accounting information for the SNODE. You can enter up to 256 characters.
3. If you want to submit the Copy now, click **Submit**.
4. If you want to specify more information, click one of the options buttons at the top of the page.

Copying a File—Copy From Options

You use the Copy From page to specify options for the platform that you are copying from. Based on your operating system, you are presented with options for one of the following Connect:Direct platforms:

- OpenVMS Copy From Options
- OS/390 Copy From Options
- OS/400 Copy From Options
- Tandem NonStop Kernel Copy From Options
- VM Copy From Options
- VSE Copy From Options
- Windows and UNIX Copy From Options

The following sections describe the Copy From options for each platform.

OpenVMS Copy From Options

To specify OpenVMS Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click to browse to it.
2. Select the disposition of the source file.
3. Type the System Operations (SYSOPTS).
4. Type any Data Exit information.
5. Type the selection criteria to select files to copy.
6. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

OS/390 Copy From Options

To specify OS/390 Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click to browse to it.
2. Type the Data Control Block (DCB).
3. Select the disposition of the source file using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Type the Unit address.

5. Type the Volume number.
6. Type the Label.
7. Type the SYSOPTS.
8. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

OS/400 Copy From Options

To specify OS/400 Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click … to browse to it.
2. Type the SYSOPTS.
3. Select the disposition of the source file using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

Tandem NonStop Kernel Copy From Options

To specify Tandem NonStop Kernel Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click … to browse to it.
2. Type the SYSOPTS.
3. Type the DCB information.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term
5. Type the Typekey.
6. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

VM Copy From Options

To specify VM Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click … to browse to it.
2. Type the File Type.
3. Type the link information in the following four fields:
   - User ID
   - Password
   - Access Mode
   - CUU

4. Type the DCB information.
5. Type the Unit address.
6. Type the Volume number.
7. Type the Label.
8. Type the Typekey.
9. Select the source disposition.
10. Select if you want to use the date value from the file be be copied as the creation date for the new file.
11. Select if you want to replace destination files with the same name as the files being sent.
12. Specify any selection criteria for files to send.
13. Specify any exclusion criteria for files to send.
14. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

VSE Copy From Options

To specify VSE Copy From options:

1. Type the Source File Name. If the file is on the PNODE, you can click … to browse to it.
2. Type the DCB information.
3. Type the SYSOPTS.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term
5. Type the Space value.
6. Type the Unit address.
7. Type the Volume number.
8. Type the Label.
9. Specify the VSAM catalog where the VSAM files reside.
10. Type the Typekey.
11. Type the number of I/O buffers.
12. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

Windows and UNIX Copy From Options

The Windows and UNIX platforms use the same Copy From options. To specify these options:

1. Type the Source File Name. If the file is on the PNODE, you can click … to browse to it.
2. Select the Source Disposition.
3. Type the SYSOPTS.
4. Click **Copy To** to specify options for the platform that you are copying the file to.

See the online Help or *Glossary* for field descriptions.

Copying a File—Copy To Options

Use the Copy To page to specify options for the platform that you are copying to. Depending on the operating system you are copying to, you are presented with options for one of the following Connect:Direct platforms:

- OpenVMS Copy To Options
- OS/390 Copy To Options
- OS/400 Copy To Options
- Tandem NonStop Kernel Copy To Options
- VM Copy To Options
- VSE Copy To Options
- Windows/UNIX/Unknown Copy To Options

The following sections describe the Copy To options for each platform.

OpenVMS Copy To Options

To specify OpenVMS Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click … to browse to it.
2. Select the disposition of the destination file.
3. Type the SYSOPTS.
4. Type the DCB information.
5. Type any Data Exit information for the copy.
6. Type the Typekey.
7. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

OS/390 Copy To Options

To specify OS/390 Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click … to browse to it.
2. Type the Data Control Block (DCB).
3. Select the destination file disposition using the following three subfields:
   - Access
   - Normal Term
   - Abnormal Term
4. Type the Space value.
5. Type the Unit address.
6. Type the Volume number.
7. Type the Label.
8. Type the Typekey.
9. Type the SYSOPTS.

10. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

OS/400 Copy To Options

To specify OS/400 Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to it.
2. Type the SYSOPTS.
3. Type the Unit address.
4. Select the disposition of the destination file.
5. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

Tandem NonStop Kernel Copy To Options

To specify Tandem NonStop Kernel Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to it.
2. Type the SYSOPTS.
3. Type the DCB information.
4. Select the disposition of the source file using the following two subfields:
   - Access
   - Normal Term
5. Type the Space value.
6. Type the Typekey.
7. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

VM Copy To Options

To specify VM Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click ... to browse to it.
2. Type the File Type.
3. Type the link information using the following four fields:
   - User ID
   - Password
   - Access Mode
   - CUU
4. Select the disposition of the destination file.
5. Select if you want to create an IBM RACF profile for the new file.
6. Type the DCB information.

7. Type the Unit address.
8. Type the Volume number.
9. Type the Label.
10. Type the Typekey.
11. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

VSE Copy To Options

To specify VSE Copy To options:

1. Type the Destination File Name. If the file is on the PNODE, you can click to browse to it.
2. Type the DCB information.
3. Type the SYSOPTS.
4. Select the disposition of the destination file using the following two subfields:
   - Access
   - Normal Term
5. Type the Space value.
6. Type the Unit address.
7. Type the Volume number.
8. Type the Label.
9. Specify the VSAM catalog where the VSAM files reside.
10. Type the Typekey.
11. Type the number of I/O buffers.
12. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

Windows/UNIX/Unknown Copy To Options

The Windows and UNIX platforms use the same Copy To options. The Unknown platform selection also uses these options. To specify these options:

1. Type the Destination File Name. If the file is on the PNODE, you can click to browse to it.
2. Select the Destination Disposition.
3. Type the SYSOPTS.
4. Click **Submit** to submit the copy Process.

See the online Help or *Glossary* for field descriptions.

Saving a Copy File Process

The following procedures describe how to save a Copy File Process to your browser's file system. The exact procedure depends on your browser type.

Saving a Copy File Process in Internet Explorer

To save a Copy File Process using Internet Explorer:

1. Click **Save**.

   The Save Copy File Process window is displayed.

2. Click the highlighted link.

   If you did not name the Process, the link is browser.cdp. If you named the Process, the link is *process-name*.cdp.

   A file download window is displayed.

   Note: Some Web servers do not display the file download window. If the file dialog window is not displayed, right-click on the link and select **Save Target as**. Go to step 5.

3. Select **Save this file to disk**.
4. Click **OK**.

   A Save As window is displayed.

5. Change the file name if desired.
6. Select a location to store the Process.
7. Click **Save**.

Saving a Copy File Process in Netscape Navigator

To save a Copy File Process using Netscape Navigator:

1. Click **Save**.

   The Save Copy File Process window is displayed.

2. Click the highlighted link.

   If you did not name the Process, the link is browser.cdp. If you named the Process, the link is *process-name*.cdp.

   An unknown file type window is displayed.

   Note: Some Web servers do not display the file download window. If the file dialog window is not displayed, right-click on the link and select **Save Link as**. Go to step 4.

3. Click **Save File**.

   A Save As window is displayed.

4. Change the file name if desired.
5. Select a location to store the Process.
6. Click **Save**.

Chapter 5

Submitting a Process

You use the Submit Process page to submit an existing Process. The Submit Process page contains several subpages that allow you to specify various options for the Process. These options override any existing parameters in the Process.

You do not have to complete all of the options to submit a Process; you can submit the Process as soon as you complete the first page. The Browser User Interface encrypts the Process before sending it.

Note: The Process syntax is checked by the Connect:Direct platform after you submit the Process. The Browser User Interface does not check Process syntax.

Submitting a Process—Main Options

To submit an existing Process:

1. Click **Submit Process** to access the Submit Process Main Options page.
2. If the Process resides on a Connect:Direct server system, type the member name of the Process library (OS/390 only).

   If the Process resides on the browser's file system, click **Browse** to navigate to and select the Process.

   Note: If the Process is located elsewhere other than the Connect:Direct server, the maximum size of the Process is 8 KB.
3. If desired, type a new name for the Process.
4. If desired, type the SNODE.
5. If you want to submit the Process now, click **Submit**.
6. If you want to specify more information, click one of the options buttons at the top of the page.

See the online Help or *Glossary* for field descriptions.

Submitting a Process—Control Options

You use the Submit Process Control Options page to specify additional options when submitting a Process.

