

UK - Weekend work plan: Weekend 28/29th January 2006

Work Co-ordinator: Salauddin Ahmed

Consisting of 4 Items, and BAU out of hours work log.

BAU Out of Hours work log

Item1: Issues Brought Forward That Require Weekend Activity

Item2: Break/Fix Snagging

Item3: Installation Dmx14C And Additional Disks 14R

Item4: Upgrading Microcode On Dmx7C/R, Dmx9C/R, Dmx11 C/R, Dmx12C/R, Dmx13C/R, Dmx14C/R

Locations:CGC2 3rd floor / RDC 1st /4th floors

Conference Call Number: +44 (0)1452 586935

Conference Code: 0207500656 (participant #)

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Version Control

Date	Version	Reason for Change
26/01/06	291005_v0.1 GR	1 st Draft
27/01/06	291005_v0.2 GR	DMX15C/R removed
27/01/06	291005_v1.0 GR	Installation version

Change Control Log

Reference: CR/VT/ART	Country	Description	Date of Scheduled work	Owner	Status
CR:06604203	UK	ACTIVATING ADDITIONAL DISKS DMX 14R	28/01/2006	BAU	Install
CR:06604193	UK	UPGRADING MICROCODE ON DMX7,9,11,12,13,14	28/01/2006	BAU	Install
CR:06604185	UK	SAN INSTALLATION DMX 14C ,15C & 15R	28/01/2006	BAU	Install

BAU Out of Hours Work Log

Reference: CR/VT/ART	Description	Date of Scheduled work	Status	Sign off

Issues Found

Log of issues found during weekend activities

ITEM/SECTION NUMBER	ISSUE	FOLLOW UP ACTION / RESOLUTION	OWNER	SIGN OFF

Documentation Changes

Changes to be reflected in the documentation after successful completion of the whole of this work plan are as follows:

SAN Configuration Documentation to be updated to reflect additional DMXs

SAN floor plans to be updated

Switch plans to be updated

Documentation update Sign Off: To be returned to BAU on completion

Member of: BAU

NAME:

Date:

Future Tasks for Scheduling

Description	Date of Scheduled work	Owner	Change/VT Details

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Graham Rodell

Overview of All Weekend Work

Item1: Issues Brought Forward That Require Weekend Activity – 1 Item

Item2: Break/Fix Snagging – 2 Items

Item3: Installation DMX 14C And Additional Disks 14R

Item4: Installation Upgrading Microcode On DMX7,9,11,12,13,14

Required Resource

ALL RESOURCE IS UNCONFIRMED

MEMBER OF

EMC CE
Oliver Cabling

CGC RESOURCE

Dave Schauerman

Salauddin Ahmed

RDC RESOURCE

Patrick Caborn
Paolo Sidoli
Salauddin Ahmed

Work Co-ordinator

Citigroup Site Co-Ord (Primary)

Graham Rodell
Salauddin Ahmed

Paolo Sidoli
Salauddin Ahmed

BUSINESS AS USUAL (Primary)

BUSINESS AS USUAL (Secondary) Dave Coles

EMC Project Manager

Zerrin Diren & Mark Luff

Dave Coles

Zerrin Diren & Mark Luff

EMC SAM

Paul Belcher

Paul Belcher

This document is to be used as a complement of the official project document and not as substitute.

Over All Sign Off

Item	Status	Owner	Sign off
Item 1: Items brought forward from previous installations			
Item2: Break/fix snagging			
Item3: Installation DMX 14C And Additional Disks 14R			
Item4: Installation Upgrading Microcode On DMX7,9,11,12,13,14			

Overall Sign Off: 1 Page – To be returned to BAU on completion

Member of: BAU

NAME:

Date:

Item 1: Items brought forward from previous installations

1 ITEMS BROUGHT FORWARD

Item number	Reference	Description	Prerequisites	Comments	Resolution
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1-1	06052901	Vendor remote access testing	Awaiting confirmation of Firewall rule completion and tokens for testing		
1-2	065220704	Installation 14C/R	DMX to be powered up	To be installed 28/01/06 06604185 & 06604203	

Item1 Sign Off: 1 Page – To be returned to BAU on completion

Member of: BAU

NAME:

Date:

Item 2: Break/Fix Snagging

Item Number	VT/EMC/ARTS Reference	Description	Comments	Resolution
2-1				
2-2				

Item2 Sign Off: 1 Page – To be returned to BAU on completion

Member of: BAU

NAME:

Date:

