Sterling Commerce
Product Documentation

Connect:Enterprise® for UNIX Version 2.4.04

Release Notes

Sterling Commerce
An IBM Company

Connect:Enterprise for UNIX Version 2.4.04 Release Notes

First Edition

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Contents

Connect:Enterprise for UNIX Version 2.4.04 Release Notes

The *Connect:Enterprise for UNIX Version 2.4.04 Release Notes* document supplements Connect:Enterprise for UNIX version 2.4 documentation. Read the document in its entirety before installation. Version 2.4.04 includes all maintenance from 2.4.01, 2.4.02, and 2.4.03. No Release Notes were published for version 2.4.02.

The Connect:Enterprise for UNIX Platform package consists of the distribution media, a license key, and product publications. Connect:Enterprise for UNIX Platform is distributed as a file downloaded from the Sterling Commerce Electronic Software Distribution Portal. See *Installing Connect:Enterprise for UNIX from the ESD Portal* on page 21 for instructions.

Requirements

Your use of Connect:Enterprise for UNIX Platform version 2.4.04 has the following requirements:

Hardware and Software

Connect:Enterprise for UNIX requires the following hardware and software:

> **Note:** Connect:Enterprise for UNIX no longer supports ARTIC cards for Bisync connectivity or the Linux zSeries operating system.

Component or Functionality	Hardware	Software
Connect:Enterprise for UNIX Base	HP 9000 platform (PA-RISC only)	HP-UX 11i, 11.31
	IBM RISC System/6000 platform	AIX 5.3, 6.1
	SUN SPARC systems	Solaris 9 or 10
	Intel Pentium system	RedHat Enterprise Linux AS 3, AS 4, AS 5
		SuSE Linux Enterprise Server 10 or 11

Component or Functionality	Hardware	Software
External Authentication Service		Open LDAP version 2.2
		Open LDAP version 2.3
		Sun Microsystems SunONE 5.2
		IBM Tivoli 5.2 with Fixpack 3
		Microsoft Windows 2003 Domain Functional Level Active Directory
Service interface daemon for the Site Administration user interface and WebDAV server		Java JDK version 1.6
AS2		Java JDK version 1.6
Site Administration user interface		Browser: ◆ Internet Explorer version 6.0 and later ◆ Netscape Navigator 7.x and later ◆ Mozilla Firefox 1.0 and later
		Web servers\servlet engine options: ◆ Jetty server (installed with Connect:Enterprise for UNIX) ◆ IBM WebSphere 6.0 and 6.1 on all supported UNIX platforms ◆ SunONE Application Server 7.0 (formerly iPlanet) on all supported UNIX and Windows platforms ◆ Apache HTTP Server 1.3 or later with Tomcat 5.0 and 6.0 on all supported UNIX platforms ◆ IIS version 5.0 with JRun 4.0 on all supported Windows platforms
User exits		Operating system-compatible ANSI C compiler
Connect:Direct UNIX interoperability		Connect:Direct for UNIX version 3.8 and later
Communications	TCP/IP support Supported Modem/LAN device options: ◆ Synchronous modem (external) ◆ Asynchronous modem (external) ◆ Ethernet or Token Ring network card	

Component or Functionality	Hardware	Software
Async Communications	MUX card that supports modem controls and hardware flow control, for example, J2094A, and the cables required for your environment. **Note:** Contact Hewlett-Packard for information on DTC16 MUX boards that support modem hardware flow control and the specific cables they require to support modems.	HP-UX 11i, 11.31 (PA-RISC only)
	Sun Microsystems part number X1008A - 8-port serial parallel controller (includes internal S-bus adapter, cable, and external 8-port panel). Verify hardware compatibility with Sun Microsystems.	SUN SPARC Solaris 9, or Solaris 10 operating system
Bisync Cleo SYNCcable+	◆ One 3780Plus package or kit for each communications line ◆ One Cleo-supported synchronous modem for each communications line ◆ Digi Etherlite port server or servers for additional asynchronous ports	Included with 3780Plus package or kit

License Key File

The license key file identifies the product features that are available at a site. When you purchase the Connect:Enterprise for UNIX application, a temporary key file is sent to you that enables operation of Connect:Enterprise for UNIX for a limited time. You must replace the temporary key with a permanent key to continue running Connect:Enterprise for UNIX. See the *Connect:Enterprise for UNIX Installation and Administration Guide* for instructions to obtain the permanent license key file and install the license key.

Customer Center Portal User Name and Password

The new Customer Center portal offers you a single location to administer everything associated with your Sterling Commerce products and services. It provides quick access to online tools, on-demand applications, community forums, product information, industry news, support updates, and support case management.

To log into the Customer Center, go to http://customer.sterlingcommerce.com. If you do not have a Support Center user name and a password, click the Join Now link and follow the instructions for new users. If you have a a Support Center account, define a new password the first time you log on.

Additional Requirements

Connect:Enterprise for UNIX has the following additional software requirements:

✦ Berkeley Software Distribution (BSD) sockets or compatible support

✦ SOCKS version 4.x is required if you are using SOCKS for network access control.

✦ If you use Connect:Enterprise HTTP Option, you must run Connect:Enterprise HTTP Option version 1.3.01 to view files larger than 2 GB in the directory list.