To use the Submit Process Control Options page:

1. Type the Start Date.
2. Type the Start Time.
3. Select the Hold Status.

> **Note:** If you submit a Process with Hold set to Yes, it is placed in the Hold queue even if you specify a start time. Connect:Direct ignores the start time until the Hold is removed.

4. Select the Priority for the Process.
5. Select the Retain Option.

> **Note:** If you send or receive a file with the Retain parameter set to Yes and Hold set to No or Call, Connect:Direct ignores the Hold parameter.

6. Select the class.
7. Type the user ID of the person to notify when the Process finishes.
8. If you want to submit the Process now, click **Submit**.

If you want to specify more information, click one of the options buttons at the top of the page.

See the online Help or *Glossary* for field descriptions.

Submitting a Process—Security Options

You use the Submit Process Security Options page to specify security options when submitting a Process.

To use the Submit Process Security Options page:

1. Type the PNODE User ID.
2. Type the PNODE Password.
3. Type the SNODE User ID.
4. Type the SNODE password.
5. If you want to submit the Process now, click **Submit**.
6. If you want to specify more information, click one of the options buttons at the top of the page.

See the online Help or *Glossary* for field descriptions.

Submitting a Process—Accounting Data

You use the Submit Process Accounting Data page to specify accounting data when submitting a Process.

To use the Submit Process Accounting Data page:

1. Type a text string to use as accounting information for the PNODE. You can enter up to 256 characters.
2. Type a text string to use as accounting information for the SNODE. You can enter up to 256 characters.
3. If you want to submit the Process now, click **Submit**.
4. If you want to specify more information, click one of the options buttons at the top of the page.

Submitting a Process—Symbolic Variables

You use the Submit Process Symbolic Variables page to specify or override symbolic variables when submitting a Process. You must assign values to all symbolic parameters in the Process before you submit the Process. Connect:Direct substitutes the assigned value for the variable during Process execution.

See the *Connect:Direct Process Guide* for your platform for symbolic substitution rules.

To use the Submit Process Symbolic Variables page:

1. Type the variable names and values you have created.
2. If you want to submit the Process now, click **Submit**.
3. If you want to specify more information, click one of the options buttons at the top of the page.

Chapter 6

Viewing Process Information

You use the Select Process page to view Process information as Processes progress through Connect:Direct. You can choose the Processes to display based on selection criteria such as Process name and number, SNODE, queue, status, or submitter node and user ID.

After you make your selections and click **Select Process**, summary Process information is displayed. You can then select to display detailed information about a particular Process. You can also select to change, delete, or suspend a Process.

View Process Information

To view Process details:

1. Click **Select Process**. The Select Process Request page is displayed.
2. Type the selection criteria in one or more of the following fields:
   - Process name
   - Process number
   - SNODE
   - Queue
   - Status
   - Submitter node and user ID

   You do not have to enter all the parameters on this page. Separate multiple entries in a field with commas.
3. Click **Select Process** to display the Process Results page.

See the online Help or *Glossary* for field descriptions.

Select Process Results

The following information is displayed on the Select Process Results page.

Field	Description
Name	Specifies the Process name.
Num	Specifies the Process number.
Step Name	Specifies the name of the step within the Process.
Status	Specifies the Process status. The statuses are: • Execution (EX)–The Process is executing. • Pending Execution (PE)–The Process is selected for execution and startup is in progress. • Waiting Connection (WC)–The Process is ready for execution, but all available connections to the SNODE are in use. • Waiting Start Time (WS)–The Process is waiting in the Timer queue because it was submitted with a start time or date that has not expired. When the start time is reached, the Process is placed into the Wait queue for scheduling. • Held Suspension (HS)–The operator issued a delete Process request with Hold set to Yes. • Timer Retry (RE)–A Process error occurred and the Process was moved to the Timer queue in RE status with short-term and long-term wait times beginning. • Held for Call (HC)–The Process was submitted with the Hold option set to Call. A session started from either node moves the Process to the Wait queue in WC status. The Process is placed in the Execution queue when it is selected for execution. • Held Due to Error (HE)–A session error or other abnormal condition occurred. • Held Initially (HI)–The Process was submitted with the Hold option set to Yes. • Held By Operator (HO)–A change Process request with Hold set to Yes was issued. • Held By Retain (HR)–The Process was submitted with retain after execution set to Yes or Initial.
Queue	Specifies the queue containing the Process. The queues are: • All–All Processes in the TCQ. • Execution–Processes currently being executed. • Hold–Processes that are either held by the user or operator or held due to execution errors. • Timer–Processes that are scheduled to be executed later, or Processes in time retry due to session errors. • Wait–Processes that are eligible for execution and are awaiting selection.
Submitter Node	Specifies the node from which the Process was submitted.
Submitter	Specifies the user ID that submitted the Process.
PNODE	Specifies the primary node used for the Process.
SNODE	Specifies the secondary node used for the Process.
Message ID	Specifies the current message ID for the Process. Click the ID to display the full message text.
Byte Count	Specifies the number of bytes transferred so far during the current Process step (if the Process is executing).

Click one of the following icons to perform an action on a record.

Icon	Description
	Click to update the display as the Process runs. If the Process ended, summary results are displayed.

Icon	Description
	Click to change Process information. See *Change Process Parameters* on page 9-1 for more information.
	Click to delete the Process. See *Delete a Process* on page 9-3 for more information.
	Click to suspend the Process. See *Suspend a Process* on page 9-4 for more information.
	Click to display detail information about a Process.

Process Detail Results

The following table lists, in alphabetic field name order, the information that can be displayed on the Process Details page. Depending on the Process, not all fields may be displayed.

Click the navigational symbols to move through the records, to return to the Select Process Results page, to refresh the display, or to change, delete, or suspend this Process.

Field	Description
Byte Count	Specifies the number of bytes transferred so far during the current Process step (if the Process is executing).
Condition Code (also known as completion code or CC)	Specifies the return code values associated with step termination. Valid completion codes are: • 0–Successful execution of the Process. • 4–A warning error was encountered. The statement probably finished normally, but you should verify the execution results. • 8–An error occurred during Process execution. • 16–A severe error occurred during Process execution. • Any–All values.
Checkpoint	Indicates if Checkpoint is activated for this Process.
Class	Determines the node-to-node session on which a Process can be executed.
DestDisp1	Specifies what to do with the destination file after a copy is complete. The destination DISP values are: • NEW–Creates a new file on the destination node. • RPL–Creates a new file on the destination node or, if the file already exists, replaces the named file on the destination node. • MOD–Appends data to the end of an existing file for which you have exclusive rights.
DestDisp2	Specifies the disposition of the destination file after a successful Process step termination that results in a zero completion code.
DestDisp3	Specifies the disposition of the destination file after an abnormal Process step termination that results in a non-zero completion code.
Destination File	Specifies the destination file used in the Process.

Field	Description
EncAlg Name	Specifies the name of the encryption algorithm.
Exec Priority	The priority under which the operating system thread that executes Connect:Direct runs. Applies to Windows only.
Extended Compression	Specifies the extended compression option.
Feedback	Specifies the feedback code for the module. The value depends on the module that creates it. Your Connect:Direct Customer Support representative may ask you for this value.
From Node	Specifies the node that sent the file. • S–SNODE • P–PNODE
Function	Specifies the function being performed.
Hold	Specifies the Hold status of a Process. The Hold statuses are: • No–The Process is not placed in the Hold queue. It is executed as soon as resources are available. • Yes–The Process is held in the Hold queue in Held Initially (HI) status until it is explicitly released. • Call–The Process is held until the SNODE, as specified in the Process SNODE parameter, connects to the PNODE. The Process is then released for execution. The Process is also released when another Process on the PNODE connects to the SNODE.
Local Node	Specifies the node that processed the file. • S–SNODE • P–PNODE
Log Date/Time	Specifies the date and time that the statistics record was written to the statistics log.
Message ID	Specifies the current message ID for the Process. Click the ID to display the full message text.
PNODE	Specifies the primary node.
Priority	Specifies the priority assigned to the Process. The lower the number the higher the priority.
Proc Name	Specifies the Process name.
Proc Number	Specifies the Process number.
Queue	Specifies the queue containing the Process. The queues are: • All–All Processes in the TCQ. • Execution–Processes currently being executed. • Hold–Processes that are either held by the user or operator or held due to execution errors. • Timer–Processes that are scheduled to be executed later, or Processes in time retry due to session errors. • Wait–Processes that are eligible for execution and are awaiting selection.
Record Count	Specifies the number of records in the file that was sent.
Restart	Indicates if Restart is activated for this Process.
Retain	Indicates whether Connect:Direct retains a copy of a Process after it is executed. The Retain options are: • Initial–Specifies to retain the Process in the Hold queue for execution every time that Connect:Direct initializes. • No–Specifies not to retain the Process after it is executed. • Yes–Specifies to retain the Process in the Hold queue after it is executed. You can release the Process for execution later or delete it.