Item3: Installation of DMX 14C & Additional Disks 14R

Work number: 280106-UK01

Change control number: 06604185, & 06604203

Item co-ordinator: DMX14C Graham Rodell, DMX14R Paolo Sidoli

Date: 28th January 2006

Location: CGCL3 & RDC L4

Start Time: 14:00 – 28/01/06

Compulsory back-out time: 14:00 – 29/01/06

Compulsory Completion time: 17:59 – 29/01/06

Applicable Appendix's:

Conference Call Number: +44 (0)1452 586935

Conference Code: 0207500656 (participant #)

Item 3: Section Checklist

Section	Details	Comments	Sign Off
3-1	Pre-requisites checks.	Additional 168 disks added 14R	
3-2	Install DMX 14C & 14R onto fabric		
3-3	Post checks.		
3-4	Back out plan		
Item 4 completion Sign Off: 1 page To be returned to BAU on completion.			
Member of: BAU_____ NAME: _____ Date:_____			

Section 3-1: Pre-requisites checks

Step	Time	Owner	Details	Comment	Date Due
3.1.1	Before: 28 th January 2006	SAN P&I	Project and Integration will ensure correct change control is raised for the weekend work	Complete CR: 06604185, & 06604203	
3.1.2		SAN P&I	All Structured cabling in place	Correct	
3.1.3		SAN P&I	All Power sockets available	Confirmed	
3.1.4		SAN P&I	BAU will ensure the Access request is submitted to DCSM for entry into the data centers and associated vendor storerooms.	Access request 06626520- If access problems delay entry for over 20 minutes - Please escalate to work co-ordinator, and this can THEN be escalated to DCSM.	27/01/2006 – 15:00

Section 3-2: Installation of DMX 14C & Additional Disks 14R

Step	Time	Owner	Details	Comment
3.2.1.	Start time: 14:00pm 28/01/2006		Installation DMX14C CGC2 L3	
3.2.2.		BAU site controller	Logon to Conference Call	
3.2.3.		BAU site controller EMC CE	Confirm with EMC CE that: a) DMX14R has 168 additional disks b) DMX14C has 384 drives. If not inform controller and stop.	
3.2.4.		EMC CE	Using the matrix A below ensure each FA/RA for DMX 14C and additional segments 14R	
3.2.5.		EMC CE/ BAU site controller	Confirm each with site and weekend Controller	
3.2.6.		SAN BUA	Using the matrix A below unbind then unblock the indicated ports for the DMX14C	
3.2.7.		SAN BUA	Using the matrix A below check the WWN names are reported on the correct port and confirm each on the matrix	
3.2.8.		SAN BUA	Using the matrix A below configure the alias names and confirm each on the matrix	
3.2.9.		SAN BUA	Using the matrix A below rebind the ports and confirm each on the matrix	
3.2.10.		SAN BUA	Repeat 4.2.5 to 4.2.8 for DMX14R	

Matrix A - DMX14C

DMX-Fa	FA/RA Active	Switch_Port	Port Unbound	Port Unblocked	Fabric	WWN Correct	Alias Added	Port Bound
DMX14C_3aA		SW17C_61			5006048449AFA2C2			
DMX14C_3bA		SW17C_65			5006048449AFA2D2			
DMX14C_3cA		SW17C_69			5006048C49AFA2C2			
DMX14C_3dA		SW17C_73			5006048C49AFA2D2			
DMX14C_4aA		SW17C_77			5006048449AFA2C3			
DMX14C_4bA		SW17C_81			5006048449AFA2D3			
DMX14C_4cA		SW17C_85			5006048C49AFA2C3			
DMX14C_4dA		SW17C_89			5006048C49AFA2D3			
DMX14C_7aA		SW17C_93			5006048449AFA2C6			
DMX14C_7bA		SW17C_97			5006048449AFA2D6			
DMX14C_7cA		SW17C_101			5006048C49AFA2C6			
DMX14C_7dA		SW93C_23			5006048C49AFA2D6			
DMX14C_8aA		SW17C_105			5006048449AFA2C7			
DMX14C_8bA								
DMX14C_8cA								
DMX14C_8dA		SW93C_18			5006048C49AFA2D7			
DMX14C_9aA								
DMX14C_9bA		SW18C_105			5006048449AFA2D8			
DMX14C_9cA								
DMX14C_9dA		SW94C_18			5006048C49AFA2D8			
DMX14C_10aA		SW18C_97			5006048449AFA2C9			
DMX14C_10bA		SW18C_93			5006048449AFA2D9			
DMX14C_10cA		SW18C_101			5006048C49AFA2C9			
DMX14C_10dA		SW94C_23			5006048C49AFA2D9			
DMX14C_13aA		SW18C_81			5006048449AFA2CC			
DMX14C_13bA		SW18C_77			5006048449AFA2DC			
DMX14C_13cA		SW18C_89			5006048C49AFA2CC			