What's New in This Release

Connect:Enterprise for UNIX version 2.4 has the following features and enhancements:

> **Note:** If you are upgrading from a previous release of Connect:Enterprise for UNIX and you use Password Encryption or Stored Batch Encryption, please read the section entitled *Upgrading to Connect:Enterprise for UNIX Version 2.4.04* for important fallback information.

Version	Enhancement
2.4.04	Supports FTP/TLS transport encryption, AES ciphers, and improved diagnostics
	Supports AES128 ciphers for password encryption and stored batch encryption
	Supports multiple HTTP daemons in AS2 autoconnect definitions for better failover
	Better error detection and recovery of DMZ protocol daemons
	Support for idle session timeout for SSH remote connect sessions
	Upgrades Jetty to version 6.1.23 to address known security issues
	Support for Intel Linux SuSE 11
	Upgrades OpenSSL to version 0.9.8L to address known security issues.
2.4.03	Upgrades Jetty to version 6.1.18 to address known security issues
	Supports Intel Linux RedHat AS5
	Support for HPUX 11.31 (PA-RISC only)
	Support for AIX 6.1
2.4.02	Provides better tracing of SSL handshake errors
	Reduces AS2 trace output
	Allows the filename to be sent in AS2 header
	Updated OpenSSL libraries to 09.8D level
	Allows wildcarding in mailbox list

Version	Enhancement
	Allows you to turn off in-progress (P) flag without taking product down
	Allows download of multitransmit (M) batch from multiple sessions simultaneously
	Logs device/IP/ports used during protocol sessions
	Logs the reset of a locked ID
	Honors the order of resources in the autoconnect (ACD) definition
	Updates cmurebuild -x to automatically delete index files before rebuilding
	Adds new -N "passphrase" parameter on cmusshkey, ceupassadm, ceupassencrypt
	Allows extracts without setting extracted (E) flag via API
	Adds new utility to dump user rolefile databases
	Makes AS2 contract configuration screens more intuitive
	Rerequests passphrase on failed first attempt
	Remembers passphrase during Admin GUI session
	Allows you to filter batches by P flag
	Splits the "Add" button on the Manage Schedules screen into "Add" and "Add AS2"
	Allows you to set an AS2 "chunking" threshold less than 2GB
	Supports Java JDK 1.5 and 1.6
	Supports Intel Linux Red Hat AS4
	Supports WebSphere Application Server 6.1
	Supports Intel SuSE Linux 9 and 10
2.4.01	Increases data buffer sizes to 16 KB, to and from the mailbox daemon
	Eliminates unnecessary internal acknowledgement data flows through the extract and transmit operations
	Allows ceuadmin and webdav daemons to run separately
2.4.00	Provides support for large AS2 payload sizes with no forced or implied maximum AS2 file size
	Provides AS2 batch correlation through a new batch naming convention, which includes the batch number of the original payload batch
	Provides dynamic tracing capability for the Java daemons
	Supports Solaris 10
	Supports Implicit SSL

Obtaining Product Updates

Product updates and update summaries, including issues resolved for previous versions of Connect:Enterprise for UNIX Platform, are available on the Support Center Web site.

To obtain product updates:

1. Log on to the Customer Center Web site.

2. Click **Support Center**.

3. From the **Product Support** menu on the left navigation bar, click **Connect:Enterprise > Product Updates & Downloads** > Connect:Enterprise for UNIX.

4. Locate the updates for your product and platform and click **View/Download**.

Description of Defects Resolved for This Release

The following table describes the defects resolved for Connect:Enterprise for UNIX version 2.4.04 since the last maintenance release. For the history of issues resolved prior to this release, navigate to the Product Updates/Downloads site for your product and platform using the instructions in *Obtaining Product Updates* on page 10 and review the Fix List.

Defect	Description
QC14600	(FTP) Remove quotes from filename with spaces prior to DELETE command
QC15257	(AS2) A certificate parsing error occurs
QC15304	(LOG) Enhance Connect:Enterprise for UNIX log daemon to normalize timestamps from DMZ daemons for SCC
QC15397	(ADMIN) Select Batches Option "From" and "To" year range ends at 2010
QC15443	(FTP,SSH) Redirect ~max session exceeded~ error messages to stderr
QC15618	(ADMIN) Correct help system security vulnerability
QC15645	(AS2) EDIINT failures occur during high volume
QC15712	(ACD) Core dump occurs with long filename in acd directory
QC16231	(AS2) EDIINT hang occurs during high volume
QC16236	(SSH) Batches pulled by a curl remote are not being logged
QC16291	(SSH) $$ dir command is causing immediate closure of connection
QC16396	(AS2) Incoming AS2 message fails with "Cannot convert date"
QC16612	(SSH) Enhancement: allow multiple addresses in autoconnect
QC16689	(ACD) Memory leak in autoconnect daemon is causing a core dump

Defect	Description
QC16735	(ADMIN) Enhancement: log the IP address of WebDAV clients
QC16812	(ACD) Syntax error occurs in acdfile when sendid has dash "-" in it
QC16884	(MBOX) File Agent getting duplicate adds due to timeout
QC16955	(SSH) Error 4096 occurs when directory has more than 100 batches
QC16961	(UTIL) Speed up cmuadd and File Agent adds
QC17110	(SSH) Disable GSS authentication
QC17221	(SSH) Enhancement: idle session timeout of SSH remote connect sessions
QC17233	(SSH) SESSIONEND record is not executed on failure, as FTP does
QC17234	(SSH) Log remote names for failed logins

Special Considerations

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

Connect:Enterprise Base

Consider the following information when you configure Connect:Enterprise for UNIX.