Field	Description
Scheduled Date/Time	Specifies the date and time that a Process is scheduled to be executed.
SecurePlus Enabled	Indicates that Secure+ is activated for the Process.
Signature	Indicates that digital signature is activated.
SNODE	Specifies the secondary node used for the Process.
Source Disp1	Specifies access to the source file during a copy operation. The source DISP values are: • SHR–The file can be opened for read-only access while it is being copied. • OLD–The file cannot be opened during the transfer.
Source Disp2	Specifies the disposition of the source file after a successful Process step termination that results in a zero completion code.
Source Disp3	Specifies the disposition of the source file after an abnormal Process step termination that results in a non-zero completion code.
Source File	Specifies the source file used in the Process.
Standard Compression	Specifies the standard compression option.
Status	Specifies the Process status. The statuses are: • Execution (EX)–The Process is executing. • Pending Execution (PE)–The Process is selected for execution and startup is in progress. • Waiting Connection (WC)–The Process is ready to execute, but all available connections to the SNODE are in use. • Waiting Start Time (WS)–The Process is waiting in the Timer queue because it was submitted with a start time or date that has not expired. When the start time is reached, the Process is placed into the Wait queue for scheduling for execution. • Held Suspension (HS)–The operator issued a delete Process request with Hold set to Yes. • Timer Retry (RE)–A Process error occurred and the Process was moved to the Timer queue in RE status with short-term and long-term wait times beginning. • Held for Call (HC)–The Process was submitted with the Hold parameter set to Call. A session started from either node moves the Process to the Wait queue in WC status. The Process is placed in the Execution queue when it is selected for execution. • Held Due to Error (HE)–A session error or other abnormal condition occurred. • Held Initially (HI)–The Process was submitted with the Hold option set to Yes. • Held By Operator (HO)–A change Process request with Hold set to Yes was issued. • Held By Retain (HR)–The Process was submitted with retain after execution set to Yes or Initial.
Step Name	Specifies the current Process step.
Submit Node	Specifies the node from which the Process was submitted.
Submitter	Specifies the user ID that submitted the Process.
XMIT Bytes	Specifies the number of bytes transmitted.
XMITRUs Buffers	Specifies the number of network buffers transmitted.

Chapter 7

Viewing Statistics

Connect:Direct maintains statistics on all Connect:Direct activity, including completion records for each step of a Process. You use the Select Statistics page to view Process statistics. You can retrieve statistics based on various criteria, such as Process name, start and stop date, start and stop time, and so on.

After you make your selections and click **Select Statistics**, summary statistics are displayed. You can then select to display detailed statistics about a particular Process.

View Process Statistics

Perform the following procedure to view Process statistics. You do not need to enter data in all of the fields on this page; you only need to supply enough data to specify the selection criteria.

1. Click **Select Statistics**. The Select Statistics Request page is displayed.
2. Type the selection criteria in one or more of the following fields:
   - Process name
   - Process number
   - Completion code
   - Record categories
   - Record IDs
   - SNODE
   - Start date
   - Start time
   - Stop date
   - Stop time
   - Submitter node and user ID
   - Source file name
   - Destination file name

   You do not have to enter all the parameters on this page. Separate multiple entries in a field with commas.
3. Click **Select Statistics** to display the Process statistics.

The following table explains the fields on this page:

Field	Description
Process Names	Specifies the name of the Process. Separate multiple Process names with commas.
Process Numbers	Specifies the system-assigned Process number. Separate multiple Process numbers with commas.
Completion Code operand and Completion Code	Specifies the completion code operator and return code values associated with step termination. Select a Completion Code operand from the drop-down box. The completion code operands are **Equal to**, **Greater or Equal to**, **Greater than**, **Less or equal to**, **Less than**, and **Not Equal to**. Valid completion codes are: • Any–All values. • 0–Successful execution of the Process. • 4–A warning error was encountered. The statement probably finished normally, but you should verify the execution results. • 8–An error occurred during Process execution. • 16–A severe error occurred during Process execution.
Record Categories	Specifies whether the record is related to an event or to a Process. The values are: • CAEV–The record is related to a CONNECT:Direct event, such as a CONNECT:Direct shutdown. • CAPR–The record is related to a CONNECT:Direct Process.
Record IDs	Specifies the type of statistics record generated. See page 7-3 for a list of Record IDs.
SNODE	Specifies the secondary CONNECT:Direct node.
Start Date	View Processes starting on this date.
Start Time	View Processes starting on this time.
Stop Date	View Processes ending on this date.
Stop Time	View Processes ending at this time.
Submitter (Node, user ID)	Specifies the node and user ID that submitted the Process.
Source file name	Specifies the source file name.
Destination file name	Specifies the destination file name.

Select Statistics Results

The following information is displayed on the Select Statistics Results page. Click to display detail statistics.

Field	Description
Log Date/Time	Specifies the date and time that the statistics record was written to the log file.

Field	Description
Type	Specifies whether the record is related to an event or to a Process. The values are: • CAEV–The record is related to a Connect:Direct event, such as a Connect:Direct shutdown. • CAPR–The record is related to a Connect:Direct Process.
Rec ID	Specifies the type of statistics record generated. See Appendix B, *Connect:Direct Statistic Record IDs,* for a list of statistic record IDs.
CC (also known as condition code or completion code)	Specifies the return code values associated with step termination. Valid codes are: • 0–Successful execution of the Process. • 4–A warning level error was encountered. The statement probably finished normally, but you should verify the execution results. • 8–An error occurred during Process execution. • 16–A severe error occurred during Process execution. • Any–All values.
FDBK	Specifies the feedback code for the module. The value depends on the module that creates it. Your Connect:Direct Customer Support representative may ask you for this value.
MSGID	Specifies the current message ID for the Process. Click the ID to display the full message text.
PName	Specifies the Process name.
Pnum	Specifies the Process number assigned by Connect:Direct when the Process was submitted.
Step Name	Specifies the name of the step within the Process.

Select Statistics Details

The following table lists in alphabetic order the information that can be displayed on the Select Statistics Details page. The exact information displayed depends on the statistics record contents.

Click the navigational symbols at the top of the page to move through the records or return to the Select Statistics Results page.

Field	Description
Bytes Read	Specifies the number of bytes read from the source file.
Bytes Received	Specifies the number of bytes received by the destination file.
Bytes Sent	Specifies the number of bytes sent to the destination file.
Bytes Written	Specifies the number of bytes written to the destination file.
Checkpoint	Indicates if checkpointing is activated for this Process.
Class	Determines the node-to-node session on which a Process can be executed.
Condition Code (or CC)	Specifies the return code values for the step termination. Valid codes are: • 0–Successful Process execution. • 4–A warning error was encountered. The statement probably completed normally, but you should verify the execution results. • 8–An error occurred during Process execution. • 16–A severe error occurred during Process execution. • Any–All values.

Field	Description
Control Block Enc Alg	Specifies the algorithm used to encrypt Connect:Direct control blocks used for strong authentication. This is the first algorithm ID in the PNODE list that is also in the SNODE list.
Cur Signature Verified	Specifies if the current encryption key was used for verifying the digital signature.
Dest Disposition 1	Specifies what to do with the destination file after a copy is complete. The destination DISP values are: • NEW–Creates a new file on the destination node. • RPL–Creates a new file on the destination node or, if the file already exists, replaces the named file on the destination node. • MOD–Appends data to the end of an existing file for which you have exclusive rights.
Dest Disposition 2	Specifies the disposition of the destination file after a successful Process step termination that results in a zero completion code.
Dest Disposition 3	Specifies the disposition of the destination file after an abnormal Process step termination that results in a non-zero completion code.
Destination File	Specifies the name of the destination file.
Exec Priority	Specifies the priority under which the operating system thread that executes Connect:Direct runs. Applies to Windows only.
Extended Compression	Specifies the extended compression option.
Feedback	Specifies the feedback code for the module. The value depends on the module that creates it. Your Connect:Direct Customer Support representative may ask you for this value.
From Node	Specifies the node that sent the file. • S–SNODE • P–PNODE
Function	Specifies the function being performed.
Hold	Specifies the Hold status of a Process. See page 6-4 for a list of Hold statuses.
Link Fail	Indicated whether a link failure occurred during transmission.
Local Condition Code	Specifies the condition code produced by the local node.
Local Message ID	Specifies the message ID produced by the local node.
Local Node	Specifies the node that processed the file. • S–SNODE • P–PNODE
Log Date/Time	Specifies the date and time that the statistics record was written to the statistics log.
Member Name	The name of the member copied.
Merge EA	Specifies the merged data encryption algorithm resulting from the merger of the PNODE and SNODE encryption algorithms.
Merge Signature	Specifies the merged results from the digital signature settings for the PNODE and SNODE. If digital signature are enabled for either the PNODE or the SNODE, then digital signatures are used for the session. If digital signatures are not enabled for both the PNODE and SNODE, digital signatures are not used.
Message ID	Specifies the current message for the Process. Click the message ID to display the full message text.