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Graham Rodell

DMX14C_13dA		SW18C_85			5006048C49AFA2DC			
DMX14C_14aA		SW18C_65			5006048449AFA2CD			
DMX14C_14bA		SW18C_61			5006048449AFA2DD			
DMX14C_14cA		SW18C_73			5006048C49AFA2CD			
DMX14C_14dA		SW18C_69			5006048C49AFA2DD			

Matrix B – DMX14RC

DMX10C - BH100 (LC)	FA/RA Active	SWITCH_PORT	Port Unbound	Port Unblocked	Fabric	WWN Correct	Alias Added	Port Bound
DMX14R_7bA		SW15R_121			5006048449AFA2D6			
DMX14R_7cA		SW15R_125			5006048C49AFA2C6			
DMX14R_8aA		SW15R_133			5006048449AFA2C7			
DMX14R_8bA		SW15R_137			5006048449AFA2D7			
DMX14R_8cA		SW15R_141			5006048C49AFA2C7			
DMX14R_10aA		SW16R_121			5006048449AFA2C9			
DMX14R_10cA		SW16R_125			5006048C49AFA2C9			
DMX14R_9aA		SW16R_137			5006048449AFA2C8			
DMX14R_9bA		SW16R_133			5006048449AFA2D8			
DMX14R_9cA		SW16R_141			5006048C49AFA2C8			

Section 3-3: Post checks

Refer to Appendix: N/A

Step	Time	Owner	Details	Comment
3.3.1	On completion of task	SAN BAU	Matrix A & B showing correct installation	

Section 3-4: Back out plan

Refer to appendix: N/A

Reason for Back Out				
The level of back out will depend on the issues encountered, and may not require complete back out, BAU will make an educated decision at the time.				
Step	Time		Details	Comment
3.4.1.	14:00 – 28/01/06		For the DMX involved re-block ports relevant ports from the appropriate matrix above.	

Item4: Microcode Upgrade of DMX 7C/R, 9C/R, 11C/R 12C/R 13C/R & 14R

Work number: 210106-UK02

Change control number: 06604193

Item co-ordinator: Salauddin Ahmed

Date: 28TH January 2006

Location: CGC2 L3 and RDC L1 & 4

Start Time: 14:00 – 28/01/06

Compulsory back-out time: 14:00 – 29/01/06

Compulsory Completion time: 17:59 – 29/01/06

Applicable Appendix's:

Conference Call Number: +44 (0)1452 586935

Conference Code: 0207500656 (participant #)

Item 4: Section Checklist

Removal of UPM cards for re-deployment in RDC level4

Section	Details	Comments	Sign Off
4-1	Pre-requisites checks.		
4-2	Installation of Microcode 7C/R, 9C/R, 11C/R 12C/R 13C/R & 14R		
4-3	Post checks.		
4-4	Back out plan		
Item 3 completion Sign Off: 1 page To be returned to BAU on completion. Member of: BAU _____ NAME: _____ Date: _____			

Section 4-1: Pre-requisites checks

Step	Time	Owner	Details	Comment	Date Due
4.1.1	Before: 21 st January 2006	SAN P&I	Project and Integration will ensure correct change control is raised for the weekend work	Complete CR: 06574199	
4.1.2		SAN P&I	Software loaded on SP's	Confirmed	
4.1.3		SAN P&I	BAU will ensure the Access request is submitted to DCSM for entry into the data centers and associated vendor storerooms.	Access request 06626520- If access problems delay entry for over 20 minutes - Please escalate to work co-ordinator, and this can THEN be escalated to DCSM.	19/01/2006 – 15:00

Section 4-2: DMX 7C/R, 9C/R, 11C/R 12C/R 13C/R & 14R

Step	Time	Owner	Details	Comment
4.2.1.	Start time: 14:00pm 28/01/2006		EMC Star Group Installation of Microcode 7C/R, 9C/R, 11C/R 12C/R & 13C/R On site EMC CE 14R	
4.2.2.		EMC Star Group	Contact Citigroup weekend work controller on Conference Call Number: +44 (0)1452 586935 Conference Code: 0207500656 (participant #) And give start pairs details,	
4.2.3.		SAN BAU	Pass details of upgrade to Ops Desk and ask that they report any unexpected San type errors on conference line immediately.	
4.2.4.		EMC Star Group	On completion of upgrade Star Group to contact controller and report completion	
4.2.5.		SAN BAU	Check email for any error reports and test DMX, filling the results in the matrix below.	
4.2.6.		SAN BAU	Inform Ops desk upgrade complete	
4.2.7.			The process will then complete every hour until all pair's are upgraded.	

