



Connect:Direct[®] for UNIX Version 4.0.00
Release Notes

Sixth Edition

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Connect:Direct for UNIX Version 4.0.00 Release Notes

The *Connect:Direct for UNIX Version 4.0.00 Release Notes* document supplements Connect:Direct for UNIX version 4.0 documentation. Release notes are updated with each release of the product and contain last-minute changes and product requirements, as well as other information pertinent to installing and implementing Connect:Direct for UNIX. Read the document in its entirety before installation.

The Connect:Direct for UNIX package consists of the distribution media, a license key, and product publications. Connect:Direct for UNIX is distributed as follows:

- File downloaded from the Sterling Commerce Electronic Software Distribution Portal
See *Installing Connect:Direct for UNIX from the ESD Portal* on page 24 for instructions.
- CD-ROM format when Sterling Commerce ships the physical distribution media

Hardware and Software Requirements

Sterling Connect:Direct® for UNIX and its related software require the following hardware and software: It supports systems running in 32- or 64-bit mode.

Component or Functionality	Hardware	Software	RAM (min.)	Disk Space (min.)
Sterling Connect:Direct for UNIX with TCP/IP or Sterling File Accelerator connectivity	HP PA-RISC	HP-UX version 11iv2 September 2004 Update or higher or 11iv3	2 GB	50 MB
	HP Integrity system with Intel Itanium processor	HP-UX version 11iv2 September 2004 Update or higher or 11iv3	2 GB	50 MB
	IBM System pSeries	AIX 5L™ version 5.3 or 6.1 AIX 7.1 is supported starting with the 09MAY2011 maintenance release of Sterling Connect:Direct for UNIX. As of Sterling Connect:Direct for UNIX V4.0.0, Fix 140 AIX 5L version 5.3 is no longer supported.	2 GB	50 MB
	Sun SPARC system	Solaris version 9 or 10 As of Sterling Connect:Direct for UNIX V4.0.0, Fix 140 Solaris version 9 is no longer supported.	2 GB	50 MB
	Sun x64 system with AMD Opteron processor	Solaris version 10	2GB	50 MB
	Solaris/x86 system	Solaris version 9 or 10 As of Sterling Connect:Direct for UNIX V4.0.0, Fix 140, Solaris version 9 is no longer supported.	2 GB	50 MB

Component or Functionality	Hardware	Software	RAM (min.)	Disk Space (min.)
	Intel and AMD x86/x86-64	Any point release of Red Hat Enterprise Linux version 4 or 5 AS or ES distribution. Version 6 is supported beginning with the 04MAR2011 maintenance release of Sterling Connect:Direct for UNIX.	2 GB	50 MB
		SuSE SLES version 9 or 10 Version 11 is supported starting with the 28JAN2010 maintenance release of Sterling Connect:Direct for UNIX.	2 GB	50 MB
		Oracle Enterprise Linux 5 is supported starting with the 28JAN2010 maintenance release of Sterling Connect:Direct for UNIX.	2 GB	50 MB
	Linux zSeries	Any point release of Red Hat Enterprise Linux version 4 or 5 AS or ES distribution	2 GB	50 MB
		SuSE SLES version 9, 10, or 11	2 GB	50 MB
Sterling Connect:Direct File Agent	Same as requirements for Sterling Connect:Direct for UNIX	Same as requirements for Sterling Connect:Direct for UNIX Java™ Standard Edition 6, installed with Sterling Connect:Direct File Agent Note: On Linux zSeries, the JRE is not bundled with Sterling Connect:Direct File Agent. You must obtain and install Java Standard Edition 6 before you install Sterling Connect:Direct File Agent.	2 GB	275 MB
Sterling Connect:Direct Secure Plus	Same as requirements for Sterling Connect:Direct for UNIX	Same as requirements for Sterling Connect:Direct for UNIX Java Standard Edition 6, installed with Sterling Connect:Direct Secure Plus	2 GB	70 MB

Component or Functionality	Hardware	Software	RAM (min.)	Disk Space (min.)
High-Availability support	HP PA-RISC	HP MC/Service Guard		
	IBM System pSeries	IBMHACMP™		
	Sun SPARC system	SunCluster 2.2, 3.0 or 3.2 To use Sterling Connect:Direct for UNIX in a Sun Cluster environment, you must install a Sun C compiler.		
SNA connectivity	IBM System pSeries	Install and configure Communications Server for AIX® V6		
	HP PA-RISC	For HP-UX 11i, you must install and configure both of the following: <ul style="list-style-type: none"> • SNAplus2 Link version R7 • SNAplus2API version R7 		
	Sun SPARC systems	Install and configure SNAP-IX Gateway software DATA Connection Limited		

License Key File

The license key file identifies the product features that are available at a site. When you purchase the Connect:Direct for UNIX application, a temporary key file is sent to you that enables operation of Connect:Direct for UNIX for a limited time. You must replace the temporary key with a permanent key to continue running Connect:Direct for UNIX. The temporary and permanent key files are supplied as text files named *nnnnn.txt*, where *nnnnn* is a number assigned by Sterling Commerce. Each key file is sent to you as an attachment to an e-mail.