Field	Description
Other Condition Code	Specifies the condition code produced by the other (remote) node.
Other Message ID	Specifies the message ID produced by the other (remote) node.
PNODE	Specifies the primary node.
PNODE Accounting Info	Specifies user-entered PNODE accounting information.
PNODE Enc Alg List	Specifies the data encryption algorithm used on the PNODE.
PNODE Enc Data	Specifies the PNODE encryption data.
PNODE Signature	Specifies if digital signatures are enabled for the PNODE.
Prev Signature Verified	Specifies if the previous encryption key was used for verifying the digital signature.
Priority	Specifies the priority assigned to the Process. The lower the number the higher the priority.
Proc Name	Specifies the Process name.
Proc Number	Specifies the Process number.
Queue	Specifies the queue containing the Process. See page 6-2 for a list of queues.
Record Category	Specifies whether the record is related to an event or a Process. The values are • CAEV–The record is related to a Connect:Direct event, such as a Connect:Direct shutdown. • CAPR–The record is related to a Connect:Direct Process.
Record ID	Specifies the record type indicator. See page 7-3.
Records Read	Specifies the number of records read from the source file.
Records Written	Specifies the number of records written to the destination file.
Restart	Indicates whether the Process was restarted.
Retain	Indicates whether Connect:Direct retains a copy of a Process after it is executed. See page 6-4 for a list of Retain options.
RUs Received	Specifies the number of buffers received by the destination file.
RUs Sent	Specifies the number of buffers sent to the destination file.
RUs Size	Specifies the size of buffers received by the destination file.
Scheduled Date/ Time	Specifies the date and time that a Process is scheduled to be executed.
Secure+ Enabled	Indicates that Secure+ is activated for the Process.
SNODE	Specifies the name of the secondary node.
SNODE Accounting Info	Specifies user-entered SNODE accounting information.
SNODE Enc Alg List	Specifies the data encryption algorithm used on the SNODE.
SNODE Enc Data	Specifies the SNODE encryption data.
SNODE Signature	Specifies if digital signatures are enabled for the SNODE.

Field	Description
Source Disposition 1	Specifies access to the source file during a copy operation. The source disposition values are: • SHR–The file can be opened for read-only access while it is being copied. • OLD–The file cannot be opened during the transfer.
Source Disposition 2	Specifies the disposition of the source file after following a successful Process step termination that results in a zero completion code.
Source Disposition 3	Specifies the disposition of the source file after following an abnormal Process step termination that results in a non-zero completion code.
Source File	Specifies the name and location of the source file.
Standard Compression	Specifies the standard compression option.
Status	Specifies the Process status. See page 6-5 for a list of status codes.
Step Name	Specifies the Process step.
Submit Date/Time	Specifies the date and time that the Process was submitted.
SYSOPTS	Specifies the platform-specific system operations. These parameters specify the data type, translation tables, inherited rights, attributes, and trustees.
Translation	Specifies if the data was translated.

Chapter 8

Viewing Message Text

The Select Message function allows you to view the short and long message text for a selected message ID. To view the message text, type the message ID and click **Select Message**. The message text is displayed. Click the browser's **Back** button to specify another message ID, or select another function.

Chapter 9

Controlling Processes

The Process Control function allows you to:

- Change Process Parameters
- Delete a Process
- Suspend a Process

Change Process Parameters

To change the parameters for one of more existing Processes that have not executed yet:

1. Click **Process Control**.
2. Click **Change Process**.

   The Change Process page is displayed.
3. Specify the Processes you want to change.

   You can select the Processes to change by:

   - Node name
   - Process name
   - Process number
   - SNODE (not used for OS/390)
   - Submitter node and user ID

   Separate multiple entries in a field with a comma or a space.
4. Type the parameters you want to change.
5. Click **Submit**.

The following table describes the parameters that you can change.

Parameters

Parameter	Description
Class	Specifies the preferred session class for the Process. The Process can execute in the class specified or any higher class. Values range from one to the maximum number of PNODE sessions defined in the network map definition. This value overrides any defaults.
Debug	Connect:Direct OS/390 only. Specifies the 8-position trace setting for this Process. This allows you to specify a trace for only this Process.
Destination Node	Specifies the node that this Process communicates with.
Plexclass	Specifies the class that directs the Process to only certain servers in a Connect:Direct/Plex environment. This parameter does not apply to a Connect:Direct/Stand-alone server. The format is PNODE class, SNODE class. Each class is 1-8 characters long.
Hold	Specifies the Hold status of a Process. • No–The Process is not placed in the Hold queue. It executes as soon as resources are available. • Yes–The Process is held in the Hold queue in a Held Initially (HI) status until it is explicitly released. • Call–The Process is held until the SNODE, as specified in the Process SNODE parameter, connects to the PNODE. The Process is then released for execution. The Process is also released when another Process on the PNODE connects to the SNODE.
Priority	Specifies the priority of a Process in the Transmission Control queue. Connect:Direct uses the Priority parameter for Process selection. Values range from 1–15. The lower the number the higher the priority. A Process with higher priority is selected for execution before a Process with a lower priority. This parameter does not affect the priority during transmission.
Release	Releases the Process for execution from its current queue.
Retain	Specifies whether Connect:Direct retains a copy of a Process after it executes. If you specify Retain with a start time, the Process is released for execution at the specified time. Each time a retained Process is released, Connect:Direct creates a copy with a new Process number. The copy is executed, and the original Process remains in the queue. The Retain options are: • Initial–Specifies to retain the Process in the Hold queue for execution every time that Connect:Direct initializes. Do not specify a start time if you choose this option. • No–Specifies not to retain the Process after it executes. • Yes–Specifies to retain the Process in the Hold queue after it executes. You can release the Process for execution later or delete it. When you specify a start date and start time, set **Retain** to **Yes** to continually execute the Process at the scheduled time.

Parameter	Description
Restart	Specifies the conditions for restarting an interrupted Process. Use this parameter to restart a data transmission at the last checkpoint before the interruption or at a previous checkpoint position. • NO specifies to restart the COPY step at the beginning of the transmission. • FIRST=volume sequence number specifies to restart the COPY step at the beginning of the volume designated by the volume sequence number. • FIRST=SER=volume serial number specifies to restart the COPY step at the beginning of the volume serial given. • LAST=volume sequence number specifies to restart the COPY step at the end of the volume designated by the volume sequence number. • LAST specifies to restart the COPY step at the last block on the volume if the output is disk or at the last checkpoint on the volume if the output is tape. • LAST=SER=volume serial number specifies to restart the COPY step at the end of the volume serial given. • VOLCNT=n specifies to change the volume count on the interrupted COPY step to the specified value. Use this parameter to increase the number of output volumes if the COPY step was interrupted because the volume count was too small.
Start Time	Specifies the time to execute the Process.

Delete a Process

To delete one or more Processes that have not executed yet:

Note: You cannot delete an executing Process. However, you can suspend an executing Process, then delete it.

1. Click **Process Control**.
2. Click **Delete Process**.

   The Delete Process page is displayed.
3. Specify the Processes you want to delete.

   You can select the Processes to delete by:

   - Process name
   - Process number
   - SNODE (not used for OS/390)
   - Submitter node and user ID

   Separate multiple entries in a field with a comma or a space.
4. Click **Submit**.

Suspend a Process

To suspend one or more executing Processes:

1. Click **Process Control**.
2. Click **Suspend Process**.

   The Suspend Process page is displayed.
3. Specify the Processes you want to suspend.

   You can select the Processes to suspend by:

   - Process name
   - Process number
   - SNODE (not used for OS/390)
   - Submitter node and user ID

   Separate multiple entries in a field with a comma or a space.
4. Click **Submit**.

Appendix A

Messages

The Browser User Interface displays the following messages when you successfully complete a function or when a function is unsuccessful.

