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SBA
FOR
GOVT

MIDSIZE

DATA CENTER

Data Center Configuration Guide

● ● ● SBA FOR GOVERNMENT

Revision: H2CY10

The Purpose of this Guide

This guide is a companion document to the *Cisco Smart Business Architecture (SBA) for Government Midsize Agencies—Data Center Deployment Guide* and should be used as such.

In this document, you will find the specific configuration files from our lab to support you during deployment.

It provides engineers step-by-step instructions to deploy the solutions in the SBA Data Center design. Because Cisco is delivering a modular architecture, you can deploy exactly what you need quickly and efficiently.

Who Should Read This Guide

This guide is intended for the reader who has any or all of the following:

- Already read the SBA for Midsize Agencies— Borderless Networks Foundation Deployment Guide
- An existing server room and is looking to solve agency problems that require technologies more typically found in a Data Center
- iSCSI and/or Fibre Channel for Storage

The intended reader of this document will be ready to:

- Increase their compute capacity from the Server Room design
- Expand from a few dozen servers to a combination of virtual and physical servers up to 250 servers

- Gain additional storage capacity for their servers
- Improve server utilization with virtual servers
- Ensure availability of applications
- Consolidate and virtualize storage and servers
- Deploy a Business Continuity/Disaster Recovery Data Center solution

Related Documents

Before reviewing this guide

- DC — Design Overview
- DC — Data Center Deployment Guide
- DC — Advanced Server Load Balancing
- DC — Design Overview

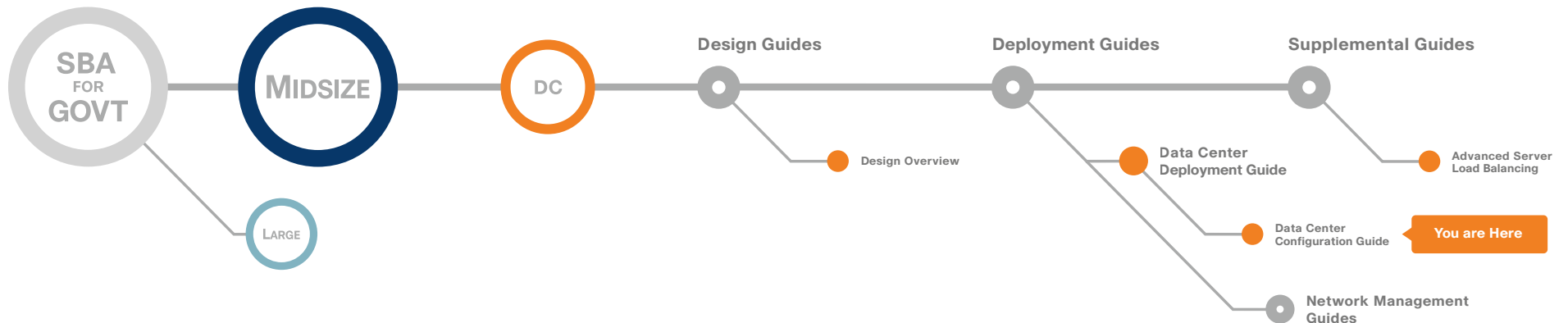


Table of Contents

Introduction	1	Resilient WAN Design	41
Ethernet Data Center Design	3	ISR 3845 Primary Data Center	41
Cisco 3750G	3	ISR 3925 Disaster Recovery Data Center	42
Nexus 5K Primary Data Center	12	ISR 2811 Branch	44
Fibre Channel Data Center Design	20	Resilient WAN Optimization Design	51
MDS 9124 Primary Data Center	20	WAAS WAVE 274 Central Manager	51
MDS 9124 Disaster Recovery Data Center	22	WAAS WAVE 574 DC Application Accelerator	51
MDS 9134 Primary Data Center	24	NME-WAE 502 Branch Application Accelerator	62
MDS 9134 Disaster Recovery Data Center	26	Resilient Server Design	73
Security Data Center Design	28	Application Control Engine 4710 Primary Data Center	73
ASA 5540 Primary Data Center (Device A)	28	Appendix A:	
ASA 5540 Primary Data Center (Device B)	30	Data Center for Midsize Agencies Product List	74
ASA 5580 Disaster Recovery Data Center (Device B)	33	Appendix B:	
SSM-40 Primary Data Center	35	SBA for Midsize Agencies Document System	75
IDS/IPS 4260 Primary Data Center	37		
IDS/IPS 4260 Disaster Recovery Data Center	39		

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Introduction

For Cisco partners and customers whose server farm will have a combined total of up to 250 physical and virtual servers, Cisco has created a network architecture that is simple, fast to deploy, affordable, scalable, and flexible. At the same time, it is easy to install, configure, and manage.

The deployment has been architected to make your life a little bit, maybe even a lot, easier by:

- Providing a solid foundation
- Making deployment fast and easy
- Avoiding the need for reengineering of the core network

By taking advantage of the foundation architecture you've already deployed, the SBA Data Center lets you add 50 or 250 servers, or a Disaster Recovery site, without wasting time and expense reconfiguring the existing Network Foundation.

Within the Cisco SBA for Midsize Agencies—Borderless Networks Foundation Deployment Guide, the Server Room module accommodates up to 24 physical servers. That design provides basic computing and storage capability for agency operations. This guide describes a data center that can easily replace the server room in the SBA for Midsize Agencies foundation architecture, for more advanced agency operations and applications. This will provide an architecture designed to accommodate growth of the server farm up to 250 physical or virtual servers.

The following configuration files are provided:

- Ethernet Data Center Design
- Fibre Channel Data Center Design
- Security Data Center Design
- Resilient WAN Design
- Resilient WAN Optimization Design
- Resilient Server Design

Refer to the Appendix for a complete list of products used in the lab testing of this design.