The temporary and permanent license key file must be applied on the computer where Connect:Direct for UNIX is installed.

To apply the temporary and permanent key file:

1. Copy the temporary license key file from the Sterling Commerce e-mail to the *<d_dir>/ndm/cfg/<node name>* directory.
2. Rename the temporary license key file to **license.key**.

Caution: Do not edit the *nnnnn.txt* file or the *license.key* file. Text editors may insert a carriage return or truncate lines, which will invalidate the key file.

3. Request the permanent license key file using one of the following methods:
 - ◆ Reply to the Sterling Commerce e-mail containing your temporary license key file and include the host name of the computer where Connect:Direct for UNIX is installed. You can run the *hostid.sh* script, located in the *<d_dir>/etc* directory, to obtain this information.
 - ◆ Request the license key file from Support On Demand:
 - a. Log in to the Sterling Commerce Support On Demand Web site. If you do not have a Support On Demand user name and password, follow the instructions in *Support On Demand User Name and Password* on page 9.
 - b. Under Product Support, click **Connect Key Request**. The Connect Product Key Request page is displayed.
 - c. Type the information in the required fields and click **Submit**.
You will receive the permanent license key file through e-mail in approximately 24 to 48 hours.
4. Make a copy of the original permanent license key file and keep it in a safe place.
5. Repeat steps 1 and 2 to replace the temporary license key file with the permanent key file.

Support On Demand User Name and Password

The Sterling Commerce Customer Support Web site is the gateway to Web support, information, and tools. This Web site contains several informative links, including a solutions database, an issue tracking system, product updates, fix information, documentation, workshop information, contact information, sunset and retirement schedules, and ordering information. Refer to the *Customer Support Reference Guide* available from the Sterling Commerce Customer Support Web site for specific information on getting support for Sterling Commerce products.

You must have a Support On Demand user name and password for access to the information and services provided on the Sterling Commerce Customer Support Web site. If you do not have a Support On Demand user name and password, click the following link to access the Customer Support login page at <http://support.sterlingcommerce.com> and follow the instructions for new users. Your Support On Demand user name and password will be sent to you in an e-mail within one business day.

Additional Requirements

Connect:Direct for UNIX version 4.0.00 has the following additional requirements.

Supported Interfaces

Connect:Direct for UNIX supports the following interfaces:

- Ethernet
- SDLC
- X.25 (QLLC)

Password Storage

Connect:Direct for UNIX enables you to use any of the following for password storage:

- /etc/passwd file
- /etc/shadow file when supported by the operating system
- HP-UX trusted security
- Network Information Service (NIS), formerly known as Yellow Pages
- Digital UNIX Enhanced Security
- Pluggable Authentication Modules (PAM)

Libraries

Ensure that you have the following libraries installed:

UNIX Platform	Software	Library
Intel and AMD x86/x86-64, Linux zSeries	All supported Linux	libstdc++.so.5 Note: You can acquire this library by applying the compat-libstdc++-33 package.
Linux zSeries	Red Hat Advanced Server	compat-libstdc++-33.3.2.3-47.3 (or later)
IBM System pSeries	AIX	IBM C Set ++ Runtime Libraries for AIX version 8 or later bos.rte.libpthreads 5.3.7.0 or later These libraries can be accessed at: http://www.ibm.com/developerworks/aix Note: After you install these libraries, re-run the Connect:Direct for UNIX installation program.

What's New in This Release

For the latest information on updates to the product and documentation, see *Features and Enhancements* on page 12 and *Improvements to Documentation* on page 13.

Features and Enhancements

Connect:Direct for UNIX version 4.0.00 and its related software have the following features and enhancements.

Product/Component	Feature or Enhancement
Connect:Direct for UNIX	<p>Sterling File Accelerator—supporting UDT (UDP-based Data Transport) for higher file transfer throughput rates on high-speed networks with latency.</p> <hr/> <p>Improves and expands use by:</p> <ul style="list-style-type: none"> ◆ Providing a configuration checking utility to validate configuration files offline to help find syntax errors before putting configuration changes into production. (SR 1355197) ◆ Providing 64-bit API libraries and source files for the Connect:Direct API so that customers can build programs using the Connect:Direct SDK/API in 64-bit mode. (SR 1362740) <hr/> <p>Provides a sample Quiesce and Resume parameter table customers can customize for their environment to enable a “testing mode” that terminates any active production work until testing is complete.</p> <hr/> <p>Provides new select statistics parameters that allow customers to access statistics information based on source and destination file names.</p> <hr/> <p>Provides stand-alone command line configuration utility (cdcustrpt) that produces a report containing configuration information for the system and Connect:Direct for UNIX, and for Connect:Direct Secure+ Option for UNIX and Connect:Direct UNIX for SWIFTNet if they are installed. The information in this report can be sent to Sterling Commerce Customer Support to assist in troubleshooting.</p> <hr/> <p>Provides a stand-alone compression utility (cgsacomp) that enables offline pre-compression of a file that can either be decompressed “on-the-fly” as it is received by the remote Connect:Direct node or be received in a pre-compressed format and later decompressed offline using the cgsacomp utility. (SR 134976)</p> <hr/> <p>Provides TCQ compacting automatically at server startup to free up unused records to reduce the TCQ file size and improve the efficiency of Connect:Direct for UNIX. (SR 1341291)</p> <hr/> <p>Provides a new API inactivity timeout parameter in the .Local node record of the netmap file so that when a CMGR has not received a command from a client for the specified amount of time, it exits to help prevent resource leaks caused when a client terminates abruptly. (SR 1366885)</p>

