Sterling Connect:Direct for UNIX

IBM

Release Notes

Version 4.1

Sterling Connect:Direct for UNIX

IBM

Release Notes

Version 4.1

Contents

Release Notes

Overview

The IBM® Sterling Connect:Direct® for UNIX Release Notes document supplements Sterling Connect:Direct for UNIX 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 Sterling Connect:Direct for UNIX.

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 11iv3 or higher	2 GB	50 MB
	HP Integrity system with Intel Itanium processor	HP-UX version 11iv3 or higher	2 GB	50 MB
	IBM System pSeries	AIX 5L™ version 5.3, 6.1, or 7 As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 AIX 5L version 5.3 is no longer supported.	2 GB	50 MB
	Sun SPARC system	Solaris version 9, 10, or 11 As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 Solaris version 9 is no longer supported.	2 GB	50 MB
	Intel and AMD x86/x86-64	Solaris version 10 (patch level (REV) dated 23 Aug 2011 or later) or 11	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, 5, or 6 AS or ES distribution As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 Red Hat Enterprise Linux version 4 is no longer supported.	2 GB	50 MB
		SuSE SLES version 9 or 11 As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 SuSE SLES version 9 is no longer supported.	2 GB	50 MB
		Any point release of Oracle Linux 5 or 6 that includes the following statement in Oracle's Certification document: "Oracle Linux is fully compatible – both source and binary – with Red Hat Enterprise Linux (RHEL)."	2 GB	50 MB
	Linux zSeries	Any point release of Red Hat Enterprise Linux version 4, 5, or 6 AS or ES distribution As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 Red Hat Enterprise Linux version 4 is no longer supported.	2 GB	50 MB
		SuSE SLES version 9 or 11 As of Sterling Connect:Direct for UNIX V4.1.0.4, interim fix 053 SuSE SLES version 9 is no longer supported.	2 GB	50 MB

Component or Functionality	Hardware	Software	RAM (min.)	Disk Space (min.)
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	Varies by platform: • AIX - 298 MB • HP Itanium - 638 MB • HP Parisc - 327 MB • Solaris Intel - 334 MB • Solaris SPARC - 351 MB • Linux zSeries - 27 MB • Linux x86 - 276 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	Varies by platform: • AIX - 310 MB • HP Itanium - 359 MB • HP Parisc - 323 MB • Solaris Intel - 317 MB • Solaris SPARC - 326 MB • Linux zSeries - 268 MB • Linux x86 - 270 MB
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		
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: • SNAplus2 Link version R7 • SNAplus2API version R7		

Component or Functionality	Hardware	Software	RAM (min.)	Disk Space (min.)
	Sun SPARC systems	Install and configure SNAP-IX Gateware software DATA Connection Limited		

Supported Interfaces

Sterling Connect:Direct for UNIX supports the following interfaces:

- Ethernet
- SDLC
- X.25 (QLLC)

Password Storage

Sterling 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 to Install

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 **Tip:** You can acquire this library by applying the compat-libstdc++-33 package.
Intel and AMD x86/x86-64	Red Hat Enterprise Linux version 6	For Red Hat Enterprise Linux version 6, the following libraries need to be installed: • libXtst-1.0.99.2-3.el6.i686 • libXmu-1.0.5-1.el6.i686 • libXt-1.0.7-1.el6.i686 • libXft-2.1.13-4.1.el6.i686 • libX11-1.3-2.el6.i686 (32-bit only) • libXi-1.3-3.el6.i686 • libXext-1.1-3.el6.i686 • libXau-1.0.5-1.el6.i686 • libXrender-0.9.5-1.el6.i686
Linux zSeries	Red Hat Advanced Server	compat-libstdc++-33.3.2.3-47.3 (or later)

UNIX Platform	Software	Library
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, rerun the Sterling Connect:Direct for UNIX installation program.

