



# ORACLE ONDEMAND

## PORT ALLOCATIONS AND NETWORK CONNECTIVITY DIAGRAMS FOR SERVERS AND SWITCHES

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<i>Creation Date</i>	<i>: November 17, 2006</i>
<i>Last Updated</i>	<i>: November 17, 2006</i>
<i>Version</i>	<i>: 1.0</i>

## Purpose

This document contains all of the various network and server diagrams as they relate to Oracle OnDemand in ADC. The purpose of this document is to bring together all of the drawings for the various configurations into one comprehensive document. Any questions, concerns or comments about the information contained within this document should be directed to Brian Jones

The setups and procedures included in this document supersede any documents currently in circulation. The standards presented within this document are current as of:

**17-November-2006**

## Information Sources

The network drawings for rNFS and non-rNFS are based on drawings and feedback from Bob Berg, Ray Copper and Kevin Widner from the Networking Team. The cabinet and interface layout drawings are a combination of revisions to existing documents and new drawings based on the new standards.

## Change Record

Date	Author	Version	Change Reference
17-Nov-06	Brian Jones	1.0	Initial Draft

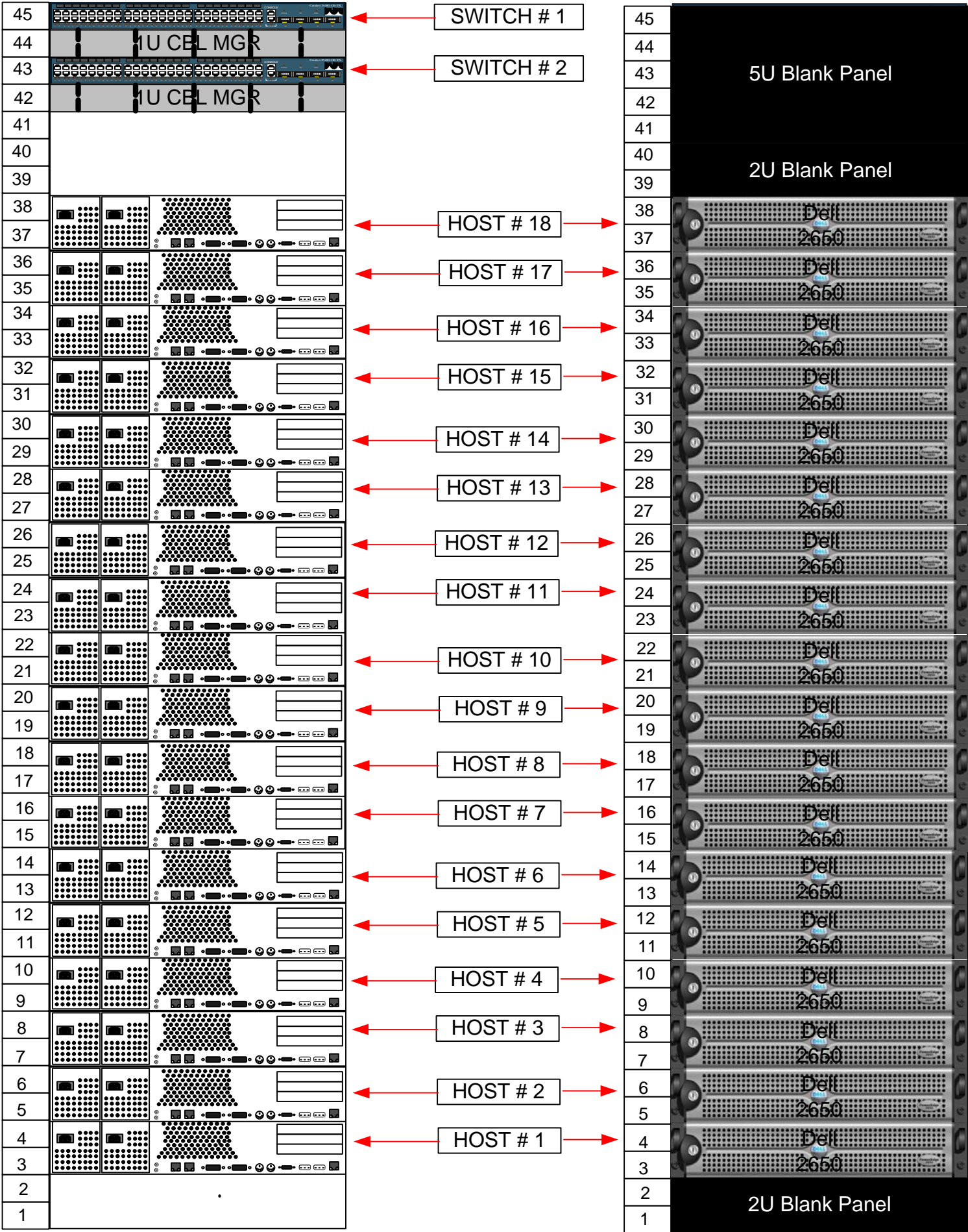
## Reviewers

Name	Position

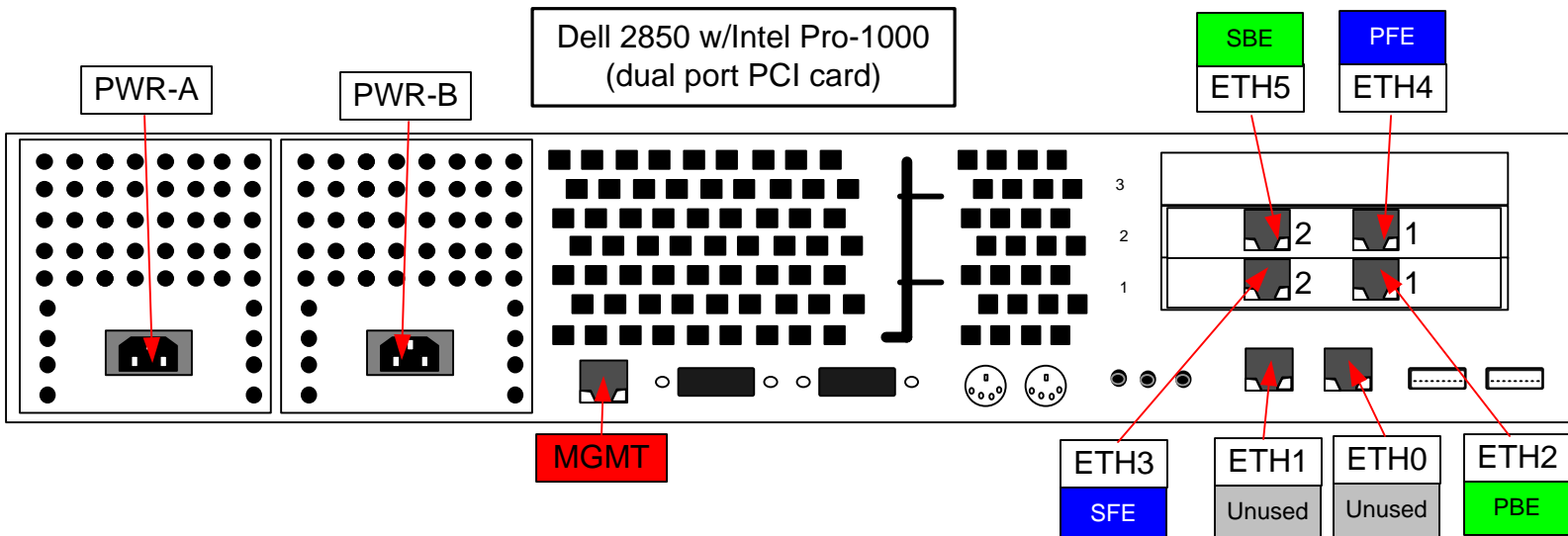
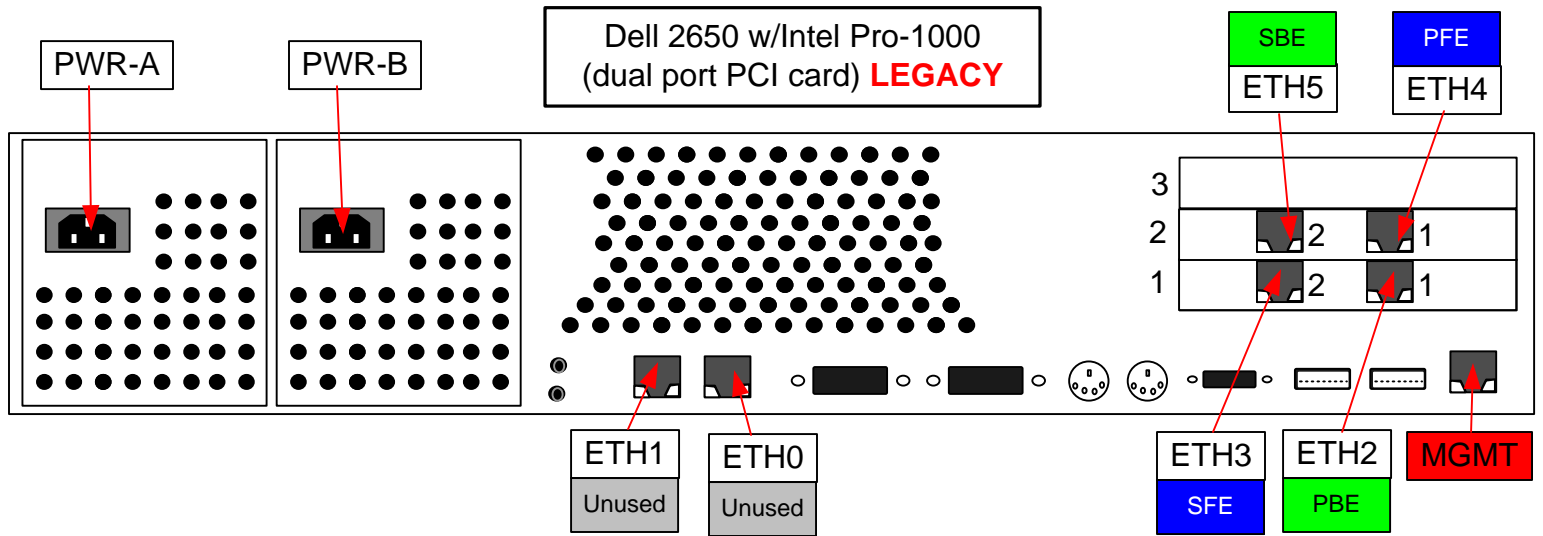
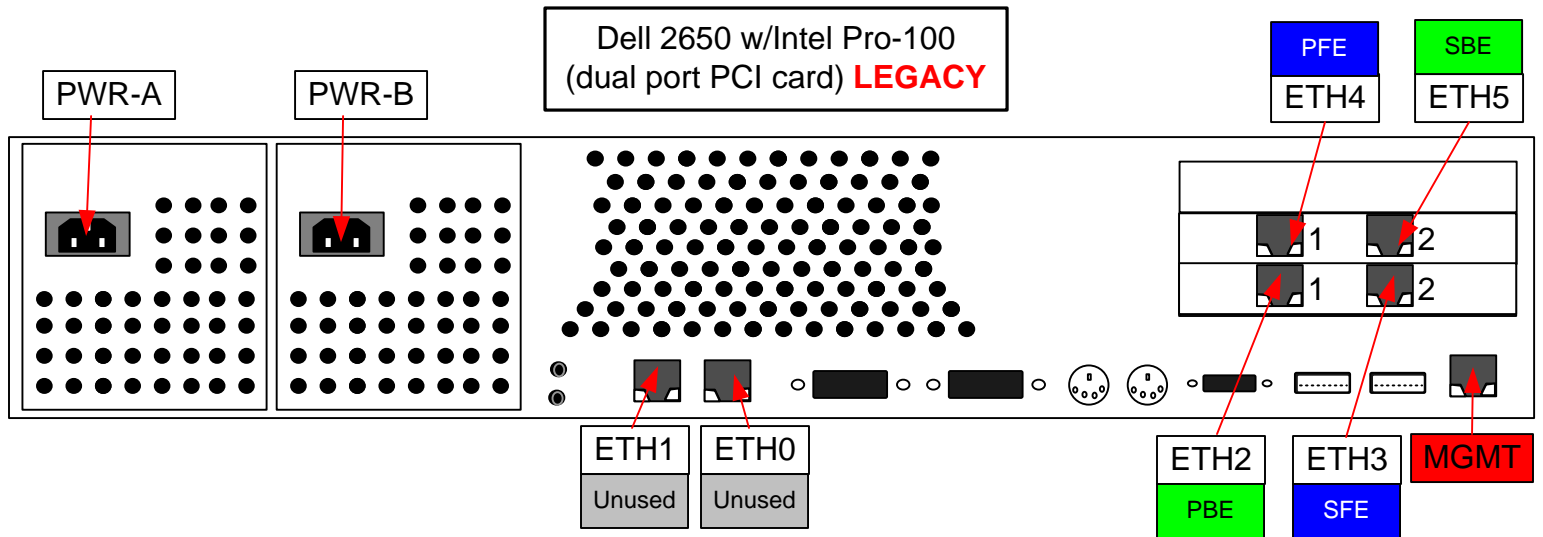


**Dell 2x50 Cabinet with Cisco 2948-GETX Switches**  
*18 Servers Maximum*  
*Standard non-RAC Configuration*

Dell 2x50 18 server cabinet using Cisco 2948GE-TX switches

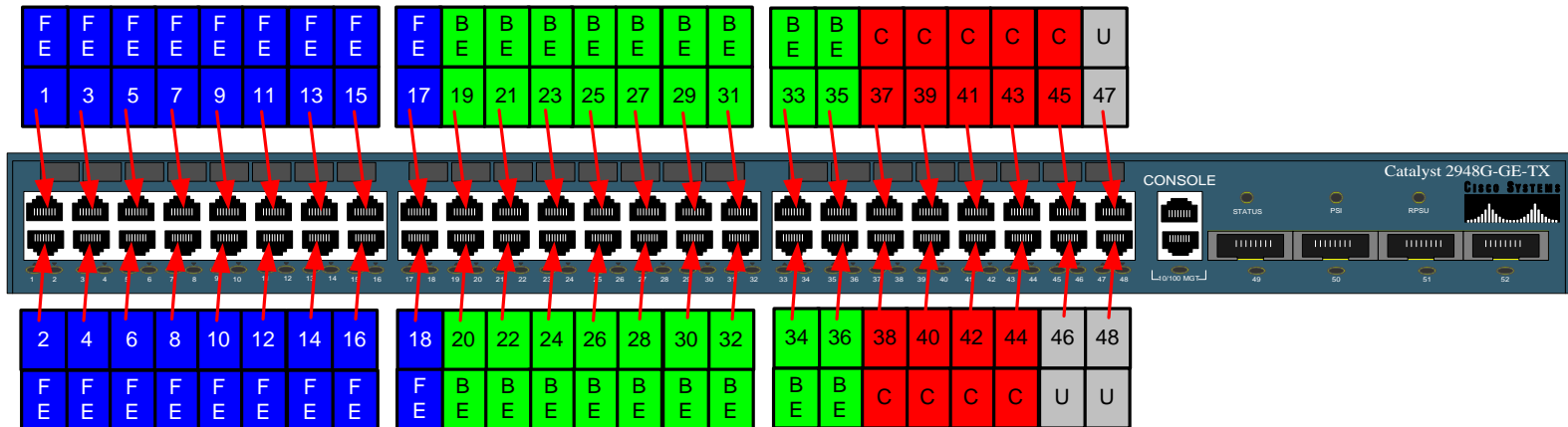


# Dell 2x50 18 server cabinet using Cisco 2948GE-TX switches



# Dell 2x50 18 server cabinet using Cisco 2948GE-TX switches

## CISCO 2948GE-TX



Blue	FRONT END (FE)
Green	BACK END (BE)
Cyan	RAC Interconnect (RAC)
Purple	rNFS (rNFS)
Red	MGMT (C)
Dark Green	NetApp Connect (NA)
Grey	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.