Product/Component	Feature or Enhancement
Connect:Direct for UNIX (continued)	<p>Extends communications support by:</p> <ul style="list-style-type: none"> ◆ Supporting the IPv6 protocol, which allows a much larger address range than IPv4 and complies with US Federal Government implementation requirements. ◆ Providing the ability to listen on multiple server addresses for inbound node connections using the <code>rnode.listen</code> parameter, <code>comm.info</code> sub-parameter in the initialization parameters file. ◆ Providing the ability to use the existing <code>tcp.api</code> parameter in the <code>local.node</code> record of the netmap to define multiple TCP/IP addresses for inbound API connections for flexibility in communications configuration. (SR 1350818) <hr/> <p>Enhances visibility of netmap check failures by placing Processes in the Hold queue rather than the Timer queue.</p> <hr/> <p>Provides a new license file option, <code>NUMBER-OF-INSTANCES</code>, to allow multiple Connect:Direct instances to run on the same server.</p> <hr/> <p>Enhances interoperability with Sterling Control Center by:</p> <ul style="list-style-type: none"> ◆ Using the time zone differential key to prevent statistics problems in Control Center. ◆ Adding new <code>initparms</code> and a user authority to support remote Secure+ configuration. <hr/> <p>Simplifies set up by initializing Secure+ during installation.</p> <hr/> <p>Improves visibility of the statistics <code>max.age</code> parameter by creating this parameter in the <code>initparms.cfg</code> file with a default value of 8 days during installation.</p> <hr/> <p>Enhances TCQ compacting by renaming the <code>tcqhdr.ind</code> backup file to <code>tcqhdr.ind.old</code> and retaining this backup file after compacting.</p>
Connect:Direct Secure+ Option for UNIX	<p>Enhances security by providing the Sterling Crypto-C module that provides a FIPS 140-2 validated cryptographic module for the HP-UX, PA-RISC, HP-UX Itanium, AIX, and Solaris SPARC UNIX platforms.</p>

Improvements to Documentation

Sterling Commerce welcomes your comments and suggestions for improvements to our product documentation. You can submit suggestions for improvements to ConnectDoc@stercomm.com. As part of our continuing effort to improve the user experience and satisfaction with our documentation, the documentation for Connect:Direct for UNIX version 4.0 has the following changes:

In the *Connect:Direct Secure+ for UNIX Implementation Guide*, information regarding SSL, TLS, and STS planning and setup has been moved and enhanced to create three new chapters:

- *Planning Your Implementation of the SSL or TLS Protocol*
- *Preparing to Setup Secure+ Option for the SSL or TLS Protocol*
- *Planning Your Implementation of the STS Protocol for Remote Nodes*

The Process Guide website has the following change:

A new subparameter, `precomp=y | n`, has been added to the **sysopts** parameter on the **from** side of the **copy** statement.

Obtaining Product Updates

Product updates and update summaries, including issues resolved for previous versions of Connect:Direct for UNIX, are available on the Support On Demand Web site at <http://support.sterlingcommerce.com>.

To obtain product updates:

1. Log on to your Support on Demand account to display your customer Home page.
2. From the **Product Support** menu on the left navigation bar, click **Connect>Product Updates/Download**.
3. Follow the links for your product until you locate the updates for your product and platform.

Description of Support Requests Resolved for This Release

Support Request	Description
975328	If a copy step has a <code>disp=mod</code> and the copy step is restarted, the following error occurs: XCPR010I. This error message is incorrect.
1354859	KQV client (such as Browser or Sterling Control Center) truncates string after a pipe character () in a select stats response or validate Process procedure.
1355970	Comm traces do not include pid and time stamps preceding each line.
1357249	Direct invocation of <code>ndmauthc</code> and <code>ndmauths</code> can cause segmentation faults. This could indicate a vulnerability for buffer overflows.
1358486	After updating the <code>userfile.cfg</code> with Connect:Direct Browser 1.4.02fix009, any user invoking the "direct" command to do a SEL STAT causes XSCM002I fdbk=15 to appear in the log. This error indicates an invalid value in the user auth file.
1359609	When Connect:Direct for UNIX is the SNODE and is receiving a file, if the connection is lost during the file transfer, the following error can occur: XLKL004I.
1360169	When a Process submitted with <code>maxdelay</code> fails, expected CLI messages are not showing up.
1360479	Two Processes submitted at the same time with duplicate copy step destination files and <code>disp=new</code> specified will occasionally both get the destination file opened and the output commingled.