VMWare

Connect:Enterprise for UNIX may be run on a supported OS under VMWare. If Technical Support cannot replicate an issue in a certified environment, they will require you to replicate the issue in a certified environment before troubleshooting further.

Preventing AS2 Timeouts

To avoid timeout problems when sending large AS2 batches, use Async MDNs.

AS2 Self-Signed Certificates and Direct Trust

When you are configuring AS2 contracts for SSL (HTTPS), two trust models are offered: Trusted Certificates and Direct Trust. If your trading partner is using self-signed certificates for SSL (as opposed to certificates signed by a Certificate Authority), you must configure the contract to use Direct Trust. Otherwise, the connection will fail. This behavior changed from version 2.3.00, so take particular care when upgrading to version 2.4.04.

Batch Encryption of Inbound AS2 Batches

Connect:Enterprise for UNIX saves a transcript (copy) of every inbound AS2 message in the "dead-letter" mailbox (if one is configured in the port's definition; otherwise, the target mailbox specified in the request will be used). If request processing is successful and the trading partner's contract specifies to "Retain original messages in recipient mailbox," then the transcript will be moved to the target mailbox and given the ".AS2" suffix. If processing is unsuccessful, the transcript is simply given the ".BQ" suffix, indicating the inbound request was not processed.

If batch encryption has been configured for the "dead-letter" mailbox only, then the transcript will remain encrypted even though it has been moved to the target (unencrypted) mailbox.

Likewise, if only the target mailbox has been configured for batch encryption, then the transcript will remain unencrypted even though it has been moved to the target (encrypted) mailbox.

Specifying Port Range Parameters with Nonsecure FTP

When nonsecure FTP is used, the following parameters must be specified in the FTP communications protocol definition (CPD file) because they are not supported in the schedule definition (ACD file) or the remote account definition (RSD file):

✦ PASSIVE

✦ PORT_RANGE

✦ PORT_RETRIES

✦ PORT_RETRY_WAIT_TIME

New Terminal Output File for Major Daemons

All major daemons start normally and then redirect output to /dev/null and stdin from /dev/null. This enhancement was introduced in version 2.4.02 to keep the product from hanging when the id that started it logged off and could not accept console messages. In some cases, however, you may miss valuable diagnostic information from the daemons. You can redirect the stdout and stderr streams to a file by adding the -o <filename> option to each of the major daemons in the ceustartup script.

Allowing the ceuadmin and webdav Daemons to Run Separately

The ceuadmin and webdav daemons may be run separately to allow for using different placement and/or access options. For example, you may want to run the WebDAV daemon in the DMZ and disable the Admin functionality there.

✦ The cmuadmind script now allows the -D ceudav and -D admin options to disable one or the other functionality:

Admin Option	Description
-D ceudav	Disables the WebDAV service, and prevents deployment of ceudav.war, if it is present.
-D admin	Disables the admin UI service, and prevents deployment of ceuadmin.war, if it is present.

✦ The -w <portnum>, -W <portnum>, and -f <cpdfile> options are no longer supported as command line options to cmuadmind.

✦ The -C <configfile> option has been added to cmuadmind, where <configfile> can be either of the following:

◆ A simple file name, for which the default path is $CMUHOME/cpd/admin

◆ A fully-qualified path to a file (starting from /). The default is $CMUHOME/cpd/admin/Admind.xml.

Note: The cmuadmind changes may cause upgrade issues if you are running a release earlier than Connect:Enterprise for UNIX version 2.2.00. Reconfiguration of the cmuadmind services is required if you are running a release prior to version 2.2.00.

High-Availability Environment

If you require a high-availability environment, obtain third-party high-availability software from the IBM (HACMP), Sun (Sun Cluster), or Hewlett-Packard (MC/Service Guard) corporations. Connect:Enterprise for UNIX supports the failover capabilities of IBM high-availability cluster multi-processing (HACMP), Sun Cluster, and Hewlett-Packard MC/Service Guard high-availability software using bisynchronous and FTP protocols. The following list identifies considerations for inbound and outbound transmissions on all platforms:

✦ When a failover occurs, the sender must restart inbound file transfers that are in progress.

✦ Depending upon the timing and nature of a failure that results in a failover, specific outbound transfers may also require a manual restart.

✦ The high-availability feature in Connect:Direct for UNIX can be integrated with the Connect:Enterprise for UNIX high-availability feature.

Considerations for FTP Sessions

Use the following information for establishing and maintaining FTP sessions:

✦ An FTP session attempted with the **Remote communication sequence (mode)** parameter set to **Send, then receive** fails when the **AC send directory** and **AC receive directory** parameters are not set. To avoid this problem, ensure that the **AC send directory** and **AC receive directory** parameters are set and that the send directory is different from the receive directory.