Matrix for DMX 7C/R, 9C/R, 11C/R 12C/R 13C/R & 14R Microcode upgrade.

DMX Number Name		Start Time	End Time	Checked	Checked by
SA287750122	DMX 7C				
CK287890296	DMX 9C				
CK287890298	DMX 11C				
CK287890587	DMX 12C				
CK287890603	DMX 13C				

DMX Number Name		Start Time	End Time	Checked	Checked by
CK287750200	DMX 7R				
CK287890275	DMX 9R				
CK287890293	DMX 11R				
CK287890581	DMX 12R				
CK287890596	DMX 13R				
CK287890602	DMX 14R	EMC on site CE Undertaking Expect start 14:00			

Section 4-3: Post checks

Refer to Appendix:

Step	Time	Owner	Details	Comment
4.3.1	On completion of task	EMC CE	DMX 7C/R, 9C/R, 11C/R 12C/R 13C/R & 14R are working correctly	

Section 4-4: Back out plan

Refer to appendix:

Reason for Back Out	
The level of back out will depend on the issues encountered, and may not require complete back out, BAU will work with EMC to ascertain the issue and plan a back out route accordingly. Should an error situation arise a conference call chaired by Gary Battersby EMEA Head of Open Storage will be opened	

Appendix A: Contact details

Company/Department	Title	Name	Contact Number 1	Contact Number 2	Contact Email
Citigroup - Applied Engineering	Work Co-ordinator	Carl Woolward	07900 915 024	020 7500 1104	carl.woolward@citigroup.com
Citigroup - Applied Engineering	Work Co-ordinator	Graham Rodell	07813 602 734	020 7508 9070	graham.rodell@citigroup.com
Citigroup - Applied Engineering	Item Co-ordinator	Carl Williams	07966 466 956	020 7986 5693	carl.patrick.williams@citigroup.com
Citigroup - BAU	BAU - On Call Representative	Salauddin Ahmed	07764 823 914	020 7500 6566	salauddin.ahmed@citigroup.com
Citigroup - BAU	BAU - On Call Representative	Javed Dad	07841 429 769	020 7500 9757	javed.dad@citigroup.com
Citigroup - BAU	BAU - On Call Representative	Hadi Al-Ali	07867 802 398	020 7500 4972	hadi.alali@citigroup.com
Citigroup - BAU	BAU - On Call Representative	Paul Haynes	07796 307 355	020 7500 4972	paul.haynes@citigroup.com
Citigroup - BAU	BAU - On Call Representative	David Coles	07834 807 687	020 7500 9855	david.peter.coles@citigroup.com
Citigroup -Oliver Cabling	Team Leader	Trevor Whelan	07835 186 452	020 7986 2596	trevor.whelan@citigreoup.com
Citigroup -Oliver Cabling	Site Engineer	Paolo Sidoli	N/A	020 7986 9962	paolo.sidoli@citigroup.com
Citigroup -Oliver Cabling	Site Engineer	Carl Elrick	N/A	020 7986 9962	carl.elrick@citigroup.com
Citigroup – DCSM – UK	DCSM Manager	Mark Matthews	07979 607 118	020 7500 8025	mark.a.matthews@citigroup.com
Citigroup – DCSM – UK	DCSM Manager	Kevin Last	07778 814 088	020 7986 2648	kevin.last@citigroup.com
Citigroup – DCSM – UK	DCSM Representative	Matt Neill	07971 008 665	020 7500 8025	matthew.neill@citigroup.com
Citigroup – DCSM – UK	DCSM Representative	Bob Coe	N/A	020 7986 2651	bob.coe@citigroup.com
Citigroup – DCSM – UK	DCSM Representative	John Mc Bride	07710 419 677	776754073 - Mobex	john.mcbride@citigroup.com
Citigroup – CRS – UK	CRS	CRS	67788	N/A	TBA
Citigroup – Command centre	Command Centre	Command Centre	62020	020 7986 2020	TBA
Citigroup - Security - CGC	Security – CGC	Security - CGC	62400	020 7986 2400	TBA
Citigroup - Security - RDC	Security – RDC	Security - RDC	54393	020 7500 4393	TBA
EMC	Project Manager/Work Coordinator	Gary Battersby	07747 765 660	N/A	Battersby_Gary@emc.com
EMC	SAM	Paul Belcher	07730 781 388	N/A	Belcher_Paul@emc.com
EMC	CE	Terry Brister	07713 505 896	N/A	brister_terry@emc.com
EMC	CE	PatrickCaborn	07801 214 303	N/A	caborn_patrick@emc.com
EMC	TS	Ian Gray	07715 012 248	N/A	grey_ian@emc.com