Description of Support Requests Resolved for This Release

Support Request	Description
1360716	An invalid CSPA091E error message is reported when attempting connection to mainframe when max secondary task count is reached.
1361569	Permanent license with multiple CPU-IDs in a cluster environment causes a startup failure, resulting in error message: "The license key file is not valid for this CPU-ID. Error initializing licensing system. Initialization failed."
1361878	Netmap checking fails with an XSMG016I error when more than two hostnames are coded in the netmap alternate.comminfo parameter.
1362181	Connect:Direct for UNIX allows a blank Process name to be submitted.
1362791	Wildcard copy can fail with XSMG271I after upgrade to 12JUN2006 maintenance for release 3.6.01.
1362903	Statistics selecting by pnum with embedded Line Feeds causes 733 error in Connect:Direct Browser.
1363051	The CSPA209E error message does not show up when selecting statistics by process number.
1363419	The Cpu_Id field is blank when hostid.sh is run on Linux.
1363903	Submitting script with spaces after the EOJ tag results in XPAE002I error.
1363908	SPCLI displayRemoteNode command does not display stsenableenc correctly after updating the remote node.
1364207	Can only run one instance of Connect:Direct for UNIX when using a universal AP key (no CPU-ID specified).
1364318	Connect:Direct for UNIX on Linux is not backward compatible with older AP keys.
1365018	When using the CLI, if a submitted stepname exceeds 255 characters, it causes a buffer overflow.
1365110	The cdstatm gets an SEGV signal and causes a core dump to be created in certain circumstances.
1365142	Invalid sysopts parameter causes Sterling Control Center to discontinue pulling statistics.
1365392	Comments are lost when modifying records from the userfile.cfg or netmap.cfg with Connect:Direct Browser.
1365424	A PRED statistics record entry is not created on a security failure when Connect:Direct for UNIX is the PNODE.
1365444	Sterling Secure Proxy can dynamically inject run task statements into a Process as it is executed. If the Process includes a wildcard copy , the Process will fail with an XSMG417I error.
1365497	When transferring files between Connect:Direct for UNIX and Connect:Direct for VM/CMS, the UNIX system does not return the needed XDR keys: SLKP and DLKP, that provide the VM link passwords.
1365509	Connect:Direct Requester select statistics output displays the wrong step name for some run task steps.

Description of Support Requests Resolved for This Release

Support Request	Description
1365800	The .locks directory permissions are set to 777. This value needs to be changed to 700.
1365911	The Cpu-Id field displays <undefined> when running hostid.sh.
1365976	Symbolic substitution does not work with double-quotes around a symbolic value that includes spaces.
1366024	When a Process fails due to a user authentication issue and is released (after solving the user authentication issue), the temp files are not deleted.
1366119	Incoming Processes cannot be configured to run with root authority.
1366485	The UNIX PID listed in the statistics log for a runjob or runtask does not match the actual PID on the operating system.
1366576	Statistics logs are filling up with XPMR012I errors when Sterling Control Center (or any Java client, such as Connect:Direct Browser) is connected and repetitively querying for Processes for an extended time.
1366755	Secure+ sessions fail with CSPA011E, reason=unsupported certificate purpose, when client authentication is enabled, and SSL certificates with Netscape extension indicating "Server only" are used. These Netscape extensions are obsolete.
1366885	Command Manager hangs when clients abruptly terminate. The API connection is not terminated.
1366903	Connect:Direct Browser allows a non-administrative user to manage Connect:Direct for UNIX Netmap and Users.
1367303	When Connect:Direct for UNIX is receiving a file and runs out of disk space, it sends an SCPA000I message to the remote node signaling a successful file transfer even though XSQF006I errors are reported on the local node.
1367485	Hostid.sh reports 'NoneNone' as the Cpu-Id.
1367629	Process restarts can fail when Connect:Direct for UNIX is installed on a network storage resource.
1367760	The cdpmgr reports an APSM026E (Only one running instance of Connect:Direct is allowed per license) error on a restart after a hard stop.
1367770	The Step Start stat record (LSST) of a copy step (with a GDG file) shows relative name instead of absolute name.
1367827	Processes on hold for an extended time will inadvertently be released when Process numbers are recycled.
1367860	Incoming session attempts fail with a CSPA311E error message: "SSL certificate verification failed, reason=unsupported certificate purpose."
1367887	The remote node generates a CSPA081E error during a copy receive. The Connect:Direct for UNIX node reports the following message: "XCPR007I - A FMH other than FMH80 received during copy data."
1367924	Repeatedly pushing an asset protection key that has the wrong Cpu-Id from Sterling Control Center brings down Connect:Direct.

Support Request	Description
1367983	Connect:Direct for UNIX is not presenting the maintenance level to Sterling Control Center.
1368252	Files copied into the Connect:Enterprise File Agent staging directory are not renamed if "no download_dir" is specified in the userfile.cfg.
1368496	Connect:Direct Browser can not view or modify the alternate.comminfo field of the netmap.cfg file.
1368617	Netmap check address verification does not work with some domain name servers.
1368993	When the cdpmgr performs a license check, it terminates with XNMP003E and XNMP004E errors when no system memory is available for allocation.
1369004	KQV support needs to be implemented for certain netmap and userfile fields for Sterling Control Center.
1369042	When Connect:Direct Browser is used to update the userfile, parameters with null values are removed.
1369159	When a codepage conversion is performed during a copy , the statistics for bytes written are incorrect.
1369544	A cdpmgr memory leak occurs while cdpmgr is idle.
1369755	The cdpmgr exits after an APSM027E error.
1371376	SMGR crash occurs during outbound file transfers with Secure+ Option using UDT on the HP-UX 11iv3 platform.