New Features and Enhancements

This product and its related software have the following features and enhancements:

Feature or Enhancement
Provides for automated deployment of Sterling Connect:Direct for UNIX across the enterprise with enterprise deployment tools such as IBM Tivoli® Endpoint Manager. For more information, refer to the *IBM Sterling Connect:Direct Enterprise Deployment Guide.* Version 4.1.0.4 or later (requires fix pack)
Provides silent installation capability for Sterling Connect:Direct for UNIX. For more information, refer to the *IBM Sterling Connect:Direct Enterprise Deployment Guide.* Version 4.1.0.4 or later (requires fix pack)
Adds support for block mode file transfer. In this mode, Sterling Connect:Direct uses the file block as the data unit to improve performance. Sterling Connect:Direct for UNIX supports block mode file transfer when the following conditions exist: • Remote node supports block mode (Sterling Connect:Direct for z/OS® only) • Source and destination files have like characteristics • Files are supported file types Version 4.1.0.4 or later (requires fix pack)
The ndm.env_vars:sanitize initialization parameter adds a user option to prevent the cdpmgr from sanitizing inherited environment variables. Valid values are y (yes) and n (no). Default value is y. **Attention:**   The initialization parameter is added for convenience. IBM recommends coding run task steps that do not rely on inherited environment variables. Version 4.1.0.3 or later (requires fix pack).
Provides new copy step sysopt, RECDL, to specify a non-standard record delimiter for source and destination text files. The RECDL sysopt is specified as x<*hex value of record delimiter*>. For example, if the source file is EBCDIC and uses the EBCDIC NL (new line character) as the record delimiter, the source file sysopts would include :RECDL=x15:. Version 4.1.0.3 or later (requires fix pack).

Feature or Enhancement
Provides new fsync.after.receive initialization parameter that calls the fsync function to flush all data to disk before you close the file. Files that are written and closed by Sterling Connect:Direct on an NFS destination might not be immediately ready for processing because of NFS-delayed writes. The fsync.after.receive initialization parameter is part of the copy.parms record of the initparm.cfg file. Valid values are y (yes) to call fsync before you close a data file that was received, and n (no). Default value is n. Version 4.1.0.1 or later (requires fix pack).
Provides outgoing Process netmap checking capability. The netmap.check parameter values now include the following settings: • Y - Checks the network map for all nodes that Sterling Connect:Direct communicates with to validate the node name and IP address.   **Attention:** This is an expanded definition to the previous meaning of Y for this parameter. • L - Checks the network map only for nodes that the local Sterling Connect:Direct initiates sessions with to validate the node name and IP address. • R - Checks the network map only for remote nodes that communicate with the local node to validate the node name and IP address. • N - Does not validate any session establishment requests in the network map.
Provides new daily keyword that, when specified with an elapsed time in the startt parameter of a submit command, schedules the Process for the next day at the specified time.
Sterling File Accelerator - supporting UDT (UDP-based Data Transport) for higher file transfer throughput rates on high-speed networks with latency.
Improves and expands use by: • 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 Sterling Connect:Direct API so that customers can build programs using the Sterling Connect:Direct SDK/API in 64-bit mode. (SR 1362740)
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.
Provides new select statistics parameters that allow customers to access statistics information based on source and destination file names.
Provides stand-alone command line configuration utility (cdcustrpt) that produces a report containing configuration information for the system and the product, and for Sterling Connect:Direct Secure Plus and Sterling Connect:Direct for SWIFTNet for UNIX if they are installed. The information in this report can be sent to IBM Customer Support to assist in troubleshooting.
Provides a stand-alone compression utility (cdsacomp) that enables offline pre-compression of a file that can either be decompressed "on-the-fly" as it is received by the remote Sterling Connect:Direct node or be received in a pre-compressed format and later decompressed offline using the cdsacomp utility. (SR 134976)
Provides TCQ compacting automatically at server startup to free up unused records to reduce the TCQ file size and improve the efficiency of Sterling Connect:Direct. (SR 1341291)
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)

