

# ***SUITABILITY TEST REPORT***

for

**Boole & Babbage  
COMMAND/Post, Version 3.2  
Solaris**

**Network Manager Component**

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Prepared by



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## 1.0 SCOPE

### 1.1 Introduction

This Suitability Test Report (STR) defines and records the test preparation and test results from suitability testing the COMMAND/Post<sup>®</sup> suite of network management applications developed and marketed by Boole & Babbage.

COMMAND/Post<sup>®</sup>, developed by Boole & Babbage, is a comprehensive management system that allows users to build an enterprise-specific network management system. The complete family consists of COMMAND/POST and associated options that extend the product's functionality for specific selected environments. Numerous connectivity and automation solutions are also available for controlling specific systems, devices and applications.

### 1.2 Test Environment

COMMAND/Post<sup>®</sup> was suitability tested against command center product line requirements and architectural constraints, utilizing a test network comprised of one SUN Ultra 1, and two SUN Sparc IPC's installed with Solaris 2.5.1. The results of the testing are documented in this report. The following Boole & Babbage products were tested during this testing phase.

Part Name	Version No.	Descriptive Name
COMMAND/Post	3.2	COMMAND/Post 3.2 for Solaris 2.5
Filter		AUTH-FIL
Desktops		AUTH-DT
ViewMaster		AUTH-VM
PinPoint		AUTH-WIN-DT
AutoCOMMAND Pericom TN3270 AutoOperations Ensign Console Ensign Admin Ensign Alarm		

The following third party products were utilized during testing.

Part Name	Version No.	Descriptive Name
Visio Professional	4.5	Graphics Software
HiJaak Pro	4.0	Graphics Software

## 2.0 SYSTEM REQUIREMENTS

The following system requirements are recommended by the vendor for the Solaris install:

- Sun SPARC-based workstations

- 64 Mb of RAM on workstation that will run COMMAND/Post daemons or filters; you can have as few as 32 megabytes, but performance will be degraded
- 32 Mb of RAM for workstations that run only COMMAND/Post desktops
- Sun 1.02G disks on workstations that will contain the COMMAND/ Post desktops
- Sun0535 or larger disks on workstations that run only Command/Post desktops
- SPARC-compliant CD-ROM drive Tape drive

### 3.0 TEST RESULTS

The results obtained during testing of the Boole & Babbage product COMMAND/Post<sup>®</sup> are shown in the following table. The table contains the *Criteria Number*, *Criteria Description*, *Test Result*, *Explanation*, and *Test Method*. The test methods used to perform the suitability testing included:

**Inspection** - consists of investigation, without the use of special equipment or procedures, to determine compliance with requirements. Inspection may include comparison of requirements to the vendor supplied product, documentation, and/or information.

**Test** - is the evaluation of functional operation by use of equipment or instrumentation, simulation techniques, and the application of established principles and procedures to determine compliance.

### 4.0 CRITERIA SOURCE REFERENCES

The criteria used in the suitability testing process were developed from the following source references:

- Generic Command Center Architecture (GCCA) Report for the Portable, Reusable, Integrated Software Modules (PRISM) Program, Revision A, 5 April 1993.
- Qualified Product List (QPL) Capstone Test Plan for the Portable, Reusable, Integrated Software Modules (PRISM) Program, Revision 0.1, 29 June 1995.
- Network Manager Class Requirements for the Portable, Reusable, Integrated Software Modules (PRISM) Program, Revision 1.0, 7 July 1995.

