The Open Group
COE Platform Certification Program
Chapter 9
Simple Mail Transport Protocol (SMTP) Interoperability Validation Procedure

Posix-Based Platform Compliance (PPC)

COE Kernel revision level 4.5p6

June 02, 2003

Revision 1.0

Table of Contents

1.1 Introduction

This document defines the Simple Mail Transport Protocol (SMTP) Interoperability Manual Validation Procedure and is part of the required set of test procedures to be used in the certification of products to the Open Brand COE Platform Product Standard[1].

2. Test Procedure

2.1 Scope:

This demonstration provides a first order verification of TCP/IP interoperability and basic BSD sockets API support for the application platform being certified. The demonstration also provides some assurance of application level interoperability for key Simple Mail Transport Protocol (SMTP) services and protocols. The demonstration of SMTP electronic mail uses the *mailx* commands required by the ISO/IEC 9945-2 (Posix) specification. An electronic mail message is read in from a file, sent to the sysadmin account on the Validation Host and reflected back to the Candidate Platform. The returned message is displayed and saved to a file. This provides some level of assurance that the Candidate Platform can support sending, receiving, display and storage of electronic mail.

2.2 Description of test items

The following functions will be exercised:

A.   Login

B.   Send Mail Test Message to Validation Host

C.   From Validation Host, Send Response to Test Message

D.   Receive reflected Mail Message and Compare to the Expected Result

Z.   Logout

2.3 Test Data/Media Required

The following test files are required: "`smtp_tst.txt`" (a test outbound message listed in Attachment 1) and "`exp_reply.txt`" (the expected message text after

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[1] See http://www.opengroup.org/openbrand/coe/

being reflected from the Validation Host). Both of these files are available on the Validation Host in the "`/kpc/smtp`" sub-directory.

2.4 Setup/Equipment Required

The tester should begin this test procedure using a newly restored Candidate Platform and Validation Host

2.5 Required Personnel

A single (1) tester will be required. The tester must be familiar with POSIX/UNIX application platforms, but need not be familiar with the Common Operating Environment (COE).

2.6 Change History

June 02, 2003

Initial Release

Test Title: Simple Mail Transport Protocol (SMTP) Interoperability Demonstration Validation Procedure

Candidate Platform: _____ Date: _____

Tester: _____ Estimated Runtime: <u>1 hours</u> _____

Start Time: _____ End Time: _____ Actual Runtime: _____

Test Site/Organization: _____ Overall Test Result (Circle One): PASS / FAIL

Configuration Validated

Hardware Platform: _____ System Software: _____

Network Type: _____ Printer: _____

Local Devices (if any): _____

Start of Validation Procedure

4. Test Procedure

Step	Operator Action	Expected Result	Observed Result
A.	4.1 Setup SMTP on the Validation Host		
A.1.	Power up the Validation Host and verify that the COE LOGIN screen opens.	The COE LOGIN screen opens with the DoD security-warning message and the "Please enter your user name" text box.	Setup
A.2.	In the "Please enter your user name" text box enter: sysadmin	The password screen opens with the "Please enter your password" text box.	Setup
A.3.	In the "Please enter your password" text box enter the password for sysadmin: password	An Informational Message dialog box opens confirming the COE LOGIN process is compete.	Setup

Step	Operator Action	Expected Result	Observed Result
A.4.	Click: OK	The dialog box closes. The menu bar, security classification and CDE appear.	Setup
A.5.	Open an XTerm window, right click anywhere on the desktop click: `Applications > Application Manager > DII_APPS > SysAdm`	The `Application Manager – SysAdm` window opens with the following icons: (go up), `Adm Tool, Change Machine ID, Create Action, DTterm, Disk Manager, Edit Local Hosts, Network Installation Server, Reboot System, Segment Installer, Set DNS, Set Routes, Set System Time, Shutdown System, Text Edit, XTerm.`	Setup
A.6.	Double Click: XTerm	An `XTerm` window opens and the login prompt is displayed.	Setup
A.7.	Login as sysadmin enter: sysadmin	The password prompt returns.	Setup
A.8.	Enter the sysadmin password: password	The system returns the command line prompt.	Setup