Feature or Enhancement
Extends communications support by: • 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 rnode.listen parameter, comm.info sub-parameter in the initialization parameters file. • Providing the ability to use the existing tcp.api parameter in the local.node record of the netmap to define multiple TCP/IP addresses for inbound API connections for flexibility in communications configuration. (SR 1350818)
Enhances visibility of netmap check failures by placing Processes in the Hold queue rather than the Timer queue.
Enhances interoperability with Sterling Control Center by: • Using the time zone differential key to prevent statistics problems in Sterling Control Center. • Adding new initparms and a user authority to support remote Sterling Connect:Direct Secure Plus configuration.
Simplifies set up by initializing Sterling Connect:Direct Secure Plus during installation.
Improves visibility of the statistics max.age parameter by creating this parameter in the initparms.cfg file with a default value of 8 days during installation.
Enhances TCQ compacting by renaming the tcqhdr.ind backup file to tcqhdr.ind.old and retaining this backup file after compacting.
Removes support for SNMP.
Enhances security by providing the IBM Sterling Crypto-C module that provides a FIPS 140-2 validated cryptographic module for HP-UX, PA-RISC, HP-UX Itanium, AIX, and Solaris SPARC UNIX. (Sterling Connect:Direct Secure Plus)

Support Requests Resolved for This Release

Version 4.1.0.4

APAR IC84762

comm.bufsize value defaults to 4096 when it's not specified in either the remote node record or the local.node record of the netmap.cfg file. Documented default is 65536.

APAR IC85214

If multiple comm.info fields are defined in a netmap entry (valid for some SNA connections), cdpmgr will leak memory whenever the netmap entry is referenced.

APAR IC85987

cdpmgr server is killed when command logging is turned on and a client, such as Sterling Control Center, attempts to import a large Secure+ trusted certificates file.

APAR IC86449

On AIX 6.1 and above, a copy step that overwrites a local file to which the local user has no update permission is successful.

APAR IC86456

Improper upgrade procedure resulting in mismatched Secure+ libraries causes cdpmgr to hang on start up.

APAR IC87996

The Partitioned Data Set (PDS) member name, key word PPMN, is listed twice in the Copy Termination Record (record id CTRC) that is logged to statistics when copying a file to or from a zSeries PDS member.

APAR IC86881

Secure cdpmgr initialization procedure to sanitize inherited environment variables, added for APAR IC82150, may prevent run task steps that depend on one or more of the inherited environment variables from working properly.

APAR IC89092

Upgrading to 4.1.0 from a release previous to 4.1.0 configured with Secure+ generates some inappropriate messages indicating that the initialize Secure+ operation failed

APAR IC88093

Certain business scenarios may require the need to specify a nonstandard record delimiter for UNIX text files. Added new copy step sysopt called RECDL.

APAR IC89513

On some Solaris systems, CLI may fail to connect, reporting XSEC016I message. ndmauthc or ndmauths may also generate a core file when this happens.

APAR IC89667

Secure+ SSL connection initiated to Sterling Connect:Direct for z/OS uses a 16k buffer even when both sides have larger buffer sizes specified.

APAR IC91661

Custom program using the Sterling Connect:Direct for UNIX API may generate XCMG000I errors when submitting a command. Server may show an XSEC012I error concurrently.

APAR IC91973

Greater than two gig file transfers fail with XSQF006I on Linux systems with kernel version 3.x.

Version 4.1.0.3

QC19725

Process with snodeid override specified submitted on Sterling Connect:Direct for UNIX node via a submit statement within another Sterling Connect:Direct Process may fail to pass snode security.

QC19758

Sterling Connect:Direct for HP NonStop reports an invalid feedback code in the completion status for a run task step submitted to Sterling Connect:Direct for UNIX.

QC19832

On AIX systems, temporary work files are created in /tmp instead of {install dir}/work/{node name} directory for Processes submitted by a user without write permission in the {install dir}/work/{node name} directory.

QC19857

View Process command may hang and generate many XUPC023I errors when viewing a submitted Process that includes a submit step with an snodeid or pnodeid override.

QC20035

An LCCA082I error is generated after cdpmgr has been started by root and a Secure+ configuration command is issued from a KQV client, like Sterling Control Center.

QC20041

Possible denial of service if attacker can play back multiple simulated sessions that include large malformed session control packets that generate lots of errors.

QC20043

Stack overflow vulnerability in ndmauthc. An attacker could exploit the vulnerability to execute commands with Sterling Connect:Direct for UNIX installer authority.

QC20044

Stack overflow vulnerability in modules that read the initparm.cfg file, like cdpmgr and ndmsmgr.

QC20157

Null pointer dereference vulnerability in ndmsmgr for Secure+ connections. Vulnerability could enable denial of service attack.