Special Considerations

This section contains considerations in addition to the procedures contained in this document and the other Connect:Direct for UNIX documents. Refer to the following notes before installing the product.

- Although Connect:Direct for UNIX Process names can be up to 255 characters long, some Connect:Direct platforms, such as Connect:Direct for z/OS limit Process names to eight characters. Processes running between UNIX and platforms that limit Process names to eight characters can have unpredictable results if longer names are specified.
- If you install Connect:Direct for UNIX on an HP Integrity system, you cannot use the Secure+ Option parameter file generated on a PA-RISC computer. You must create a new parameter file.
- Defining SSL as the preferred protocol in the Secure+ Option does not always result in the use of SSL as the handshake-verification method. If both nodes have the ability to use TLS for authentication, Secure+ Option determines the most secure handshake available to both nodes and uses the secure protocol. You can view the statistics record to determine which protocol was used to verify each node.
- The Secure+ initparms record and the user authority that have been added to Connect:Direct for UNIX version 4.0 support remote configuration of Secure+ Option. These configuration

options are needed when using the Central Management feature available in Sterling Control Center 5.0 and later.

- If you are using a certificate that was created with an older version of Sterling Certificate Wizard, the certificate may contain a blank line between the "BEGIN" and "END" statements that define a private key. This version cannot process the blank line, resulting in an error. If a certificate generates an error, delete the blank line in the certificate.

Special Considerations for Using Sterling File Accelerator (UDT)

If you plan to use UDT for file transfers on high-speed networks with latency, refer to the following table which summarizes performance differences between TCP and UDT:

Bandwidth	Latency	Results
45 Mbps	All latencies	TCP is equal to UDT
155 Mbps	Less than 20 ms	TCP outperforms UDT
	Greater than 20 ms	UDT outperforms TCP
1 Gbps	Less than 10 ms	TCP outperforms UDT
	Greater than 10 ms	UDT outperforms TCP

If you need additional information, see the *Determining When to Use UDT (Sterling File Accelerator)* whitepaper that is available on the documentation CD-ROM or with the Connect:Direct for UNIX product documentation on the Sterling Commerce Support On Demand Web site at <http://support.sterlingcommerce.com>.

Special Considerations for Using Connect:Direct for UNIX in FIPS 140-2 Mode

This version of Connect:Direct Secure+ Option for UNIX offers a FIPS mode of operation. Refer to the following notes when configuring Connect:Direct Secure+ Option for UNIX:

Connect:Direct Secure+ Option for UNIX supports the following cipher suites in FIPS mode:

- TLS_DHE_RSA_WITH_AES_256_CBC_SHA
- TLS_DHE_DSS_WITH_AES_256_CBC_SHA
- TLS_RSA_WITH_AES_256_CBC_SHA
- TLS_DHE_RSA_WITH_AES_128_CBC_SHA
- TLS_DHE_DSS_WITH_AES_128_CBC_SHA
- TLS_RSA_WITH_AES_128_CBC_SHA
- SSL_DHE_RSA_WITH_3DES_EDE_CBC_SHA
- SSL_DHE_DSS_WITH_3DES_EDE_CBC_SHA
- SSL_RSA_WITH_3DES_EDE_CBC_SHA
- SSL_DHE_RSA_WITH_DES_CBC_SHA
- SSL_DHE_DSS_WITH_DES_CBC_SHA
- SSL_RSA_WITH_DES_CBC_SHA

Connect:Direct Secure+ Option for UNIX does not support the following cipher suites in FIPS mode:

- SSL_RSA_WITH_RC4_128_SHA
- SSL_RSA_WITH_RC4_128_MD5
- SSL_RSA_EXPORT_WITH_RC4_40_MD5
- SSL_RSA_EXPORT_WITH_DES40_CBC_SHA
- SSL_RSA_EXPORT_WITH_RC2_CBC_40_MD5
- SSL_RSA_WITH_NULL_SHA
- SSL_RSA_WITH_NULL_MD5

If you have private keys generated by Certificate Wizard version 1.2.03 or earlier, they are not encrypted with a FIPS-approved algorithm. Use the OpenSSL utility provided with Connect:Direct for UNIX to convert existing private keys generated using Certificate Wizard to FIPS-approved keys. This utility is located in the `<d_dir>/ndm/bin` directory. For more information on converting keys, see the *Connect:Direct Secure+ Option for UNIX Implementation Guide*.