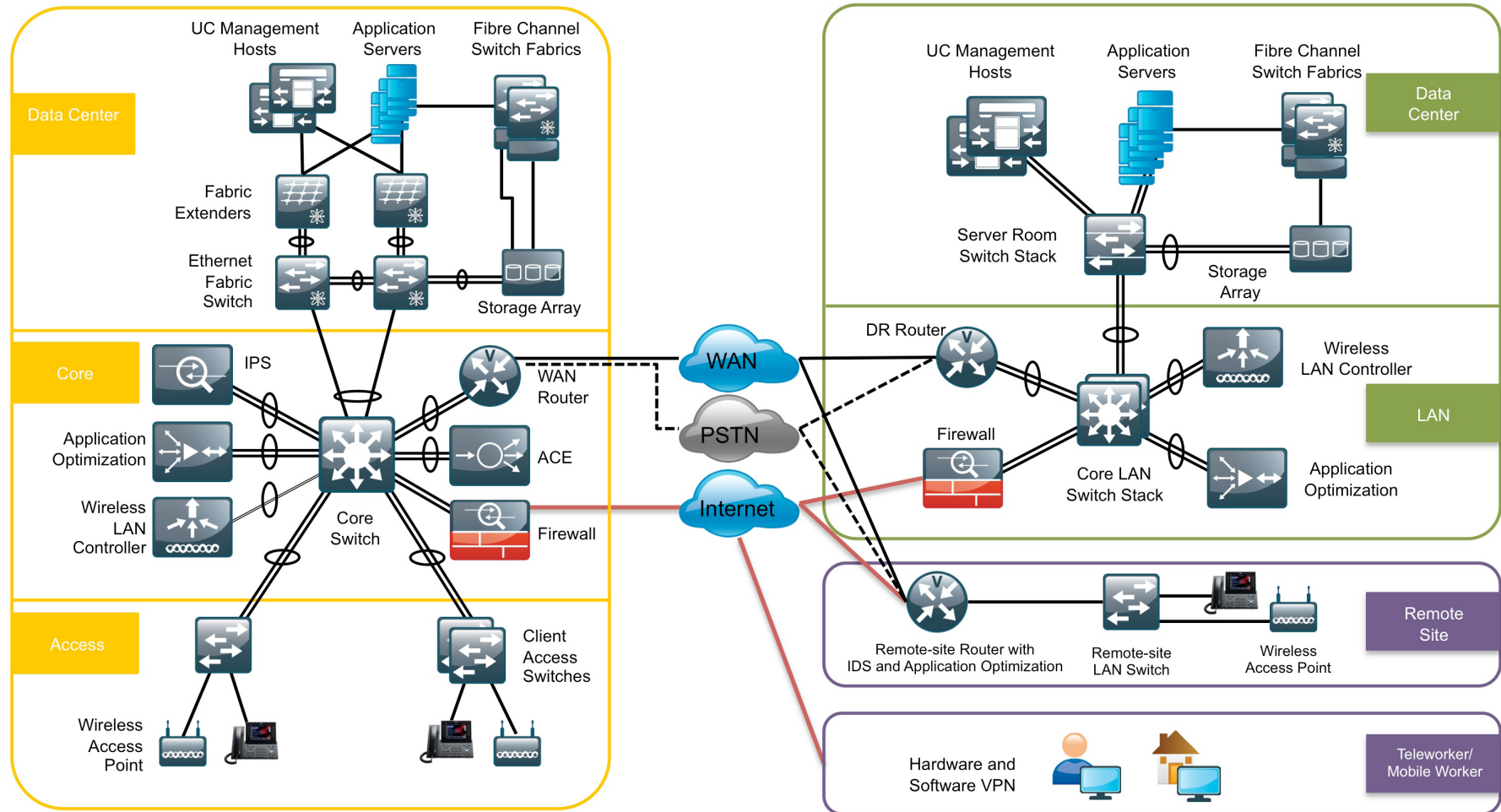


Tech Tip

The actual settings and values will depend on your current network configuration. Please review all settings and configuration changes before submitting them.

Figure 1 depicts the architecture that will be in place if you deploy all of the modules in the Data Center design.

Figure 1. Data Center for Midsize Agencies Design



Ethernet Data Center Design

Cisco 3750G

Current configuration : 20951 bytes

```
!  
! Last configuration change at 16:21:35 UTC Thu Oct 8 2009  
! NVRAM config last updated at 11:11:55 UTC Thu Aug 27 2009  
!  
version 12.2  
no service pad  
service timestamps debug uptime  
service timestamps log datetime localtime  
no service password-encryption  
!  
hostname DC3750G1  
!  
boot-start-marker  
boot-end-marker  
!  
enable secret 5 *****  
!  
username ***** privilege 15 password 0 *****  
no aaa new-model  
clock timezone UTC -8  
clock summer-time UTC recurring  
switch 1 provision ws-c3750g-24ts  
switch 2 provision ws-c3750g-24ts  
switch 3 provision ws-c3750g-24ps  
system mtu routing 1500  
vtp domain CiscoMilpitas  
vtp mode transparent  
udld aggressive  
ip subnet-zero  
ip domain-name cisco.local  
ip name-server 192.168.28.10  
!  
!
```

```
!  
mls qos map cos-dscp 0 8 16 24 32 46 48 56  
mls qos srr-queue input bandwidth 90 10  
mls qos srr-queue input threshold 1 8 16  
mls qos srr-queue input threshold 2 34 66  
mls qos srr-queue input buffers 67 33  
mls qos srr-queue input cos-map queue 1 threshold 2 1  
mls qos srr-queue input cos-map queue 1 threshold 3 0  
mls qos srr-queue input cos-map queue 2 threshold 1 2  
mls qos srr-queue input cos-map queue 2 threshold 2 4 6 7  
mls qos srr-queue input cos-map queue 2 threshold 3 3 5  
mls qos srr-queue input dscp-map queue 1 threshold 2 9 10 11  
12 13 14 15  
mls qos srr-queue input dscp-map queue 1 threshold 3 0 1 2 3 4  
5 6 7  
mls qos srr-queue input dscp-map queue 1 threshold 3 32  
mls qos srr-queue input dscp-map queue 2 threshold 1 16 17 18  
19 20 21 22 23  
mls qos srr-queue input dscp-map queue 2 threshold 2 33 34 35  
36 37 38 39 48  
mls qos srr-queue input dscp-map queue 2 threshold 2 49 50 51  
52 53 54 55 56  
mls qos srr-queue input dscp-map queue 2 threshold 2 57 58 59  
60 61 62 63  
mls qos srr-queue input dscp-map queue 2 threshold 3 24 25 26  
27 28 29 30 31  
mls qos srr-queue input dscp-map queue 2 threshold 3 40 41 42  
43 44 45 46 47  
mls qos srr-queue output cos-map queue 1 threshold 3 5  
mls qos srr-queue output cos-map queue 2 threshold 3 3 6 7  
mls qos srr-queue output cos-map queue 3 threshold 3 2 4  
mls qos srr-queue output cos-map queue 4 threshold 2 1  
mls qos srr-queue output cos-map queue 4 threshold 3 0  
mls qos srr-queue output dscp-map queue 1 threshold 3 40 41 42  
43 44 45 46 47  
mls qos srr-queue output dscp-map queue 2 threshold 3 24 25 26  
27 28 29 30 31  
mls qos srr-queue output dscp-map queue 2 threshold 3 48 49 50  
51 52 53 54 55  
mls qos srr-queue output dscp-map queue 2 threshold 3 56 57 58  
59 60 61 62 63  
mls qos srr-queue output dscp-map queue 3 threshold 3 16 17 18  
19 20 21 22 23  
mls qos srr-queue output dscp-map queue 3 threshold 3 32 33 34  
35 36 37 38 39  
mls qos srr-queue output dscp-map queue 4 threshold 1 8
```

```

mls qos srr-queue output dscp-map queue 4 threshold 2 9 10 11
12 13 14 15
mls qos srr-queue output dscp-map queue 4 threshold 3 0 1 2 3
4 5 6 7
mls qos queue-set output 1 threshold 1 138 138 92 138
mls qos queue-set output 1 threshold 2 138 138 92 400
mls qos queue-set output 1 threshold 3 36 77 100 318
mls qos queue-set output 1 threshold 4 20 50 67 400
mls qos queue-set output 2 threshold 1 149 149 100 149
mls qos queue-set output 2 threshold 2 118 118 100 235
mls qos queue-set output 2 threshold 3 41 68 100 272
mls qos queue-set output 2 threshold 4 42 72 100 242
mls qos queue-set output 1 buffers 10 10 26 54
mls qos queue-set output 2 buffers 16 6 17 61
mls qos
!
crypto pki trustpoint TP-self-signed-2046566272
enrollment selfsigned
subject-name cn=IOS-Self-Signed-Certificate-2046566272
revocation-check none
rsa-keypair TP-self-signed-2046566272
!
!
crypto pki certificate chain TP-self-signed-2046566272
certificate self-signed 01
3082024C 308201B5 A0030201 02020101 300D0609 2A864886 F70D0101
04050030
31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D
43657274
69666963 6174652D 32303436 35363632 3732301E 170D3039 30373239
31383135
33345A17 0D323030 31303130 30303030 305A3031 312F302D 06035504
03132649
4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D32
30343635
36363237 3230819F 300D0609 2A864886 F70D0101 01050003 818D0030
81890281
8100C0FD 44BE7255 0D6F9F17 90B76B85 A995BB8C 799ACE9B 1F44CF63
18969114
5917DCCA CAC77CAA BEFBF6FB 5B30E129 13D1B708 33377BAB A97EB341
8E76B181
914D581C 54722222 5ADE0F18 31680882 2BEE2553 47E65773 2D15C3EC
079DFDCD
4B0ADB83 D209F7D6 8F263D0C 845CA298 19704925 52F59B2C 4AA95738
2D0B8013
49F70203 010001A3 74307230 0F060355 1D130101 FF040530 030101FF
301F0603