QC20158

ndmsmgr segmentation violation during Secure+ connection attempt using a malicious certificate with an inordinately long subject. Possible denial of service.

QC20403

Potential for XPMR018I error when client such as Sterling Control Center attempts to update the initparm.cfg file.

QC20473

Some records on z/OS VB destination file are not filled to LRECL specification when sending a UNIX file with datatype=binary and codepage conversion specified.

QC20638

ndmcmgr aborts with signal 11 when Sterling Control Center attempts to add a local user.

RTC 103045

When Secure+ is installed on a node for the first time, it must be initialized. The initialization procedure requires the Sterling Connect:Direct node name, but it is not offered by default.

RTC 140646

Clients like Sterling Control Center or Sterling Connect:Direct Browser User Interface are able to set an invalid tcp.api value in the local.node netmap entry causing future api connections to be rejected.

APAR IC82150

Improved safe initialization procedures for suid files ndmauthc, ndmauths, and cdpmgr.

APAR IC81358

Statistics archive files may be owned by root.

RTC 315406

cdinstall indication of disk space requirement to install File Agent is too low

APAR IC83460

When SSL/TLS is enabled, updating the .SEAServer entry in Secure+ would fail even when External Authentication is disabled: "Error: The .SEAServer host name must be specified."

APAR IC83593

On exit, cdcust may give an inappropriate warning about incomplete root authority configurations.

APAR IC84027

spcli may display resolved symbolic link values for pathnames entered with symbolic links specified.

APAR IC84003

When Sterling Connect:Direct for UNIX receives a redirect message, SCPA007I, from Sterling Connect:Direct for z/OS Plex environment, Sterling Connect:Direct for UNIX inappropriately records a nonzero completion code. Plex redirection is a normal operational flow.

Version 4.1.0.2

QC19065

XSMG605I error when copy step to i5/OS node fails and connection is via Secure+ STS with digital signatures enabled.

QC19079

XSMG271I error on restarted wildcard copy step when local user on sending node is other than the Sterling Connect:Direct installer.

QC19299

SVSJ032I error sending a binary file to a z/OS destination file with V or VB record format.

QC19324

Scheduled Process fails with XSQF009I error if cdpmgr is recycled before the scheduled Process start time.

QC19414

cdcust option to run "Configurations requiring root privilege" is ineffective when root user is configured with a nologin shell.

QC19435

Files written and closed by Sterling Connect:Direct on NFS destination may not be immediately ready for processing due to NFS delayed writes.

QC19633

cdinstall fails to detect and provide notice when the installed Sterling Connect:Direct version is newer than the installing version.

Version 4.1.0.1

QC18587

Null pointer dereference vulnerability in ndmsmgr.

QC18588

Stack overflow exploit potential in ndmsmgr.

QC18972

Added "daily" keyword that when specified in the startt parameter with an elapsed time will schedule the Process for the next day at the specified time.

QC18999

XIPT011I error when Sterling Control Center attempts to import a large (greater than 16k) trusted certificate file.

QC19021

Trailing blanks are not stripped from first record of a text file received with strip.blanks=yes and codepage conversion.

QC19050

Added functionality to allow server connections to strongly secure sensitive information in session overhead and leave data which may not be sensitive unencrypted to enhance performance. Documentation for this feature and how to use it is available on our IBMconref="product_names.dita#variables/SterlingCommerce-l"> Support Center website.

Version 4.1.0.0

1351573

Copy step fails to checkpoint and restarts from beginning after Process is suspended (flush/hold) and restarted.

1365363

TCP comm errors (XIPT errors) are not returned in a select statistics by pnumber response.

1369148

Customer client applications coded with the Sterling Connect:Direct API would core dump after successive connection failures.

1370676

Wildcard send gets file read permission error when user should have read access via supplementary group permissions.

1370745

"Bytes Read" counter may be incorrect in the Copy Termination Record (CTRC) of select statistics output when sending a text file with strip.blanks=yes.

1370775

CTRC stat record does not reflect XSQF006I generated when small text file received on filesystem that is at full capacity.

1370824

ndmsmgr persisting and using high percentage of CPU in some cases after pnode=snode Process is completed.

1371040

Proxy record that begins with the '#' character causes XSMG242I error for incoming Processes.