Special Considerations for Connectivity with the HP NonStop Kernel Operating System

This version of Connect:Direct for UNIX offers connectivity to Connect:Direct HP NonStop Kernel version 3.2.00 or later using TCP/IP. Refer to the following notes when transferring files from the UNIX operating system to the HP NonStop Kernel operating system:

- Do not define the `sysopts` parameter with continuation marks. Type the text in a continuous string, with blanks separating each subparameter. The `sysopts` parameter is valid for the copy statement.
- When copying files from the UNIX operating system to the HP NonStop Kernel operating system, define the `dcb` parameter to allocate destination files. Define any additional options using the `sysopts` parameter. The `dcb` and `sysopts` parameters are valid for the copy statement. Use of the `dcb` parameter ensures that the attributes of the file being sent match the attributes of the file that is created on the remote node. If you do not define the `dcb` parameter, the default file types on the destination node are as follows:
 - ◆ If you are transferring a text file, the file type on the HP NonStop Kernel node defaults to an unstructured file, code 101.
 - ◆ If you are transferring a binary file, the file type on the HP NonStop Kernel node defaults to an unstructured file, code 0.
- When copying files from the HP NonStop Kernel operating system to the UNIX operating system, define the `sysopts` parameter to allocate destination files.

For syntax and parameter descriptions for Process statements, see the Connect:Direct Processes Web site at <http://www.sterlingcommerce.com/documentation/processes/processhome.html>.

Known Restrictions

Connect:Direct for UNIX version 4.0 has the following restrictions related to the use of third-party hardware or software:

- UDT
 - ◆ Under conditions of high CPU usage, a Connect:Direct Process running over UDT may be interrupted by a lost connection. Should this occur, Connect:Direct retries the Process. If connection losses due to high CPU usage are occurring, their frequency can be reduced by restricting the number of concurrent UDT sessions through Netmap session limits.
 - ◆ All UDT SNODE connections must be defined in your netmap so that the node name can be used to specify the SNODE in a Process statement. You cannot use an IP address and port number to specify the SNODE in a Process statement if you want to connect to a remote node using UDT.
 - ◆ UDT is not supported in a load balancing environment.
- If you are using the file allocation retry function when communicating with a remote node on an operating system that is not UNIX, identify operating system retry codes using formats and code values defined by the remote node.
- A copy operation from Connect:Direct for UNIX to Connect:Direct for i5/OS completes successfully, but generates an SNA error in the iSeries log.
- If you use the Hummingbird Exceed terminal emulator to access a Solaris workstation, you may not have all of the fonts needed to use Connect:Direct Secure+ Option. Add the following command to the spadmin.sh file:

```
xset fp default
```

Insert this command before the following line of code:

```
java -classpath $CLASSPATH:/SCI/USERS/... com.stercomm.csg.spadmin.spadmin
```

This command maps all unknown fonts to a default value and prevents Connect:Direct from performing a core dump if it is unable to locate a font.

- The administration of Secure+ Option is achieved through Java and a graphical user interface (GUI). The standard UNIX telnet server does not support a GUI client session. To use the UNIX GUI you must be connected to the UNIX server via an X Windows client session, such as xterm. If you are connected to the UNIX server using a telnet session, you will not be able to run the GUI sessions required to install and administer Connect:Direct. If you do not have access to X Windows, you can use the Secure+ Option Command Line Interface (SPCLI).
- Secure+ Option does not support server gated crypto (SGC) certificates.
- The Secure+ Option Command Line Interface does not support using \$HOME or the tilde (~) to specify the path to your home directory.
- Connect:Direct Secure+ Option for UNIX supports FIPS mode on the following platforms:
 - ◆ Sun Solaris 10 (SPARC)

- ◆ IBM AIX 5L 5.3
- ◆ HP-UX 11iv2 (HP Integrity)
- ◆ HP-UX 11iv2 (PA_RISC)
- When using the Secure+ Option Command Line Interface on the Solaris platform, command entries may be limited by the buffer size. To resolve this limitation, add line breaks to a command entry. For example, enter the following command with line breaks:

```
SslTlsEnableCipher=(TLS_RSA_WITH_AES_256_CBC_SHA,  
TLS_RSA_WITH_AES_128_CBC_SHA,SSL_RSA_WITH_RC4_128_MD5,  
SSL_RSA_WITH_RC4_128_SHA, SSL_RSA_WITH_3DES_EDE_CBC_SHA,  
SSL_RSA_WITH_DES_CBC_SHA,SSL_RSA_EXPORT_WITH_RC4_40_MD5,  
SSL_RSA_EXPORT_WITH_DES40_CBC_SHA,SSL_RSA_WITH_NULL_MD5);
```

- On the HP-UX, IBM System pSeries, and Linux platforms, when a run task defines an invalid UNIX command, the operating system return code is 127 and the completion code (CCOD) reported by Connect:Direct for UNIX is displayed in hexadecimal (7F) in the statistics output. This return code is correct for the error received, even though most return codes are defined as 0, 4, 8, or 16.

If the return code value of 127 is the highest step return code, the Process End (PRED) statistics record message ID is set to the Message ID of the run task step. On other platforms, the run task return code is 1, resulting in the message ID of XSMG252I in the PRED statistics record.

- The following features are not supported for Connect:Direct for UNIX running on Linux RedHat or SuSE:
 - ◆ SNA
 - ◆ SNMP
- Connect:Direct Browser User Interface is not supported for Connect:Direct for UNIX running on HP Integrity systems with Intel Itanium processors.

Installation Notes

Before you install Connect:Direct for UNIX, read all the information in this section and follow the guidelines.