Message	Description	Action
Cannot connect to the Connect:Direct server.	The Connect:Direct server is not monitoring the specified port, or the server network is down.	Verify that the Connect:Direct server is running.
Cannot find node file.	You left the Node Name field blank, and the default node file is not in the server directory.	Ask the system administrator to verify that the node file associated with your user ID exists in the server directory.
Cannot open Node property file.	Either the node property file does not exist or it cannot be read.	Ask the system administrator to verify that the node property file exists and that it is readable.
Change Process successful.	The Change Process command completed successfully.	None.
Change Process failed.	The Change Process failed.	Review the Change Process parameters and submit the Change Process command again.
Connect:Direct server port number is invalid.	Either you entered an invalid port number during signon, or the node property file has an invalid port number.	Sign on again with a valid port number. If you still get this message, ask the system administrator to verify that the node property file has a valid port number.
Copy File failed.	The Copy File command failed.	Use Select Process to determine why the copy failed. Make the appropriate corrections and submit the Copy again.
Default node does not exist.	You left the Node Name field blank, and no default node name was set up in the system property file and user property file.	Either type the node name when you sign on, or ask the system administrator to set up a default node name.
Delete Process successful.	The Delete Process command completed successfully.	None.
Delete Process failed.	The Delete Process command failed.	Review the Delete Process parameters and submit the Delete Process command again.
Direct node port number is invalid. Please try again.	You tried to sign on with an invalid port number.	Either type a valid port number when you sign on, or ask the system administrator to associate user ID in the user property file with a valid node and port number.

Message	Description	Action
Error: Connection Exception! Please try again.	You tried to logon with a valid user ID, but with an invalid IP address or port number.	Either type a valid address/port number when you sign on, or ask the system administrator to associate a node with your user ID in the user property file.
Error: Logon failed! User ID or password may be invalid.	Invalid user ID/password combination.	Either type a valid user ID and password when you sign on, or ask the system administrator to set up a default user ID in the system property file.
Error: No Cookies Support	You tried to log on to Connect:Direct through the Browser User Interface, and cookies are disabled on your browser.	Enable cookies on your browser, then log on to the Browser User Interface again.
Invalid message ID.	You requested message text for a message ID that does not exist.	Verify the message ID and try again.
Local file is not attached. Return code: 735	You tried to submit a Process with a Process file name that does not exist in the browser's file system.	Supply an existing Process file name and resubmit.
Node, Address & Port must be specified.	You tried to add a node property record without the required information.	Enter the node, address, and port information and click **Add**.
No Node hostname/IP address is defined. Please try again!	You tried to sign on with a user ID without supplying a valid node name or IP address.	Either type a valid node name and IP address when you sign on, or ask the system administrator to associate a node with your user ID in the user property file.
No password is defined. Please try again.	Missing password.	Enter the user ID and password and click **Signon**.
No Process matches your criteria.	No Processes match the selection criteria you supplied.	If you think you should have found Processes, verify the selection criteria and try again.
No statistic matches your criteria.	No statistic records match the selection criteria you supplied.	If you think you should have found statistics records, verify the selection criteria and try again.
No user ID is defined. Please try again.	You did not type anything in the User ID field, and a default user does not exist.	Either type a user ID when you sign on, or ask the system administrator to set up a default user ID in the system property file.
Only a node with a Node property file defined can be accessed.	Either you entered a node name that does not match an entry in the node property file, or you left the node name field blank and the node name was not set up in the node property file.	Ask the system administrator to verify the node property file setup.
Only users with a User property file defined can access the Connect:Direct server.	Your user ID was not set up in the user property file.	Ask the system administrator to set up a user ID for you in the user property file.
Sign off request successful.	The sign off was successful.	None.
Sign on is successful.	The sign on was successful.	None.
Submit Process failed, state is *waiting|hold|timer.*	The Submit Process failed, and the Process was moved to the indicated queue.	Use Select Process to determine why the Process failed. Make the appropriate corrections and submit the Process again.
Submit Process is successful.	The Submit Process was successful.	None.

Message	Description	Action
Suspend Process completed.	The Suspend Process finished successfully.	None.
Suspend Process failed.	The Suspend Process failed.	Review the Suspend Process parameters and submit the Suspend Process again.
The submit of the Process succeeded.	A Copy File Process was successfully submitted.	None.
USER *name* login incorrect.	Either the user ID or the password is incorrect.	Try again with the correct user ID and password.
You are not currently signed on as the administrator. Note: You are signed off automatically when nonconfiguration functions are performed.	You used the Back button to access the Configuration utility from a nonconfiguration page. When you exit the Configuration utility, you are automatically signed off from it and must sign on again to use it.	Sign on again to the Configuration utility with a valid administrator ID and password.
You are not signed on. Please sign on first.	You have not signed on yet.	Sign on.
You must enter a Process.	You did not supply a Process name on a Submit Process.	Supply a valid Process name and resubmit.
You must enter either a node name, or enter IP, port.	Your signon is missing information.	Supply the missing information.
Your user ID or password is incorrect.	You supplied either an incorrect administrator ID or password when trying to sign on to the configuration feature.	Try again with the correct administrator ID and password.

Appendix B

Connect:Direct Statistic Record IDs

The following tables list Connect:Direct statistics record IDs and meaning by platform.

Connect:Direct UNIX Statistics Record IDs

ID	Description
APSM	Asset Protection failure generated
CHGP	The CHANGE PROCESS command issued
CRHT	Copyright statement
CSPA	Secure+ failure generated
CSTP	Child Process stopped
CTRC	Copy termination record
CTRM	Child Process terminated
CUKN	Child Process unknown status
CXIT	Child Process exited
DELP	The DELETE PROCESS command issued
FLSP	The FLUSH PROCESS command issued
FMRV	Error occurred in function management information receive operation
FMSD	Error occurred in function management information send operation
GPRC	Error occurred while getting Process
IFED	The IF statement ended
LIEX	License expired
LWEX	License will expire within 14 days
NINF	Connect:Direct Information generated at startup
NMOP	Network map file opened

ID	Description
NUIC	Initialization complete
NUIS	Initialization started
NUTC	Termination completed
NUTS	Termination started
PERR	Process error
PFLS	Process flushed
PRED	Processes ended
PSAV	Process saved
PSTR	Process started
RJED	The RUN JOB ended
RNCF	Remote node connection failed
RTED	The RUN TASK ended
SBED	The SUBMIT ended
SELP	The SELECT PROCESS command issued
SELS	The SELECT STATISTICS command issued
SEND	Session ended
SERR	System error
SHUD	Shutdown occurred
SIGC	Signal caught
SSTR	Save Process
STOP	The STOP command issued
SUBP	The SUBMIT command issued
TRAC	The TRACE command issued
UNKN	Unknown command issued
XMSG	Message sent to user exit
XSTA	User exit program started

Connect:Direct Windows Statistics Record IDs

ID	Description
CHGP	Change Process command issued
COAC	Communication activated
CRHT	Connect:Direct Copyright
CSTP	Child process stopped
CTRC	Copy control record written
CTRM	Child process terminated
CUKN	Child process unknown status
CXIT	Child process exited
DELP	Delete Process command issued
FLSP	Flush Process command issued
FMRV	Formatted Header (FMH) received
FMSD	Formatted Header (FMH) sent
GPRC	Get Process issued
IFED	If statement ended
LIEX	License has expired
LIOK	Listen okay
LWEX	License will expire in 14 days
NAUH	Node Authorization check issued
NMOP	Network map file opened
NUIC	Connect:Direct Initialization complete
NUIS	Connect:Direct start initialization
NUTC	Connect:Direct termination complete
NUTS	Connect:Direct termination started
PERR	Process error was detected
PFLS	Process was flushed
PRED	Process has ended
PSAV	Process was saved
PSED	Process step was detected
PSTR	Process has started
RJED	Run Job command completed

ID	Description
RNCF	Remote Connect:Direct server call failed
RTED	Run Task command completed
SBED	Submit complete
SELP	Select Process command issued
SELS	Select Statistics command issued
SEND	Session end issued
SERR	System error
SHUD	Connect:Direct shutdown
SIGC	Signal caught
SSTR	Session start issued
STOP	Stop Connect:Direct command issued
SUBP	Submit command issued
TRAC	Trace command issued
UNKN	Unknown command issued
USEC	User Security check issued
xxxx	Record types identified by the first four characters of the message ID

Connect:Direct OS/390 Statistics Record IDs

ID	Description
CE	Copy I/O Start
CH	Change Process
CI	Copy Step Start
CS	Statistics Command
CT	Copy Termination
DP	Delete Process
DS	Digital Signature
DT	Select Task
DU	Delete User
EI	Event Services Start Command
EL	Event Services Lost Session