Step	Operator Action	Expected Result	Observed Result
A.9.	Ensure that the smtp_tst.txt file is on the Validation Host enter: ls –al /kpc/smtp/*	A listing of the files in the /kpc/smtp subdirectory is displayed. Check the ownership and permissions of the smtp_tst.txt file and /kpc/smtp subdirectories. If necessary su to root and chmod 777 the /kpc/smtp subdirectory and files.	Setup
A.10.	Ensure that the /etc/hosts file contains the proper IP addresses enter: more /etc/hosts	The contents of the /etc/hosts file are displayed followed by the system prompt. If not vi edit the /etc/hosts file and insert the proper IP addresses.	Setup
A.11.	Exit the XTerm window enter: Exit	The XTerm window closes.	Setup
B.	4.2 Setup SMTP on the Candidate Platform		
B.1.	Power up the Candidate Platform and verify that the COE LOGIN screen opens.	The COE LOGIN screen opens with the DoD security-warning message and the "Please enter your user name" text box.	Setup

Step	Operator Action	Expected Result	Observed Result
B.2.	In the "`Please enter your user name`" text box enter: `sysadmin`	The password screen opens with the "`Please enter your password`" text box.	Setup
B.3.	In the "`Please enter your password`" text box enter the password for `sysadmin`: `password`	An `Informational Message` dialog box opens confirming the COE login process is compete.	Setup
B.4.	Click: `OK`	The dialog box closes. The menu bar, security classification and CDE appear.	Setup
B.5.	Open an XTerm window, right click anywhere on the desktop click: `Applications > Application Manager > DII_APPS > SysAdm`	The `Application Manager - SysAdm` window opens with the following icons: (go up), `Adm Tool, Change Machine ID, Create Action, DTterm, Disk Manager, Edit Local Hosts, Network Installation Server, Reboot System, Segment Installer, Set DNS, Set Routes, Set System Time, Shutdown System, Text Edit, XTerm.`	Setup

Step	Operator Action	Expected Result	Observed Result
B.6.	Double Click: XTerm	An XTerm window opens and the login prompt is displayed.	Setup
B.7.	Login as sysadmin enter: sysadmin	The password prompt returns.	Setup
B.8.	Enter the sysadmin password: password	The system returns the command line prompt.	Setup
B.9.	Ensure that the /kpc/smtp directory exists on the Candidate Platform enter: ls –al /kpc/smtp	If the /kpc/smtp exists on the Candidate Platform a listing of the files in the /kpc/smtp subdirectory is displayed. Check the ownership and permissions of the files and subdirectories. If the subdirectory /kpc/smtp does not exist create the subdirectory. su to root, mkdir /kpc/smtp.	Setup
B.10.	Ensure that the /etc/hosts file contains the proper IP addresses enter: more /etc/hosts	The contents of the /etc/hosts file are displayed followed by the system prompt. If not vi edit the /etc/hosts file and insert the proper IP addresses.	Setup