Appendix B: WWN details

CITIGROUP SYMMETRIX DMX WWN Table
(Version 1.0, 17/01/2006)

Name	Model	Serial Number	Segment #	FA	WWN
DMX10C	DMX3000	287890294	10	7bA	500604844A36DD96
			11	10aA	500604844A36DD89
				7cA	5006048C4A36DD86
				10cA	5006048C4A36DD89
			13	8aA	500604844A36DD87
				9bA	500604844A36DD98
			14	8bA	500604844A36DD97
				9aA	500604844A36DD88
			15	8cA	5006048C4A36DD87
				9cA	5006048C4A36DD88
DMX10R	DMX3000	287890300	15	8cA	5006048C4A36DF07
				9cA	5006048C4A36DF08

DMX14C	DMX3000	287890877			
			1	3aA	5006048449AFA2C2
				14bA	5006048449AFA2DD
			2	3bA	5006048449AFA2D2
				14aA	5006048449AFA2CD
			3	3cA	5006048C49AFA2C2
				14dA	5006048C49AFA2DD
			4	3dA	5006048C49AFA2D2
				14cA	5006048C49AFA2CD
			5	4aA	5006048449AFA2C3
				13bA	5006048449AFA2DC
			6	4bA	5006048449AFA2D3
				13aA	5006048449AFA2CC
			7	4cA	5006048C49AFA2C3
				13dA	5006048C49AFA2DC
			8	4dA	5006048C49AFA2D3
				13cA	5006048C49AFA2CC
			9	7aA	5006048449AFA2C6
				10bA	5006048449AFA2D9
			10	7bA	5006048449AFA2D6
				10aA	5006048449AFA2C9
			11	7cA	5006048C49AFA2C6
				10cA	5006048C49AFA2C9
			12	7dA	5006048C49AFA2D6
				10dA	5006048C49AFA2D9
			13	8aA	5006048449AFA2C7
				9bA	5006048449AFA2D8
			14	8bA	5006048449AFA2D7
				9aA	5006048449AFA2C8
			15	8cA	5006048C49AFA2C7
				9cA	5006048C49AFA2C8
			16	8dA	5006048C49AFA2D7
				9dA	5006048C49AFA2D8
			17	3aB	5006048449AFA2E2
				14bB	5006048449AFA2FD
			18	3bB	5006048449AFA2F2
				14aB	5006048449AFA2ED
			19	3cB	5006048C49AFA2E2
				14dB	5006048C49AFA2FD
			20	3dB	5006048C49AFA2F2
				14cB	5006048C49AFA2ED
			21	4aB	5006048449AFA2E3
				13bB	5006048449AFA2FC
			22	4bB	5006048449AFA2F3
				13aB	5006048449AFA2EC
			23	4cB	5006048C49AFA2E3
				13dB	5006048C49AFA2FC
			24	4dB	5006048C49AFA2F3
				13cB	5006048C49AFA2EC
			25	7aB	5006048449AFA2E6
				10bB	5006048449AFA2F9
			26	7bB	5006048449AFA2F6

	27	10aB	5006048449AFA2E9
		7cB	5006048C49AFA2E6
		10cB	5006048C49AFA2E9
	28	8aB	5006048449AFA2E7
		9bB	5006048449AFA2F8
	29	8bB	5006048449AFA2F7
		9aB	5006048449AFA2E8
	30	8cB	5006048C49AFA2E7
		9cB	5006048C49AFA2E8