1371229

Select statistics command response time improvement.

1371264

Message SVSG005I missing from msgfile.cfg.

1371409

Add methods GetProcessRC and GetProcessMsgID to the C++ sdk API for Process submitted with maxdelay=unlimited.

1371934

XCPS009I error when LRECL specification exactly equal actual text file record length.

1372112

Flush Process ineffective when run task step is running on remote node.

Restriction: Processes running a run task step on a remote node can now be flushed; however, the Process will not be flushed on the remote node side. The task will continue to completion and then the remote node Process will fail with a communication error.

1372125

XUPC035I errors on view Process command when Process specifies sysopts string with embedded quotes.

1372165

XSMG240I error after successful step completion.

1372245

XSMG015I Process error on HP-UX systems configured with long node names.

1372292

Netmap record names longer than 16 characters cause configuration problems in spadmin and spcli.

1372394

Default session class specified in adjacent node record fails to override session class defined in local node record.

1372833

PRED record message id short text shows generic Process completed message, not specific text of PRED record message id.

1372865

Wildcard copy fails to send file that user has read access to via Access Control List.

QC13457
Netmap not checked for outgoing Processes.

QC13793
Potential for small cdpmgr memory leak when select Process detail command is processed.

QC13827
Ndmcmgr memory leak causes File Agent to generate a NullPointerException after repeatedly submitting Processes.

QC14076
cfgcheck '-f' parameter does not restrict check to named file only.

QC14185

Allow underscore characters in hostnames.

QC14341

Sterling Control Center update of local.node record removes tcp.api value.

QC14470

Wild card copy step would inappropriately report success when some but not all matching files were not readable by the user. Added new error message XSMG277I to indicate this condition.

QC14572

After upgrading node with Secure+ option, connections may fail with CSPA016E or CSPA317E errors.

QC14577

XPAE003I syntax error submitting Process coded with several symbolics defined with long symbolic names and values.

QC14599

Install on AIX 5.3 with Service Pack 10 applied fails indicating unsupported pthreads library version.

QC14670

MBCS002E error receiving file using codepage conversion and strip.blanks=yes.

QC14782

XUPC028I error when a view Process command is attempted on a Process with a run task/job step that includes '|' and '=' characters.

QC14860

Potential for client application using API to dump core after ndmapi_sendcmd function call.

QC15020

Expired passwords pass security check on shadow password security enabled systems.

QC15507

While processing a large number of Sterling Connect:Direct Processes, a 'select process pnumber=*' command will intermittently return a truncated list of Processes.

QC15570

When Sterling Connect:Direct for UNIX is at maximum API capacity (as specified by api.max.connects), a Java API call to instantiate (create and connect) to a new node will complete successfully, but subsequent execute commands will fail with the messages "Error: Connection Exception!" and "Unexpected IOException in CommunicationBuffer::Receive()" or "Error: Connection Exception! End of file in CommunicationBuffer::Receive()".

QC15647

XAPI006I errors with Substitution="Specified file could not be opened", with api submit "submit file=filename;" with no space between end of command text and ';'.

QC15740

Change Process command issued for large amount of Processes on TCQ takes a long time to complete and generates many XLKL004I errors.

QC16086

Select Process command while many Processes are in tcq causes CLI to exit with XCMG000I error.

QC16177

CLI abruptly exits with various error indications (depending on operating system) when a select statistics command is issued with a stopt parameter value previous to any existing statistics. Current statistics shows an ndmcmgr terminating with signal SEGV.

QC16235

cfgcheck doesn't indicate line number of errors reported.

QC16242

Sessions fail with CSPA311E and CSPA309E when Secure+ configured with certificates using SHA-2 based signatures.

QC16338

CSPE003E error generated when attempting to submit a Process. Preceded by CSPE008E error with fdbk=9 on cdpmgr startup.

QC16418

When a KQV client (Sterling Connect:Direct Browser User Interface, Sterling Connect:Direct File Agent, etc.) submits a Process, the submitted time reported to the KQV client is the UNIX Epoch, 31 Dec 1969.

QC16538

The XSEC007I message generated when a CLI connection fails due to improper directory permissions of the security subdirectory has misleading text.