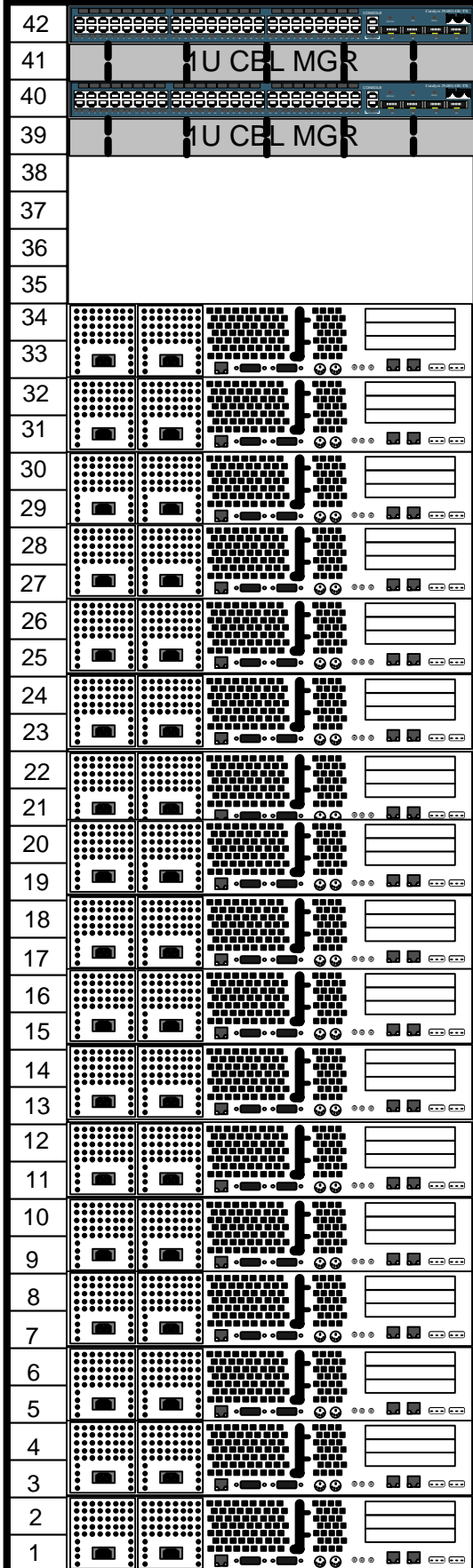
HOST #	RU	PFE	SFE	PBE	SBE	PRAC	SRAC	PrNFS	SrNFS	MGMT	LENGTH
18	37	swi-1 2/18	swi-2 2/18	swi-1 2/36	swi-2 2/36					swi-2 2/45	
17	35	swi-1 2/17	swi-2 2/17	swi-1 2/35	swi-2 2/35					swi-2 2/44	
16	33	swi-1 2/16	swi-2 2/16	swi-1 2/34	swi-2 2/34					swi-2 2/43	
15	31	swi-1 2/15	swi-2 2/15	swi-1 2/33	swi-2 2/33					swi-2 2/42	
14	29	swi-1 2/14	swi-2 2/14	swi-1 2/32	swi-2 2/32					swi-2 2/41	
13	27	swi-1 2/13	swi-2 2/13	swi-1 2/31	swi-2 2/31					swi-2 2/40	
12	25	swi-1 2/12	swi-2 2/12	swi-1 2/30	swi-2 2/30					swi-2 2/39	
11	23	swi-1 2/11	swi-2 2/11	swi-1 2/29	swi-2 2/29					swi-2 2/38	
10	21	swi-1 2/10	swi-2 2/10	swi-1 2/28	swi-2 2/28					swi-2 2/37	
9	19	swi-1 2/9	swi-2 2/9	swi-1 2/27	swi-2 2/27					swi-1 2/45	
8	17	swi-1 2/8	swi-2 2/8	swi-1 2/26	swi-2 2/26					swi-1 2/44	
7	15	swi-1 2/7	swi-2 2/7	swi-1 2/25	swi-2 2/25					swi-1 2/43	
6	13	swi-1 2/6	swi-2 2/6	swi-1 2/24	swi-2 2/24					swi-1 2/42	
5	11	swi-1 2/5	swi-2 2/5	swi-1 2/23	swi-2 2/23					swi-1 2/41	
4	9	swi-1 2/4	swi-2 2/4	swi-1 2/22	swi-2 2/22					swi-1 2/40	
3	7	swi-1 2/3	swi-2 2/3	swi-1 2/21	swi-2 2/21					swi-1 2/39	
2	5	swi-1 2/2	swi-2 2/2	swi-1 2/20	swi-2 2/20					swi-1 2/38	
1	3	swi-1 2/1	swi-2 2/1	swi-1 2/19	swi-2 2/19					swi-1 2/37	



