



Global Distributed Storage Engineering
Citigroup Architecture and Technology Engineering

EMC Secure Remote Support Gateway

**GDSE-07006-PS
Project Scope
Version 1.0**

1. Version Control

Version	Date	Author	Reviewed	Comments
0.1	26-Feb-2006	Kevin Hobaugh	Stephen Hopkins	Peer Review
0.2	6-Mar-07	Kevin Hobaugh	SAN Global Stakeholders	RFC
1.0	26-Mar-07	Kevin Hobaugh	-	Production

2. Legal Notice

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3. Contact

Please address any comments or questions regarding the information contained in this document via email to the “*GT Global Distributed Storage Engineering” distribution list or alternatively to gdse@citigroup.com.

4. Latest Versions

It is recommended that the latest version of the document be used from the GDSE website <http://engineering.ti.citigroup.net/gdse/>. Newer versions may include certification on additional platforms, or comments on issues discovered after deployment.

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6. Introduction

In an effort to improve EMC's commitment to protecting our information infrastructure through "24x7 availability", Global Distributed Storage Engineering and Remote Access Engineering are collaborating on this project to certify and release EMC's Secure Remote Support Gateway product to the Production environment. This product provides a secure, IP-based, distributed remote support solution giving Citigroup control and visibility of remote support access, meeting our security, audit and CISS requirements.

ESRS is replacing the existing EMC notifications of faults via modem. Faults will now use FTP/SMTP via the Gateway. The Gateway expands and improves the EMC Secure Remote Support portfolio with these features:

Consolidation – The Gateway solution consolidates access points for EMC support by providing a uniform, standards-based architecture for remote access across EMC product lines. The benefits include the elimination of modems and modem lines, controlled authorization of access for remote support events, and consolidated logging of remote access for audit review.

Security – The Gateway solution fulfills requirements for authentication, authorization and auditing. This IP-based remote access architecture initiates all connections from our site. Security features include:

- o Digital security – Gateway security includes SSL data encryption, entity authentication (private digital certificates), and remote access user authentication verified through EMC network security.
- o Authorization controls – Policy controls allow customized authorization to accept, deny, or require dynamic approval for connections to our EMC information infrastructure at the support application and device level.
- o Secure remote access session tunnels – Gateway establishes remote sessions using secure IP and application fixed and dynamic port assignment between source and target endpoints.
- o Auditing support – The Gateway Policy Manager logs all remote access connection, diagnostic script executions, and support file transfer operations. All log files are controlled and managed by Citigroup to enable auditing of remote support activities executed by EMC. This information can be reconciled against a problem ticket.

7. Licensing

EMC Secure Remote Support software, licensing and installation of the Gateway and Policy Manager are included with the maintenance agreement. EMC does not charge for the software, licensing or installation/configuration of the product.

8. Project Scope

A new approach for certification is being piloted by GDSE for this project. Instead of Storage Operations having to wait for the entire certification to finish, GDSE will deliver partially developed Solutions Guide documentation to Operations per the milestones detailed below. This will allow Operations to order the hardware and software as early as 2 or 3 weeks after the start of the project even as GDSE continues to develop the solution further.

8.1 Phase I – ESRS Installation & Testing (4 Weeks)

Phase I of the project will include installation, configuration and testing of the ESRS infrastructure with Symmetrix/DMX storage, McData switches and Connectrix Manager in the GDSE Lab. After completion of Phase I, ESRS will be ready for production rollout.

Effort	Description	Dependencies	Delivery Time
ESRS Infrastructure:			2 weeks
Install and configure ESRS Gateways (High Availability)	EMC and GDSE will install and configure High Availability Gateway Servers	Available VMWare servers. GDSE/EMC installs and configures Gateways. <u>Note:</u> The Gateway server cannot be shared with other vendors. Using a VMWare server will allow us to potentially have multiple Gateways (vendors) on one server.	3-5 days
Install and configure Policy Manager	GDSE/EMC install Policy Mgr on Citi SOE server on one of the Gateway servers. Configure vendor access request notification Configure allowed remote access applications	GDSE/EMC	3-5 days
Network Security Configuration (VPN/SSL)	Verify configuration meets Citi requirements	GDSE	1-2 weeks
HTTP/SSL Proxy Server Configuration	Verify configuration meets Citi requirements	GDSE	1-2 weeks
Remote Access Security	Verify configuration meets Citi requirements	GDSE	1-2 weeks
IIS settings	Verify requested EMC IIS settings meet Citi security.	GDSE & Secure SOE Build	3 days
Support on VMWare	Test HA environment on VMWare Servers	GDSE/SOE Build	3 days
Integration with SAN Environment:			1 week