DMX14R	DMX3000	287890602	10	7bA	5006048449AFA2D6
			11	10aA	5006048449AFA2C9
				7cA	5006048C49AFA2C6
			13	10cA	5006048C49AFA2C9
				8aA	5006048449AFA2C7
			14	9bA	5006048449AFA2D8
				8bA	5006048449AFA2D7
			15	9aA	5006048449AFA2C8
				8cA	5006048C49AFA2C7
				9cA	5006048C49AFA2C8

DMX16C	DMX2000	287751811	1	3aA	5006048449AFA2C2
			2	14bA	5006048449AFA2DD
				3bA	5006048449AFA2D2
			3	14aA	5006048449AFA2CD
				3cA	5006048C49AFA2C2
			4	14dA	5006048C49AFA2DD
				3dA	5006048C49AFA2D2
			5	14cA	5006048C49AFA2CD
				4aA	5006048449AFA2C3
			6	13bA	5006048449AFA2DC
				4bA	5006048449AFA2D3
			7	13aA	5006048449AFA2CC
				4cA	5006048C49AFA2C3
			8	13dA	5006048C49AFA2DC
				4dA	5006048C49AFA2D3
			9	13cA	5006048C49AFA2CC
				7aA	5006048449AFA2C6
			10	10bA	5006048449AFA2D9
				7bA	5006048449AFA2D6
			11	10aA	5006048449AFA2C9
				7cA	5006048C49AFA2C6
			12	10cA	5006048C49AFA2C9
				7dA	5006048C49AFA2D6
			13	10dA	5006048C49AFA2D9
				8aA	5006048449AFA2C7
			14	9bA	5006048449AFA2D8
				8bA	5006048449AFA2D7
			15	9aA	5006048449AFA2C8
				8cA	5006048C49AFA2C7
			16	9cA	5006048C49AFA2C8
				8dA	5006048C49AFA2D7

			17	9dA 3aB 14bB	5006048C49AFA2D8 5006048449AFA2E2 5006048449AFA2FD
			18	3bB 14aB	5006048449AFA2F2 5006048449AFA2ED
			19	3cB 14dB	5006048C49AFA2E2 5006048C49AFA2FD
			20	3dB 14cB	5006048C49AFA2F2 5006048C49AFA2ED
			21	4aB 13bB	5006048449AFA2E3 5006048449AFA2FC
			22	4bB 13aB	5006048449AFA2F3 5006048449AFA2EC
			23	4cB 13dB	5006048C49AFA2E3 5006048C49AFA2FC
			24	4dB 13cB	5006048C49AFA2F3 5006048C49AFA2EC
			25	7aB 10bB	5006048449AFA2E6 5006048449AFA2F9
			26	7bB 10aB	5006048449AFA2F6 5006048449AFA2E9
			27	7cB 10cB	5006048C49AFA2E6 5006048C49AFA2E9
			28	8aB 9bB	5006048449AFA2E7 5006048449AFA2F8
			29	8bB 9aB	5006048449AFA2F7 5006048449AFA2E8
			30	8cB 9cB	5006048C49AFA2E7 5006048C49AFA2E8
DMX16R	DMX2000	287751819	1	3aA 14bA	5006048449AFA2C2 5006048449AFA2DD
			2	3bA 14aA	5006048449AFA2D2 5006048449AFA2CD
			3	3cA 14dA	5006048C49AFA2C2 5006048C49AFA2DD
			4	3dA 14cA	5006048C49AFA2D2 5006048C49AFA2CD
			5	4aA 13bA	5006048449AFA2C3 5006048449AFA2DC
			6	4bA 13aA	5006048449AFA2D3 5006048449AFA2CC
			7	4cA 13dA	5006048C49AFA2C3 5006048C49AFA2DC
			8	4dA 13cA	5006048C49AFA2D3 5006048C49AFA2CC
			9	7aA 10bA	5006048449AFA2C6 5006048449AFA2D9
			10	7bA 10aA	5006048449AFA2D6 5006048449AFA2C9
			11	7cA 10cA	5006048C49AFA2C6 5006048C49AFA2C9
			12	7dA	5006048C49AFA2D6