**Dell 2850 Cabinet with Cisco 4948-GETX Switches**  
*17 Servers Maximum*  
*Standard non-RAC Configuration*



# Dell 2850 17 server cabinet using Cisco 4948GE-TX switches



SWITCH # 1

SWITCH # 2

HOST # 17

HOST # 16

HOST # 15

HOST # 14

HOST # 13

HOST # 12

HOST # 11

HOST # 10

HOST # 9

HOST # 8

HOST # 7

HOST # 6

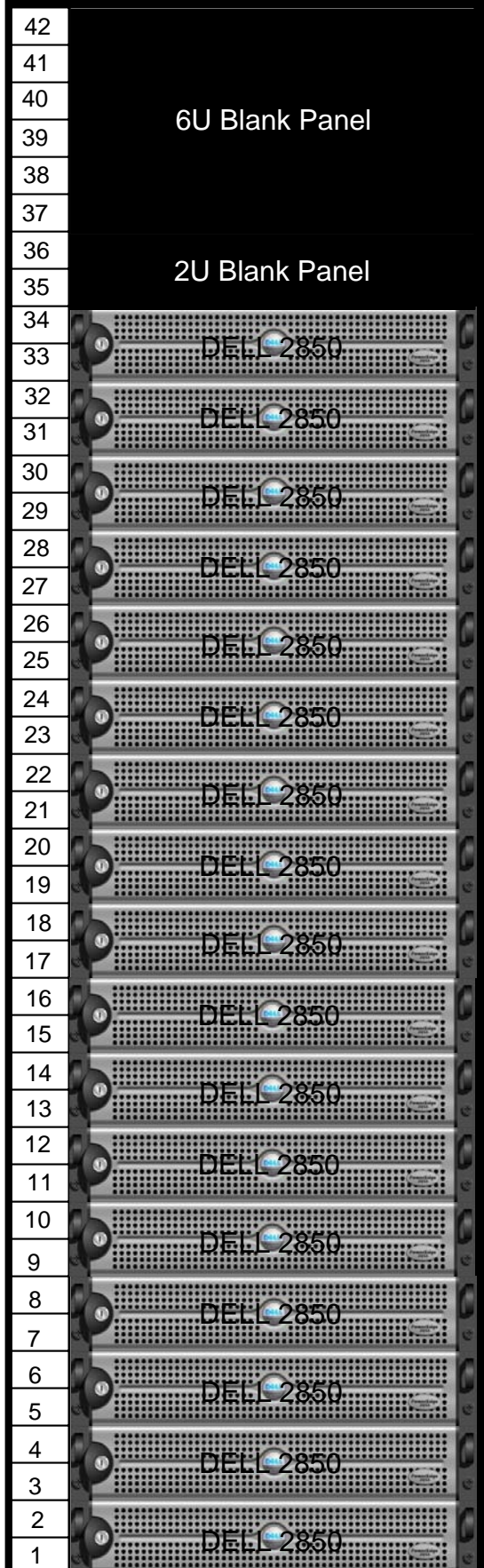
HOST # 5

HOST # 4

HOST # 3

HOST # 2

HOST # 1



6U Blank Panel

2U Blank Panel

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

DELL 2850

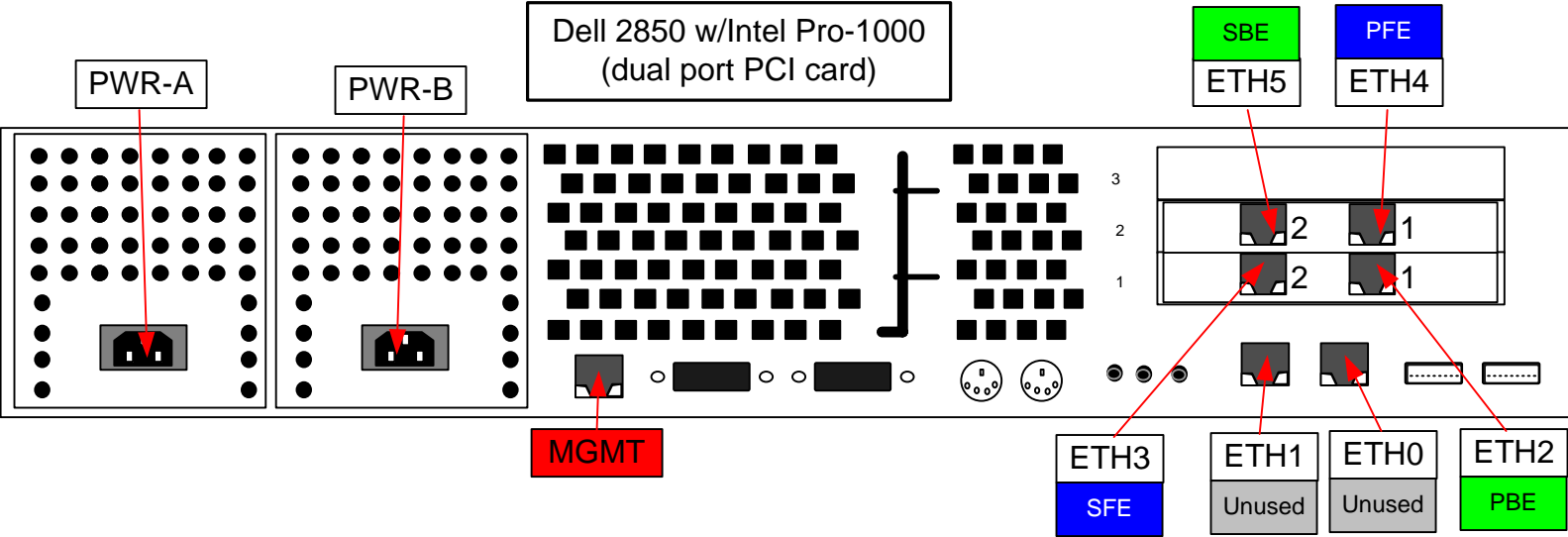
DELL 2850



Dell 2850 17 server cabinet using Cisco 4948GE-TX switches

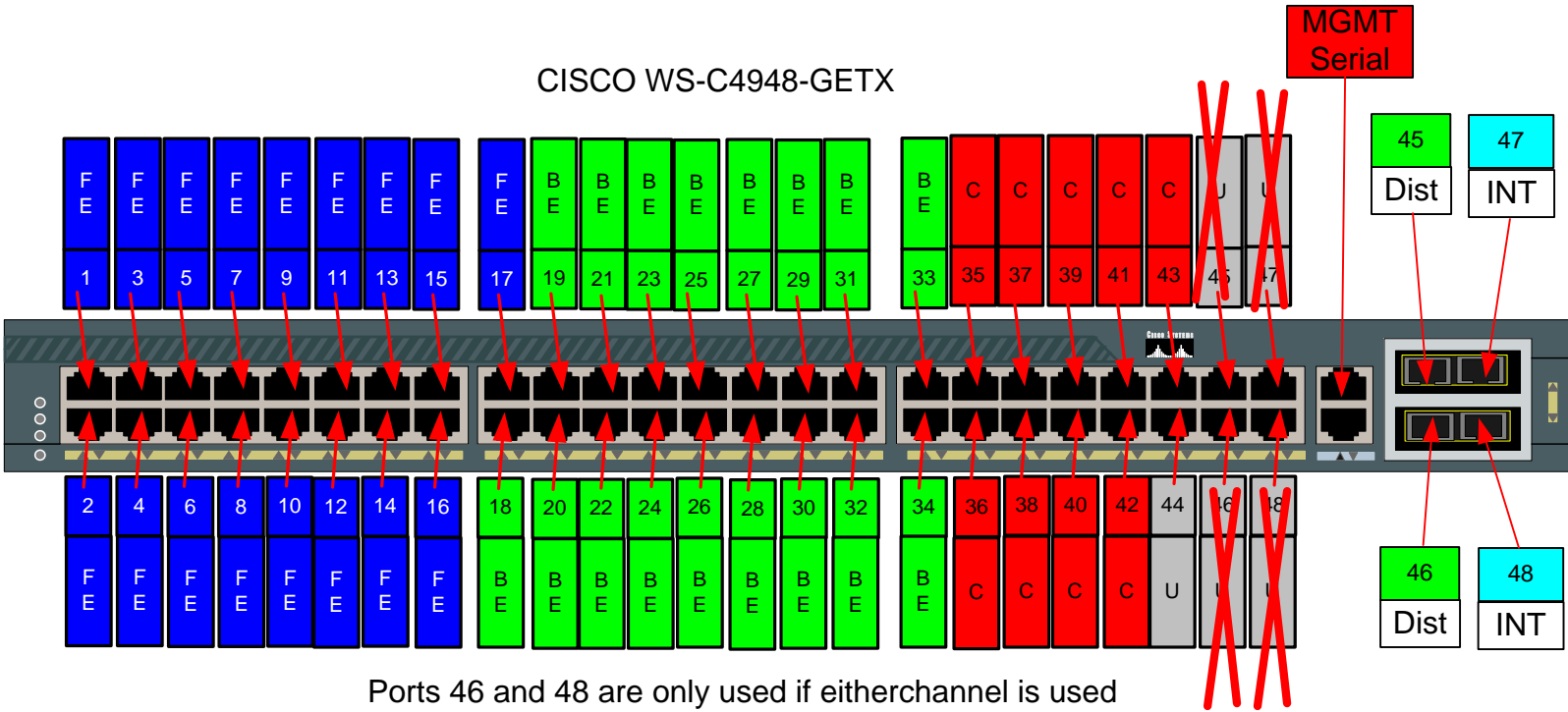
FRONT END (FE)	
BACK END (BE)	
RAC Interconnect (RAC)	
rNFS (rNFS)	
MGMT (C)	
NetApp Connect (NA)	
Not Used (U)	

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.



# Dell 2850 17 server cabinet using Cisco 4948GE-TX switches

CISCO WS-C4948-GETX



Blue	FRONT END (FE)
Green	BACK END (BE)
Cyan	RAC Interconnect (RAC)
Red	rNFS (rNFS)
Red	MGMT (C)
Green	NetApp Connect (NA)
Grey	Not Used (U)

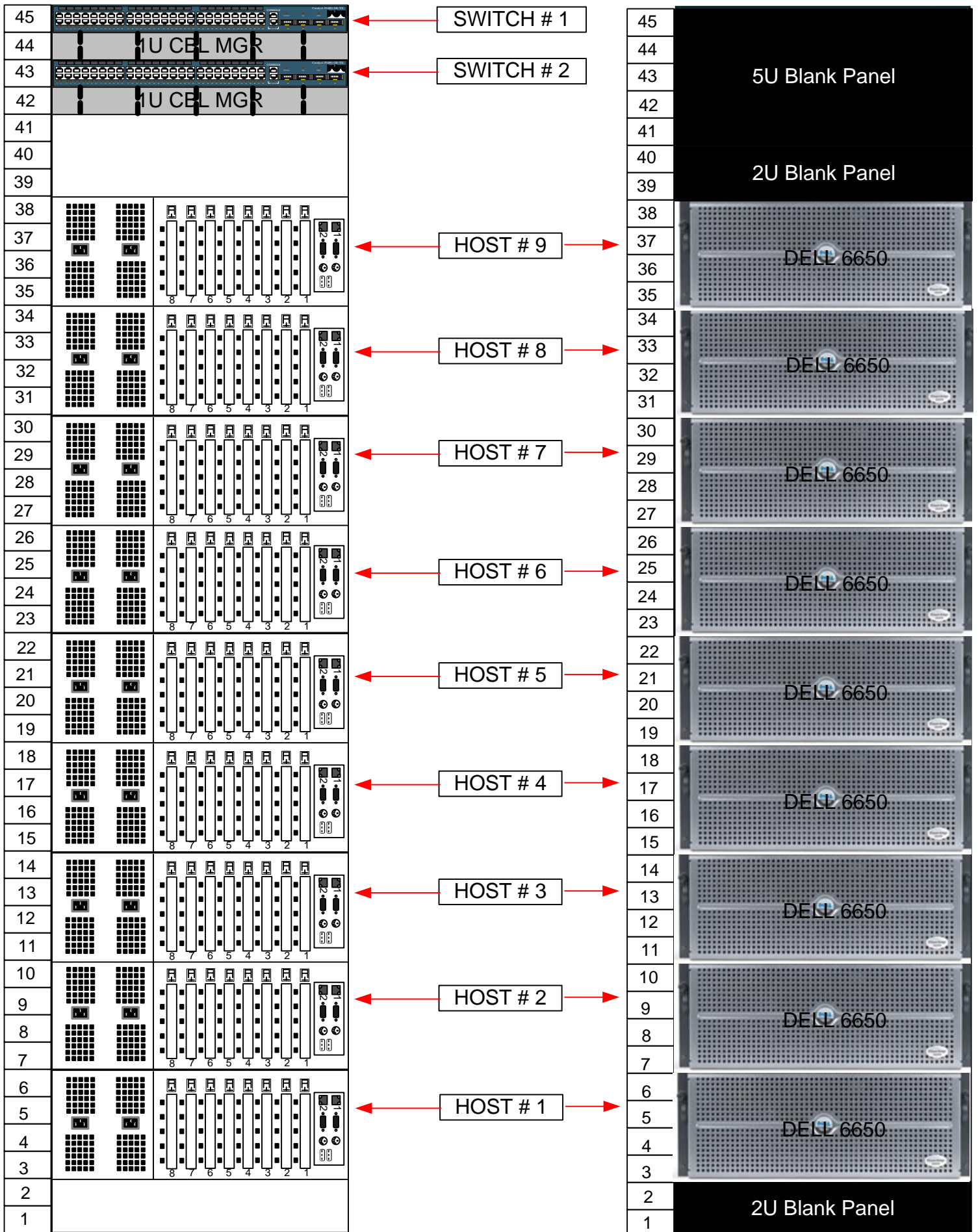
NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a "P" or "S" preceding the port definition. The "P" stands for the Primary Switch which is the first in the pair and the "S" stands for the Secondary Switch which is the second in the pair.

HOST #	RU	PFE	SFE	PBE	SBE	PRAC	SRAC	PrNFS	SrNFS	MGMT	LENGTH
17	33	swi-1 2/17	swi-2 2/17	swi-1 2/34	swi-2 2/34					swi-2 2/42	7'
16	31	swi-1 2/16	swi-2 2/16	swi-1 2/33	swi-2 2/33					swi-2 2/41	7'
15	29	swi-1 2/15	swi-2 2/15	swi-1 2/32	swi-2 2/32					swi-2 2/40	7'
14	27	swi-1 2/14	swi-2 2/14	swi-1 2/31	swi-2 2/31					swi-2 2/39	7'
13	25	swi-1 2/13	swi-2 2/13	swi-1 2/30	swi-2 2/30					swi-2 2/38	7'
12	23	swi-1 2/12	swi-2 2/12	swi-1 2/29	swi-2 2/29					swi-2 2/37	7'
11	21	swi-1 2/11	swi-2 2/11	swi-1 2/28	swi-2 2/28					swi-2 2/36	7'
10	19	swi-1 2/10	swi-2 2/10	swi-1 2/27	swi-2 2/27					swi-2 2/35	10'
9	17	swi-1 2/9	swi-2 2/9	swi-1 2/26	swi-2 2/26					swi-1 2/43	10'
8	15	swi-1 2/8	swi-2 2/8	swi-1 2/25	swi-2 2/25					swi-1 2/42	10'
7	13	swi-1 2/7	swi-2 2/7	swi-1 2/24	swi-2 2/24					swi-1 2/41	10'
6	11	swi-1 2/6	swi-2 2/6	swi-1 2/23	swi-2 2/23					swi-1 2/40	10'
5	9	swi-1 2/5	swi-2 2/5	swi-1 2/22	swi-2 2/22					swi-1 2/39	10'
4	7	swi-1 2/4	swi-2 2/4	swi-1 2/21	swi-2 2/21					swi-1 2/38	10'
3	5	swi-1 2/3	swi-2 2/3	swi-1 2/20	swi-2 2/20					swi-1 2/37	10'
2	3	swi-1 2/2	swi-2 2/2	swi-1 2/19	swi-2 2/19					swi-1 2/36	10'
1	1	swi-1 2/1	swi-2 2/1	swi-1 2/18	swi-2 2/18					swi-1 2/35	10'



**Dell 6x50 Cabinet with Cisco 2948-GETX Switches**  
*9 Servers Maximum*  
*RAC and rNFS Supported*

# Dell 6x50 9 server cabinet using Cisco 2948GE-TX switches

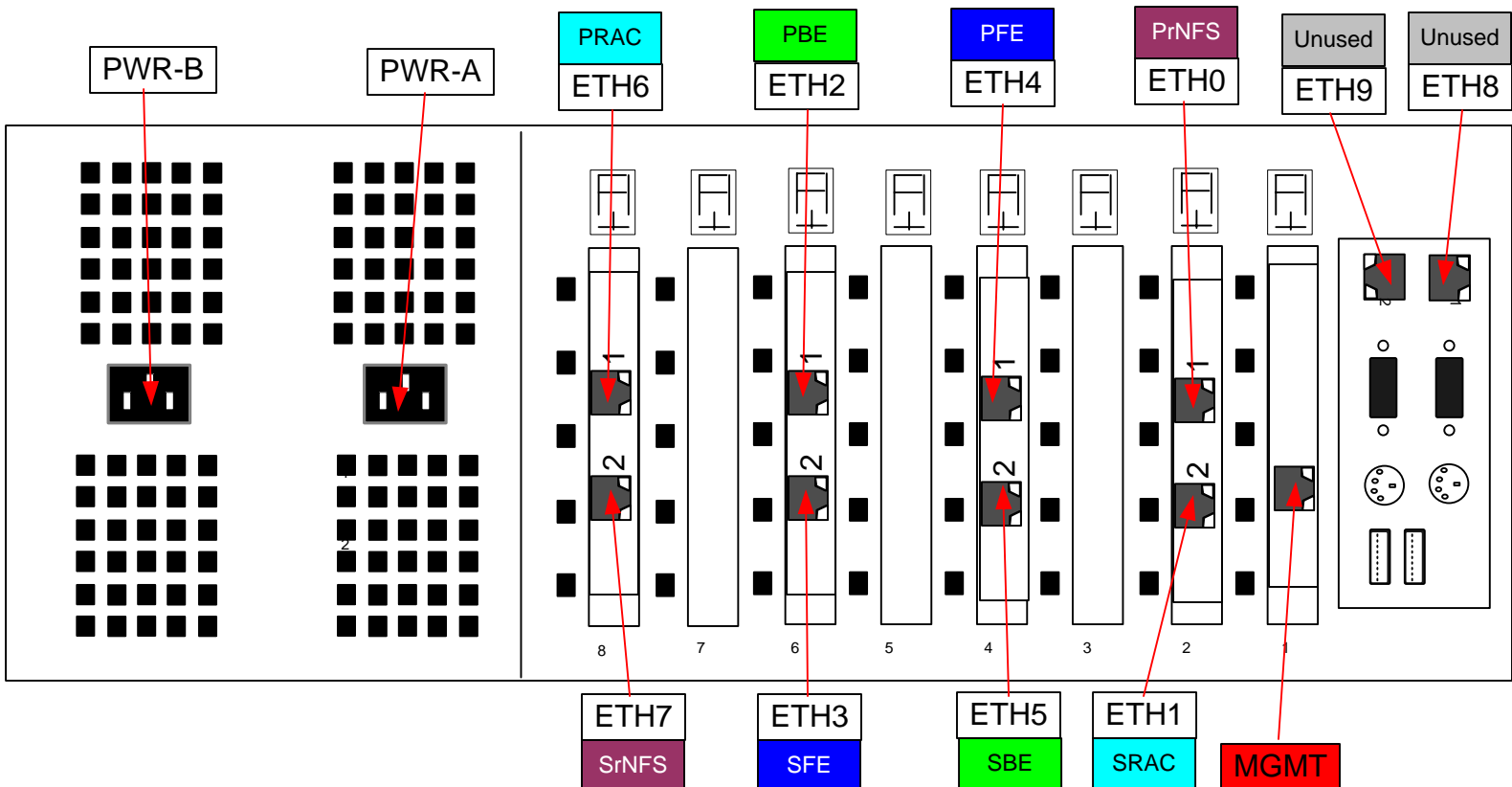


# Dell 6x50 9 server cabinet using Cisco 2948GE-TX switches

	FRONT END (FE)
	BACK END (BE)
	RAC Interconnect (RAC)
	rNFS (rNFS)
	MGMT (C)
	NetApp Connect (NA)
	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a "P" or "S" preceding the port definition. The "P" stands for the Primary Switch which is the first in the pair and the "S" stands for the Secondary Switch which is the second in the pair.