```

```

551D1104 18301682 14444333 37353047 312E6369 73636F2E 6C6F6361
6C301F06
03551D23 04183016 8014B78E D77E4ADA F09EAD5C 5EEBAD56 ACD92C13
3C6A301D
0603551D 0E041604 14B78ED7 7E4ADAF0 9EAD5C5E EBAD56AC D92C133C
6A300D06
092A8648 86F70D01 01040500 03818100 9539CC54 6C646A9E 4A0F03BF
B5B3C593
72E4F77E 8C1A8074 1DD8C9B2 CE7B2E41 3A7B4262 BEE498E5 95CDF7AA
FDE72205
3DCD3C19 B1E4F1A5 FDEBF2EC A16F2569 97A872C5 9B8E63B1 FF6A9402
60E4E53D
ED8EEE31 24FAA354 C6E0A91A 110BD790 ED4CD3E9 410CE7AF 7F0F6FDE
104F4833
BA9AE7B1 39585257 1615560B 660AC6A8
quit
!
!
!
errdisable recovery interval 120
!
!
spanning-tree mode pvst
spanning-tree etherchannel guard misconfig
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 24-27,32-35
!
ip ftp username *****
ip ftp password *****
ip ssh version 2
!
!
!
interface Port-channel1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
!
interface Port-channel11
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
!

```

```

interface Port-channel12
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
!
interface GigabitEthernet1/0/1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
channel-group 11 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet1/0/2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
shutdown
channel-group 12 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet1/0/3
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
channel-group 11 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet1/0/4
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
shutdown
channel-group 12 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet1/0/5
switchport access vlan 24
switchport mode access

```

```

srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
flowcontrol receive on
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/6
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/7
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/8
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/9
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2

```

```

priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/10
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/11
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/12
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/13
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust

```

```

spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/14
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/15
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/16
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/17
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!

```

```

interface GigabitEthernet1/0/18
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/19
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/20
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/21
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/22
switchport access vlan 25
switchport mode access

```

```

srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/23
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/24
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet1/0/25
shutdown
!
interface GigabitEthernet1/0/26
shutdown
!
interface GigabitEthernet1/0/27
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet1/0/28
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27

```

```

switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/1
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
shutdown
channel-group 11 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet2/0/2
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
channel-group 12 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet2/0/3
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
shutdown
channel-group 11 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet2/0/4
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 24,25
switchport mode trunk
switchport nonegotiate
load-interval 30
channel-group 12 mode on
spanning-tree portfast trunk
!
interface GigabitEthernet2/0/5
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20

```

```

queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/6
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/7
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/8
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/9
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos

```

```

auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/10
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/11
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/12
switchport access vlan 24
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/13
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!

```

```

interface GigabitEthernet2/0/14
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/15
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/16
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/17
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/18
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20

```

```

queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/19
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/20
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/21
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/22
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos

```

```

auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/23
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/24
switchport access vlan 25
switchport mode access
srr-queue bandwidth share 10 10 60 20
queue-set 2
priority-queue out
mls qos trust cos
auto qos voip trust
spanning-tree portfast
spanning-tree bpduguard enable
!
interface GigabitEthernet2/0/25
shutdown
!
interface GigabitEthernet2/0/26
shutdown
!
interface GigabitEthernet2/0/27
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet2/0/28
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point

```

```

!
interface GigabitEthernet3/0/1
!
interface GigabitEthernet3/0/2
!
interface GigabitEthernet3/0/3
!
interface GigabitEthernet3/0/4
!
interface GigabitEthernet3/0/5
!
interface GigabitEthernet3/0/6
!
interface GigabitEthernet3/0/7
!
interface GigabitEthernet3/0/8
!
interface GigabitEthernet3/0/9
!
interface GigabitEthernet3/0/10
!
interface GigabitEthernet3/0/11
!
interface GigabitEthernet3/0/12
!
interface GigabitEthernet3/0/13
!
interface GigabitEthernet3/0/14
!
interface GigabitEthernet3/0/15
!
interface GigabitEthernet3/0/16
!
interface GigabitEthernet3/0/17
!
interface GigabitEthernet3/0/18
!
interface GigabitEthernet3/0/19
!
interface GigabitEthernet3/0/20
!
interface GigabitEthernet3/0/21
!
interface GigabitEthernet3/0/22
!
interface GigabitEthernet3/0/23
!
interface GigabitEthernet3/0/24

```

```

!
interface GigabitEthernet3/0/25
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet3/0/26
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet3/0/27
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface GigabitEthernet3/0/28
switchport trunk encapsulation dot1q
switchport trunk allowed vlan 1,24-27
switchport mode trunk
mls qos trust dscp
channel-group 1 mode on
spanning-tree link-type point-to-point
!
interface Vlan1
ip address 192.168.1.34 255.255.255.0
!
ip default-gateway 192.168.1.1
ip classless
ip http server
ip http secure-server
!
!
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!

```

```

!
line con 0
line vty 0 4
login local
transport input all
line vty 5 15
login local
transport input all
!
ntp clock-period 36029191
ntp server 192.168.31.2
end

```

Nexus 5K Primary Data Center

```

version 4.1(3)N1(1)
feature telnet
cfs eth distribute
feature private-vlan
feature udld
feature interface-vlan
feature lacp
feature vpc
vpc domain 10
role priority 16000
peer-keepalive destination 192.168.128.9 source 192.168.128.8
feature fex
username ***** password 5 ***** role network-admin
no password strength-check
ip domain-lookup
ip host Nexus5010A 192.168.128.8
hostname Nexus5010A
fex 100
pinning max-links 1
description FEX0100
type "Nexus 2148T"
fex 102
pinning max-links 1
description FEX0102
type "Nexus 2148T"
snmp-server user admin network-admin auth
md5 0xef65043f3ca28c5ca2243c7127825afb priv
0xef65043f3ca28c5ca2243c7127825afb localizedkey
snmp-server community cisco group network-operator
vrf context management
ip route 0.0.0.0/0 192.168.128.1
vlan 1,152-155