Symmetrix/DMX deployment	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
Connectrix Manager (non-SOE)	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
McData Switches	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
SMTP/FTP to the Gateway	Remote Access Network Engineering will need to verify secure communication.	Remote Access Network Engineering	1 week
**** Order Hardware & Software ****			
Test Notification and Remote Access:			1 week
Call Home Test	EMC will initiate a notification to be sent to Customer Service	EMC will test the above platforms	3-5 days
High Availability	Verify HA functionality is working as designed.	GDSE/EMC	3-5 days
Vendor Remote Access – Authentication	EMC will test accessing the devices from EMC Corp. Remote Access Network Engineering will need to verify secure communication.	EMC & Remote Access Eng collaborative effort	1 week
Complete Security Documentation:			2-4 days
Submittal of Security Documentation	Complete EP & ICQ documentation	GDSE	2-4 days
GDSE Documentation:			3 weeks
Phase I ESRS Release Notes	ESRS Installation and configuration. Integrate with Symm/DMX, McData and Connectrix Mgr.	GDSE	3 weeks
**** Deploy Symm/DMX McData and CM environments ****			

8.2 Phase II – continued SAN Environment Integration (6 Weeks)

Phase II will consist of testing ESRS on the remaining storage arrays, switches and Connectrix Manager (SOE).

Effort	Description	Dependencies	Delivery Time
Integration with SAN Environment:			6 weeks
CX Series	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
Centera	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
Cisco Switches (Not supported at this time)	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
Connectrix Manager (SOE via RDP)	Configure SP for ESRS Deploy SAN device (from Gateway Server) EMC will configure Connect Home software to communicate with Gateway Server	SAN device is required to be on the network (CEP). EMC must add ESRS connection record to Clarify	1-5 days
Test Notification and Remote Access:			1 week
Call Home Test	EMC will initiate a notification to be sent to Customer Service	EMC will test the above platforms	1 week
Vendor Remote Access – Authentication	EMC will test accessing the devices from EMC Corp. Remote Access Network Engineering will need to verify secure communication.	EMC & Remote Access Eng collaborative effort	1-2 weeks
GDSE Documentation:			3 weeks
Phase II ESRS Release Notes – Final Doc	Integrate with CX, Centera, and Connectrix Mgr on SOE.	GDSE	3 weeks
**** Deploy CX, Centera and CM SOE environments ****			

8.3 Phase III – Auditing / Security (12 Weeks)

Phase III will consist of audit log collection, packaging software (where applicable) and completing Security documentation. (12 weeks)

Effort	Description	Dependencies	Delivery Time
Auditing / Security			12 weeks
Audit – logging of remote sessions	Verify vendor remote access activity is being logged	GDSE	3 days
eTrust Integration	Engage CA PS to design Message Parsing file (create, configure, test and document)	Citi: Funding for PS engagement CA: Design MP file	4-6 weeks
Software Packaging	Create SPAC for Gateway Server	GDS: create package	6-8 weeks
Submittal of Security Documentation	Standard Build and SB Configuration Checklist	GDSE	1 week
Complete Security Documentation Process	Approval of EP & ICQ documentation	BISO: approve EP & ICQ	12 weeks
	Standard Build and SB Configuration Checklist	SAA: approve SB/SBCC	

The following areas will be considered *out of scope* for this project:

- Any other SAN equipment (ONLY EMC being tested)
- Cisco not supported at this time

9. Project Strategy

The following storage tiers will be certified in this project:

- Symm / DMX
- Clariion
- McData Directors (via Connectrix Manager)
- Connectrix Manager SP (on Non SOE and SOE)
- Centera

10. Project Classification

This is classified as a Maintenance project.
WTS Project ID: 4888

11. Project Deliverables

This project will result in the delivery of the following documents:

EMC Secure Remote Support Gateway
Citigroup Internal Use Only

- EMC Secure Remote Support – Project Scope (this document)
- EMC Secure Remote Support version 1.0 – Release Notes
- EMC Secure Remote Support - Solution Guide

12. Project Prerequisites

High availability servers running on VMWare are required for certification.

13. Project Risks

The benefits of EMC's Gateway solution include the elimination of modems and modem lines, controlled authorization of access for remote support events, and consolidated logging of remote access for audit review.