Dell 6650 w/Intel Pro-1000  
(dual port PCI card) **LEGACY**

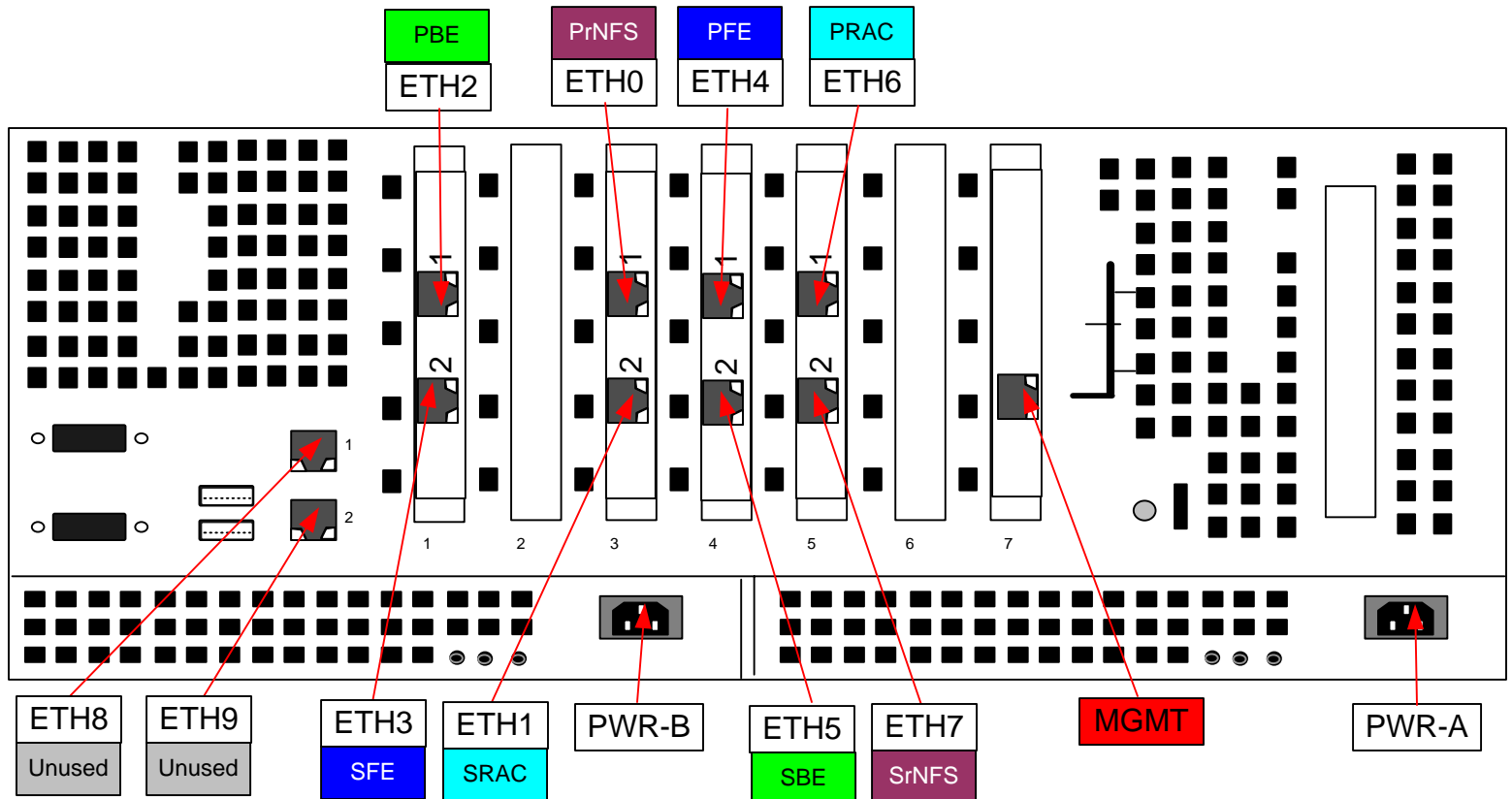


# Dell 6x50 9 server cabinet using Cisco 2948GE-TX switches

Blue	FRONT END (FE)
Green	BACK END (BE)
Cyan	RAC Interconnect (RAC)
Purple	rNFS (rNFS)
Red	MGMT (C)
Dark Green	NetApp Connect (NA)
Grey	Not Used (U)

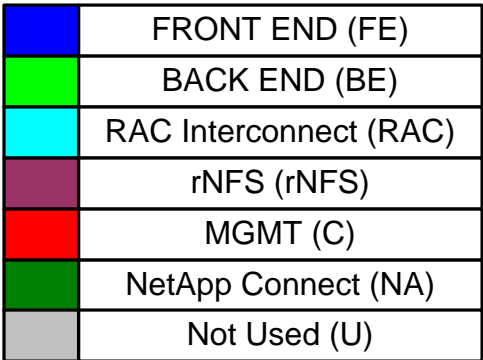
NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a "P" or "S" preceding the port definition. The "P" stands for the Primary Switch which is the first in the pair and the "S" stands for the Secondary Switch which is the second in the pair.

Dell 6850 w/Intel Pro-1000  
(dual port PCI card) **LEGACY**





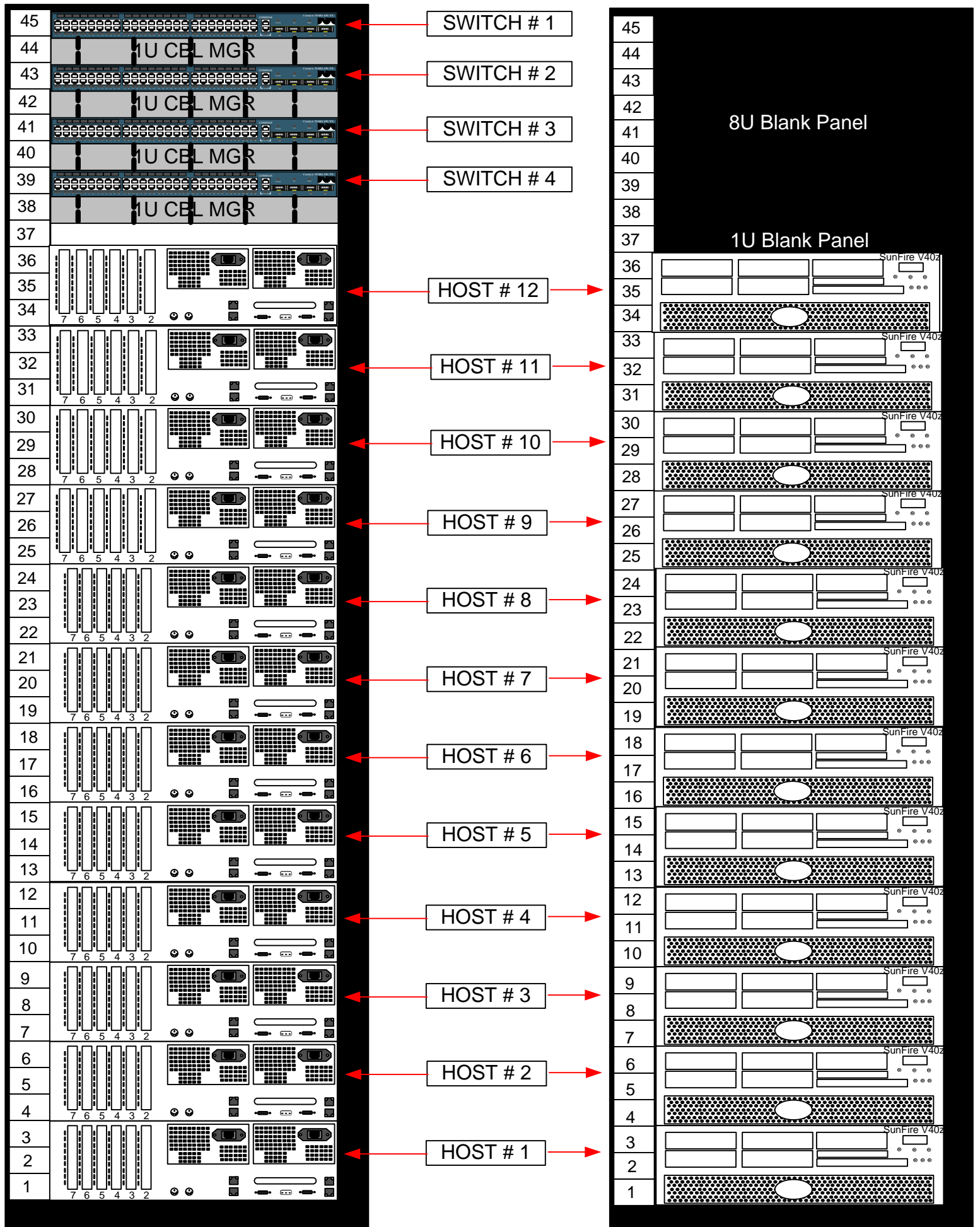
CISCO 2948GE-TX
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[illegible]

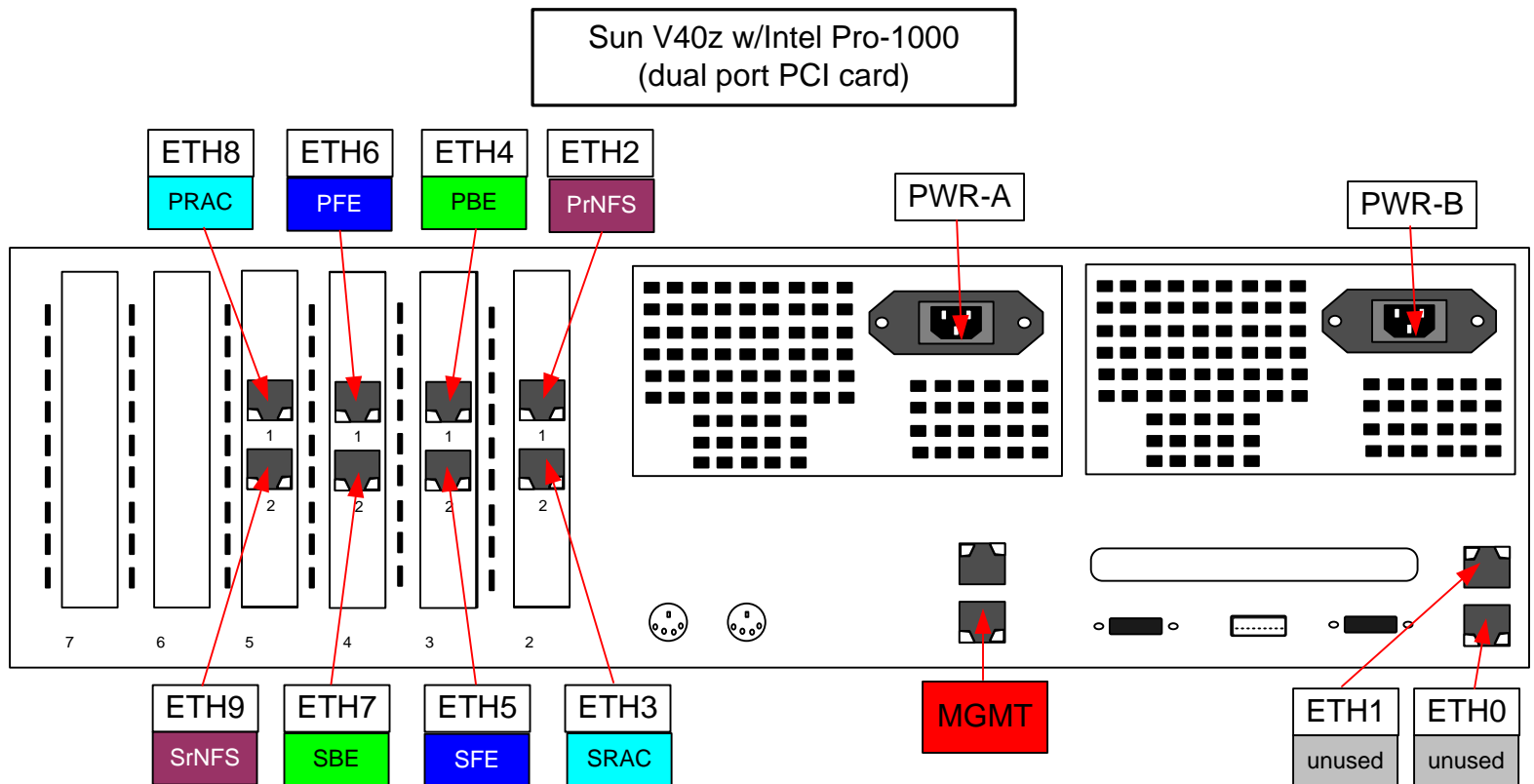
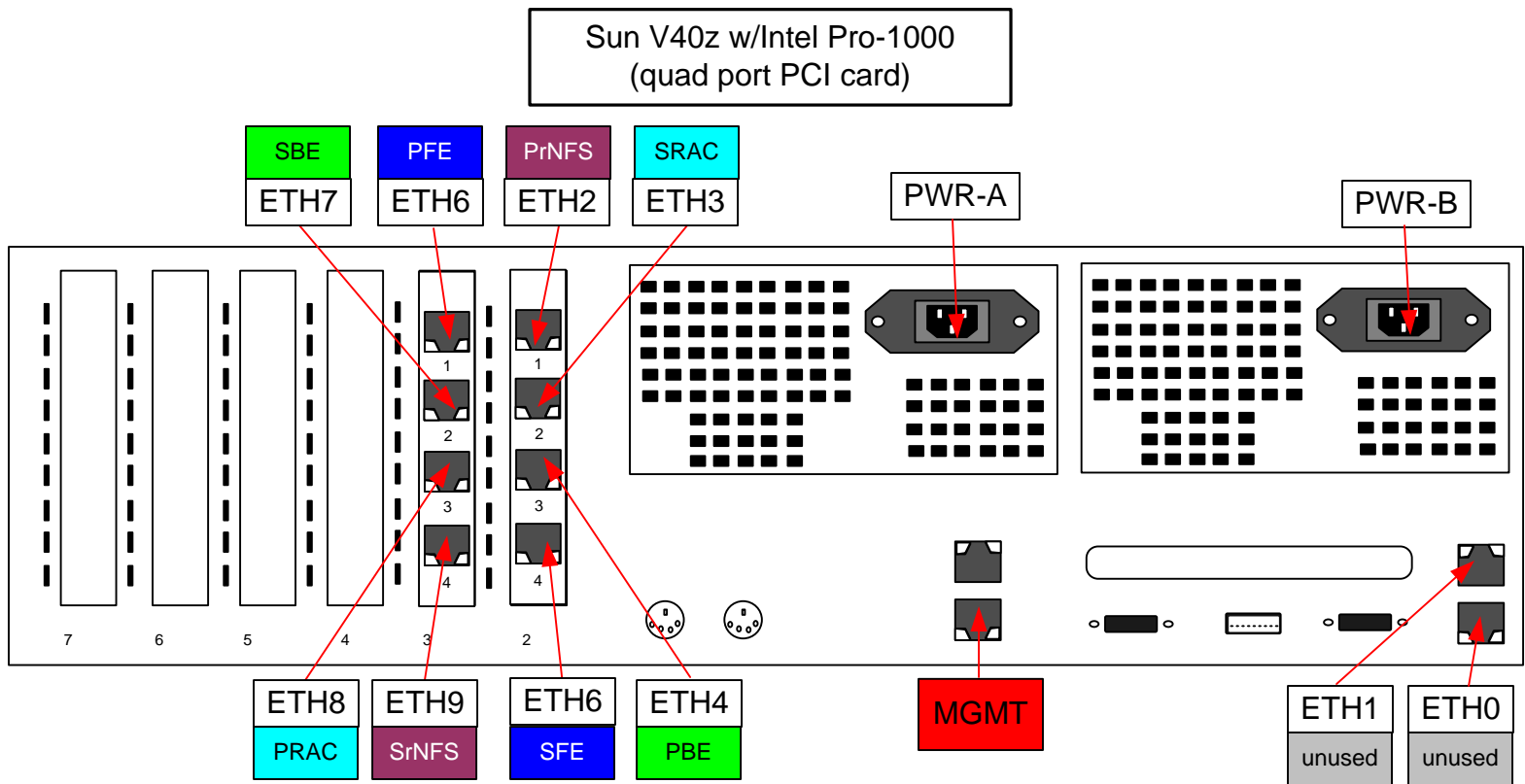