```

```

vlan 156
name Control
vlan 157
name Packet
interface Ethernet1/1
switchport mode trunk
switchport trunk native vlan 153
switchport trunk allowed vlan 153
speed 1000
channel-group 1 mode active
interface Ethernet1/2
interface Ethernet1/3
interface Ethernet1/4
interface Ethernet1/5
interface Ethernet1/6
interface Ethernet1/7
interface Ethernet1/8
interface Ethernet1/9
interface Ethernet1/10
interface Ethernet1/11
interface Ethernet1/12
interface Ethernet1/13
switchport mode fex-fabric
fex associate 102
channel-group 102
interface Ethernet1/14
interface Ethernet1/15
switchport mode fex-fabric
fex associate 100
channel-group 100
interface Ethernet1/16
switchport mode fex-fabric
fex associate 100
channel-group 100
interface Ethernet1/17
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 10 mode active
interface Ethernet1/18
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 10 mode active
interface Ethernet1/19
interface Ethernet1/20
switchport mode trunk

```

```

switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 60 mode active
interface Vlan1
interface port-channel1
switchport mode trunk
switchport trunk native vlan 153
switchport trunk allowed vlan 153
vpc 1
spanning-tree port type normal
speed 1000
interface port-channel10
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
vpc peer-link
spanning-tree port type network
interface port-channel60
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
vpc 60
spanning-tree port type network
interface port-channel100
switchport mode fex-fabric
fex associate 100
interface port-channel102
switchport mode fex-fabric
vpc 102
fex associate 102
speed 10000
interface port-channel200
switchport mode trunk
switchport trunk allowed vlan 153,156-157
vpc 200
interface port-channel201
switchport mode trunk
switchport trunk allowed vlan 153,156-157
vpc 201
interface port-channel202
switchport mode trunk
switchport trunk allowed vlan 152
vpc 202
interface port-channel203
switchport mode trunk
switchport trunk allowed vlan 152
vpc 203
interface port-channel204
interface mgmt0

```

```

ip address 192.168.128.8/24
interface Ethernet100/1/1
description esx-12-vmnic6_system_uplink
switchport mode trunk
switchport trunk allowed vlan 153,156-157
spanning-tree port type edge
channel-group 200
interface Ethernet100/1/2
description esx-13-vmnic6-system-uplink
switchport mode trunk
switchport trunk allowed vlan 153,156-157
spanning-tree port type edge
channel-group 201
interface Ethernet100/1/3
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/4
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/5
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/6
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/7
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/8
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/9
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/10
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/11
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/12
switchport access vlan 152
spanning-tree port type edge
interface Ethernet100/1/13
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/14
switchport mode trunk
switchport trunk allowed vlan 152

```

```

spanning-tree port type edge
channel-group 202
interface Ethernet100/1/15
switchport mode trunk
switchport trunk allowed vlan 152
spanning-tree port type edge
channel-group 203
interface Ethernet100/1/16
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/17
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/18
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/19
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/20
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/21
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/22
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/23
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/24
switchport access vlan 153
spanning-tree port type edge
interface Ethernet100/1/25
interface Ethernet100/1/26
interface Ethernet100/1/27
interface Ethernet100/1/28
interface Ethernet100/1/29
interface Ethernet100/1/30
interface Ethernet100/1/31
interface Ethernet100/1/32
interface Ethernet100/1/33
interface Ethernet100/1/34
interface Ethernet100/1/35
interface Ethernet100/1/36
interface Ethernet100/1/37

```

```

interface Ethernet100/1/38
interface Ethernet100/1/39
interface Ethernet100/1/40
interface Ethernet100/1/41
interface Ethernet100/1/42
interface Ethernet100/1/43
interface Ethernet100/1/44
interface Ethernet100/1/45
interface Ethernet100/1/46
interface Ethernet100/1/47
interface Ethernet100/1/48
interface Ethernet102/1/1
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/2
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/3
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/4
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/5
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/6
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/7
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/8
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/9
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/10
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/11
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/12
switchport access vlan 152
spanning-tree port type edge

```

```

interface Ethernet102/1/13
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/14
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/15
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/16
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/17
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/18
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/19
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/20
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/21
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/22
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/23
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/24
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/25
interface Ethernet102/1/26
interface Ethernet102/1/27
interface Ethernet102/1/28
interface Ethernet102/1/29
interface Ethernet102/1/30
interface Ethernet102/1/31
interface Ethernet102/1/32
interface Ethernet102/1/33
interface Ethernet102/1/34
interface Ethernet102/1/35

```

```

interface Ethernet102/1/36
interface Ethernet102/1/37
interface Ethernet102/1/38
interface Ethernet102/1/39
interface Ethernet102/1/40
interface Ethernet102/1/41
interface Ethernet102/1/42
interface Ethernet102/1/43
interface Ethernet102/1/44
interface Ethernet102/1/45
interface Ethernet102/1/46
interface Ethernet102/1/47
interface Ethernet102/1/48
line console
boot kickstart bootflash:/n5000-uk9-kickstart.4.1.3.N1.0.130a.
bin
boot system bootflash:/n5000-uk9.4.0.1a.N2.1.bin
boot system bootflash:/n5000-uk9.4.1.3.N1.0.130a.bin

```

Nexus 5K Disaster Recovery Data Center

```

version 4.1(3)N1(1)
feature telnet
cfs eth distribute
feature private-vlan
feature udld
feature interface-vlan
feature lacp
feature vpc
vpc domain 10
role priority 24000
peer-keepalive destination 192.168.128.8 source 192.168.128.9
feature fex
username ***** password 5 ***** role network-admin
no password strength-check
ip domain-lookup
ip host Nexus5010B 192.168.128.9
hostname Nexus5010B
fex 101
pinning max-links 1
description FEX0101
type "Nexus 2148T"
fex 102
pinning max-links 1
description FEX0102
type "Nexus 2148T"

```

```

snmp-server user admin network-admin auth
md5 0xec8d3637cc0ccd8f37f3d67cb66154ec priv
0xec8d3637cc0ccd8f37f3d67cb66154ec localizedkey
snmp-server community cisco group network-operator
vrf context management
ip route 0.0.0.0/0 192.168.128.1
vlan 1,152-155
vlan 156
name Control
vlan 157
name Packet
interface Ethernet1/1
switchport mode trunk
switchport trunk native vlan 153
switchport trunk allowed vlan 153
speed 1000
channel-group 1 mode active
interface Ethernet1/2
interface Ethernet1/3
interface Ethernet1/4
interface Ethernet1/5
interface Ethernet1/6
interface Ethernet1/7
interface Ethernet1/8
interface Ethernet1/9
interface Ethernet1/10
interface Ethernet1/11
interface Ethernet1/12
interface Ethernet1/13
switchport mode fex-fabric
fex associate 102
channel-group 102
interface Ethernet1/14
interface Ethernet1/15
switchport mode fex-fabric
fex associate 101
channel-group 101
interface Ethernet1/16
switchport mode fex-fabric
fex associate 101
channel-group 101
interface Ethernet1/17
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 10 mode active
interface Ethernet1/18

