

At a Glance

*Over 25 years
combined storage
distance networking
domain knowledge*

*Core competency in
SRDF over optical
networking*

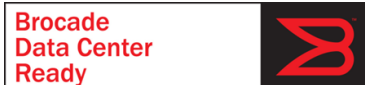
*Fiber Channel over
SONET/SDH, WDM,
IP and Ethernet
Experience*

*EMC Entrance
Criteria Testing*

*Brocade Data Center
Ready Testing*

*FC Design Review
Service for WAN
equipment providers*

*Final Pass Verifica-
tion for WAN
equipment providers*



Data Sheet: SAN Interoperability Service

Abstract

Superna has many years of combined domain knowledge in testing and designing wide area fiber channel networks for disaster recovery. Superna offers a unique service to design, execute and streamline pre-qualification testing requirements for EMC eLab (eLab Entrance Criteria Testing). For Brocade, we offer Data Center Ready testing.

Superna has built a world-class independent testing facility to undertake qualification work and has a consultative partnership with EMC and Brocade. We have successfully completed SAN Interoperability testing with several Tier 1 and Tier 2 network equipment providers.



Summary

The **SAN Interoperability Service** provides the WAN equipment vendor with a number of critical advantages in obtaining qualification with EMC and Brocade and in determining the overall capability of their equipment in a real world testing environment.

- ◆ Gain a **time to market advantage** by leveraging Superna's years of experience with EMC eLab processes and requirements.
- ◆ **Reduce risk** for New Product Introduction of storage networking solutions with Superna's turnkey consult, test, design, support and manage service.
- ◆ Gain EMC eLab storage qualification with **reduced costs** in both equipment and testing resources.
- ◆ A unique suite of applications are available from Superna post qualification that can assess the state of the WAN for SRDF applications for **improved supportability**.



EMC eLab Entrance Criteria and Brocade Data Center Ready Qualification

Benefits

Gain EMC eLab Storage qualification with reduced costs

Additional software Plug-Ins for management systems

TTM advantage by leveraging Superna's years of experience with EMC eLab processes and requirements

Pre-sales support using Superna's domain knowledge in implementing Wide Area Storage Networks

Reduce risk for New Product Introduction of storage networking solutions with Superna's turnkey consult, test, design, support and manage service

Service Scope

Superna's SAN Interoperability Service provides a comprehensive solution for network equipment vendors who are looking for EMC eLab Entrance Criteria or Brocade Data Center Ready qualification:

- Review of vendor devices and requirements
- Develop test case profile for entrance criteria
- Execute and document the testing required for EMC and Brocade
- Create final test report
- Provide technical implementation details for documentation of the vendor's solution, network types (WDM IP, GFP, Ethernet) and management solution

A suite of comprehensive tests that have been designed by EMC and Brocade are utilized to fully evaluate and exercise the distance extension function on the network platform. All interaction with EMC and Brocade is undertaken by Superna through the testing period. Feedback is provided to the vendor for any items that require clarification or modification.

Completion of the testing by Superna typically takes approximately 20 days per network card. This is the first step in the EMC and Brocade qualification process and represents the full scope of Superna's activities. Following the successful execution of the testing, EMC typically requires further validation to take place in their testing facilities.

Superna has invested to build a uniquely equipped lab to undertake EMC eLab and Brocade qualification testing. The components and a diagram of our test environment are provided below.