**Sun V40z Cabinet with Cisco 2948-GETX Switches**  
*12 Servers Maximum*  
*RAC and rNFS Supported*

# Sun V40z 12 server cabinet using Cisco 2948GE-TX switches



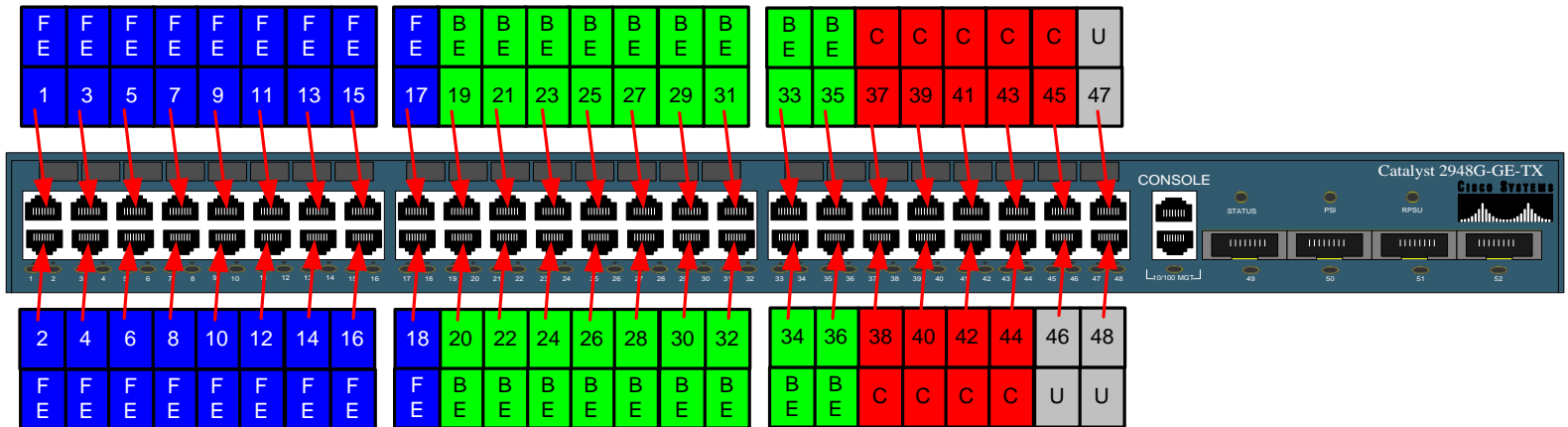
# Sun V40z 12 server cabinet using Cisco 2948GE-TX switches



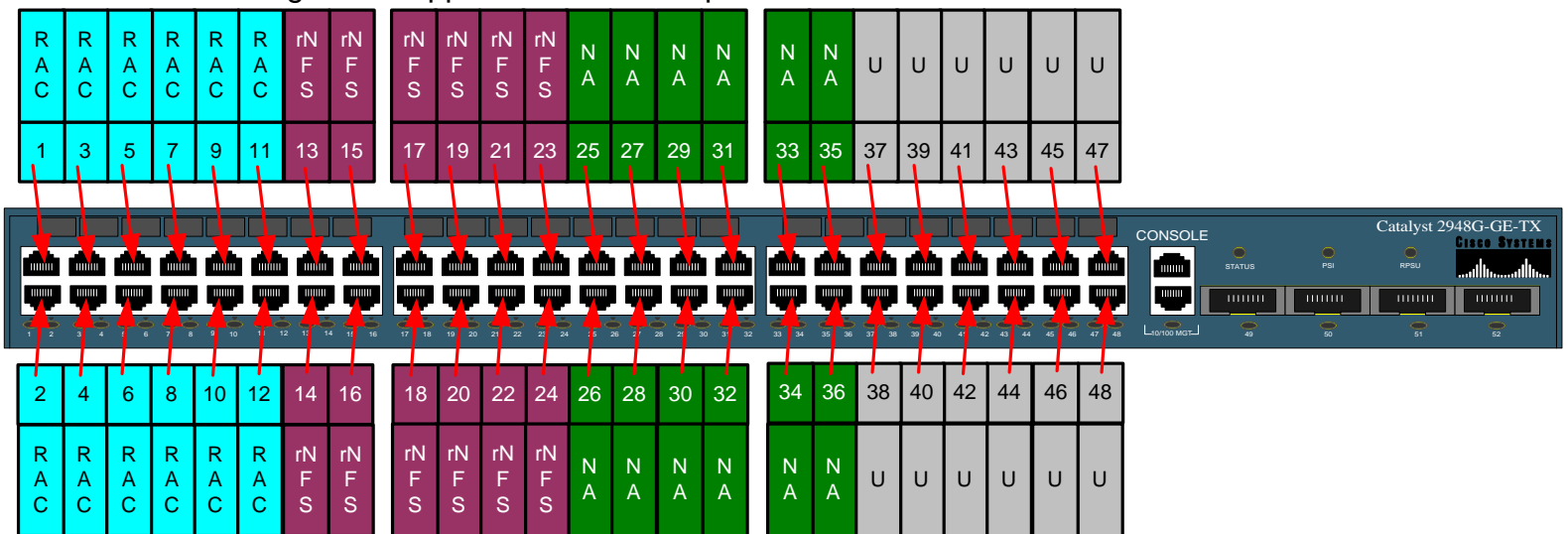
# Sun V40z 12 server cabinet using Cisco 2948GE-TX switches

## CISCO 2948GE-TX

This switch configuration applies to the switch pair #1 and #2



This switch configuration applies to the switch pair #3 and #4



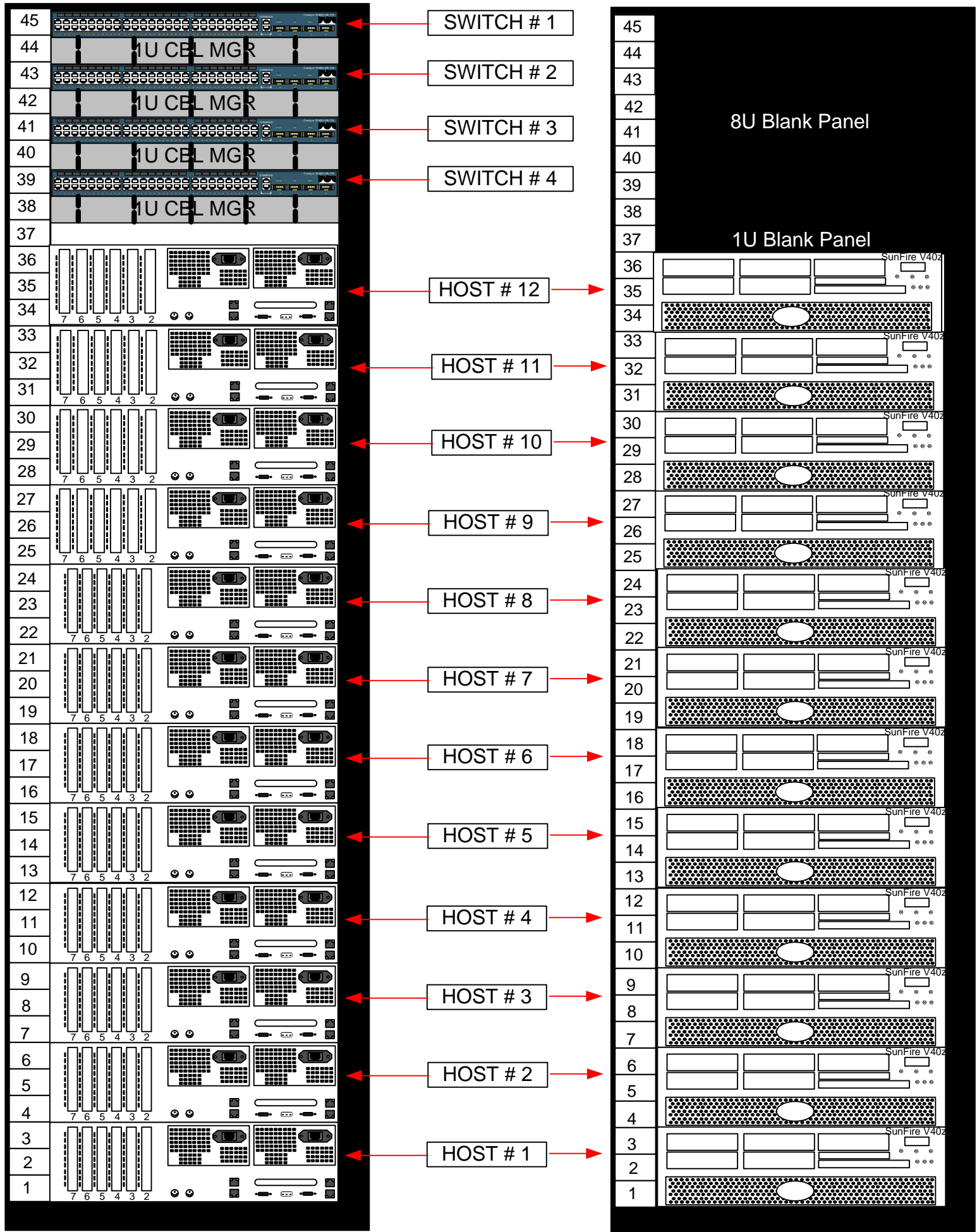
HOST #	RU	PFE	SFE	PBE	SBE	PRAC	SRAC	PrNFS	SrNFS	MGMT
12	34	swi-1 2/12	swi-2 2/12	swi-1 2/30	swi-2 2/30	swi-3 2/12	swi-4-2/12	swi-3 2/24	swi-4-2/24	swi-2 2/42
11	31	swi-1 2/11	swi-2 2/11	swi-1 2/29	swi-2 2/29	swi-3 2/11	swi-4-2/11	swi-3 2/23	swi-4-2/23	swi-2 2/41
10	28	swi-1 2/10	swi-2 2/10	swi-1 2/28	swi-2 2/28	swi-3 2/10	swi-4-2/10	swi-3 2/22	swi-4-2/22	swi-2 2/40
9	25	swi-1 2/9	swi-2 2/9	swi-1 2/27	swi-2 2/27	swi-3 2/9	swi-4-2/9	swi-3 2/21	swi-4-2/21	swi-1 2/45
8	22	swi-1 2/8	swi-2 2/8	swi-1 2/26	swi-2 2/26	swi-3 2/8	swi-4-2/8	swi-3 2/20	swi-4-2/20	swi-1 2/44
7	19	swi-1 2/7	swi-2 2/7	swi-1 2/25	swi-2 2/25	swi-3 2/7	swi-4-2/7	swi-3 2/19	swi-4-2/19	swi-1 2/43
6	16	swi-1 2/6	swi-2 2/6	swi-1 2/24	swi-2 2/24	swi-3 2/6	swi-4-2/6	swi-3 2/18	swi-4-2/18	swi-1 2/42
5	13	swi-1 2/5	swi-2 2/5	swi-1 2/23	swi-2 2/23	swi-3 2/5	swi-4-2/5	swi-3 2/17	swi-4-2/17	swi-1 2/41
4	10	swi-1 2/4	swi-2 2/4	swi-1 2/22	swi-2 2/22	swi-3 2/4	swi-4-2/4	swi-3 2/16	swi-4-2/16	swi-1 2/40
3	7	swi-1 2/3	swi-2 2/3	swi-1 2/21	swi-2 2/21	swi-3 2/3	swi-4-2/3	swi-3 2/15	swi-4-2/15	swi-1 2/39
2	4	swi-1 2/2	swi-2 2/2	swi-1 2/20	swi-2 2/20	swi-3 2/2	swi-4-2/2	swi-3 2/14	swi-4-2/14	swi-1 2/38
1	1	swi-1 2/1	swi-2 2/1	swi-1 2/19	swi-2 2/19	swi-3 2/1	swi-4-2/1	swi-3 2/13	swi-4-2/13	swi-1 2/37