✦ The Connect:Enterprise server closes the control channel when it is out of disk space for FTP connections. If this occurs, the FTP transfer must be restarted.

Resource Use for Communications Sessions

Connect:Enterprise for UNIX requires one semaphore, one shared memory segment, and at least one socket descriptor for each communications session (FTP, Async, or Bisync). In addition, each bisync port configured with the SYNCcable+ hardware uses one shared memory segment between 20 K and 40 K. When the session finishes, those resources are released. As a result, the total number of concurrent communications sessions possible on a particular platform depends on the settings of these kernel parameters.

In addition, be aware of what other users are doing on the same system, because other activities can require the same resources needed by Connect:Enterprise for UNIX.

Connect:Enterprise Linux Functionality

Consider the following information for the Linux operating system: Approximately 20 Java processes start when the http daemon and the ediint daemon are started on the Linux OS. This is normal behavior that is due to the Linux thread support architecture.

FTP - Replacing System Standard FTP or SSH

The Connect:Enterprise for UNIX FTP and SSHFTP servers can run in place of the system standard servers to provide a more secure point of entry to your Connect:Enterprise for UNIX system. To replace your system servers:

1. In your Connect:Enterprise for UNIX binary directory ($CMUHOME/<os>/bin), change the owner of the FTP and SSHFTP binaries and setuid to **root**, this allows Connect:Enterprise for UNIX to listen on the standard FTP and SSH ports (21 and 22).

    For FTP, use the following commands:

    ```
    $ chown root cmuftpd ftpd ftp
    $ chmod 4755 cmuftpd ftpd ftp
    ```

    For SSH, use the following commands:

    ```
    $ chown root cmusshftpd sftp-server
    $ chmod 4755 cmusshftpd sftp-server
    ```

2. Edit the communication port definition file for FTP and SSHFTP to change the value for PORTLISTENER to 21 and 22, respectively.

Port Definition File	Value
$CMUHOME/cpd/ftp.cpd	PORTLISTENER = 21
$CMUHOME/cpd/sshftp.cpd	PORTLISTENER = 22

3. Copy the Connect:Enterprise for UNIX inter-process communication shared object library to /usr/lib and mark it as owned by root. Use the following commands:

    ```
    $ cp $CMUHOME/<os>/lib/libcmusips.so   /usr/lib
    ```

    Note: For HP-UX, copy libcmusips.sl and not libcmusips.so.

    ```
    $ chown root /usr/lib/libcmusips.so
    ```

    Note: For HP-UX, mark libcmusips.sl and not libcmusips.so

4. Delete or comment out the line in /etc/inetd.conf that refers to ftp and sshftpd, for example:

```
#ftp      stream  tcp     nowait  root    /etc/ftpd ftpd
#sftp     stream  tcp     nowait  root    /etc/sftpd sftpd
```

5. Signal inetd so that the change will take effect:

```
$ kill -1 nnnn
```

The *nnnn* is inetd PID number.

6. Restart Connect:Enterprise for UNIX so that its configuration changes will take effect:

```
$ ceushutdown -i
$ ceustartup
```

7. When installing a new release or adding maintenance to any of the above modules, you will need to take off the root permissions, do the install, and add the root permissions again.

Known Restrictions

Connect:Enterprise for UNIX version 2.4 has the following restrictions:

Component/Functionality	Restriction
FTP	FTP Proxy firewalls do not work with SSL.
AS2	Client authentication is not supported with Connect:Enterprise for UNIX when HTTPS is used for the AS2 protocol.
	AS2 must use a 32-bit Java version so that it can write to its MDN correlation database. Do not point to a 64-bit Java version when installing AS2. java.security.SignatureException: SHA1withRSA: Not initialized when requesting MDN signing. To overcome this problem, run with Java 5, or check the Customer Center Portal for the correct version of IBM Java 6 to run.
	When running AS2 under an IBM Java 6 JRE, you may encounter java.lang.unsatisfiedLinkError: as2ctree when building payloads or java.security.SignatureException: SHA1withRSA: Not initialized when requesting MDN signing. To overcome this problem, run with Java 5, or check the Customer Center Portal for the correct version of IBM Java 6 to run a 64-bit Java version when installing AS2.
WebDAV	Connect:Enterprise does not accept WebDAV files larger than two gigabytes (2147483647 bytes) unless your WebDAV client supports chunked transfer encoding.

Component/Functionality	Restriction
High Availability	◆ The Connect:Enterprise for UNIX high-availability feature does not support asynchronous communications. ◆ High availability is not supported on Linux.
NFS Drives	Specifying the staging directory for the File Agent on an NFS drive causes problems for the cereport tool. Unless the system time on the local workstation and the NFS server are exactly the same, the Connect:Direct component of cereport cannot locate records for specific transactions and cannot correctly report the path taken by batches extracted for transfer using Connect:Direct. All such transfers are identified as **U** (Unknown).
Connect:Enterprise HTTP Option	Due to browser restrictions, you cannot use Connect:Enterprise HTTP Option to send or receive files larger than 2 GB.
SSHFTP	When acting as an SSHFTP server, Connect:Enterprise for UNIX will not allow multiple simultaneous uploads or downloads. The SSH client is responsible to close each upload or download prior to starting another.
Jetty Server	The Jetty server in Connect:Enterprise for UNIX version 2.4.04 runs very slowly on Linux and AIX when running with Java 1.4.2. Use Java JDK 1.5 or 1.6 to improve performance.