```

```

switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 10 mode active
interface Ethernet1/19
interface Ethernet1/20
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
channel-group 60 mode active
interface Vlan1
interface port-channel1
switchport mode trunk
switchport trunk native vlan 153
switchport trunk allowed vlan 153
vpc 1
spanning-tree port type normal
speed 1000
interface port-channel10
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
vpc peer-link
spanning-tree port type network
interface port-channel60
switchport mode trunk
switchport trunk native vlan 152
switchport trunk allowed vlan 152-157
vpc 60
spanning-tree port type network
interface port-channel101
switchport mode fex-fabric
fex associate 101
interface port-channel102
switchport mode fex-fabric
vpc 102
fex associate 102
speed 10000
interface port-channel200
switchport mode trunk
switchport trunk allowed vlan 153,156-157
vpc 200
interface port-channel201
switchport mode trunk
switchport trunk allowed vlan 153,156-157
vpc 201
interface port-channel202

```

```

switchport mode trunk
switchport trunk allowed vlan 152
vpc 202
interface port-channel203
switchport mode trunk
switchport trunk allowed vlan 152
vpc 203
interface port-channel204
interface mgmt0
    ip address 192.168.128.9/24
interface Ethernet101/1/1
switchport mode trunk
switchport trunk allowed vlan 153,156-157
spanning-tree port type edge
channel-group 200
interface Ethernet101/1/2
description ESX-13-vmnic4_System_Uplink
switchport mode trunk
switchport trunk allowed vlan 153,156-157
spanning-tree port type edge
channel-group 201
interface Ethernet101/1/3
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/4
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/5
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/6
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/7
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/8
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/9
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/10
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/11
switchport access vlan 152
spanning-tree port type edge

```

```

interface Ethernet101/1/12
switchport access vlan 152
spanning-tree port type edge
interface Ethernet101/1/13
switchport mode trunk
switchport trunk allowed vlan 152
spanning-tree port type edge
channel-group 202
interface Ethernet101/1/14
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/15
description ESX-13-vmnic2_VM_Uplink
switchport mode trunk
switchport trunk allowed vlan 152
spanning-tree port type edge
channel-group 203
interface Ethernet101/1/16
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/17
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/18
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/19
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/20
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/21
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/22
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/23
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/24
switchport access vlan 153
spanning-tree port type edge
interface Ethernet101/1/25
interface Ethernet101/1/26
interface Ethernet101/1/27
interface Ethernet101/1/28

```

```

interface Ethernet101/1/29
interface Ethernet101/1/30
interface Ethernet101/1/31
interface Ethernet101/1/32
interface Ethernet101/1/33
interface Ethernet101/1/34
interface Ethernet101/1/35
interface Ethernet101/1/36
interface Ethernet101/1/37
interface Ethernet101/1/38
interface Ethernet101/1/39
interface Ethernet101/1/40
interface Ethernet101/1/41
interface Ethernet101/1/42
interface Ethernet101/1/43
interface Ethernet101/1/44
interface Ethernet101/1/45
interface Ethernet101/1/46
interface Ethernet101/1/47
interface Ethernet101/1/48
interface Ethernet102/1/1
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/2
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/3
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/4
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/5
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/6
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/7
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/8
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/9
switchport access vlan 152
spanning-tree port type edge

```

```

interface Ethernet102/1/10
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/11
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/12
switchport access vlan 152
spanning-tree port type edge
interface Ethernet102/1/13
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/14
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/15
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/16
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/17
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/18
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/19
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/20
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/21
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/22
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/23
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/24
switchport access vlan 153
spanning-tree port type edge
interface Ethernet102/1/25
interface Ethernet102/1/26

```

```
interface Ethernet102/1/27
interface Ethernet102/1/28
interface Ethernet102/1/29
interface Ethernet102/1/30
interface Ethernet102/1/31
interface Ethernet102/1/32
interface Ethernet102/1/33
interface Ethernet102/1/34
interface Ethernet102/1/35
interface Ethernet102/1/36
interface Ethernet102/1/37
interface Ethernet102/1/38
interface Ethernet102/1/39
interface Ethernet102/1/40
interface Ethernet102/1/41
interface Ethernet102/1/42
interface Ethernet102/1/43
interface Ethernet102/1/44
interface Ethernet102/1/45
interface Ethernet102/1/46
interface Ethernet102/1/47
interface Ethernet102/1/48
line console
boot kickstart bootflash:/n5000-uk9-kickstart.4.1.3.N1.0.130a.
bin
boot system bootflash:/n5000-uk9.4.1.3.N1.0.130a.bin
```

Notes

Fibre Channel Data Center Design

MDS 9124 Primary Data Center

```
MDS9124A# sh run
version 3.3(2)
vsan database
  vsan 4 name "finance"
device-alias database
device-alias name array1-a pwwn 50:06:01:60:3c:e0:60:e2
device-alias name esx-5-hba-a pwwn 20:01:00:24:e8:64:c5:7c
device-alias name esx-6-hba-a pwwn 20:01:00:24:e8:64:c5:e4
device-alias name esx3-hba0-a pwwn 20:01:00:24:e8:64:c5:ca
device-alias name esx3-hba1-a pwwn 20:01:00:24:e8:64:c5:62
device-alias name esx4-hba0-a pwwn 20:01:00:24:e8:64:c5:d7
device-alias name esx4-hba1-a pwwn 20:01:00:24:e8:64:c5:6f
device-alias commit
fcdomain fcid database
vsan 1 wwn 50:06:01:60:3c:e0:60:e2 fcid 0x7a0000 dynamic
!
  [array1-a]
vsan 1 wwn 20:01:00:24:e8:64:c5:6f fcid 0x7a0100 dynamic
!
  [esx4-hba1-a]
vsan 1 wwn 20:01:00:24:e8:64:c5:62 fcid 0x7a0200 dynamic
!
  [esx3-hba1-a]
vsan 1 wwn 20:02:00:24:e8:64:c5:ca fcid 0x7a0300 dynamic
vsan 1 wwn 20:01:00:24:e8:64:c5:d7 fcid 0x7a0400 dynamic
!
  [esx4-hba0-a]
vsan 1 wwn 20:01:00:24:e8:64:c5:7c fcid 0x7a0500 dynamic
!
  [esx-5-hba-a]
vsan 1 wwn 20:01:00:24:e8:64:c5:e4 fcid 0x7a0600 dynamic
!
  [esx-6-hba-a]
vsan 1 wwn 20:01:00:24:e8:64:c5:ca fcid 0x7a0700 dynamic
!
  [esx3-hba0-a]
vsan 1 wwn 10:00:00:00:c9:8d:a5:26 fcid 0x7a0800 dynamic
vsan 1 wwn 10:00:00:00:c9:8d:a5:0a fcid 0x7a0900 dynamic
vsan 1 wwn 10:00:00:00:c9:8d:cc:30 fcid 0x7a0a00 dynamic
vsan 4 wwn 50:06:01:60:3c:e0:60:e2 fcid 0x530000 dynamic
!
  [array1-a]
vsan 4 wwn 20:01:00:24:e8:64:c5:ca fcid 0x530100 dynamic
!
  [esx3-hba0-a]
```

```
vsan 4 wwn 20:01:00:24:e8:64:c5:62 fcid 0x530200 dynamic
!
  [esx3-hba1-a]
vsan 4 wwn 20:01:00:24:e8:64:c5:d7 fcid 0x530300 dynamic
!
  [esx4-hba0-a]
vsan 4 wwn 20:01:00:24:e8:64:c5:7c fcid 0x530400 dynamic
!
  [esx-5-hba-a]
vsan 4 wwn 20:01:00:24:e8:64:c5:6f fcid 0x530500 dynamic
!
  [esx4-hba1-a]
vsan database
vsan 4 interface fc1/1
vsan 4 interface fc1/2
vsan 4 interface fc1/3
vsan 4 interface fc1/4
vsan 4 interface fc1/5
vsan 4 interface fc1/7
interface fc1/1
interface fc1/2
interface fc1/3
interface fc1/4
interface fc1/5
interface fc1/6
interface fc1/7
interface fc1/8
interface fc1/9
interface fc1/10
interface fc1/11
interface fc1/12
interface fc1/13
interface fc1/14
interface fc1/15
interface fc1/16
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20
interface fc1/21
interface fc1/22
interface fc1/23
interface fc1/24
ip default-gateway 192.168.1.1
switchname MDS9124A
role name default-role
description This is a system defined role and applies to all
users
rule 1 permit show feature system
rule 2 permit show feature snmp
rule 3 permit show feature module
```

```

rule 4 permit show feature hardware
rule 5 permit show feature environment
username ***** password 5 ***** role network-admin
ssh key rsa 2048 force
ssh server enable
boot kickstart bootflash:/m9100-s2ek9-kickstart-mz.3.3.2.bin
boot system bootflash:/m9100-s2ek9-mz.3.3.2.bin
kernel core target 0.0.0.0
kernel core limit 1
snmp-server community cisco123 group network-operator
snmp-server user admin network-admin auth md5
0x4e15887cba4e4755565604d9d2227d64
priv 0x4e15887cba4e4755565604d9d2227d64 localizedkey
snmp-server enable traps license
callhome
zoneset activate name ciscozoneset vsan 1
!Full Zone Database Section for vsan 4
zone name esx3-array1-a vsan 4
    member pwn 20:01:00:24:e8:64:c5:62
!
    [esx3-hba1-a]
    member pwn 20:01:00:24:e8:64:c5:ca
!
    [esx3-hba0-a]
    member pwn 50:06:01:60:3c:e0:60:e2
!
    [array1-a]
zone name esx4-array1-a vsan 4
    member pwn 20:01:00:24:e8:64:c5:6f
!
    [esx4-hba1-a]
    member pwn 20:01:00:24:e8:64:c5:d7
!
    [esx4-hba0-a]
    member pwn 50:06:01:60:3c:e0:60:e2
!
    [array1-a]
zone name esx5-array1-a vsan 4
    member pwn 20:01:00:24:e8:64:c5:7c
!
    [esx-5-hba-a]
    member pwn 50:06:01:60:3c:e0:60:e2
!
    [array1-a]
zone name esx6-array1-a vsan 4
    member pwn 50:06:01:60:3c:e0:60:e2
!
    [array1-a]
    member pwn 20:01:00:24:e8:64:c5:e4
!
    [esx-6-hba-a]
zoneset name Zoneset1 vsan 4
member esx3-array1-a
member esx4-array1-a
member esx5-array1-a
member esx6-array1-a
zoneset activate name Zoneset1 vsan 4