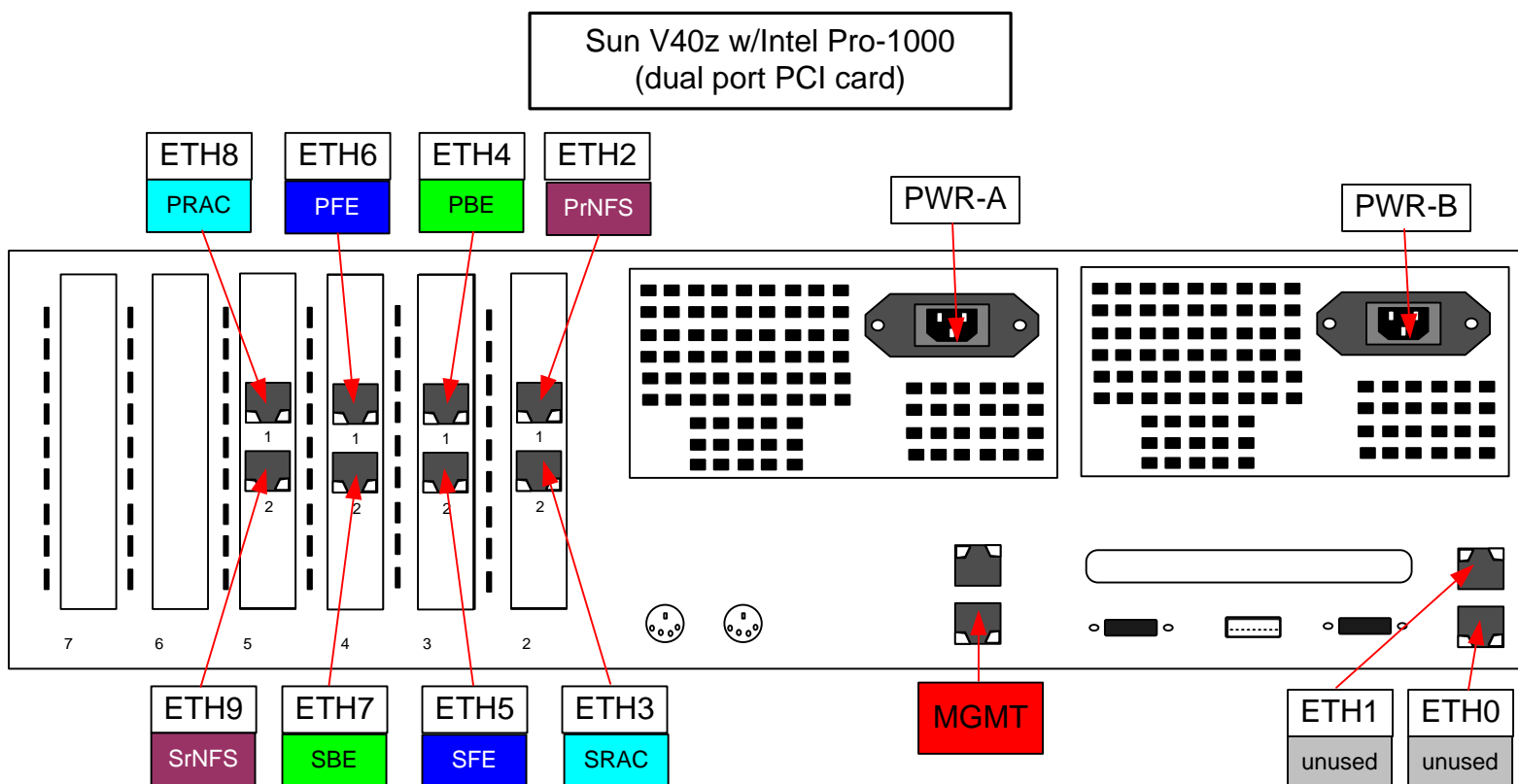
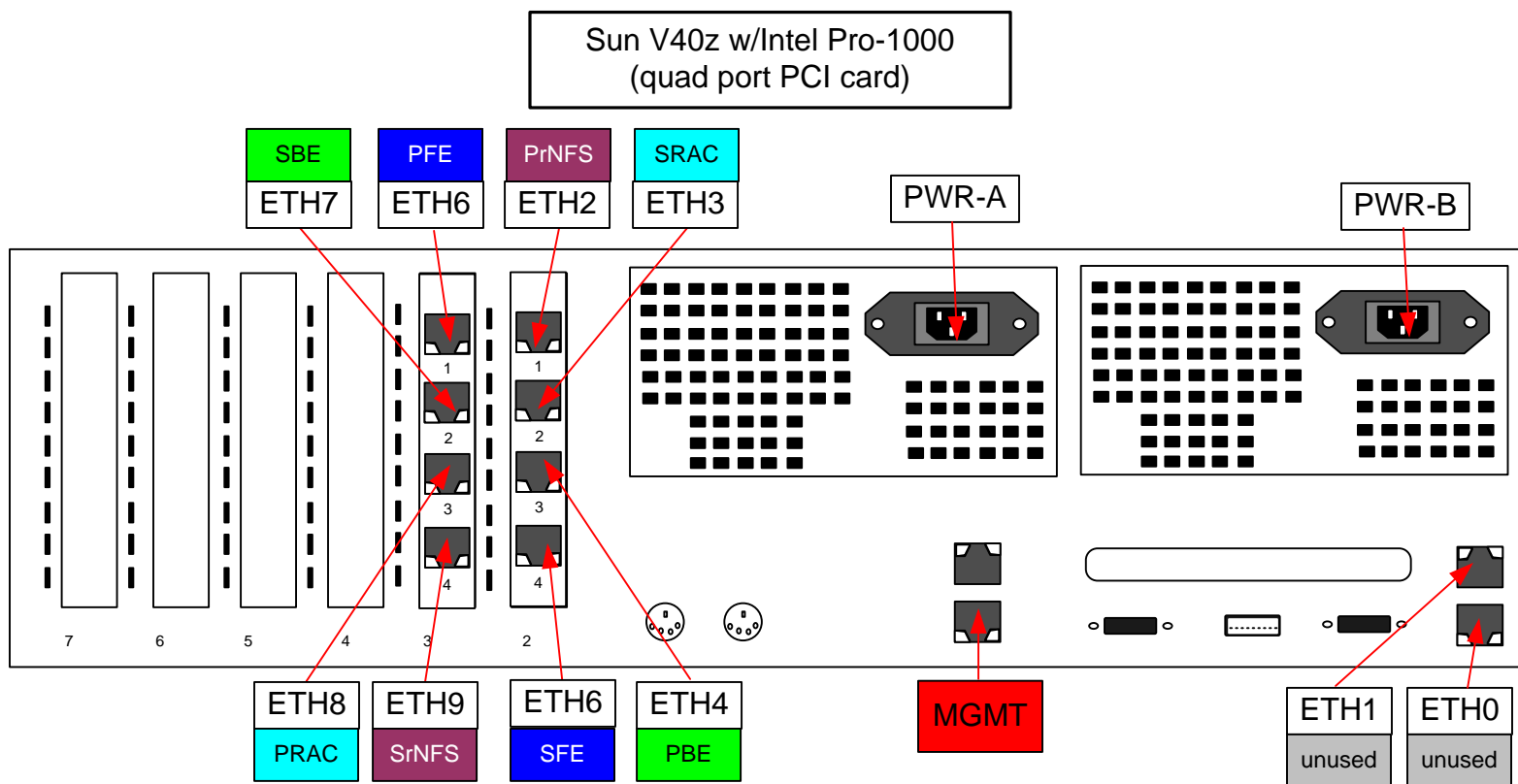
**Sun V40z Cabinet with Cisco 4948-GETX Switches**  
*12 Servers Maximum*  
*RAC and rNFS Supported*