Installation Notes

The installation program executes a master script that calls the installation script for each component. You can install all of Connect:Enterprise for UNIX or just selected components.

Installation instructions for Connect:Enterprise for UNIX are located in the *Connect:Enterprise UNIX for Installation and Administration Guide,* which is available in a PDF file located in the ESD download file.

Refer to the *Connect:Enterprise for UNIX Installation and Administration Guide* before installing Connect:Enterprise for UNIX. Also, review the following publications and gather any necessary information before installing Connect:Enterprise components:

✦ *Connect:Direct for UNIX Getting Started Guide*

✦ *Connect:Direct for UNIX Release Notes*

Read the following publications for more information regarding optional components for Connect:Enterprise for UNIX.

✦ *Connect:Enterprise Command Line Client (Secure FTP) User's Guide*

✦ *Connect:Enterprise HTTP Option Installation and Administration Guide*

Networked Storage Media

You cannot install Connect:Enterprise for UNIX on networked storage media that does not support synchronous file system locking, such as NFS or Samba shares.

UNIX File System Support

If you want to have batches larger than 2,147,483,647 bytes, you must run on a UNIX file system that supports files larger than 2 gigabytes.

CPIO File Names During Installation

Use the following abbreviated directories to obtain cpio file names for use during installation:

File Name	Description
${ESD_root}/ceinstall	Main installation script to install Connect:Enterprise
${ESD_root}/Base/cebase2404.cpio	Connect:Enterprise Base CPIO file (without encryption)
${ESD_root}/Base/cebase2404s.cpio	Connect:Enterprise Base CPIO file (with encryption)

Kernel Parameters on HP-UX Operating Systems

If you are running an HP-UX operating system, ensure that the following *minimum* values are set in SAM:

Parameter	Value
maxuprc	1024
maxusers	1024
nflocks	2048
nstrpty	60
semaem	16384
semmap	1026
semmni	1024
semmns	16384
semmnu	2048
semume	256

These lines increase the number of available semaphore and shared memory resources in the kernel. If you change your semaphore or shared memory settings, you must reboot your computer for the new settings to take effect.

Kernel Parameters on Solaris Operating Systems

The minimum semaphore and shared memory settings for Connect:Enterprise for UNIX on Solaris operating systems in the */etc/system* file are:

```
set semsys:seminfo_semmap=1026
set semsys:seminfo_semmsl=200
set semsys:seminfo_semmni=1024
set semsys:seminfo_semmns=16384
set semsys:seminfo_semmnu=400

set shmsys:shminfo_shmmax=1048576
set shmsys:shminfo_shmmni=1024
```

Note: These are the *minimum* settings. If your settings are higher, you do not need to change them.

These lines increase the number of available semaphore and shared memory resources in the kernel. To check your settings, use the **sysdef** command on Solaris operating systems. If you make changes to your semaphore or shared memory settings, you must reboot your computer for the new settings to take effect.

Exporting Environment Variables

You must set the environment variables before starting Connect:Enterprise for UNIX. Refer to *Exporting Environment Variables* section of the *Connect:Enterprise for UNIX Installation and Administration Guide* after installation.

Upgrading to Connect:Enterprise for UNIX Version 2.4

If you are upgrading from an existing version of Connect:Enterprise for UNIX, refer to Chapter 3, *Upgrading Connect:Enterprise for UNIX*, in the *Connect:Enterprise for UNIX Installation and Administration Guide* for detailed instructions and upgrade considerations.

If you use Password Encryption or Stored Batch Encryption, please read the following information and follow the instructions in *Upgrade and Fallback Planning* on page 20.

New Encryption Ciphers for Password and Stored Batch Encryption

Connect:Enterprise for UNIX version 2.4.04 now supports the AES128 cipher for Password and Stored Batch encryption. However, it will no longer encrypt passwords or batches with the RC5 cipher, which was used on non-Linux platforms on previous releases. Connect:Enterprise for UNIX version 2.4.04 will decrypt passwords and batches encrypted with RC5 from a previous release but will no longer encrypt with this cipher.

Global Key Changes

Prior to Connect:Enterprise for UNIX version 2.4.04, the global key ($CMUHOME/keys/key.global) and triple DES global key (deskey.global) were encrypted using Strong encryption (RC5 on non-Linux, RC4 on Linux). In Connect:Enterprise for UNIX version 2.4.04, they are encrypted with RC4 in all cases. During the upgrade process, the ceukey -R utility is run to save the old keys into time stamped files and then reencrypt them with RC4. The ceukey -R utility tests the global key first and does nothing if it is already encrypted with RC4.

> **Note:** The keys in RC4 format are not backward compatible with previous versions of Connect:Enterprise for UNIX on non-Linux platforms, so you must keep the time stamped saved copies for fallback purposes.

Password Encryption Changes

Prior to Connect:Enterprise for UNIX version 2.4.04, encrypted passwords were stored in the RSD file using Strong encryption (RC5 on non-Linux, RC4 on Linux) based on the global key. The format was the following:

PASSWORD="ENCRYPTED_39E7FB8389CB1AB5" or
RMT_PASSWORD="ENCRYPTED_EC1BB4FA13F5498C"

Connect:Enterprise for UNIX version 2.4.04 will continue to read the old format and decrypt the passwords correctly but will no longer save passwords in this format.