Superna eLab Compliant Testing Lab Components

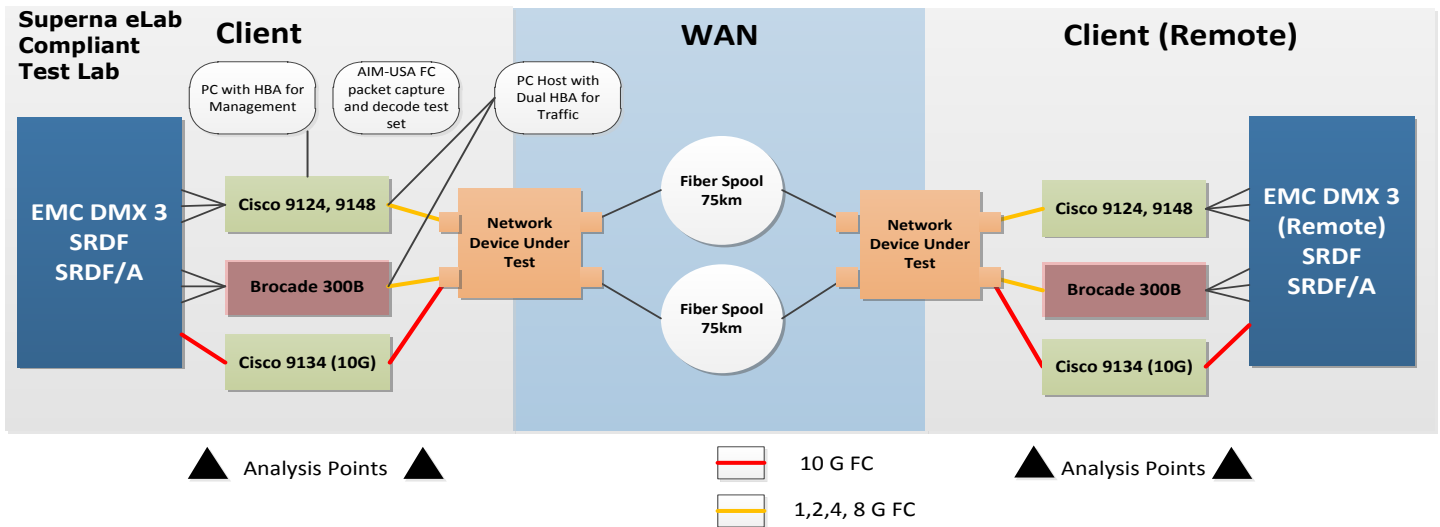
Item	Version
Brocade 300B FC switch 1,2,4,8 FC rates	Latest software supported by eLAB and Brocade
Cisco MDS-9124 and 9148 FC Switch 1,2,4, 8	Latest software supported by eLAB
Cisco MDS-9134 FC Switch 10G FC	Latest software supported by eLAB
EMC DMX 950 (with SRDF sync and async)	Latest software supported by eLAB
Host PC with Emulex HBA with 4 x 2G interfaces	Iometer, windows OS for traffic generation and SYMCLI for DMX management
AIM-USA FC test set for FC capture, generation, primitive corruption	Latest firmware
Ionix server with Network discovery Engine	NDE 1.1 Ionix 8.0
EMC VPLEX	Planned for 2011

Superna

- ◆ Assist vendor to be approved by EMC for eLab qualification (technical and business case development)
- ◆ Review testing timeline with EMC to target completion date
- ◆ Identify EMC prime for document review and approvals
- ◆ Create test plan based on pre-testing check list input from vendor
- ◆ Review test plan with EMC for sign off
- ◆ Execute test plan and manage ongoing communication during test cycle
- ◆ Provide progress updates to equipment vendor, interface to vendor for EMC on technical Q&A required to confirm behaviors or fix/work around issues found during testing
- ◆ Complete final test report for EMC and vendor
- ◆ 3 way conference call (to include EMC) to review the final testing report results
- ◆ Provide remote access to Superna lab for EMC and Brocade to perform final audit testing if required to complete qualification
- ◆ Vendor published in qualification matrix based on EMC resources to review final test results - EMC maintains ownership of final publishing timeline, independently of completed testing

Vendor

- ◆ Pre-test check list and design questionnaire
- ◆ Devices to be tested including all hardware, circuit packs, shelf processors, power modules, software, management software
- ◆ Power requirements for the supplied equipment test configuration. i.e. watts, amps, current and type of power (rectifier to convert DC to AC 110v if required)
- ◆ Product documentation, software and firmware specific to the revision under test
- ◆ Product release notes or post GA bugs that describes known issues and any work around.
- ◆ Marketing presentations and product briefs on the solution
- ◆ On-site equipment installation prime to assist in initial configuration
- ◆ Systems Engineering contact to provide product overview and training session on operation of the equipment
- ◆ Contact name, number and email for a support prime during the testing cycle
- ◆ Access to a design level authority to answer specific questions around the implementation of the solution must be available to answer questions as required



About Superna

Superna is focused on addressing interoperability, management and network security challenges faced by enterprise and telecommunications organizations in the ownership and maintenance of their networks. The Superna team has used their in-depth technical expertise in WAN based storage area networking, network security, WAN optimization, network modeling and large scale service implementations to develop a product portfolio which includes a SAN Interoperability Service, Network management tools, a Security Dashboard and applications for Optical Networks. For more information please visit www.superna.net.