# Sun V40z 12 server cabinet using Cisco 4948GE-TX switches



# Sun V40z 12 server cabinet using Cisco 4948GE-TX switches



# Sun V40z 12 server cabinet using Cisco 4948GE-TX switches

Switch #1 & #2

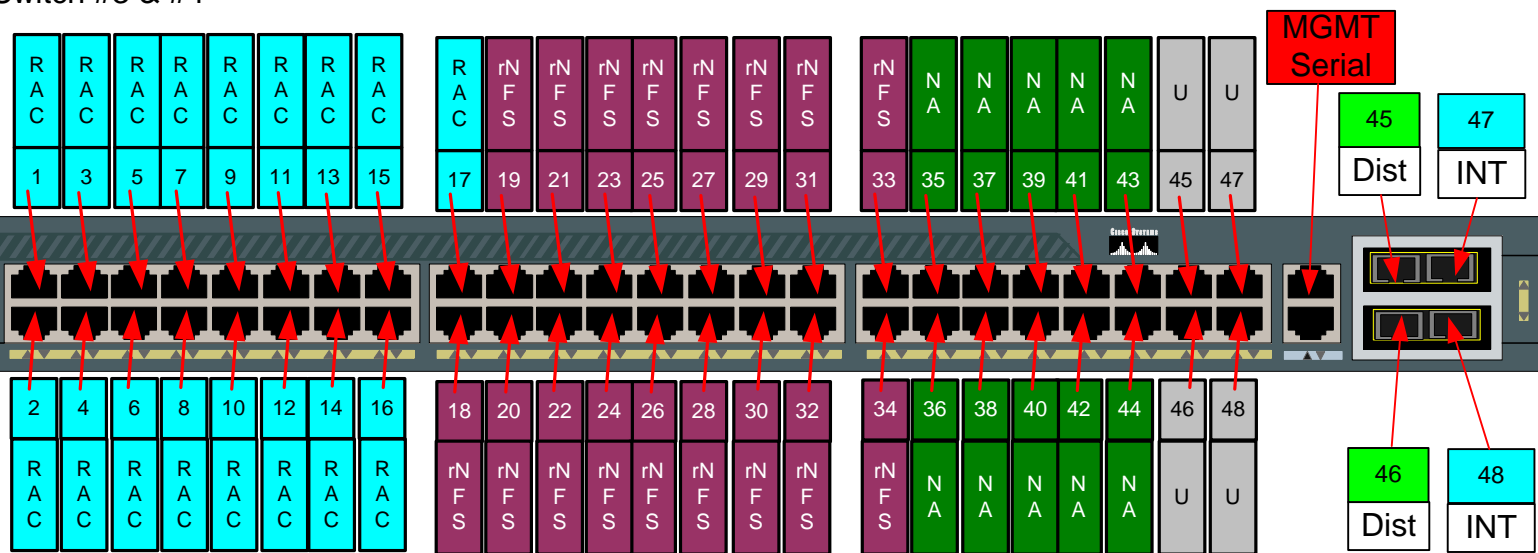
CISCO WS-C4948-GETX



Ports 46 and 48 are only used if eitherchannel is used

Switch #3 & #4

CISCO WS-C4948-GETX

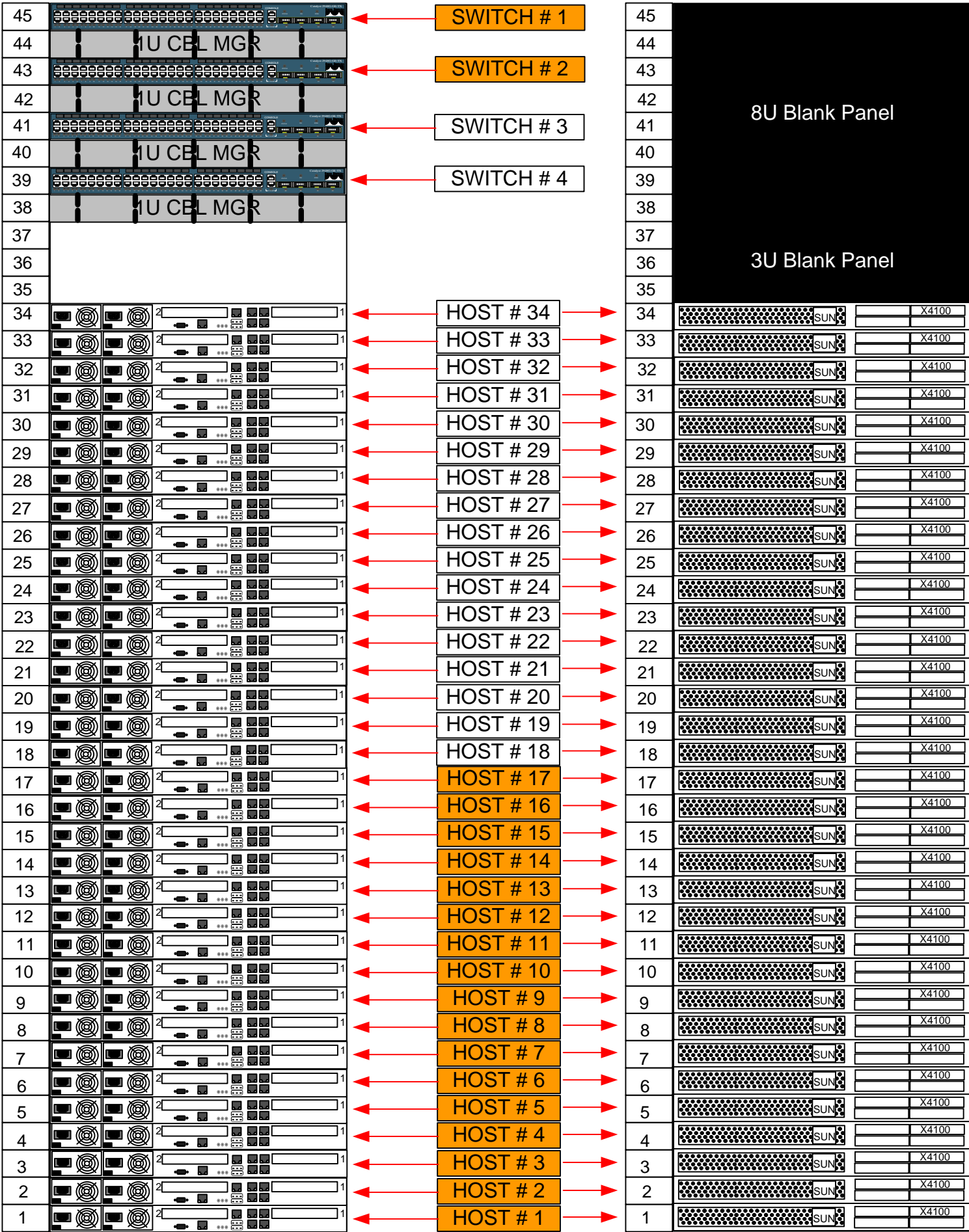


Ports 46 and 48 are only used if eitherchannel is used








HOST #	RU	PFE	SFE	PBE	SBE	PRAC	SRAC	PrNFS	SrNFS	MGMT
12	34	swi-1 1/12	swi-2 1/12	swi-1 1/29	swi-2 1/29	swi-3 1/12	swi-4-1/12	swi-3 1/29	swi-4 1/29	swi-2 1/37
11	31	swi-1 1/11	swi-2 1/11	swi-1 1/28	swi-2 1/28	swi-3 1/11	swi-4-1/11	swi-3 1/28	swi-4 1/28	swi-2 1/36
10	28	swi-1 1/10	swi-2 1/10	swi-1 1/27	swi-2 1/27	swi-3 1/10	swi-4-1/10	swi-3 1/27	swi-4 1/27	swi-2 1/35
9	25	swi-1 1/9	swi-2 1/9	swi-1 1/26	swi-2 1/26	swi-3 1/9	swi-4-1/9	swi-3 1/26	swi-4 1/26	swi-1 1/43
8	22	swi-1 1/8	swi-2 1/8	swi-1 1/25	swi-2 1/25	swi-3 1/8	swi-4-1/8	swi-3 1/25	swi-4 1/25	swi-1 1/42
7	19	swi-1 1/7	swi-2 1/7	swi-1 1/24	swi-2 1/24	swi-3 1/7	swi-4-1/7	swi-3 1/24	swi-4 1/24	swi-1 1/41
6	16	swi-1 1/6	swi-2 1/6	swi-1 1/23	swi-2 1/23	swi-3 1/6	swi-4-1/6	swi-3 1/23	swi-4 1/23	swi-1 1/40
5	13	swi-1 1/5	swi-2 1/5	swi-1 1/22	swi-2 1/22	swi-3 1/5	swi-4-1/5	swi-3 1/22	swi-4 1/22	swi-1 1/39
4	10	swi-1 1/4	swi-2 1/4	swi-1 1/21	swi-2 1/21	swi-3 1/4	swi-4-1/4	swi-3 1/21	swi-4 1/21	swi-1 1/38
3	7	swi-1 1/3	swi-2 1/3	swi-1 1/20	swi-2 1/20	swi-3 1/3	swi-4-1/3	swi-3 1/20	swi-4 1/20	swi-1 1/37
2	4	swi-1 1/2	swi-2 1/2	swi-1 1/19	swi-2 1/19	swi-3 1/2	swi-4-1/2	swi-3 1/19	swi-4 1/19	swi-1 1/36
1	1	swi-1 1/1	swi-2 1/1	swi-1 1/18	swi-2 1/18	swi-3 1/1	swi-4-1/1	swi-3 1/18	swi-4 1/18	swi-1 1/35



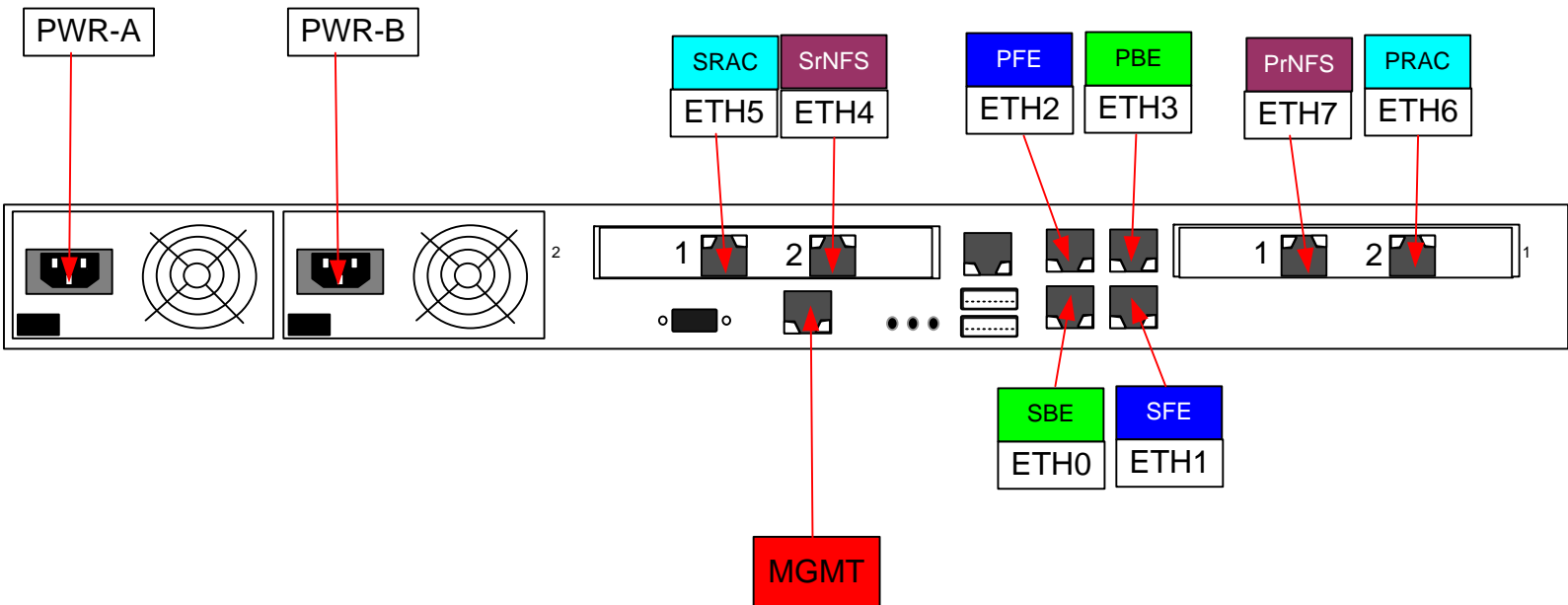
**Sun x4100 non-RAC Cabinet with  
Cisco 4948-GETX Switches  
*34 Servers Maximum*  
*Standard non-RAC Configuration***



# Server Port Designation

	FRONT END (FE)
	BACK END (BE)
	RAC Interconnect (RAC)
	rNFS (rNFS)
	MGMT (C)
	NetApp Connect (NA)
	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.





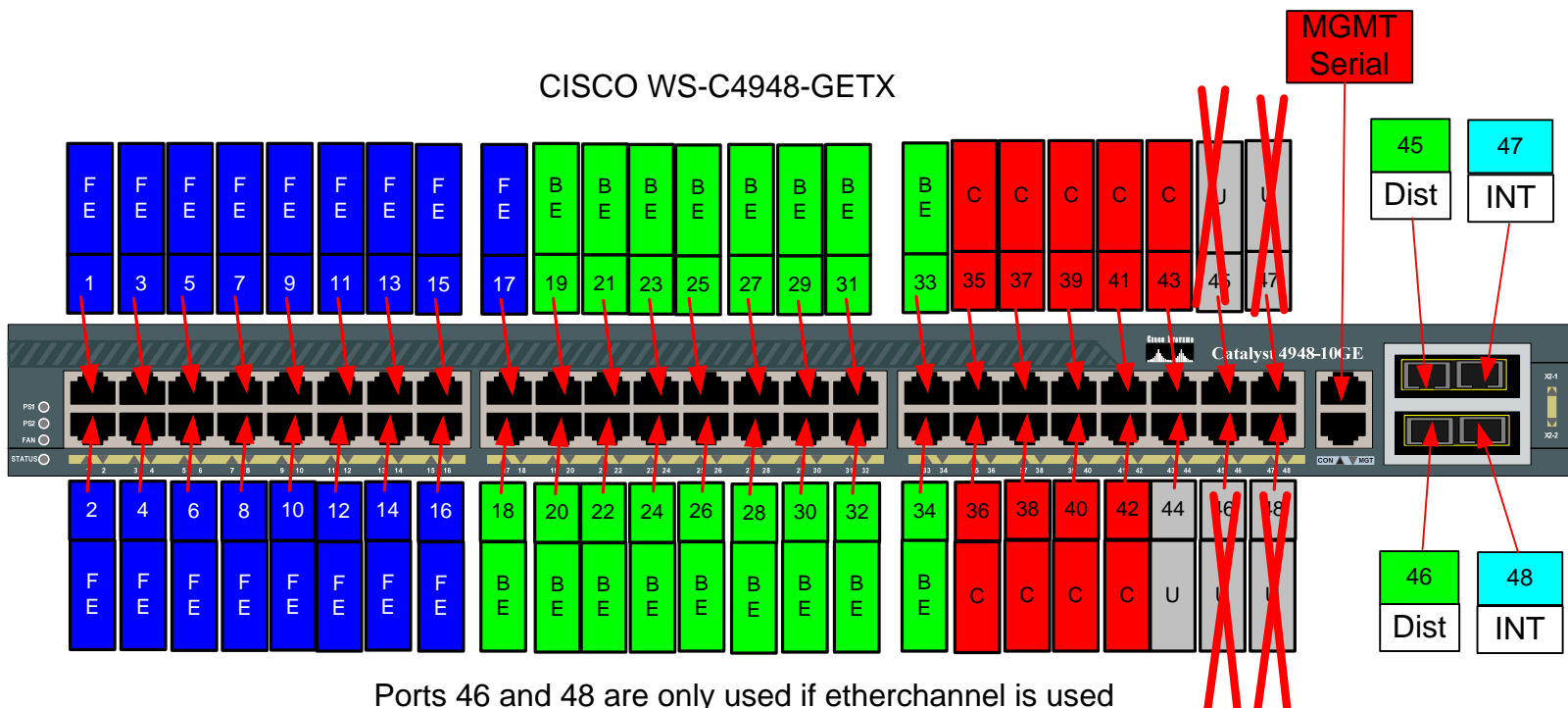
# Network Switch Port Configuration

Blue	FRONT END (FE)
Green	BACK END (BE)
Cyan	RAC Interconnect (RAC)
Purple	rNFS (rNFS)
Red	MGMT (C)
Dark Green	NetApp Connect (NA)
Grey	Not Used (U)








NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a "P" or "S" preceding the port definition. The "P" stands for the Primary Switch which is the first in the pair and the "S" stands for the Secondary Switch which is the second in the pair.

IMPORTANT NOTE: There are four (4) switches installed in this rack. The four (4) switches are built in the primary and secondary pairs. The top pair of switches support the top seventeen (17) servers. Referencing the Rack diagram the grouping of the switches to the servers are color coded. Also the Network Connectivity, Network Cabling and Host to Power strip Connectivity are also color coded to emphasize the grouping.

CISCO WS-C4948-GETX



# Network Switch Port Configuration

	FRONT END (FE)
	BACK END (BE)
	RAC Interconnect (RAC)
	rNFS (rNFS)
	MGMT (C)
	NetApp Connect (NA)
	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.

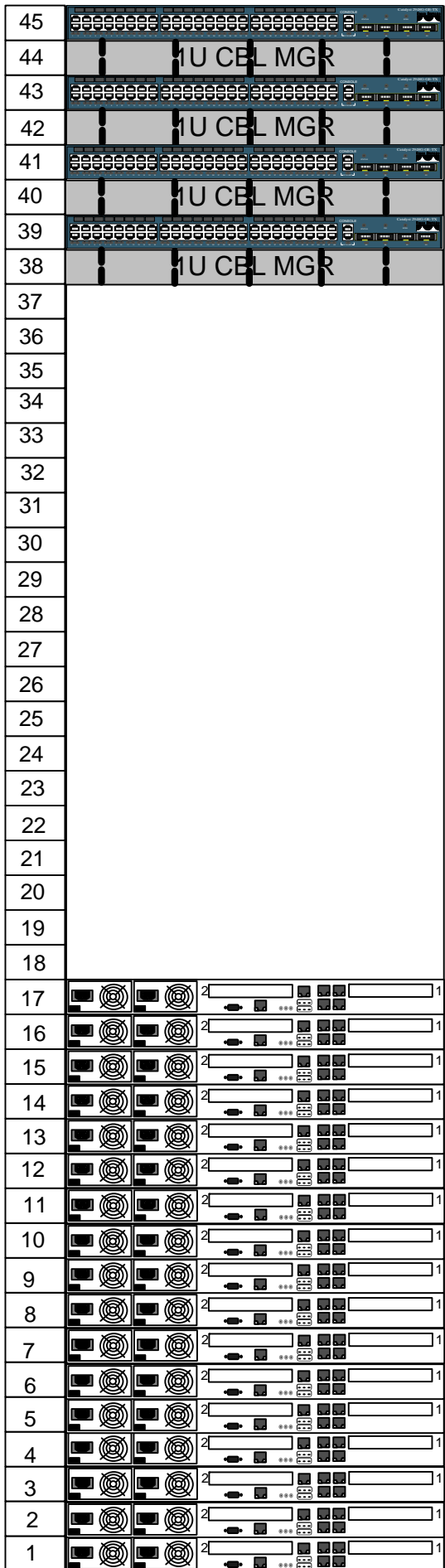
**IMPORTANT NOTE:** There are four (4) switches installed in this rack. The four (4) switches are built in the primary and secondary pairs. The top pair of switches support the top seventeen (17) servers.