In Connect:Enterprise for UNIX version 2.4.04, the Connect:Enterprise for UNIX administrator can specify the encryption to be used for password encryption in a new file $CMUHOME/mcd/passencrypt.cfg. If the file is missing, the default cipher is RC4:

```
PASSWORD_ENCRYPT_CIPHER={DES|RC4|AES128|3DES}
```

As new RSDs are defined or users change their passwords, the PASSWORD field uses a new format to keep track of which cipher was used as shown in the following:

```
PASSWORD="ENCR_DES__xxxx..." (Password encrypted with DES)
PASSWORD="ENCR_RC_4_xxxx..." (Password encrypted with RC4)
PASSWORD="ENCR_AES1_xxxx..." (Password encrypted with AES128)
PASSWORD="ENCR_3DES_xxxx..." (Password encrypted with Triple DES)
```

> **Note:** The passwords in the new format are not backward compatible with previous versions of Connect:Enterprise for UNIX, so you should create a backup of your RSD directory for fallback purposes before you upgrade.

Stored Batch Encryption Changes

Prior to Connect:Enterprise for UNIX version 2.4.04, batches could be encrypted with WEAK, STRONG, or 3DES encryption, based on settings in the $CMUHOME/med/encrypt.cfg file. For

WEAK and STRONG batches, the batch encryption key (unique for each batch) was itself encrypted with the global key using STRONG encryption (RC5 for non-Linux, RC4 for Linux) and stored in the batch header along with the encryption type (a one byte flag: "W"or "S").

For triple-DES batches, the batch encryption key was (and still is) encrypted using triple-DES with the global triple-DES key and saved in the header with the encryption type ("T"). Triple-DES encryption is forward and backward compatible with Connect:Enterprise for UNIX version 2.4.04 and prior releases. The best strategy during an upgrade is to set triple-DES for all batches in the encrypt.cfg file as follows:

```
 * Triple_DES     # Encrypts all new batches with 3DES encryption
```

Connect:Enterprise for UNIX version 2.4.04 reads batches encrypted in prior releases with WEAK or STRONG, but no longer encrypts batches in those formats. Instead, the batch encryption key is encrypted with the global key using RC4 and the actual batch encryption type is stored in the header ("D" for DES, "R" for RC4, "T" for Triple-DES, and "1" for AES128). If the encrypt.cfg file lists any batches to encrypt with WEAK or STRONG, the Connect:Enterprise for UNIX version 2.4.04 mailbox daemon will put out an error message and shut down. You must remove or comment out any references to WEAK or STRONG encryption in your encrypt.cfg file before you upgrade to CEU2404.

Upgrade and Fallback Planning

When upgrading to Connect:Enterprise for UNIX version 2.4.04, complete the following steps to ensure a smooth upgrade and provide for a fallback to your previous release if needed.

1. Back up your $CMUHOME/keys and $CMUHOME/rsd directories prior to the upgrade. Restore them if you must fall back.

2. If you use Stored Batch Encryption, update your $CMUHOME/med/encrypt.cfg prior to the upgrade to remove all references to WEAK or STRONG encryption and use Triple Des for encrypting all batches as follows:

```
 * Triple_DES     # Encrypts all new batches with 3DES encryption
```

Any batches created after upgrading to Connect:Enterprise for UNIX version 2.4.04 will be readable by the pre-version 2.4.04 system.

Installing Connect:Enterprise for UNIX from the ESD Portal

These instructions contain procedures for downloading and installing the Connect:Enterprise for UNIX version 2.4.04 release, including the documentation. The file you download from the Electronic Software Distribution (ESD) Portal is one of the following:

Version	File Name
FTP	CE.UnixUI.2404.tar.Z
Secure FTP	CE.UnixSI.2404.tar.Z

Downloading and Extracting Product Files

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

To download the 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:Enterprise for UNIX version 2.4.04 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.

5. Transfer the file to the system where you will install it.

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

6. Uncompress the .tar file:

```
uncompress CE.UnixSI.2404.tar.Z
```

7. Extract the files from the archive:

```
tar xvf CE.UnixSI.2404.tar
```

The .tar file contains the following files:

File	Description
./Base/cebaseinstall	Connect:Enterprise for UNIX installation script
./Base/ceupgradebase	Script to upgrade Connect:Enterprise for UNIX
./Base/cebase2404s.cpio or ./Base/cebase2404.cpio (for nonsecure installations)	Installation image for AIX, HP, Sun, and Linux operating systems

Installing the Application

To install Connect:Enterprise for UNIX:

1. Review *Connect:Enterprise for UNIX Version 2.4.04 Release Notes* for last-minute product information and installation requirements.

2. Print and review the Connect:Enterprise for UNIX installation documentation on the ESD download file. See *Connect:Enterprise for UNIX Documentation* on page 27 for details about the documentation files.

3. Go to *Creating the User ID* in Chapter 2 of *Connect:Enterprise for UNIX Installation and Administration Guide* and follow the directions to create the ID used for the installation.