Criteria Number	Criteria Description	Test Result	Explanation	Test Method
<b>1.0</b>	<b><i>Architectural Characteristics</i></b>			
1.1	The Network Manager should be capable of working in small (0-50 nodes), medium (50-150 nodes), and large (over 150 nodes) networks.	Yes		Inspection
1.1.1	The NM should be capable of handling the magnitude of management information that could be generated in a large (i.e., over 150 nodes) network.	Yes		Inspection
1.2	The NM should be able to provide a hierarchical view of all devices managed by the NM. This view should be represented as a hierarchical map that incorporates explodable icons, which can spawn a sub-map that represents another level of detail. At the lowest level, icons should represent specific devices from which status information can be accessed.	Yes	Use Visio Professional (Visio Corporation) HijaakPro (Quarterdeck) to create or convert initial map. Then import map into COMMAND/Post Map Builder for association of icons and hierarchy building or create all from Map Builder.	Testing
1.3	The NM should allow grouping of devices based on functionality, location, security, or any other user-defined category, and perform management on those groups.	Yes		Testing
1.4	The NM should support manager-to-manager transmissions of: Access control information. Devise status change information. Network configuration changes. (Others?).	Yes	Use COMMAND/Post Option Viewmaster (Boole & Babbage) as an API interface to HPOV NNM.	Inspection
1.5	The NM should provide for functionality which is contained in separate modules which allows the user to choose those functions required and avoid inclusion of non-required functions.	Yes		Testing
1.5.1	The user of the NM software should be able to make software configuration changes (based on changes in the environment) without vendor technical support.	Yes		Inspection
1.6	The NM should be capable of distributing its manager/agent processes among multiple network devices.	Yes		Inspection
1.7	The NM should be capable of running on multiple platforms.	Yes		Inspection
<b>2.0</b>	<b><i>System Interface Criteria</i></b>			
2.1	The NM should support a graphical representation of the network. Comment: This requirement deals with the topology (e.g., token ring, star, bus, node, etc.) of any given level of geography.	Yes	Use Visio Professional (Visio Corporation) HijaakPro (Quarterdeck) to create or convert initial map. Then import map into COMMAND/Post map Builder for associations of icons and hierarchy building or create all from Map Builder.	Inspection
2.1.1	The NM should support the ability to provide a hierarchical map.	Yes		Inspection
2.1.2	The NM should support the ability to represent unmanageable devices in the map.	Yes		Testing
2.1.3	The NM should support the ability to show both physical and logical maps.	Yes		Inspection
2.1.4	The NM should support the ability to tailor the icons that represent the network and network interfaces.	Yes	Use Visio Professional (Visio Corporation) HijaakPro (Quarterdeck) to create or convert initial map. Then import map into COMMAND/Post map Builder for associations of icons and hierarchy building or create all from Map Builder.	Testing
2.2	The NM should provide an interface to access the information off of the Directory Server when one exists.	Yes		Inspection
<b>3.0</b>	<b><i>Security Features</i></b>			

Criteria Number	Criteria Description	Test Result	Explanation	Test Method
3.1	The NM should provide a means to identify and authenticate users via user identification and passwords.	Yes		Testing
3.2	The NM should provide user access controls.	Yes		Inspection
3.2.1	The NM should provide the capability to restrict access to applications.	Yes		Testing
3.2.2	The NM should provide the capability to restrict access to files.	Yes		Testing
3.2.3	The NM should provide the capability to restrict access to queues and other resources.	Yes		Testing
<b>4.0</b>	<b><i>Implementation Constraints</i></b>			
4.1	If Unix-based, the NM should support current POSIX requirements (FIPS Pub 151).	Yes		Inspection
4.2	If Unix-based, the NM product should use the X-windows standard.	Yes		Inspection
4.3	If Unix-based, the NM should support the Open Software Foundation (OSF)/MOTIF graphical user style guide.	Yes		Inspection
<b>5.0</b>	<b><i>Configuration Management</i></b>			
5.1	The NM should provide the capability to define new managed object types. The definition should include attributes, including the range and types of values to which the attributes can be set.	Yes		Testing
5.2	The NM should provide the capability to set SNMP parameters and process allocation.	Yes	Use COMMAND/Post Option ViewMaster (Boole & Babbage) as an API interface to HPOV VVM.	Inspection
5.3	The NM should provide the capability to modify the relationships (i.e. roles) of network resources.	Yes	Use COMMAND/Post Option ViewMaster (Boole & Babbage) as an API interface to HPOV VVM.	Inspection
5.4	The NM should provide the capability to remotely examine device statistics, threshold values, and Local Area Network (LAN) connections.	Yes	Use COMMAND/Post Option ViewMaster (Boole & Babbage) as an API interface to HPOV VVM.	Inspection
5.5	The NM should provide the capability to specify initialization and shutdown procedures for network devices.	Yes		Testing
5.6	The NM should provide for graceful degradation and restoration of the network.	Yes	Requires user to build scripts to extract required data.	Inspection
5.7	The NM should provide the capability to verify each user's authorization for performing either specific or categories of configuration management functions.	Yes		Testing
5.8	The NM should be capable of reporting on configuration status.	Yes		Inspection
5.8.1	The NM should provide the capability of agent systems to report configuration changes to their managers as these changes occur.	Yes		Testing
5.8.2	The NM should provide the capability to poll their agents in order to determine each agent's (or agent system's) configuration status.	Yes		Testing
<b>6.0</b>	<b><i>Performance Management</i></b>			
6.1	The NM should provide the capability to monitor performance.	Yes		Inspection
6.1.1	The NM should provide the capability to monitor the workload of networked devices (e.g., resource utilization).	Yes		Testing