[illegible]

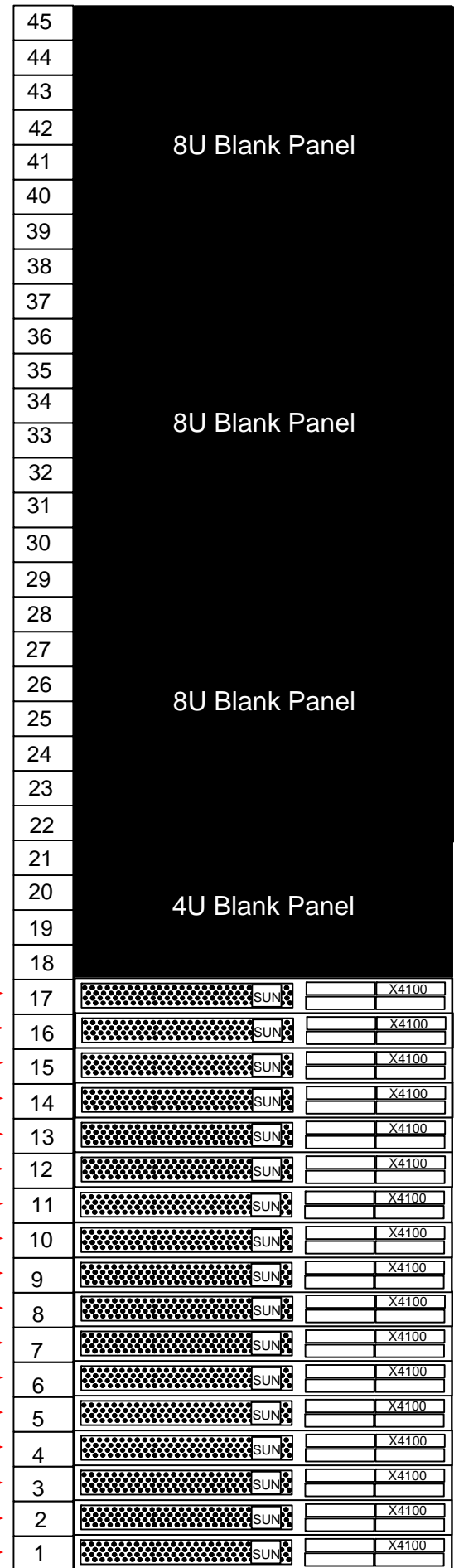


**Sun x4100 Multi-node RAC Cabinet with  
Cisco 2948-GETX Switches  
*17 Servers Maximum  
RAC and rNFS Supported***








## 45U Rack



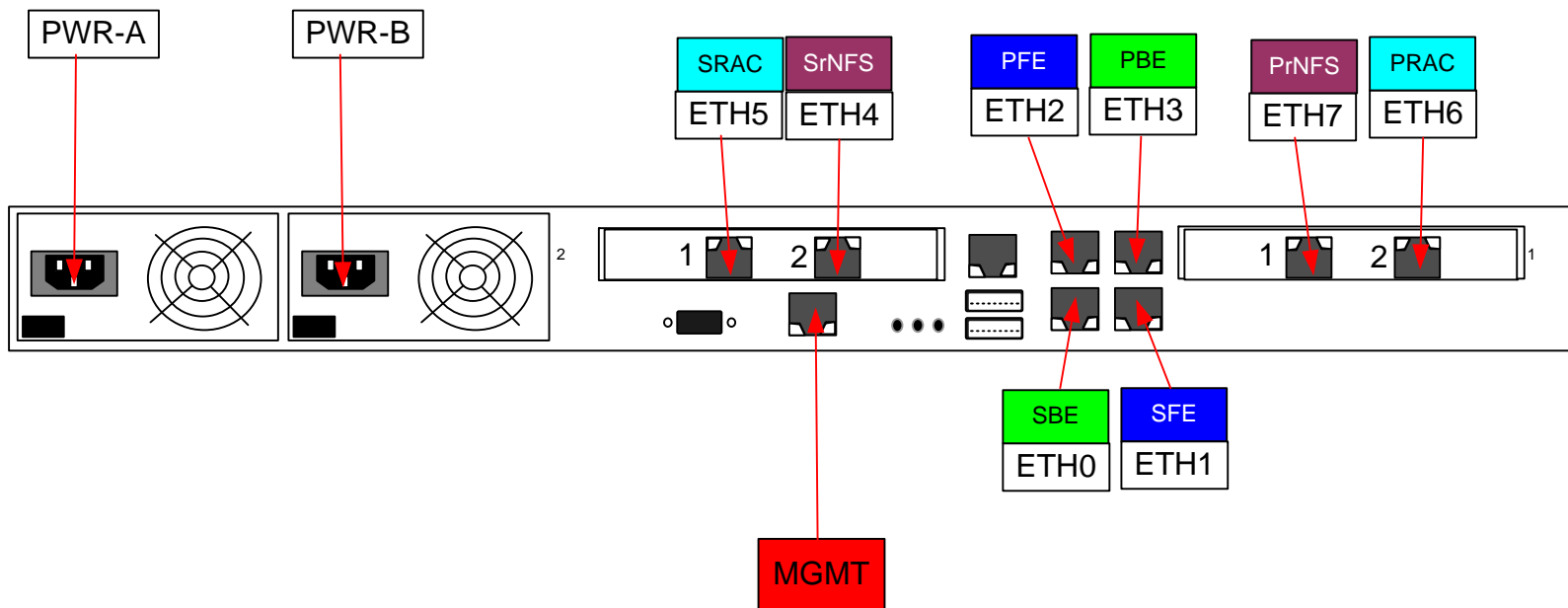
## 45U Rack



# Server Port Designation

	FRONT END (FE)
	BACK END (BE)
	RAC Interconnect (RAC)
	rNFS (rNFS)
	MGMT (C)
	NetApp Connect (NA)
	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.



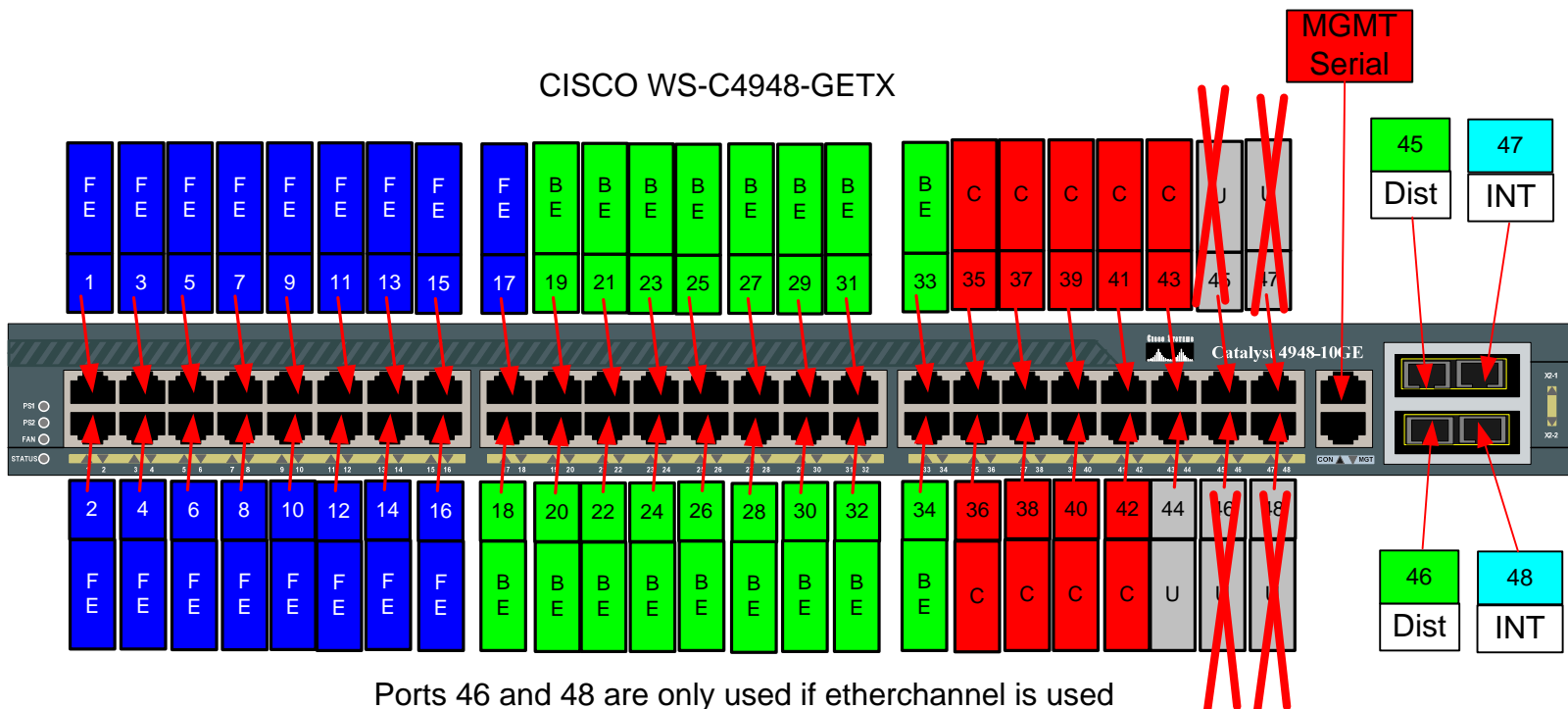
# Network Switch Port Configuration

Blue	FRONT END (FE)
Green	BACK END (BE)
Cyan	RAC Interconnect (RAC)
Purple	rNFS (rNFS)
Red	MGMT (C)
Dark Green	NetApp Connect (NA)
Grey	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a "P" or "S" preceding the port definition. The "P" stands for the Primary Switch which is the first in the pair and the "S" stands for the Secondary Switch which is the second in the pair.

Switch #1 & #2








CISCO WS-C4948-GETX



Ports 46 and 48 are only used if etherchannel is used



# Network Switch Port Configuration

	FRONT END (FE)
	BACK END (BE)
	RAC Interconnect (RAC)
	rNFS (rNFS)
	MGMT (C)
	NetApp Connect (NA)
	Not Used (U)

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.

Switch #3 & #4

CISCO WS-C4948-GETX

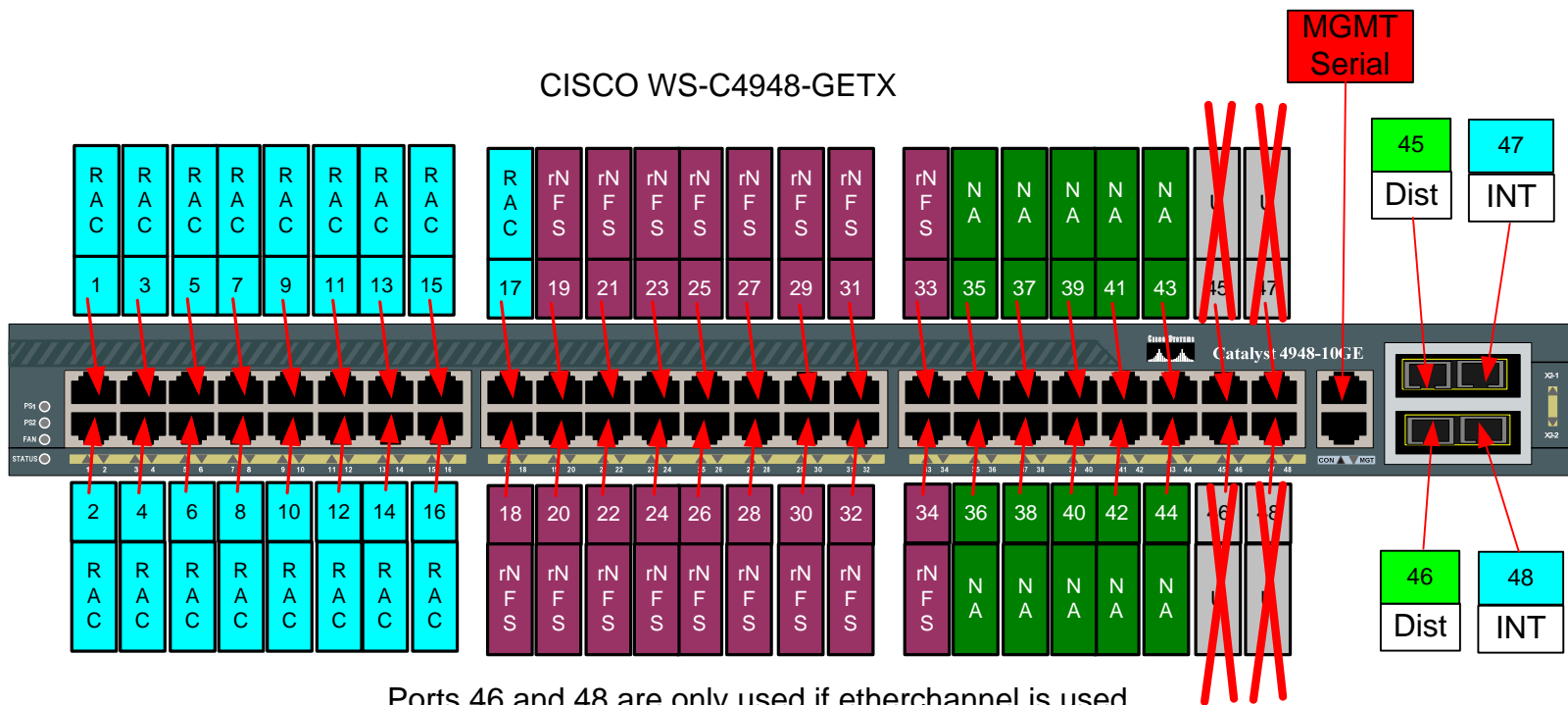
MGMT  
Serial

45  
Dist

47  
INT

46  
Dist

48  
INT



# Network Switch Port Configuration

FRONT END (FE)	
BACK END (BE)	
RAC Interconnect (RAC)	
rNFS (rNFS)	
MGMT (C)	
NetApp Connect (NA)	
Not Used (U)	

NOTE: For redundancy the network switches are built in pairs. The following connection matrix has the various port descriptions with a “P” or “S” preceding the port definition. The “P” stands for the Primary Switch which is the first in the pair and the “S” stands for the Secondary Switch which is the second in the pair.

[illegible]