



Release Notes

Sockets Direct Protocol (SDP)

Rev 1.7.0

Mellanox Technologies

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1 OVERVIEW

This document describes the contents of the SDP (Sockets Direct Protocol) Rev 1.7.0 release. The SDP standard describes the message format and protocol definitions required to send/receive data over sockets using SDP.

Note: For supported platforms and operating systems, please refer to the *Mellanox IB Gold Distribution Release Notes*.

This document includes the following sections:

- “Software Dependencies” (page 3)
- “Major Features” (page 3)
- “Known Issues And Unsupported Features” (page 4)
- “Fixed Bugs” (page 4)
- “Main Verification Flows” (page 5)

2 SOFTWARE DEPENDENCIES

SDP depends on the installation of the IB Gold Distribution stack with OpenSM running. The SDP module also depends on the IPoIB module that is part of that stack.

3 MAJOR FEATURES

This SDP is based on Annex A4: “Sockets Direct Protocol” of the *InfiniBand Architecture Specification, Vol. 1, Release 1.1*. Please refer to the Annex for features of SDP.

3.1 New Features

- SDP/TCP socket switch - This is a new option in the libsdp configuration file. Whenever a new TCP socket is created and *listen* is called, it can be configured to one of three options: listen on TCP socket, listen on SDP socket, and listen on both sockets. The default configuration is ‘listen on SDP’ sockets only. For more details, see the libsdp configuration file. (Default path: /usr/local/ibgd/etc/libsdp.conf)

4 KNOWN ISSUES AND UNSUPPORTED FEATURES

The following table lists currently known issues and unsupported compliancy features.

Table 1 - Known Issues And Unsupported Compliancy Features

Flow	Compliancy	Description
Failure of socket rebinding after socket disconnection		SDP may fail to rebind a socket after disconnecting it. (Example: nepipe -r)
rlogin is not supported		The rlogin application is not supported over SDP
Changing buffer size using ChRcvBuf message is not supported		If a message with a ChRcvBuf request is received, a 'reject' is returned
SDP supports user-space sockets only. Sockets created by the kernel are not supported		

5 FIXED BUGS

The following table lists the fixed bugs in this release.

Table 2 - Fixed Bugs

Issue	Description
QP goes to the error state when a connection is refused	The next connection may cause ib_qp_modify to fail
ib_sdp module might not come down	There was no reference count on the usage of ib_sdp module in 2.4

6 MAIN VERIFICATION FLOWS

In order to verify the correctness of the SDP, the following tests and parameters were run.

Table 3 - Verification Tests

Test	Description	Flags
TTCP	<i>Client-server 1 to 1</i> test. Data transfers in different buffer sizes.	-l,-n
Netperf	<i>Client-server 1 to many</i> test. Data transfer in different buffer sizes. A server may serve many clients.	-n,-m
Netpipe	<i>Client-server 1 to 1</i> test. Data transfers in many different buffer sizes. Connect/Disconnect tests.	-r flag does not work -I, -2
Iperf	<i>Client-server 1 to many</i> test. Also a bi-directional test. A test can open many clients.	-P, -l,-d
Apache WebServer	http server.	
lftp	http client	
Wget	http client	
Apache Benchmark	http client	
ftp	ftp protocol	
inetd services	telnet, ssh, vsftpd, etc.	
shutdown test	A test that performs a shutdown on the send/receive side	
nonblocking data	Uses fcntl to cause the socket to work in a non-blocking manner	
bursts test	Inserts sleeps between read and write operations	
Cable disconnecting	Brings links down in the middle of a data transfer	
Signals testing	Uses signals while tests are running (ctrl-c, ctrl-z, kill -9, kill -15)	

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