ID	Description
ET	Event Services Stop Command
EV	Event Services Command
FI	Long File Name Record
FP	Flush Process
FS	Suspend Process
FT	Flush Task
GO	Process Modal - GOTO, ELSE, or EXIT Statement
IA	Inquire Statistics
ID	Inquire STATDIR
IF	Process Modal - IF Statement
IP	Inquire Initparms
IU	Insert User
IX	Inquire Browser User Interface/Plex
JI	Run Job Start
MC	PDS Member Copy
NL	Process modal - EIF or PEND statement
PE	Browser User Interface/Plex Error Record
PI	Process Start
PS	Process Submit
PT	Process Termination
PX	Browser User Interface/Plex Activity (Leave or Join Browser User Interface/Plex)
QE	Queue Change to EXEC queue
QH	Queue Change to HOLD queue
QT	Queue Change to TIMER queue
QW	Queue Change to WAIT queue
RJ	Run Job
RT	Run Task
S2	Statistics Logging Statistics
SC	Statistics Control Record
SD	Start Browser User Interface
SF	Statistics Format
SI	Signon
SL	Select Secure+ Profile
SN	Select Netmap

ID	Description
SO	Signoff
SP	Select Process
SS	Select Statistics
ST	Stop Browser User Interface
SU	Select User
SW	Submit within a Process
TI	Run Task Start
TP	Throughput Record Statistics
TS	Suspend Task
UC	Update Secure+ Profile
UM	Update Netmap
UU	Update User
WO	Write-to-Operator (WTO)
XO	Trace On/Off

Glossary

Term	Definition
Abnormal termination	Specifies the disposition of the file after an abnormal Process step termination results in a non-zero completion code. This subparameter applies to non-VSAM files. The values are: KEEP–The file is kept after the Process step terminates abnormally. DELETE–The file is deleted after the Process step terminates abnormally. CATLG–The file is kept after the Process step terminates abnormally and an entry is placed in the system catalog (OS/390 only).
Access	Specifies the status of a file before a Process is executed. The values are: NEW–Creates a new file on the destination node. RPL–Creates a new file on the destination node or, if the file already exists, replaces the named file of the destination node. MOD–Appends data to the end of an existing file for which you have exclusive rights (not used by VSE) SHR–The file exists and the Process does not have exclusive control of the file. OLD–The file exists, and the Process has exclusive control of the file.
Address	A node property that specifies either the fully qualified domain name or IP address (nnn.nnn.nnn.nnn format). This property is required. You can enter up to 64 characters for the domain name; however, only 20 characters are displayed. You can scroll through the field to see the complete name.
Allow only Defined Nodes	A system property that specifies whether the Connect:Direct Browser User Interface can only access the nodes defined in a node property file or can access any Connect:Direct node. The values are: Y–Specifies that the Connect:Direct Browser User Interface can only access nodes defined in the node property files. If you specify Y, you must create at least one node property file. N–Specifies that the Connect:Direct Browser User Interface can access any Connect:Direct node. N is the default value.
Allow only Defined Users	A system property that specifies whether only users defined in a user property file can access the Connect:Direct Browser User Interface, or if any Connect:Direct user can access the Connect:Direct Browser User Interface. Y–Specifies that only users defined in user property files can access the Connect:Direct Browser User Interface. N–Specifies that any Connect:Direct user can access the Connect:Direct Browser User Interface. N is the default value.
BUFND	Specifies the number of I/O buffers VSAM uses for transmitting data between virtual and auxiliary storage. A buffer is the size of a control interval in the data component. Valid values range from 1–510. Increasing this number generally improves the I/O performance on the file but requires more memory.

Term	Definition
Buffer Size	Specifies the buffer size for transmitting data to and from a remote Connect:Direct node. This is a numeric value from 256–32,768. The default is 4096. This field overrides the initialization parameter value.
Checkpoint Restart	Specifies if checkpointing is used. This allows restart of interrupted transmissions at the last valid checkpoint, reducing the time to retransmit a file. The options are: Default–Uses the value specified in the Checkpoint Interval initialization parameter. Check At Every–Performs checkpoints at the specified number of kilobytes or megabytes. Sequential files, VSAM files, or partitioned data sets (PDS) can be checkpointed. Checkpointing of PDS-to-PDS transmissions occurs on each each member. Sequential-to-PDS and PDS-to-sequential transmissions cannot be checkpointed.
Completion Code	Specifies the completion code operator and return code values associated with step termination. Also referred to as the condition code. The completion code operands are **Equal to**, **Greater or Equal to**, **Greater than**, **Less or equal to**, **Less than**, and **Not Equal to**. Valid completion codes are: • Any–All values. • 0–Successful execution of the Process. • 4–A warning error was encountered. The statement probably finished normally, but you should verify the execution results. • 8–An error occurred during Process execution. • 16–A severe error occurred during Process execution.
Compression	Specifies if the file data should be compressed, reducing the amount of data transmitted as the file is copied. The file is then automatically decompressed at its destination. The options are: None– The data is not compressed Primary Char–Compresses text data or single-character repetitive data. Repetitive occurrences (ranging from 2–63) of the primary compression character are compressed to one byte. Repetitive occurrences (ranging from 3–63) of any other character are compressed to two bytes. If you select the Primary Char option, you must specify either the primary compression character or its hexidexcimal equivalent. The default value for the primary compression character is a blank (X'40'). Extended–Extended searches for repetitive strings of characters in data and compresses them to codes that are transmitted and converted back to the original string during decompression. If you select Extended compression, you must specify the following: • Comp Level–The compression level. Level 1 is the fastest compression, but it offers the lowest amount of compression. Selecting a higher value produces more compression, but is slower. • Window–The size of the compression window or history buffer. Specifying a higher window size increases the degree of compression and uses more virtual memory (above the line); for example, window size 8 uses 1 KB of memory, whereas size 15 uses 128 KB of memory. • Memory–Identifies how much virtual memory (above the line) is allocated to compression. Level 1 requires the least memory (1K), but it reduces the amount of compression. Level 9 provides the fastest compression, but it uses the most memory (256K). Compression is CPU-intensive, and its effectiveness is data dependent. It should only be used if its benefits are known.
Condition Code	See Completion Code.
Class	Specifies the preferred session class for the Process. The Process can execute in the class specified or any higher class. Values range from one to the maximum number of PNODE sessions defined in the network map definition. This value overrides any defaults.

Term	Definition
Comment Statement	A statement within a Process that contains a descriptive comment.
Conditional Statement	A statement within a Process that controls its execution by testing Process step return codes and directing the next step. Conditional statements are If, Then, Else, EIF, Goto, and Exit.
Copy Statement	A statement within a Process that performs a data transfer. Copy statement parameters include source and destination file names and attributes.
DATAEXIT	Specifies the name of the user-written program called to examine or modify the COPY data.
DCB	Data Control Block. Specifies the attributes used to allocate source and destination files.
Debug	A system property that indicates whether debug tracing for Connect:Direct Browser User Interface operation is written to the trace data set. This property does not control Process execution debug tracing. The values are: Off–No debug tracing is performed. Minimal–Basic debug tracing is performed. Maximal–Extended debug tracing is performed.
Default Current Directory	Specifies the default directory to browse for a file.
Description	A node or user property that specifies descriptive information about the property file.
Destination DISP	Specifies what to do with the destination file after a copy is complete. The destination DISP values can be: NEW–Creates a new file on the destination node. RPL–Creates a new file on the destination node or, if the file already exists, replaces the named file on the destination node. MOD–Appends data to the end of an existing file for which you have exclusive rights. OLD–The file exists, and the Process has exclusive control of the file. SHR–The file exists and the Process does not have exclusive control of the file. The exact DISP values displayed depend on the platform.
Destination file	Specifies the name of the destination file that you are copying to. The name should include the full path to the file. The name can be 1–256 characters long (1–8 characters for Tandem NonStop Kernel).
Direction	Specifies the copy file direction. Selecting **Send** sends the file to the SNODE. Selecting **Receive** indicates the file is received from the SNODE.
Display Nodes	Specifies if nodes defined to the Browser User Interface are displayed in a list box on the Signon page.
Default Connect:Direct Node	A system and user property that specifies the name of the Connect:Direct node to connect with, if the node is not specified in a request. This value must be the same as the name of one of the node property files. There is no default value.
Default Connect:Direct User ID	A system or user property that specifies the Connect:Direct user ID or the user property file name to use if one is not specified in a request. There is no default value.
Exclusion Criteria	Specifies criteria for excluding specific CMS files from a copy operation. The format is: generic | member | (startrange/stoprange)| list generic–Specifies a generic file name. member–Specifies an individual file name. startrange–Specifies the first name in an alphanumeric range of files. stoprange–Specifies the last name in an alphanumeric range of files.