- Review *Connect:Direct for UNIX Version 4.0.00 Release Notes* for last-minute product information and pre-installation tasks.
- Print and review *Connect:Direct for UNIX Getting Started Guide* from the CD or ESD download file.
- Complete any worksheets prior to installing Connect:Direct for UNIX.
- Review your security configuration to ensure compatibility with Connect:Direct for UNIX before proceeding with the installation. Refer to the *Connect:Direct for UNIX Getting Started Guide* for security options.
- Verify that you have the current updates for Connect:Direct for UNIX. Access current update information, including instructions for applying updates containing product fixes and enhancements, from the Customer Support Web site at <http://support.sterlingcommerce.com>. See *Obtaining Product Updates* on page 14 for instructions.

Connect:Direct File Agent

Before you install Connect:Direct for UNIX File Agent, read all the information in this section and follow the guidelines.

If you want to install a new version of File Agent on AIX, do the following:

1. Save the configuration files (all *.ser files), license files, and Process files to a backup directory.
2. Remove the File Agent directory.
3. Install the new version of File Agent.
4. Copy the original configuration files, license files, and Process files back into the new File Agent directory.

Review the information on using and configuring Connect:Direct for UNIX File Agent in *Connect:Direct for UNIX Getting Started Guide*.

Connect:Direct Secure+ Option for UNIX

Before you install Connect:Direct Secure+ Option for UNIX, read all the information in this section and follow the guidelines.

- Print and Review *Connect:Direct Secure+ Option for UNIX Implementation Guide*.
- To install Secure+ Option at the same time that you install Connect:Direct for UNIX, follow the instructions in *Connect:Direct for UNIX Getting Started Guide*.
- When you upgrade from a previous version of Connect:Direct Secure+ Option for UNIX, the parameters file is converted and can be used with the new version.

Upgrading to Connect:Direct for UNIX Version 4.0

If you are upgrading from an existing version of the Connect:Direct for UNIX application, observe the following guidelines:

- Change the ownership on the statistics files in your work directory so that these files are owned by the user who starts the cdpmgr daemon. Use the following command sequence to change the ownership of the statistics files:

```
$ su root
Password: root_password
# cd cddir/work/node
# chown user_who_starts_cdpmgr S*.*??
```

The following variable definitions apply:

Variable	Definition
root_password	Root user's password
cddir	Directory in which Connect:Direct is installed
node	Your Connect:Direct node name
user_who_starts_cdpmgr	User name of the user who will start the cdpmgr daemon

- If you are upgrading to Connect:Direct for UNIX from version 3.6, 3.7, or 3.8, you must replace the TCQ file with a file in the new format. The upgrade process automatically converts the existing TCQ file to the new format and preserves existing TCQ information.

The program to convert the existing TCQ file is included on the installation media. This program, `tcq_convert`, is extracted to the `d_dir/etc/` directory, where `d_dir` is the directory where Connect:Direct for UNIX is installed and runs automatically during the installation.

If the Process information cannot be converted, the program will display an error and provide instructions to correct the problem.

You can also run this program manually from the system prompt, as described in the sections that follow.

Assuming that the `d_dir/etc/` directory is in your path, the format for the `tcq_convert` program follows:

```
tcq_convert input_filename output_filename
```

Provide the following required parameters:

Parameter	Description
input_filename	TCQ file in the format from a previous version of Connect:Direct for UNIX
output_filename	TCQ file in the format for Connect:Direct for UNIX version 4.0

- If you are upgrading a collection of Connect:Direct for UNIX nodes in a load-balancing environment, stop all of the nodes before you begin the upgrade. You can restart the nodes after they have been upgraded.

Installing Connect:Direct for UNIX from the ESD Portal

These instructions contain procedures for downloading and installing the Connect:Direct for UNIX version 4.0.00 release, including documentation. The exact name of the file you download from the Sterling Commerce Electronic Software Distribution (ESD) Portal depends on your operating system and platform. In the following instructions, the term `CDUnix4000_UNIXPLATFORM.tar.Z` refers to one of the following files:

UNIX Platform	ESD Product Download File Name
HP PA-RISC	CDUnix4000_HP_PA-RISC.tar.Z
HP UX Itanium	CDUnix4000_HP_Itanium.tar.Z
IBM System pSeries	CDUnix4000_IBM.tar.Z
Sun SPARC systems	CDUnix4000_Sun_Solaris.tar.Z
Red Hat	CDUnix4000_RedHat_linux.tar.Z
SuSE	CDUnix4000_SuSE_linux.tar.Z
Linux for zSeries	CDUnix4000_IBMS390_linux.tar.Z
Solaris/X86	CDUnix4000_Solaris_x86.tar.Z

Make a backup copy of the software file and store it in a safe place. You may need the backup in case of disaster recovery, hardware failure, or to reinstall the software.

Downloading Product Files

These instructions assume that you download the `CDUnix4000_UNIXPLATFORM.tar.Z` to a computer running the Windows operating system (OS) and transfer it to the system where you will install it.