Step	Operator Action	Expected Result	Observed Result
B.11.	Exit the XTerm window enter: Exit	The XTerm window closes.	Setup
C.	**4.3 Send Mail Test Message.** **Send Mail From Validation Host to Candidate Platform, From Candidate Platform to Validation Host**		
C.1.	On the Validation Host open an XTerm window, right click anywhere on the desktop click: `Applications > Application Manager > DII_APPS > SysAdm`	The `Application Manager – SysAdm` window opens with the following icons: (go up), `Adm Tool, Change Machine ID, Create Action, DTterm, Disk Manager, Edit Local Hosts, Network Installation Server, Reboot System, Segment Installer, Set DNS, Set Routes, Set System Time, Shutdown System, Text Edit, XTerm.`	Circle one: PASS / FAIL
C.2.	Double Click: XTerm	An `XTerm` window opens and the login prompt is displayed.	Circle one: PASS / FAIL
C.3.	Login as sysadmin enter: sysadmin	The password prompt returns.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
C.4.	Enter the sysadmin password: password	The system returns the command line prompt.	Circle one: PASS / FAIL
C.5.	Send the message file smtp_tst.txt to the Candidate Platform enter: mailx sysadmin@kpccp.kpc.disa.mil `< /kpc/smtp/smtp_tst.txt`	The system prompt is returned. File smtp_tst.txt contains an ASCII message, as found in Attachment 1.	Circle one: PASS / FAIL
C.6.	On the Candidate Platform open an XTerm window, right click anywhere on the desktop click: `Applications > Application Manager > DII_APPS > SysAdm`	The `Application Manager – SysAdm` window opens with the following icons: (go up), `Adm Tool, Change Machine ID, Create Action, DTterm, Disk Manager, Edit Local Hosts, Network Installation Server, Reboot System, Segment Installer, Set DNS, Set Routes, Set System Time, Shutdown System, Text Edit, XTerm.`	Circle one: PASS / FAIL
C.7.	Double Click: XTerm	An `XTerm` window opens and the login prompt is displayed.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
C.8.	Login as sysadmin enter: sysadmin	The password prompt returns.	Circle one: PASS / FAIL
C.9.	Enter the sysadmin password: password	The system returns the command line prompt.	Circle one: PASS / FAIL
C.10.	Execute the mail program enter: mailx	XTerm window displays a mailx prompt. Mail headers as displayed indicating 1 message received from the Validation Host.	Circle one: PASS / FAIL
C.11.	At the mailx prompt enter: headers	Displays the header for the mail message just received. N 1 sysadmin@mailhost. <date and time>	Circle one: PASS / FAIL
C.12.	At the mailx prompt enter: print	If the message displayed is similar to Attachment 1, this test step result is PASS, otherwise this test step result is FAIL.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
C.13.	At the mailx prompt save the message received as a file enter: save /kpc/smtp/smtp_tst.txt	The string "/kpc/smtp/smtp_tst.txt" [newfile]" is returned followed by the mailx prompt.	Circle one: PASS / FAIL
C.14.	Terminate the mailx program at the mailx prompt enter: quit	Returns a command prompt in the xterm window.	Circle one: PASS / FAIL
C.15.	Send the message file smtp_tst.txt to the Validation Host enter: mailx sysadmin@kpchost.kpc.disa.mil `< /kpc/smtp/smtp_tst.txt`	The system prompt is returned. File smtp_tst.txt contains an ASCII message, as found in Attachment 1.	Circle one: PASS / FAIL
C.16.	On the Validation Host execute the mail program enter: mailx	XTerm window displays a mailx prompt. Mail headers as displayed indicating 1 message received from the Validation Host.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
C.17.	At the mailx prompt enter: headers	Displays the header for the mail message just received. N 1 sysadmin@mailhost. <date and time>	Circle one: PASS / FAIL
C.18.	At the mailx prompt enter: print	If the message displayed is similar to Attachment 1, this test step result is PASS, otherwise this test step result is FAIL.	Circle one: PASS / FAIL
C.19.	At the mailx prompt save the message received as a file enter: save /kpc/smtp/rcv_msg.txt	The string "/kpc/smtp/rcv_msg.txt" [newfile]" is returned followed by the mailx prompt.	Circle one: PASS / FAIL
C.20.	Terminate the mailx program at the mailx prompt enter: quit	Returns a command prompt in the XTerm window.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
D.	4.4 Send Reply to Test Message. **Send Reply: From the Validation Host to Candidate Platform.**		