Term	Definition
File Type	Specifies the VM file type.
Hold Status	Specifies the Hold status of a Process. The Hold statuses are: • No–The Process is not placed in the Hold queue. It is executed as soon as resources are available. • Yes–The Process is held in the Hold queue in Held Initially (HI) status until it is explicitly released. • Call–The Process is held until the SNODE, as specified in the Process SNODE parameter, connects to the PNODE. The Process is then released for execution. The Process is also released when another Process on the PNODE connects to the SNODE.
Host Name	Specifies the 1–256 character host name for the node.
IP Address	Specifies the IP address of the Connect:Direct system you want to sign on to. It is in the format nnn.nnn.nnn.nnn, for example 127.0.0.1. You do not have to supply an IP address if a node property file is defined for you.
Label	Specifies the label information for the tape.
Link	Specifies the disk where the CMS file is located. This parameter allows access to the CMS file. The Link information consists of: User ID–The owner ID for the CMS minidisk where the file is located. The valid length ranges from 1–8 characters. Password–The password for the CMS minidisk where the file is located. The maximum length is 256 characters. The default password is ALL. Access mode–the link access mode. The Copy From access modes are: • W (primary read/write access) • M (primary multiple access) • R (primary read-only access) • RR (primary and secondary read-only access) • WR (primary read/write access; alternate read-only access) • MR (primary multiple access; alternate read-only access) • MW (primary multiple access; alternate read/write only access) **Warning**: MW access to CMS format disks can be destructive. If you use MW access, no other VM user or Connect:Direct Process should have MW, M, or W access to the minidisk. If multiple users or Processes simultaneously write to the disk, the CMS directory on the disk can be destroyed. CUU–The virtual address of the disk where the CMS file is located. Any four-digit number is valid.
Logging	A system property that controls whether Connect:Direct Browser User Interface activity is logged to the trace data set. This property does not affect Process logging. The values are: Off–No logging is performed. Minimal–Basic logging at key processing points is performed. Maximal–Detailed logging is performed.
Maximum API Connections	Specifies the Connect:Direct UNIX api.max.connects local.node parameter that defines the maximum number of concurrent API connections permitted for the local node. The default is 16.
Maximum Logon Attempts	Specifies the maximum number of signon attempts the user is allowed per hour. The range is 0–99. The default is 60. Zero (0) indicates no maximum number.
Maximum Records	A system property that specifies the maximum number of records that a Connect:Direct node can return in response to a command. If the number of records exceeds this value, the command continues, but all records returned after the maximum number are will be discarded. The default is an unlimited number of records.
Maximum RU Size	Specifies the maximum RU size for sessions in this group. The default is 4096.

Term	Definition
Maximum Sessions	Specifies the maximum number of sessions allowed in this mode group. The default is 8. Specify 1 if you use dependent LUs as the communications path because dependent LUs can only support a single session.
Mode	Specifies the 1–48 character communications mode name.
New Name	Specifies the new name of the Process. The default is the label on the Process statement.
Netmap Check	Specifies the Connect:Direct UNIX netmap.check local.node parameter that determines if security checks are made to verify that a remote node name is in the netmap.cfg file.
Node	Specifies a 1–16 character name for the Connect:Direct node, as defined in the network map. Use of this field for login to the Browser User Interface is optional; if the node is defined in your user property file, you do not have to supply a node during login.
Normal termination	Specifies the disposition of a file following a normal Process step termination that results in a zero completion code. The values are: KEEP–The file is kept after the Process step finishes. DELETE–The file is deleted after the Process step terminates normally. CATLG–The file is kept after the Process step terminates abnormally and an entry is placed in the system catalog (OS/390 only).
Notify	Specifies the user ID to receive Process completion messages. The user ID is notified through a Microsoft Exchange E-mail, a Windows dialog box, or a TSO notify.
Old Date	Specifies to use the creation or last modified date and the time of the file being transmitted to set the creation date and time of the file received. If you do not specify to use the old date, the current date and time are used for the creation date and time of the received file. Use this for sequential file transfers between two Connect:Direct for VM/ESA systems, and transfers between a set of CMS files on Connect:Direct for VM/ESA to a PDS on a Connect:Direct for OS/390 system.
Operator	Specifies the type of comparison to be performed in an If statement. Operators are: • **EQ** specifies equals. • **GE** specifies must be greater than or equal to • **GT** specifies must be greater than • **LE** specifies must be less than or equal • **LT** specifies must be less • **NE** specifies does not equal
Pacing Send Count	Specifies the number of send operations to perform before waiting for a pacing response from a remote node. This is a numeric value from 0–63. The default is 0, which indicates no pacing. This field overrides the initialization parameter value.
Pacing Send Delay	Specifies the amount of time Connect:Direct waits before sending each outbound data buffer to the remote node. This is a 24-hour time value formatted as hh:mm:ss. The default value of 0 indicates that Connect:Direct sends each data buffer as soon as possible. The maximum value is 23:59:59. This field overrides the initialization parameters value.
Pacing Size	Specifies the largest permissible receive pacing window size for sessions in this mode group. Connect:Direct sends this number of data buffers before waiting for an acknowledgment from the remote node. The range is 0–63; 0 specifies no pacing. The default is 7.
Parallel Sessions	Specifies the Connect:Direct UNIX local.node sess.total parameter that defines the maximum number of concurrent connections between all nodes and the local node. The default is 255.

Term	Definition
Passticket Data	Specifies the values required for a Stage 2 security exit to rewrite a RACF PassTicket password. The format is *APPL prof name, secured signon key*, where: • *APPL prof name* is the value specified when the profile is defined for the PTICDATA class. • *Secured signon key* is the value associated with the PTICDATA class and the name specified in the APPL Prof name.
Password	A user node property that specifies the password corresponding to the User ID property value. If no value is specified, the system assumes either that there is no password associated with the user ID, or that a password is specified during logon. If you create a password you cannot later reset it to a null password. Instead, you must delete the user profile, then recreate the profile without a password.
Pend Statement	A statement within a Process that indicates the end of a Process. The Pend statement is only used in Connect:Direct UNIX and Connect:Direct Windows Processes. There are no parameters for the Pend statement.
Port	Specifies the 1–5-digit port number of the Connect:Direct system you want to sign on to. You do not have to supply a port number if a node property file is defined.
Port property	A node property that specifies the 1–5-digit port number of this Connect:Direct node. The default listening port is 1363 for API requests.
PNODE	Specifies the Connect:Direct network node where the Process resides (the primary node).
PNODE Password	Specifies the user password on the PNODE. This field is case-sensitive.
PNODE User ID	Specifies the user ID used as a security ID on the PNODE. This ID must be the name of an existing user account. This field is case-sensitive.
Priority	Specifies the priority of a Process in the Transmission Control queue. Connect:Direct uses the Priority parameter for Process selection. Values range from 1–15. The lower the number, the higher the priority. A Process with higher priority is selected for execution before a Process with a lower priority. This parameter does not affect the priority during transmission.
Process file name	Specifies the name of the file that contains the Process.
Process Name	Specifies the 1–8 character name of the Process.
Process Number	Specifies the system-assigned number of the Process. The range is 1–99999.
Process Statement	The first statement in a Process. The Process statement defines general Process characteristics, including Process name, primary and secondary nodes, execution date and time, security parameters, accounting data, and symbolic variables.
Protect	Specifies whether an IBM RACF profile is created for a new file.
Protocol	Specifies the type of protocol for a communications mode or path, either TCP/IP or APPC.
Proxy Attempt	Specifies the Connect:Direct UNIX local.node proxy.attempt parameter that defines if remote users can specify a dummy user ID in the SNODE ID. The default is no, where neither the local system nor the remote system requires a user ID from the other side.
Queue	Specifies which queue to select Processes from. The queues are: • All–All Processes in the TCQ. • Exec–Processes currently be executed. • Hold–Processes that are either held by the user or operator or held due to execution errors. • Timer–Processes that are scheduled for execution later, or Processes in time retry due to session errors. • Wait–Processes that are eligible for execution and are awaiting selection.