To download the CDUnix4000_UNIXPLATFORM_tar.Z file:

1. Log in to the ESD Portal using the instructions in *Access the ESD Portal* in your Order Confirmation e-mail from Sterling Commerce. The Download Area is displayed.
2. Find Connect:Direct for UNIX version 4.0.00 <for Platform> and click **Download**.
3. In the **File Download** dialog box, click **Save**.
4. When the **Save As** dialog box opens, specify the location to save the file, or save the file to your desktop.

Note: If Internet Explorer adds a number in brackets to the name of the downloaded file (for example, CDUnix4000_UNIXPLATFORM_tar.Z), rename the file on the Windows system before you transfer it in binary mode to the system where it will be installed.

5. If the Windows OS is not the target system for the CDUnix4000_UNIXPLATFORM_tar.Z file, transfer the CDUnix4000_UNIXPLATFORM_tar.Z to the system where you will install it.

Caution: Upload the CDUnix4000_UNIXPLATFORM_tar.Z file to the target system in **binary** mode.

Extracting Files

To extract the files:

1. Change the current working directory to the directory where you transferred the Connect:Direct for UNIX download file on the target system.
2. Perform one of the following actions to uncompress the .tar file:
 - ◆ On linux systems, type the following command:

```
gzip -d CDUnix4000_UNIXPLATFORM_tar.Z
```

- ◆ On HP PA-RISC, HP Itanium, IBM System pSeries, Sun SPARC, and Solaris/X86 systems, type the following command:

```
uncompress CDUnix4000_UNIXPLATFORM_tar.Z
```

3. Type the following command to retrieve the files from the archive:

```
tar xvf CDUnix4000_UNIXPLATFORM_tar.Z
```

The following files or folders are extracted:

File or Folder	Description
cdinstall	Contains the Connect:Direct installation script.
cdunix	Contains the installation cpio file.

File or Folder	Description
documentation	Contains the documentation files

Installing the Application

To install Connect:Direct for UNIX:

1. Review *Connect:Direct for UNIX Release Notes* for last-minute product information and installation requirements.
2. Print and review Connect:Direct for UNIX installation documentation from the ESD download file. See *Connect:Direct for UNIX Documentation* on page 26 for details about the files.
3. Follow the instructions for your platform in Chapter 2 of *Connect:Direct for UNIX Getting Started Guide* to install Connect:Direct for UNIX.

Documentation Updates

The *Connect:Direct for UNIX User's Guide* contains instructions for the Configuration Checking Utility (cfgcheck). You must type the Configuration Checking Utility command in all lower-case: `cfgcheck`. Also, there is no `-v` argument for the utility. The correct syntax description for the Configuration Checking Utility on page 83 should appear as follows:

```
$ cfgcheck -t -h -f filename.cfg
```

The *Connect:Direct for UNIX Administration Guide* contains instructions for updating the Global Copy Record. The parameter table for the Global Copy Record should contain the following parameter and description:

`insert.newline`: arbitrarily appends an LF character at the end of each record when receiving a datatype=text file. By default, an LF character is not appended if one already exists at the end of a record. Valid values include `y`—arbitrarily appends an LF character and `n`—appends an LF character if needed (default).

Connect:Direct for UNIX Documentation

The Connect:Direct for UNIX documentation is available on the product media or the documentation CD-ROM or as Help systems integrated into the product interfaces. You can view or download documentation from the Sterling Commerce Support On Demand Web site at <http://support.sterlingcommerce.com>. You need a Support On Demand user name and password. See *Support On Demand User Name and Password* on page 9 for instructions on obtaining your user name and password.

Access to PDF files requires the latest version of Adobe Acrobat Reader, which you can download at www.adobe.com. You can search for a specific word or phrase in the text of an open Adobe PDF

document or a set of PDF documents in a specified location. See the Adobe Reader Help for instructions on using the Search feature. The search lists all instances of the specified string.

The Connect:Direct for UNIX documentation consists of the following:

- *Connect:Direct for UNIX Getting Started Guide*
- *Connect:Direct for UNIX Administration Guide*
- *Connect:Direct for UNIX User's Guide*
- *Connect:Direct for UNIX Version 4.0.00 Release Notes*
- *Connect:Direct for UNIX SNMP Agent System Guide*
- *Connect:Direct Secure+ Option for UNIX Implementation Guide*
- Connect:Direct Secure+ Option SPAdmin Help
- Connect:Direct File Agent Help
- *Determining When to Use UDT (Sterling File Accelerator) whitepaper*
- *Understanding Connect:Direct Processes*

Documentation for the following supplemental products is available on additional distribution media and from the Documentation Library on the Sterling Commerce Support On Demand Web site:

- Connect:Direct Browser User Interface
- Sterling Certificate Wizard
- Sterling External Authentication Server

The latest updates to and information on Connect:Direct Processes are available from the Connect:Direct Processes Web site at

<http://www.sterlingcommerce.com/documentation/processes/processhome.html>.

The *Connect:Direct Compatibility and Connectivity Chart* contains the latest information about currently supported versions and platforms of Connect:Direct and their compatibility and connectivity. This document is available as a PDF file from the Support On Demand Documentation Library. After you log in to the Support On Demand Web site, use the following links on the left-hand navigation bar to access the file: Product Support>Connect>Documentation>Connect:Direct.