QC16620

Apparent hang in spadmin on HP platforms when DISPLAY is directed to Attachmate Reflection X server.

QC16622

No statistic record logged when a non-executing Process is deleted from the TCQ by user.

QC16726

CSPE007E, error=Lock Failed, when a submit within Process step is run on snode with local snode authority other than the Sterling Connect:Direct installer ID.

QC16794

If a wildcard copy step ends with an error condition code, subsequent successful wildcard copy steps will erroneously report step failure.

QC16797

Processes submitted from Sterling Connect:Direct Requester fail to retry connections specified in alt.comm.outbound.

QC16938

No statistic record logged when Secure+ is installed, and a Secure+ session attempt fails due to a Secure+ library load attempt failure.

QC17049

XXDR012I message referring to Key=SER generated for incoming connections from i5/OS.

QC17370

ndmsmgr executable may hang and burn CPU when non-Sterling

Connect:Direct component (possibly a denial of service attack contrivance) sends a buffer to the server port attempting to emulate a Sterling Connect:Direct component.

QC17371

ndmumgr is vulnerable to a stack overflow exploit which could allow a non-root user root authority.

QC17372

ndmumgr can be exploited by a non root user to create a root owned file.

QC17439

tcp.max.time.to.wait parameter is not honored for initial connection attempt.

QC17694

XUPC035I and XUPC066I messages missing from msgfile.cfg.

QC17727

SPAdmin/SPCli execution fails with error opening audit log.

QC17761

XCPS009I error generated due to inappropriate record length check by Sterling Connect:Direct for UNIX when sending a file.

QC17763

Select statistics command specified with startt=(day of the week) fails with "XPAS009I - STARTT has a future date."

QC18309

If Sterling Connect:Direct File Agent 1.3 has been previously applied to a Sterling Connect:Direct for UNIX installation, a cdinstall operation in upgrade mode fails when upgrade attempted for File Agent.

QC18378

Trace cmgr command only effects ndmcmgr of client that issued the command and new ndmcmgrs started after the command is issued. Ndmcmgrs that are running at the time the command is issued are not affected.

QC18772

On some systems, such as RHEL 6, Sterling Connect:Direct API client connect fails with XAPI005I and XSEC015I. Server statistics show XIPT016I.

Special Considerations

This section contains considerations in addition to the procedures defined. Refer to the following notes before installing the product.

- Although Sterling Connect:Direct for UNIX Process names can be up to 255 characters long, some Sterling Connect:Direct platforms, such as Sterling 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 Sterling Connect:Direct for UNIX on an HP Integrity system, you cannot use the Sterling Connect:Direct Secure Plus parameter file generated on a PA-RISC computer. You must create a new parameter file.
- Defining SSL as the preferred protocol in the Sterling Connect:Direct Secure Plus 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, Sterling Connect:Direct

Secure Plus 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 Sterling Connect:Direct Secure Plus initparms record and the user authority that have been added to Sterling Connect:Direct for UNIX version 4.1.00 support remote configuration of Sterling Connect:Direct Secure Plus. 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 for 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

For more information, see Determining When to Use UDT (Sterling File Accelerator) white paper available with the Sterling Connect:Direct for UNIX product documentation on the IBM Support portal.

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

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

The following cipher suites are supported 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

The following cipher suites are not supported 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 Sterling Certificate Wizard version 1.2.03 or earlier, they are not encrypted with a FIPS-approved algorithm. Use the OpenSSL utility provided with Sterling Connect:Direct for UNIX to convert existing private keys to FIPS-approved keys. This utility is located in the *<d_dir>*/ndm/bin directory. For more information on converting keys, see the Sterling Connect:Direct Secure Plus Implementation Guide.

Special Considerations for Connectivity with the HP NonStop Kernel Operating System

This version of Sterling Connect:Direct for UNIX offers connectivity to Sterling Connect:Direct for 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 Sterling Connect:Direct Processes Web site.

Known Restrictions

Sterling Connect:Direct for UNIX has the following restrictions when using third-party hardware or software:

- UDT
  – Under conditions of high CPU usage, a Sterling Connect:Direct Process running over UDT may be interrupted by a lost connection. If the connection is lost, the Process is retried. The frequency of connections lost due to high

CPU usage 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 Sterling Connect:Direct for UNIX to Sterling Connect:Direct for z/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 Sterling Connect:Direct Secure Plus. 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 Sterling Connect:Direct from performing a core dump if it is unable to locate a font.