Term	Definition
Record Categories	Specifies whether the record is related to an event or to a Process. The values are: • CAEV–The record is related to a Connect:Direct event, such as a Connect:Direct shutdown. • CAPR–The record is related to a Connect:Direct Process.
Record ID	Specifies the type of statistics record generated. See the *Select Statistics Results* Help topic for a list of Records IDs
Remote C:D Platform	Specifies the type of Connect:Direct system on the SNODE.
Replace	Specifies that the files sent replace destination files with the same name.
Retain	Indicates whether Connect:Direct retains a copy of a Process after it is executed. If you specify Retain with a start time, the Process is released for execution at the specified time. Each time a retained Process is released, Connect:Direct creates a copy with a new Process number. The copy is executed, and the original Process remains in the queue. The Retain options are: • Initial–Specifies to retain the Process in the Hold queue for execution every time that Connect:Direct initializes. Do not specify a start time if you choose this option. • No–Specifies to not retain the Process after it is executed. • Yes–Specifies to retain the Process in the Hold queue after it is executed. You can release the Process for execution later or delete it. When you specify a start date and start time, set **Retain** to **Yes** to continually execute the Process at the scheduled time.
Run Job Statement	A statement within a Process that submits a job to the host operating system. This job executes concurrently with the Process. Any Process statements following the Run Job statement execute without waiting for the Run Job results. The job can execute on either the local or remote node.
Run Task Statement	A statement within a Process that executes an external program or command. The program or command must complete before any further statements in the Process are executed. Run Task produces a return code as the exit code for the program it calls. Do not call programs with the Run Task statement that require user intervention to complete. Do not use a return code 16 in any programs called by the Run Task statement, or the Run Task will fail.
Security ID	Specifies the 1–64 character security ID used by a security subsystem such as RACF subsystem.
Security Password	Specifies the 1–64 character security password required by a security subsystem such as RACF subsystem.
Select	Specifies selection criteria for copying OpenVMS PDS members. The SELECT parameters are: name–Specifies an individual member name. *–Specifies a global generic indicating that all members of the file are to be included.

Term	Definition
Selection Criteria	Specifies selection criteria for copying a set of CMS files. The format is: member | generic|(*) | (member,[newname], [NR|R])|generic,,[NR|R] (startrange/stoprange,, [NR|R])| list The values are: member–Specifies an individual file name. generic–Specifies a generic file name. (*)–Specifies a global generic. A global generic indicates that all files in the set of files are to be included. newname–Specifies a new name for a file. The newname parameter must be null if a generic name or range is used in the first subparameter position. NR–Specifies that a file does not replace an existing file of the same name at the receiving set of files. NR overrides the REPLACE option. When used with newname, NR applies to the newname and not to the original file name. When used with a generic name or with a range, NR applies to all files selected for that criterion. R–Specifies that a file replaces an existing file of the same name at the receiving set of files. When used with newname, R applies to the newname and not to the original file name. When used with a generic name or with a range, R applies to all files selected for that criterion. When using a generic and specifying NR or R, ensure that the second positional parameter (newname) is null. startrange–Specifies the first name in an alphanumeric range of files. stoprange–Specifies the last name in an alphanumeric range of files.
Servlet Information	A system property that specifies the servlet information. The default is the Connect:Direct Browser Interface.
Session Time-out in Seconds	A system property that specifies the number of seconds before a session terminates when no requests are processed. The default is 1800 seconds.
SNODE	Specifies the secondary node to be used in this Process. The secondary node name is a 1–16 alphanumeric character name that is defined in the network map. The name can be expressed in alphanumerics or nationals (@#$) with embedded periods.
SNODE New Password	Specifies a new password for the SNODE. The user password is changed to the new value on the SNODE if the user ID and old password are correct and the SNODE supports this optional parameter. Connect:Direct does not support spaces in the password. This field is case-sensitive.
SNODE Password	Specifies the user password on the SNODE. This field is case-sensitive.
SNODE User ID	Specifies the user ID used as a security ID on the SNODE. This field is case-sensitive.
Source DISP	Specifies access to the source file during a copy operation. The values can be: SHR–The file can be opened for read-only access while it is being copied. OLD–The file cannot be opened during the transfer. The exact DISP values displayed depend on the platform.
Source File	Specifies the fully qualified name of the source file being copied. The name can be 1–256 characters long (1–8 characters for Tandem NonStop Kernel).
Space	Specifies the amount of DASD storage to be allocated for new files on the destination node. Specify Space for all new non-VSAM files unless you specify a Typekey file that includes Space parameters.
Start Date	Specifies the day and date to execute the Process.
Start Time	Specifies the time to execute the Process.

Term	Definition
Status	Selects Processes for viewing according to status. The statuses are: • Execution (EX)–The Process is being executed. • Pending Execution (PE)–The Process is selected for execution and startup is in progress. • Waiting Connection (WC)–The Process is ready to execute, but all available connections to the SNODE are in use. • Waiting Start Time (WS)–The Process is waiting in the Timer queue because it was submitted with a start time or date that has not expired. • Held Suspension (HS)–The operator issued a delete Process request with Hold set to Yes. • Timer Retry (RE)–The Process is in the Timer queue in RE (retry) status with short-term and long-term wait times. • Held for Call (HC)–The Process was submitted with the Hold option set to Call. • Held Due to Error (HE)–A session error or other abnormal condition occurred, and the Process is being held as a result. • Held Initially (HI)–The Process was submitted with the Hold option set to Yes. • Held By Operator (HO)–The Process is held because a Change Process request with Hold set to Yes was issued. • Held By Retain (HR)–The Process was submitted with retain after execution set to Yes or Initial.
Step Label	A 1–8 character user-defined string that identifies a Connect:Direct statement. The first character must be alphabetic. Step labels are also used by Goto statements to identify branching destinations in a Process.
Stop Date	View Processes ending on this date.
Stop Time	View Processes ending at this time.
Submit Statement	A statement within a Process that submits another Process. The Process can execute on either the local or remote node.
Submitter	Specifies the node name and user ID of the user that submitted the Process. Separate the node name and user ID with a comma; for example, atlanta, user1. To specify multiple submitters, enclose each node name/user ID combination in parentheses and separate with commas; for example, (atlanta, user1), (atlanta, user2), (atlanta, user3).
Symbolic Variables	Symbolic variables are text strings in a Process which are replaced with predefined values went the Process is executed. This allows you to easily change Processes when these values changes. For example, you van define a variable &filename and declare the value to be file1.txt. Whenever the Process encounters the &filename variable, it substitutes file1.txt. If you want to use a different value, just change the &filename definition to the new file name, and the Process will use that instead.
SYSOPTS	Specifies the platform-specific system operations. These parameters specify the data type, translation tables, inherited rights, attributes, and trustees. Separate multiple UNIX SYSOPTS with colons. Separate multiple Windows, OS/390, OS/400, OpenVMS, VM, or VSE SYSOPTS with a space. Separate multiple Tandem Non-Stop Kernel SYSOPTS with a comma. Refer to the *Connect:Direct Process Guide* for specific SYSOPTS values.
TCP Address	Specifies the Connect:Direct UNIX local.node tcp.api parameter that is used to monitor connection requests from the CLI or API using TCP/IP. You can specify either the host name of the Connect:Direct host computer or the IP address of the Connect:Direct host computer.
TCP API Bufsize	Specifies the Connect:Direct UNIX local.node tcp.api.bufsize parameter that defines the buffer size for transmitting data to and from a Connect:Direct CLI/API. The default is 4096 bytes.

Term	Definition
TCP Max Time to Wait	Specifies the Connect:Direct UNIX local.node tcp.max.time.to.wait parameter that defines the maximum number of seconds that the local node waits for a message from the remote node when using TCP/IP. When the time expires, the Process moves to the timer queue and Connect:Direct attempts to reestablish a session with the remote node. When set to 0, the wait time is unlimited, unless limited by the operating system. The default value is 0.
TCP Port	Specifies the Connect:Direct port name or number used in TCP/IP communications.
Typekey	Specifies the name of the file that contains the default file attributes used to allocate the destination file. Specify a Typekey only when you request defaults.
Unit	Specifies the unit address, device type, or user-assigned group name where the file resides or will reside. For the OS/400 platform, specifies the unit identifier of the auxiliary storage unit where the storage space for the file and file members is allocated.
Value	Specifies the completion code used for comparison in an If statement. Typically, a completion code less than 4 indicates that the Process completed successfully, completion code of 4 indicates a warning, and a completion code greater than 4 indicates the Process ended with errors.
VOL	Specifies the volume serial numbers containing the file and optional processing associated with the file.
VSAMCAT	Specifies the name of the VSAM catalog where the VSAM file resides.

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