Criteria Number	Criteria Description	Test Result	Explanation	Test Method
6.1.2	The NM should provide the capability to generate event reports as utilization approaches capacity.	Yes		Testing
6.1.3	The NM should provide the capability to report on other (i.e. other than utilization capacity) events. The report should specify the event type.	Yes		Testing
6.2	The NM should provide the capability to execute performance tests and to collect the results from those tests inputted to the Diagnostic Testing Function provided under Fault Management.	Yes		Testing
6.3	The NM should provide the capability of monitoring resource allocations for any resource on the network.	Yes		Testing
6.4	The NM should provide the capability to set or modify resource attribute values.	Yes		Testing
6.5	The NM should provide the capability to allow NM operators to specify performance tuning methods.	Yes		Inspection
6.6	The NM should provide the capability to generate performance reports based on user specified criteria.	Yes		Testing
6.6.1	The NM should provide the capability to specify the format of all reports.	Yes		Testing
6.7	The NM should provide the capability to test resource capacity.	Yes		Inspection
<b>7.0</b>	<b><i>Fault Management</i></b>			
7.1	The NM should provide the capability to monitor the events and errors.	Yes		Testing
7.2	The NM should provide the capability to log events and errors, to record reports within the managed system that generated the event, (e.g., logging) or error, and then retrieve these reports remotely.	Yes		Testing
7.3	The NM should provide the capability to forecast anticipated faults by allowing the user to set thresholds, which represent performance limits of networked devices.	Yes		Testing
7.4	The NM should provide the capability to activate diagnostic and testing procedures.	Yes		Testing
7.5	The NM should provide the capability to report results from Diagnostic and Testing procedures.	Yes		Testing
7.6	The NM should provide the capability to analyze the results of diagnostic testing.	Yes		Testing
7.7	The NM should provide the capability to report failures.	Yes		Testing
7.8	The NM should provide the capability to terminate failures.	Yes		Testing
7.9	The NM should provide Diagnostic Tests.	Yes		Inspection
7.9.1	The diagnostic tests should include Connectivity Tests.	Yes		Testing
7.9.2	The diagnostic tests should include Data Saturation Tests.	Yes		Testing
7.9.3	The diagnostic tests should include Data Integrity Tests.	Yes		Testing
7.9.4	The diagnostic tests should include Protocol Integrity Tests.	Yes		Testing
7.9.5	The diagnostic tests should include Connection Saturation Tests.	Yes		Testing
7.9.6	The diagnostic tests should include Response Time Tests.	Yes		Testing
7.9.7	The diagnostic tests should include Imaging Loopback Tests.	Yes		Testing

