The Open Group
COE Platform Certification Program
Chapter 13
TCP/IP "Ping" and DNS Interoperability
Validation Procedure

Posix-Based Platform Compliance (PPC)

COE Kernel revision level 4.5p6

June 02, 2003

Revision 1.0

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1. Overview

1.1 Introduction

This document defines the TCP/IP "Ping" and DNS 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 Candidate Platform. The demonstration also provides an initial assurance of application level interoperability prior to demonstration of other services and protocols as well as for key Domain Name System (DNS) services and protocols. The Ping utility sends a request for simple acknowledgment and displays the result to the user. The DNS utility "nslookup" is exercised to retrieve and display DNS information about the Validation Host's DNS client.

2.2 Description of test items

The following functions will be exercised:

A.   Login

B.   Identify Host Names and IP Address

C.   Use "Ping" to Validate the Communication Capability of the Candidate Platform

Z.   Logout

2.3 Test Data/Media Required

None

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

2.4   Setup/Equipment Required

The tester should begin this test procedure using a newly restored Candidate Platform and Validation Host. The COE Validation Host must be running TCP/IP and DNS Service and must be available to the Candidate Platform. NIS must not be running on the Candidate Platform. The Candidate Platform must have the Ping client program and be configured as a DNS client of the 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

3. Test Procedure Submission Form

Test Title: TCP/IP "Ping" and Domain Naming System (DNS) 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 Power-Up and Verify Login		
A.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
A.2.	In the text box "Please enter your user name " enter: sysadmin	The password screen opens with the "Please enter your password" text box.	Setup
A.3.	In the text box "Please enter your password" enter the sysadmin's password. password	An Informational Message dialog box opens confirming that COE login processing 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 desktop displayed.	Setup
B.	**4.2** Identify Host Names and IP Addresses		
B.1.	On the Candidate Platform, open an Xterm window. Right click anywhere on the desktop and select 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
B.2.	Double Click: Xterm	An Xterm window opens and the login prompt is displayed.	Circle one: PASS / FAIL
B.3.	At the login prompt enter: sysadmin	The password prompted is displayed.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
B.4.	At the password prompt enter the sysadmin's password. password	The system prompt is returned.	Circle one: PASS / FAIL
B.5.	Check for Network Information Services (NIS) enter: ps –eaf|grep nis	No NIS/NIS+ related processes should be present, including: 1. nis_cachemanager 2. rpc.nisd –Y 3. rpc.nispasswdd (the grep of nis (i.e. grep nis) may be present and is acceptable.) If NIS/NIS+ processes are present, remove NIS and restart this test procedure. To remove NIS, select Network > Servers > NIS > remove NIS and follow the instructions.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
B.6.	Check for Network Information Services (NIS) enter: ps –eaf|grep yp	No NIS related processes should be present, including: 1. ypbind 2. ypserv 3. yppasswdd (the grep of yp may be present and is acceptable.) If NIS processes are present, remove NIS and restart this test procedure. To remove NIS, select Network > Servers > NIS > remove NIS and follow the instructions.	Circle one: PASS / FAIL
B.7.	Check for Domain Name Service (DNS) enter: nslookup.	The screen returns the following: Default Server: kpchost.kpc.disa.mil address 204.34.175.194 followed by a **>** command prompt.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
B.8.	Check the listing of hosts enter: ls –d kpc.disa.mil	A listing of hosts and their IP addresses is displayed, followed by a **>** command prompt. If correct information is displayed for all Validation Cell hosts, test result is PASS otherwise the result is FAIL. Validation Host Name: _____ IP Address: _____ Cell Network Printer Name: _____ IP Address: _____ Candidate Platform Name: _____ IP Address: _____	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
B.9.	Exit the nslookup prompt, Type: exit	The nslookup utility is closed and the XTerm command prompt returns.	Circle one: PASS / FAIL
C.	**4.3** Use `Ping` to Validate the Communication of the Candidate Platform		
C.1.	Invoke Super User in the XTerm window enter: su –root	The password prompt is returned.	Circle one: PASS / FAIL
C.2.	At the password prompt enter the root password: password	A system command prompt returns in the XTerm window.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
C.3.	Initiate a repetitive ping command. At the system command prompt, Type: `ping –I 2 kpchost`	The following example is returned: pinging kpchost with 32 bytes of data reply from \<host>: bytes=\<32> time=\<80ms> TTL=\<249> reply from \<host>: bytes=\<32> time=\<80ms> TTL=\<249> : : If the result is similar to the expected response (parameters reported and values may vary), test result is PASS otherwise the test step result is FAIL.	Circle one: PASS / FAIL
C.4.	Halt the ping process enter: Ctrl Z	Pinging of remote host stops.	Circle one: PASS / FAIL

Step	Operator Action	Expected Result	Observed Result
Z.	4.4 Verify `sysadmin` Logout		
Z.1.	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

End of Test Validation Procedure