4. Go to step 4 of *Running the Connect:Enterprise Installation Script* in *Connect:Enterprise UNIX for Installation and Administration Guide*, and follow the directions to complete the installation.

Configuring Modems

The following section provides information for configuring your modems.

Configuring Modems for Async-Specific Information

The following parameters are the minimum Hayes-compatible modem configuration parameters necessary for proper operation of the Connect:Enterprise for UNIX async daemon:

Parameter	Description
S0=1	Auto-answer on first ring
E0	Local character echo off
Q1	Response displays off (No *OK*, *Connect*, and so forth)
&C1	DCD (data carrier detect) on while carrier is present

Parameter	Description
&D2	Loss of DTR (data terminal ready) disconnects

The modem control string is set in the **Modem Initialization** field on the Configuring Async Communications screen of the Site Administration user interface or using the MDMCTL parameter in the communications protocol definition (CPD). The format of the Async CPD modem control parameter is an AT command. The following async CPD statement is sufficient:

```
AT S0=1 E0 M0 &C1 &D2
```

Stopping Child Process Before Turning Off Async Modem

The Async master daemon (**cmuasyd**) forks a child process for each Async modem used. If you know in advance that you need to turn a modem off (for example, to replace it or move it), first stop the Async child daemon associated with that modem; otherwise, that port becomes unusable. After the modem is back on, restart the child process. This action does not disrupt other Async modems.

If power to a modem is unexpectedly lost before the associated Async child process is terminated, the port is unusable until the Async master daemon is stopped and restarted. This forces all the Async ports under that master daemon's control to be cycled (creating new child processes), even if the other Async modems experienced no power disruption.

Configuring Modems for Cleo Bisync Support

If you are using the SYNCcable+ hardware and the Cleo bisync daemon **cmubscdc**, the Cleo configuration file settings for the dialing method and the modulation type must match your modem settings.

> **Note:** Do not specify a value for termid in the Cleo configuration file.

Refer to Cleo documentation when you set up the modem and configuration file. You can also refer to www.cleo.com for more setup information.

> **Note:** You must install and test the SYNCcable+ hardware and accompanying software according to the procedures defined by Cleo Communication Systems *before* you configure Connect:Enterprise for UNIX to use it.

See *Requirements* on page 5 for SYNCcable+ requirements.

Configuring UDS Modems

Configure UDS v.3225/v.3229 for v.25bis Bisync dialing using its built-in setup menu. Consult the modem manufacturer's manual for instructions on how to set these options.

Using Etherlite Port Servers

The Digi Etherlite port server has network connectivity and is accessed by the UNIX computer through an IP connection. Connect:Enterprise for UNIX detects no difference between a native port connection and an Etherlite connection. The Etherlite terminal server enables Connect:Enterprise for UNIX to attach multiple bisync modems to one server and also enables these modems to be shared by a high-availability cluster.

The Digi Etherlite ports are physically different from the native ports, so when you use 3780Plus, do not use the async cable supplied with the 3780Plus package. The Digi Etherlite port server and special cable kit required are specific to your particular hardware configuration and can be purchased from Cleo Communications Systems. The Digi Etherlite port servers come with the necessary software for the Etherlite installation. Procedures to install the Etherlite hardware are also available from the Digi Web site at http://support.digi.com/.

The tty devices used to communicate with the Etherlite terminal server and the device names used in the Connect:Enterprise for UNIX configuration files are generated during the installation procedure. Refer to the *Connect:Enterprise for UNIX Configuration Files Reference Guide* for more information.

Documentation Updates

This section describes additions to the Connect:Enterprise for UNIX version 2.4 documentation:

Installation and Administration Guide

On page 30-31, replace the procedure for *Setting Up Secure FTP* with the following:

1. To set up Secure FTP, press Enter. The following information and prompt are displayed:

```
**
**
** Connect:Enterprise UNIX Secure FTP with SSL Setup Script
**
**
Doing FTP with SSL requires private key and certificate pair(s).
Now creating a ssl.spd Security Protocol Definition file
for production use.

You must use the Certificate Wizard or equivalent to generate
a private key and Certificate Signing Request (CSR) to obtain
a certificate from a Certificate Authority (CA), such as
Verisign or Thawte.

When complete, place the concatenated private key and cert
in the /localhome/users/dengs1/ce2404sample/spd/keycert.txt file.
Add the trusted root certificate from the CA to the
/localhome/users/dengs1/ce2404sample/spd/trusted.txt file.

Enter the Security Policy you would like for your FTP connections
(1=REQUIRED, 2=OPTIONAL, 3=DISALLOWED): [2]
```

2. Type the number corresponding to the level of security you want to implement. If you have not installed your certificate, select **3=DISALLOWED**. After you install your certificate, change your setting to enable Secure FTP in the Security Policy field of your SPD file(s). If you select **1=REQUIRED** or **2=OPTIONAL**, the following screen is displayed:

```
Enter the Cipher Strength you would like for your FTP connections (1=STRONG,
2=EXPORT, 3=ALL): [3]
```

3. Type the number corresponding to the appropriate cipher strength for the sites with which you exchange data. See Chapter 10, *Configuring Secure FTP*, for more information regarding cipher suites.