		10dA	5006048C49AFA2D9
	13	8aA	5006048449AFA2C7
		9bA	5006048449AFA2D8
	14	8bA	5006048449AFA2D7
		9aA	5006048449AFA2C8
	15	8cA	5006048C49AFA2C7
		9cA	5006048C49AFA2C8
	16	8dA	5006048C49AFA2D7
		9dA	5006048C49AFA2D8
	17	3aB	5006048449AFA2E2
		14bB	5006048449AFA2FD
	18	3bB	5006048449AFA2F2
		14aB	5006048449AFA2ED
	19	3cB	5006048C49AFA2E2
		14dB	5006048C49AFA2FD
	20	3dB	5006048C49AFA2F2
		14cB	5006048C49AFA2ED
	21	4aB	5006048449AFA2E3
		13bB	5006048449AFA2FC
	22	4bB	5006048449AFA2F3
		13aB	5006048449AFA2EC
	23	4cB	5006048C49AFA2E3
		13dB	5006048C49AFA2FC
	24	4dB	5006048C49AFA2F3
		13cB	5006048C49AFA2EC
	25	7aB	5006048449AFA2E6
		10bB	5006048449AFA2F9
	26	7bB	5006048449AFA2F6
		10aB	5006048449AFA2E9
	27	7cB	5006048C49AFA2E6
		10cB	5006048C49AFA2E9
	28	8aB	5006048449AFA2E7
		9bB	5006048449AFA2F8
	29	8bB	5006048449AFA2F7
		9aB	5006048449AFA2E8
	30	8cB	5006048C49AFA2E7
		9cB	5006048C49AFA2E8

Appendix C: DMX14C Details

CITIGROUP SYMMETRIX DMX SYSTEM BIN FILE REQUEST (Version 1.0, 10/01/2006)

General	Device Names	DMX14C
	Purpose	Midrange / HP / DS Local
	Model	DMX3000
	Serial #	CK287890877
	Microcode	5670.94.84 (downgrade req. if higher)
Location Details	Site/Floor	CGC2 / 3 rd Floor
	Grid	TBC
Hardware Configuration	# of 146GB drives	384 (+1 x 146GB drive for DRV)
	# of 8-port Frontend cards	8
	Slots for Frontend cards	3,4,7,8,9,10,13,14
	Multi-protocol cards	None
	# of Backend cards	8
	Slots of Backend cards	1,2,5,6,11,12,15,16
	Empty slots	None
	Cache Size	64GB
	Cache configuration	8 x 8GB
	Hotspare	None
SRDF configuration	Dynamic RDF enabled ?	YES
	SRDF partners	None. SRDF is configured for future usage
	# of SRDF port pairs to SRDF partner	2
Special Drives Configuration	# of DRV volumes	4 They will be created using the capacity allocated to the 1 st Segment LUNs.
	# of SFS volumes	2 They will be created using the capacity allocated to the 1 st Segment LUNs.
	SYMACL enabled ?	YES
	TimeFinder BCV ?	NO
Host Operating Systems Connectivity	FA port configuration	HP-UX and Solaris/AIX/Windows connectivity.
	Clusters	None
	DMP on the FA ports	YES
	Management Station Connectivity	No special port pair is required. Management station will share ports with other hosts.
Volume Configuration Overview	Protection	All RAID1
	Split size for data volumes	8GB (18414 Cylinders)
	# of splits per drive	16 for data volumes
	LUNs	There will be 8GB single hypers. The LUNs will be 2-member and 4-member meta devices of 16GB and 32GB.
	Quorum LUN size	~367MB (783 Cylinders)
	GKs	6 dedicated GKs per FA port (not per FA port pair but per port)

Below table gives the details about the requested number of LUNs and sizes along with the segments they should be mapped to:

- There are 384 drives (192 pairs) in the system. All capacity will be used for LUN, Quorum and GK allocation. The DRV and SFS devices will be created from the capacity allocated to 1st segment, therefore the 32GB LUN number will drop here.

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation
Segment 1	3aA + 14bA	HP-UX 11i with or without cluster	12 pairs	46 x 32GB Dyn. RDF 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 2	3bA + 14aA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 3	3cA + 14dA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 4	3dA + 14cA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 5	4aA + 13bA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 6	4bA + 13aA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 7	4cA + 13dA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 8	4dA + 13cA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation
Segment 9	7aA + 10bA	HP-UX 11i with or without cluster	16 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 10	7bA + 10aA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 11	7cA + 10cA	Sol/Win/AIX	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 12	7dA + 10dA	SRDF pair 1	n/a	n/a
Segment 13	8aA + 9bA	Sol/Win/AIX	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 14	8bA + 9aA	Sol/Win/AIX	Future	None
Segment 15	8cA + 9cA	Sol/Win/AIX	Future	None
Segment 16	8dA + 9dA	SRDF pair 2	n/a	n/a
Segment 17	3aB + 14bB	Sol/Win/AIX	Future	None
Segment 18	3bB + 14aB	Sol/Win/AIX	Future	None
Segment 19	3cB + 14dB	Sol/Win/AIX	Future	None
Segment 20	3dB + 14cB	Sol/Win/AIX	Future	None
Segment 21	4aB + 13bB	Sol/Win/AIX	Future	None
Segment 22	4bB + 13aB	Sol/Win/AIX	Future	None
Segment 23	4cB + 13dB	Sol/Win/AIX	Future	None
Segment 24	4dB + 13cB	Sol/Win/AIX	Future	None
Segment 25	7aB + 10bB	Sol/Win/AIX	Future	None
Segment 26	7bB + 10aB	Sol/Win/AIX	Future	None
Segment 27	7cB + 10cB	Sol/Win/AIX	Future	None
Segment 28	8aB + 9bB	Sol/Win/AIX	Future	None
Segment 29	8bB + 9aB	Sol/Win/AIX	Future	None
Segment 30	8cB + 9cB	Sol/Win/AIX	Future	None