```

```

interface fc1/1
switchport description array1-a
port-license acquire
no shutdown
interface fc1/2
switchport description esx3-hba0-a
port-license acquire
interface fc1/3
switchport description esx3-hba1-a
port-license acquire
interface fc1/4
switchport description esx4-hba0-a
port-license acquire
interface fc1/5
switchport description esx4-hba1-a
port-license acquire
interface fc1/6
    port-license acquire
interface fc1/7
switchport description esx5-hba-a
port-license acquire
interface fc1/8
port-license acquire
no shutdown
interface fc1/9
port-license acquire
no shutdown
interface fc1/10
port-license acquire
no shutdown
interface fc1/11
port-license acquire
no shutdown
interface fc1/12
    port-license acquire
interface fc1/13
    port-license acquire
interface fc1/14
    port-license acquire
interface fc1/15
    port-license acquire
interface fc1/16
    port-license acquire
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20

```

```

interface fc1/21
interface fc1/22
interface fc1/23
interface fc1/24
interface mgmt0
  ip address 192.168.1.50 255.255.255.0
no system default switchport shutdown
scheduler enable

```

MDS 9124 Disaster Recovery Data Center

```

MDS9124B# sh run
version 3.3(2)
vsan database
  vsan 4 name "finance"
device-alias database
device-alias name array1-b pwwn 50:06:01:68:3c:e0:60:e2
device-alias name esx-5-hba-b pwwn 20:02:00:24:e8:64:c5:7c
device-alias name esx-6-hba-b pwwn 20:02:00:24:e8:64:c5:e4
device-alias name esx3-hba0-b pwwn 20:02:00:24:e8:64:c5:ca
device-alias name esx3-hba1-b pwwn 20:02:00:24:e8:64:c5:62
device-alias name esx4-hba0-b pwwn 20:02:00:24:e8:64:c5:d7
device-alias name esx4-hba1-b pwwn 20:02:00:24:e8:64:c5:6f
device-alias commit
fcdomain fcid database
vsan 1 wwn 50:06:01:68:3c:e0:60:e2 fcid 0x2a0000 dynamic
!
  [array1-b]
vsan 1 wwn 20:02:00:24:e8:64:c5:62 fcid 0x2a0100 dynamic
!
  [esx3-hba1-b]
vsan 1 wwn 20:02:00:24:e8:64:c5:6f fcid 0x2a0200 dynamic
!
  [esx4-hba1-b]
vsan 1 wwn 20:01:00:24:e8:64:c5:ca fcid 0x2a0300 dynamic
vsan 1 wwn 20:02:00:24:e8:64:c5:d7 fcid 0x2a0400 dynamic
!
  [esx4-hba0-b]
vsan 1 wwn 20:02:00:24:e8:64:c5:7c fcid 0x2a0500 dynamic
!
  [esx-5-hba-b]
vsan 1 wwn 20:02:00:24:e8:64:c5:e4 fcid 0x2a0600 dynamic
!
  [esx-6-hba-b]
vsan 1 wwn 20:02:00:24:e8:64:c5:ca fcid 0x2a0700 dynamic
!
  [esx3-hba0-b]
vsan 1 wwn 10:00:00:00:c9:8d:a5:0b fcid 0x2a0800 dynamic
vsan 4 wwn 50:06:01:68:3c:e0:60:e2 fcid 0xb70000 dynamic
!
  [array1-b]
vsan 4 wwn 20:02:00:24:e8:64:c5:ca fcid 0xb70100 dynamic
!
  [esx3-hba0-b]
vsan 4 wwn 20:02:00:24:e8:64:c5:62 fcid 0xb70200 dynamic
!
  [esx3-hba1-b]

```

```

vsan 4 wwn 20:02:00:24:e8:64:c5:d7 fcid 0xb70300 dynamic
!
  [esx4-hba0-b]
vsan 4 wwn 20:02:00:24:e8:64:c5:6f fcid 0xb70400 dynamic
!
  [esx4-hba1-b]
vsan 4 wwn 20:02:00:24:e8:64:c5:7c fcid 0xb70500 dynamic
!
  [esx-5-hba-b]
vsan database
vsan 4 interface fc1/1
vsan 4 interface fc1/2
vsan 4 interface fc1/3
vsan 4 interface fc1/4
vsan 4 interface fc1/5
vsan 4 interface fc1/8
interface fc1/1
interface fc1/2
interface fc1/3
interface fc1/4
interface fc1/5
interface fc1/6
interface fc1/7
interface fc1/8
interface fc1/9
interface fc1/10
interface fc1/11
interface fc1/12
interface fc1/13
interface fc1/14
interface fc1/15
interface fc1/16
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20
interface fc1/21
interface fc1/22
interface fc1/23
interface fc1/24
ip default-gateway 192.168.1.1
switchname MDS9124B
role name default-role
description This is a system defined role and applies to all
users
rule 1 permit show feature system
rule 2 permit show feature snmp
rule 3 permit show feature module
rule 4 permit show feature hardware
rule 5 permit show feature environment