4. The following screen is displayed that completes the Secure FTP installation and also provides information about the CEU Factory Keycert.

```
SPD file /localhome/users/dengs1/ce2404sample/spd/ssl.spd has been created.

Adding /localhome/users/dengs1/ce2404sample/spd/ssl.spd as the default spd file
in
/localhome/users/dengs1/ce2404sample/cpd/ftp.cpd

**
**
Connect:Enterprise UNIX provides a CEU Factory Keycert / Cert pair
for testing purposes.

The CEU Factory Keycert pair may be used for FTP or AS2
SSL/TLS sessions.

The keycert may be used for AS2 payload signing and decryption.
The cert may be used for AS2 signature verification and encryption.

DO NOT USE THE CEU FACTORY KEYCERT FOR PRODUCTION!

SPD file /localhome/users/dengs1/ce2404sample/spd/CEUFactoryKeycert.spd has been
created.

Hit enter to continue.
```

On page 105, add the following information to *cmulogd - Log Daemon Parameters*:

Parameter	Value	Description
-n		Instructs the log daemon to "normalize" the start and/or end timestamps on each incoming record to the current time on the log daemon machine. This ensures that all records written are based on one clock and will not have time discrepancies due to running protocol daemons on another machine. Without the -n flag, no alteration is done on the records.

On page 119, add the following information to *cmusshftpd - SSH Daemon Parameters*:

Parameter	Value	Description
-t	nnnn	Specifies the SSHFTP session timeout in seconds. Valid values are between 30 and 7200 seconds unless the -T parameter is defined. The default is **900**.

User's Guide

On page 18, add the following information to *cmulist Parameters*:

Parameter	Value	Description
-e		Display a one line listing of each selected batch which includes the encryption cipher that each batch was encrypted with in the last column, if any. The encryption types are WEAK and STRONG (for pre-2404 batches), DES, RC4 and AES128 (for post-2404 batches) and TDES.

On page 21, add the following information to *cmustatus Parameters*:

Parameter	Value	Description
-R		Re-encrypt selected batches with Triple-DES encryption to make them compatible with all versions of Connect:Enterprise for UNIX. Batches which display as DES, RC4, and AES128 in a cmulist -e output are not readable on a pre-2.4.04 system. Batches which display as WEAK or STRONG may not be readable in releases after 2.4.04.

On page 26, add the following information to *cmusslverify Parameters*:

Parameter	Value	Description
-v		Provides a verbose listing of the key/certificate or certificate being verified

Configuration Files Reference Guide

On page 108, add the following information to *Security Protocol Definition (SPD) File Parameters*:

SECURITY_PROTOCOL=<u>SSLv3</u>|TLSv1

Specifies the minimum security protocol allowed when securing an SSL session. TLSv1 is considered to be more secure than SSLv3.

Option	Description
SSLv3	Allows sessions to be encrypted with the SSL version 3 protocol or the higher TLS version 1 if available. This is the default and allows for the most compatibility with trading partners. SSLv2 is not supported.
TLSv1	Allows sessions to be encrypted with the TLS version 1 protocol only. If the other side of the session does not support TLSv1, the session is terminated.

CIPHER_SUITES="cipher suite:cipher suite:..."

Specifies the cipher suites, in order of preference, allowed by Connect:Enterprise for UNIX. A cipher suite consists of a key exchange method, a data encryption method, and a message digest function (MD5 or SHA).

Supported cipher suites (in order of descending strength) are the following:

✦ RSA_WITH_AES_256_CBC_SHA (new with Connect:Enterprise for UNIX version 2.4.04)

✦ RSA_WITH_3DES_EDE_CBC_SHA

✦ RSA_WITH_AES_128_CBC_SHA (new with Connect:Enterprise for UNIX version 2.4.04)

✦ RSA_WITH_RC4_128_SHA

✦ RSA_WITH_RC4_128_MD5

✦ RSA_WITH_DES_CBC_SHA

✦ RSA_EXPORT_WITH_RC4_40_MD5

✦ RSA_EXPORT_WITH_RC2_CBC_40_MD5

✦ RSA_EXPORT_WITH_DES40_CBC_SHA

✦ RSA_WITH_NULL_SHA

✦ RSA_WITH_NULL_MD5

Connect:Enterprise for UNIX Documentation

The Connect:Enterprise for UNIX documentation is available on the product media. You can view or download documentation from the Sterling Commerce Customer Center Web site at http://customer.sterlingcommerce.com. You need a Customer Center user name and password. See *Customer Center Portal User Name and Password* on page 7 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:Enterprise for UNIX documentation consists of:

✦ *Connect:Enterprise for UNIX Installation and Administration Guide*

✦ *Connect:Enterprise for UNIX Site Administration User Interface Help*

✦ *Connect:Enterprise for UNIX User's Guide*

✦ *Connect:Enterprise for UNIX Remote User's Guide*

✦ *Connect:Enterprise for UNIX Programmer's Guide*

✦ *Connect:Enterprise for UNIX Configuration Files Reference Guide*

✦ *Connect:Enterprise for UNIX Integration Tools User's Guide*

Documentation for the following supplemental products is available on additional distribution media:

✦ Connect:Direct for UNIX

✦ Sterling Certificate Wizard

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