NOTES:

- 7dB, 8dB, 9dB and 10dB are not usable unusable due to SRDF on the other port.
- The maximum capacity of this array is up to 576 drives, which would fill up to Segment 20, if all segments would have filled with max. amount of 16 pairs. If the Fan-out ratio on an existing segment should reach beyond EMC supported values, new servers and their LUNs should be moved to Segments 20 to 30.

Appendix D: DMX14R Details

CITIGROUP SYMMETRIX DMX SYSTEM BIN FILE CHANGE (Version 1.0, 10/01/2006)

General	Device Name	DMX14R
	Purpose	Open Systems Local
	Model	DMX3000
	Serial #	287890602
	Current Microcode	5670.83.78A
Location	CG Site/Floor	RDC / 4 th Floor
	Location/Grid	TBC
Owners	Requested by	Javed Dad
	Request date	09/01/2006
	Should be completed by	28-29/01/2006
Implementation	Online / Offline ?	Online (To be confirmed by EMC CS)
	Priority	High
	Downtime for servers ?	Citigroup must confirm that the existing 8GB LUNs are not assigned to any server.
	Other downtime?	As above.
	Microcode upgrade ?	Yes. Subject to completion of the Citigroup certification pre-requisites, the microcode will be upgraded to 5670.94.84
Requested Changes		
- All existing 8GB LUNs will be converted to 16GB 2-way meta LUNs on the same segment. - This system has 280 x 146GB physical drives. 168 x 146GB new drives will be added to the configuration. The configuration of the new drives are described below. - Following empty segments will be configured. 16 new pairs of drives will be allocated to these segments. Please see the table on the next page for the details of the configuration: 7bA + 10aA 7cA + 10cA 8aA + 9bA 8bA + 9aA 8cA + 9cA - The Segment 7aA+10bA currently has 12 pairs of disks allocated. 4 new pairs (8 drives) of 146GB drive will be added to the 32GB LUN pool. These disks will be configured as described in the table next page. - A new 146GB drive will be added as an independent DRV drive.		
Prerequisite Checks/Tasks		
- The Solutions Enabler on the SAN Management servers must be upgraded to 5.5 before this change. - Citigroup must confirm that the existing 8GB LUNs are not assigned to any server.		

1. The segment configuration table for Change 3.

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation
Segment 10	7bA + 10aA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 11	7cA + 10cA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 12	7dA + 10dA	SRDF pair 1	n/a	n/a
Segment 13	8aA + 9bA	HP-UX 11i with or without cluster	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 14	8bA + 9aA	Sol/Win/AIX	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF
Segment 15	8cA + 9cA	Sol/Win/AIX	12 pairs	48 x 32GB 6 Quorum ? 6 GK per FA port, 12 total
			4 pairs	32 x 16GB Dyn. RDF

2. The segment configuration table for Change 4.

Current configuration:

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation
Segment 9	7aA + 10bA	Sol/Win/AIX	8 pairs	32 x 32GB Dyn. RDF 6 Quorum 6 GK per FA port, 12 total
			4 pairs	64 x 8GB Dyn. RDF

New target configuration:

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation

FA Port Segments and LUN Allocation				
Segment	FA port pair	Usage	# of dedicated drives	LUN allocation
Segment 9	7aA + 10bA	Sol/Win/AIX	12 pairs	• 48 x 32GB Dyn. RDF • 6 Quorum • 6 GK per FA port, 12 total
			4 pairs	• 32 x 16GB Dyn. RDF