Criteria Number	Criteria Description	Test Result	Explanation	Test Method
7.10	The NM should provide the capability to request dumps.	Yes		Testing
7.10.1	The NM should provide the capability to request statistic blocks.	Yes		Inspection
7.10.2	The NM should provide the capability to request operational status information of managed network devices.	Yes		Testing
7.11	The NM should provide the capability to track corrections to fault conditions.	Yes		Testing
<b>8.0</b>	<b><i>Security Management</i></b>			
8.1	The NM should provide the capability to the NM operator (or security officer) to permit or disallow access to security related parts of the network.	Yes		Testing
8.2	The NM should provide the capability to archive and retrieve security related information.	Yes		Testing
8.2.1	The NM should provide the capability to create and delete security logs or audit trails.	Yes		Testing
8.2.2	The NM should provide the capability to read from and write to security logs or audit trails.	Yes		Testing
8.2.3	The NM should provide the capability to start and suspend logging or auditing activities.	Yes		Testing
8.2.4	The NM should provide the capability to monitor audit trails or security logs to identify security violation activity.	Yes		Testing
8.2.5	The NM should provide reporting and notification of violations or attempted violations.	Yes		Testing
<b>9.0</b>	<b><i>Accounting Management</i></b>			
9.1	The NM should be capable of recording and generating accounting information.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.1.1	The NM should be able to gather information regarding the duration of communications resource usage.	Yes	Requires 3rd party software	Inspection
9.1.2	The NM should be able to gather information regarding the number of service data units used.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.1.3	The NM should be able to gather information regarding the quality of service provided.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.1.4	The NM should be able to gather information regarding the reason for communications termination.	Yes		Inspection
9.2	The NM should provide the capability of specifying accounting information to be collected.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.2.1	The NM should provide the capability to specify accounting information based on the definition of a managed object.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.2.2	The NM should provide the flexibility for the inclusion of optional attributes for accounting (Accounting Management).	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.2.3	The NM should provide the flexibility for new attributes to be specified by the NM operator.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection

Criteria Number	Criteria Description	Test Result	Explanation	Test Method
			software) to gather this information.	
9.3	The NM should allow for standard procedures to retrieve accounting information and to manage the disposition of the accounting information.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.4	The NM should provide the capability for NM operators to select the format the accounting information is to be presented to users, operators, and administrators.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.5	The NM should support the ability to read accounting limits for communications resources.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.5.1	The NM should support the ability to set accounting limits for communications resources.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.5.2	The NM should support the ability to change accounting limits for communications resources.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
9.6	The NM should provide the capability to allow the NM operator to define metrics and accounting information units for accountable resources.	Yes	Use Open Aviator (SPIRE Technologies) or modify the patrol Agents (BMC software) to gather this information.	Inspection
<b>10.0</b>	<b>General</b>			
10.1	The NM should be a COTS or GOTS product.	Yes		Inspection
10.1.1	The NM should have been used to satisfy NM requirements for at least one year in a multiplatform environment.	Yes		Inspection
10.2	The NM should have proven performance, reliability, and availability characteristics (e.g., mean time between failure, response time to user inputs) and the vendor should be able to provide data supporting characteristic values claimed.	No		Inspection
10.3	The NM should have user manuals.	Yes		Inspection
10.3.1	The NM should have training support.	Yes		Inspection
10.3.2	The NM vendor should provide or make available product upgrades, new versions, updates, patches, bug fixes, and maintenance releases to users, including options for implementing the changes and associated costs for the various kinds of changes.	Yes		Inspection
10.4	The NM should have proven conformance to Human Factors Engineering (HFE) requirements applicable to an operational command center. (Ref, USAF Human Factors Engineering Guidelines)	Yes		Inspection
10.5	The NM should provide programmatic interfaces to support detailed NM requirements.	Yes		Inspection
10.6	The NM should have a proven and demonstrable installed base, where the network manager products have been installed in DoD or non-DoD applications in which products could be demonstrated.	Yes		Inspection
10.7	The NM should be structured into separate functional priced items to allow users to choose the desired capabilities of the product base that satisfy their particular requirements.	Yes		Inspection