D.1	On the Validation Host send the message file rcv_msg.txt to the Candidate Platform enter: mailx sysadmin@kpccp.kpc.disa.mil `< /kpc/smtp/rcv_msg.txt`	The system prompt is returned. File rcv_msg.txt contains an ASCII message, as found in Attachment 1.	Circle one: PASS / FAIL
D.2.	On the Candidate Platform execute the mail program enter: Mailx	XTerm window displays a mailx prompt**.** Mail headers as displayed indicating 1 message received from the Validation Host.	Circle one: PASS / FAIL
D.3.	At the mailx prompt enter: headers	Displays headers for mail messages received, verifies that the reply was received. N 1 sysadmin@mailhost.<date and time> that first message was sent from kpccp to kpchost. N 2 sysadmin@mailhost. <date and time> that second message was sent from kpccp to kpchost.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
D.4.	At the mailx prompt enter: print	If the message displayed is similar to Attachment 1, this test step result is PASS, otherwise this test step result is FAIL.	Circle one: PASS / FAIL
D.5.	At the mailx prompt save the message received as a file enter: save /kpc/smtp/reply_msg.txt	The string "/kpc/smtp/reply_msg.txt" [newfile]" is returned followed by the mailx prompt.	Circle one: PASS / FAIL
D.6.	Terminate the mailx program at the mailx prompt enter: quit	Returns a command prompt in the xterm window.	Circle one: PASS / FAIL
D.7.	Exit the XTerm window enter: Exit	The XTerm window closes.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
D.8.	On the Candidate Platform open an XTerm window, right click anywhere on the desktop click: `Applications > Application Manager > DII_APPS > SysAdm`	The `Application Manager – SysAdm` window opens with the following icons: (go up), `Adm Tool, Change Machine ID, Create Action, DTterm, Disk Manager, Edit Local Hosts, Network Installation Server, Reboot System, Segment Installer, Set DNS, Set Routes, Set System Time, Shutdown System, Text Edit, XTerm.`	Circle one: PASS / FAIL
D.9.	Double Click: XTerm	An XTerm window opens and the login prompt is displayed.	Circle one: PASS / FAIL
D.10.	Login as sysadmin enter: sysadmin	The password prompt returns.	Circle one: PASS / FAIL
D.11.	Enter the sysadmin password: password	The system returns the command line prompt.	Circle one: PASS / FAIL
D.12.	Execute the mailx program enter: mailx	The mailx system prompt is returned.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
D.13.	At the mailx prompt enter: headers	Displays headers for mail messages received.	Circle one: PASS / FAIL
D.14.	At the mailx prompt enter: print # where # is the number corresponding to the reply from the Validation Host.	Displays reply message received from Validation Host. If message is similar to Attachment 2, this test step result is PASS, otherwise this test step result is FAIL. Time stamps must reflect time of test. Both headers must be present. 3. Message body must be identical to Attachment 2.	Circle one: PASS / FAIL
D.15.	Delete messages from the Candidate Platform at the mailx prompt enter: delete	The mailx prompt returns.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
D.16.	Terminate the mailx program at the mailx prompt enter: quit	Returns a command prompt in the xterm window.	Circle one: PASS / FAIL
D.17.	In the XTerm window at the system prompt enter: cat /kpc/smtp/reply_msg.txt	The contents of the reply_msg.txt file are displayed and the system prompt is returned. If message is similar to Attachment 2, this test step result is PASS, otherwise this test step result is FAIL. Time stamps must reflect time of test. Both headers must be present. Message body must be identical to Attachment 2.	Circle one: PASS / FAIL
D.18.	In the XTerm window at the system prompt enter: rm /kpc/smtp/*	All of the files in the /kpc/smtp subdirectory are deleted and the system prompt returns.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
Z.	4.5 Sysadmin Logout		
Z.1.	On the Validation Host click the EXIT button on the CDE menu bar: EXIT	Logout confirmation window opens.	Logout
Z.2.	Click: OK	System exits and the COE LOGIN screen is displayed.	Logout
Z.3.	On the Candidate Platform click the EXIT button on the CDE menu bar: EXIT	Logout confirmation window opens.	Logout
Z.4.	Click: OK	System exits and the COE LOGIN screen is displayed.	Logout

End of Test Validation Procedure