• Sterling Connect:Direct Secure Plus is administered 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 Sterling Connect:Direct. If you do not have access to X Windows, you can use the Sterling Connect:Direct Secure Plus Command Line Interface (Secure+ CLI).

• Sterling Connect:Direct Secure Plus does not support server gated crypto (SGC) certificates.

• The Secure+ CLI does not support using $HOME or the tilde (~) to specify the path to your home directory.

• Sterling Connect:Direct Secure Plus 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+ CLI 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 Sterling 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.

- Sterling Connect:Direct Browser User Interface is not supported running on HP Integrity systems with Intel Itanium processors.

- Installation on Linux platforms displays the following message:

```
awk: cmd. line:6: warning: escape sequence `\.' treated as plain `.'
```

  This is a known issue with Install Anywhere and does not effect installation or functionality of Sterling Connect:Direct File Agent on Linux.

Upgrading Sterling Connect:Direct File Agent on AIX

Procedure

1. Save the configuration files (all *.ser 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 and Process files back into the new File Agent directory.

Sterling Connect:Direct for UNIX Guidelines

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

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

Upgrade Considerations

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

- SNMP is no longer supported. If you are using SNMP and upgrade to this version, other functionality will not be negatively impacted. However, you will no longer receive SNMP messages.
- 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:
  - root_password - Root user's password
  - cddir - Directory in which Sterling Connect:Direct for UNIX is installed
  - node - Your Sterling Connect:Direct node name
  - user_who_starts_cdpmgr - User name of the user who will start the cdpmgr daemon
- If you are upgrading to Sterling 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 Sterling 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:
  - input_filename - TCQ file in the format from a previous version of Sterling Connect:Direct for UNIX
  - output_filename - TCQ file in the format for Sterling Connect:Direct for UNIX version 4.1.00
- If you are upgrading a collection of Sterling 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.

Notices

This information was developed for products and services offered in the US. This material might be available from IBM in other languages. However, you may be required to own a copy of the product or product version in that language in order to access it.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those

websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBMproducts. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to

IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs. The sample programs are provided "AS IS", without warranty of any kind. IBM shall not be liable for any damages arising out of your use of the sample programs.

Each copy or any portion of these sample programs or any derivative work must include a copyright notice as shown in the next column.

© 2015.
Portions of this code are derived from IBM Corp. Sample Programs.
© Copyright IBM Corp. 2015.

Trademarks

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

IT Infrastructure Library is a registered trademark of the Central Computer and Telecommunications Agency which is now part of the Office of Government Commerce.

Intel, Intel logo, Intel Inside, Intel Inside logo, Intel Centrino, Intel Centrino logo, Celeron, Intel Xeon, Intel SpeedStep, Itanium, and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

ITIL is a registered trademark, and a registered community trademark of the Office of Government Commerce, and is registered in the U.S. Patent and Trademark Office.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Cell Broadband Engine is a trademark of Sony Computer Entertainment, Inc. in the United States, other countries, or both and is used under license therefrom.

Linear Tape-Open, LTO, the LTO Logo, Ultrium and the Ultrium Logo are trademarks of HP, IBM Corp. and Quantum in the U.S. and other countries.

Connect Control Center®, Connect:Direct®, Connect:Enterprise®, Gentran®, Gentran®:Basic®, Gentran:Control®, Gentran:Director®, Gentran:Plus®, Gentran:Realtime®, Gentran:Server®, Gentran:Viewpoint®, Sterling Commerce™, Sterling Information Broker®, and Sterling Integrator® are trademarks or registered trademarks of Sterling Commerce®, Inc., an IBM Company.

Other company, product, and service names may be trademarks or service marks of others.

Terms and conditions for product documentation

Permissions for the use of these publications are granted subject to the following terms and conditions.

Applicability

These terms and conditions are in addition to any terms of use for the IBM website.

Personal use

You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative work of these publications, or any portion thereof, without the express consent of IBM.

Commercial use

You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Rights

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

IBM. ®

Product Number: 5725-C99

Printed in USA