```

```

username ***** password 5 ***** role network-admin
ssh key rsa 2048 force
ssh server enable
boot kickstart bootflash:/m9100-s2ek9-kickstart-mz.3.3.2.bin
boot system bootflash:/m9100-s2ek9-mz.3.3.2.bin
kernel core target 0.0.0.0
kernel core limit 1
snmp-server community cisco123 group network-operator
snmp-server user admin network-admin auth md5
0x40cbea83c35466f15b51f626419555f6
priv 0x40cbea83c35466f15b51f626419555f6 localizedkey
snmp-server enable traps license
callhome
!Full Zone Database Section for vsan 4
zone name esx3-array1-b vsan 4
member pwnn 50:06:01:68:3c:e0:60:e2
!
[array1-b]
member pwnn 20:02:00:24:e8:64:c5:62
!
[esx3-hba1-b]
member pwnn 20:02:00:24:e8:64:c5:ca
!
[esx3-hba0-a]
zone name esx4-array1-b vsan 4
member pwnn 20:02:00:24:e8:64:c5:6f
!
[esx4-hba1-b]
member pwnn 20:02:00:24:e8:64:c5:d7
!
[esx4-hba0-b]
member pwnn 50:06:01:68:3c:e0:60:e2
!
[array1-b]
zone name esx5-array1-b vsan 4
member pwnn 20:02:00:24:e8:64:c5:7c
!
[esx-5-hba-b]
member pwnn 50:06:01:68:3c:e0:60:e2
!
[array1-b]
zone name esx6-array1-b vsan 4
member pwnn 50:06:01:68:3c:e0:60:e2
!
[array1-b]
member pwnn 20:02:00:24:e8:64:c5:e4
!
[esx-6-hba-b]
zoneset name Zoneset1 vsan 4
member esx3-array1-b
member esx4-array1-b
member esx5-array1-b
member esx6-array1-b
zoneset activate name Zoneset1 vsan 4
interface fc1/1
switchport description array1-b
port-license acquire

```

```

interface fc1/2
switchport description esx3-hba0-b
port-license acquire
interface fc1/3
switchport description esx3-hba1-b
port-license acquire
interface fc1/4
switchport description esx4-hba0-b
port-license acquire
interface fc1/5
switchport description esx4-hba1-b
port-license acquire
interface fc1/6
port-license acquire
interface fc1/7
port-license acquire
interface fc1/8
switchport description esx5-hba-b
port-license acquire
interface fc1/9
port-license acquire
no shutdown
interface fc1/10
port-license acquire
no shutdown
interface fc1/11
port-license acquire
no shutdown
interface fc1/12
shutdown
port-license acquire
interface fc1/13
shutdown
port-license acquire
interface fc1/14
shutdown
port-license acquire
interface fc1/15
shutdown
port-license acquire
interface fc1/16
shutdown
port-license acquire
interface fc1/17
shutdown
no port-license
interface fc1/18

```

```

shutdown
no port-license
interface fc1/19
shutdown
no port-license
interface fc1/20
shutdown
no port-license
interface fc1/21
shutdown
interface fc1/22
shutdown
interface fc1/23
shutdown
interface fc1/24
shutdown
interface mgmt0
ip address 192.168.1.51 255.255.255.0
no system default switchport shutdown
scheduler enable

```

MDS 9134 Primary Data Center

```

MDS9134A# sh run
version 4.1(1c)
role name default-role
description This is a system defined role and applies to all
users.
rule 5 permit show feature environment
rule 4 permit show feature hardware
rule 3 permit show feature module
rule 2 permit show feature snmp
rule 1 permit show feature system
username ***** password 5 ***** role network-admin
no password strength-check
feature telnet
ssh key rsa 2048
ip domain-lookup
aaa group server radius radius
snmp-server user admin network-admin auth md5
0xbf3d4fd841b437ef078cf5734b829459
priv 0xbf3d4fd841b437ef078cf5734b829459 localizedkey
snmp-server host 172.16.211.128 traps version 2c public udp-
port 2162
snmp-server host 192.168.152.40 traps version 2c public udp-
port 2162
snmp-server host 192.168.28.250 traps version 2c public udp-

```

```

port 1163
snmp-server host 192.168.28.250 traps version 2c public udp-
port 2162
snmp-server enable traps license
snmp-server enable traps entity fru
vsan database
vsan 1 name "lab"
vsan 2 name "production"
vsan 3 name "tape"
vsan 4 name "finance"
device-alias database
device-alias name array0-a pwwn 50:0a:09:82:89:2a:df:b1
device-alias name esx-12-hba0 pwwn 10:00:00:00:c9:87:be:1c
device-alias name esx-13-hba0 pwwn 10:00:00:00:c9:87:be:2a
device-alias commit
fcdomain fcid database
vsan 1 wwn 10:00:00:00:c9:87:be:2a fcid 0xe70000 dynamic
! [esx-13-hba0]
vsan 1 wwn 50:0a:09:82:89:2a:df:b1 fcid 0xe70100 dynamic
! [array0-a]
vsan 1 wwn 10:00:00:00:c9:87:be:1c fcid 0xe70200 dynamic
! [esx-12-hba0]
vsan 4 wwn 10:00:00:00:c9:87:be:2a fcid 0x830000 dynamic
! [esx-13-hba0]
vsan 4 wwn 10:00:00:00:c9:87:be:1c fcid 0x830100 dynamic
! [esx-12-hba0]
vsan 4 wwn 50:0a:09:82:89:2a:df:b1 fcid 0x830200 dynamic
! [array0-a]
vsan database
vsan 4 interface fc1/3
vsan 4 interface fc1/5
vsan 4 interface fc1/7
interface fc1/1
shutdown
port-license acquire
interface fc1/2
shutdown
port-license acquire
interface fc1/3
switchport description esx-12-hba0
port-license acquire
interface fc1/4
port-license acquire
interface fc1/5
switchport description esx-13-hba0
port-license acquire
interface fc1/6

```

```

    port-license acquire
interface fc1/7
switchport description array0-a
port-license acquire
interface fc1/8
    port-license acquire
interface fc1/9
    port-license acquire
interface fc1/10
    port-license acquire
interface fc1/11
    port-license acquire
interface fc1/12
    port-license acquire
interface fc1/13
    port-license acquire
interface fc1/14
    port-license acquire
interface fc1/15
    port-license acquire
interface fc1/16
    port-license acquire
interface fc1/17
    port-license acquire
interface fc1/18
    port-license acquire
interface fc1/19
    port-license acquire
interface fc1/20
    port-license acquire
interface fc1/21
    port-license acquire
interface fc1/22
    port-license acquire
interface fc1/23
    port-license acquire
interface fc1/24
    port-license acquire
interface fc1/25
interface fc1/26
interface fc1/27
interface fc1/28
interface fc1/29
interface fc1/30
interface fc1/31
interface fc1/32
interface fc1/33

```

```

interface fc1/34
interface mgmt0
    ip address 192.168.128.14 255.255.255.0
ip default-gateway 192.168.128.1
switchname MDS9134A
boot kickstart bootflash:/m9100-s2ek9-kickstart-mz.4.1.1c.bin
boot system bootflash:/m9100-s2ek9-mz.4.1.1c.bin
interface fc1/1
interface fc1/2
interface fc1/3
interface fc1/4
interface fc1/5
interface fc1/6
interface fc1/7
interface fc1/8
interface fc1/9
interface fc1/10
interface fc1/11
interface fc1/12
interface fc1/13
interface fc1/14
interface fc1/15
interface fc1/16
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20
interface fc1/21
interface fc1/22
interface fc1/23
interface fc1/24
interface fc1/25
interface fc1/26
interface fc1/27
interface fc1/28
interface fc1/29
interface fc1/30
interface fc1/31
interface fc1/32
interface fc1/33
interface fc1/34
!Full Zone Database Section for vsan 4
zone name esx-13-hba0-array0-a vsan 4
    member pwnn 10:00:00:00:c9:87:be:2a
!
    member pwnn 50:0a:09:82:89:2a:df:b1
!
    [array0-a]

```

```

zone name esx-12-hba0-array0-a vsan 4
  member pwn 10:00:00:00:c9:87:be:1c
!
  [esx-12-hba0]
  member pwn 50:0a:09:82:89:2a:df:b1
!
  [array0-a]
zoneset name Zoneset1 vsan 4
  member esx-13-hba0-array0-a
  member esx-12-hba0-array0-a
zoneset activate name Zoneset1 vsan 4
no system default switchport shutdown

```

MDS 9134 Disaster Recovery Data Center

```

MDS9134B# sh run
version 4.1(1c)
role name default-role
description This is a system defined role and applies to all
users.
rule 5 permit show feature environment
rule 4 permit show feature hardware
rule 3 permit show feature module
rule 2 permit show feature snmp
rule 1 permit show feature system
username ***** password 5 ***** role network-admin
no password strength-check
feature telnet
ssh key rsa 2048
ip domain-lookup
aaa group server radius radius
snmp-server user ***** network-admin auth md5
0x01feda9c9d00458c847274f06b2ec1a3
  priv 0x01feda9c9d00458c847274f06b2ec1a3 localizedkey
snmp-server host 192.168.152.40 traps version 2c public udp-
port 2162
snmp-server enable traps license
snmp-server enable traps entity fru
vsan database
vsan 1 name "lab"
vsan 2 name "production"
vsan 3 name "tape"
vsan 4 name "finance"
device-alias database
device-alias name array0-b pwn 50:0a:09:81:89:2a:df:b1
device-alias name esx-12-hba1 pwn 10:00:00:00:c9:87:be:1d
device-alias name esx-13-hba1 pwn 10:00:00:00:c9:87:be:2b
device-alias commit
fcdomain fcid database

```

```

vsan 1 wwn 50:0a:09:81:89:2a:df:b1 fcid 0x530000 dynamic
!
  [array0-b]
vsan 1 wwn 10:00:00:00:c9:87:be:2b fcid 0x530100 dynamic
!
  [esx-13-hba1]
vsan 1 wwn 10:00:00:00:c9:87:be:1d fcid 0x530200 dynamic
!
  [esx-12-hba1]
vsan 4 wwn 10:00:00:00:c9:87:be:1d fcid 0x6a0000 dynamic
!
  [esx-12-hba1]
vsan 4 wwn 10:00:00:00:c9:87:be:2b fcid 0x6a0100 dynamic
!
  [esx-13-hba1]
vsan 4 wwn 50:0a:09:81:89:2a:df:b1 fcid 0x6a0200 dynamic
!
  [array0-b]
vsan database
vsan 4 interface fc1/3
vsan 4 interface fc1/5
vsan 4 interface fc1/7
interface fc1/1
shutdown
port-license acquire
interface fc1/2
shutdown
port-license acquire
interface fc1/3
switchport description esx-12-hba1
port-license acquire
interface fc1/4
  port-license acquire
interface fc1/5
switchport description esx-13-hba1
port-license acquire
interface fc1/6
  port-license acquire
interface fc1/7
switchport description array0-b
port-license acquire
interface fc1/8
  port-license acquire
interface fc1/9
  port-license acquire
interface fc1/10
  port-license acquire
interface fc1/11
  port-license acquire
interface fc1/12
  port-license acquire
interface fc1/13
  port-license acquire

```

```

interface fc1/14
  port-license acquire
interface fc1/15
port-license acquire
interface fc1/16
  port-license acquire
interface fc1/17
  port-license acquire
interface fc1/18
  port-license acquire
interface fc1/19
  port-license acquire
interface fc1/20
  port-license acquire
interface fc1/21
  port-license acquire
interface fc1/22
  port-license acquire
interface fc1/23
  port-license acquire
interface fc1/24
  port-license acquire
interface fc1/25
interface fc1/26
interface fc1/27
interface fc1/28
interface fc1/29
interface fc1/30
interface fc1/31
interface fc1/32
interface fc1/33
interface fc1/34
interface mgmt0
  ip address 192.168.128.15 255.255.255.0
ip default-gateway 192.168.128.1
switchname MDS9134B
boot kickstart bootflash:/m9100-s2ek9-kickstart-mz.4.1.1c.bin
boot system bootflash:/m9100-s2ek9-mz.4.1.1c.bin
interface fc1/1
interface fc1/2
interface fc1/3
interface fc1/4
interface fc1/5
interface fc1/6
interface fc1/7
interface fc1/8
interface fc1/9

```

```

interface fc1/10
interface fc1/11
interface fc1/12
interface fc1/13
interface fc1/14
interface fc1/15
interface fc1/16
interface fc1/17
interface fc1/18
interface fc1/19
interface fc1/20
interface fc1/21
interface fc1/22
interface fc1/23
interface fc1/24
interface fc1/25
interface fc1/26
interface fc1/27
interface fc1/28
interface fc1/29
interface fc1/30
interface fc1/31
interface fc1/32
interface fc1/33
interface fc1/34
!Full Zone Database Section for vsan 4
zone name esx-13-hba0-array0-b vsan 4
  member pwwn 10:00:00:00:c9:87:be:2b
!
  [esx-13-hba1]
  member pwwn 50:0a:09:81:89:2a:df:b1
!
  [array0-b]
zone name esx-12-hba0-array0-b vsan 4
  member pwwn 10:00:00:00:c9:87:be:1d
!
  [esx-12-hba1]
  member pwwn 50:0a:09:81:89:2a:df:b1
!
  [array0-b]
zoneset name Zoneset1 vsan 4
member esx-13-hba0-array0-b
member esx-12-hba0-array0-b
zoneset activate name Zoneset1 vsan 4
no system default switchport shutdown

```

Security Data Center Design

ASA 5540 Primary Data Center (Device A)

```
ASA Version 8.0(4)
!
hostname ASA5540DC
enable password 2y4FIGBVyBLau0Q encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
names
name 192.168.26.26 BladeWeb1Secure
name 192.168.26.27 BladeWeb2Secure
name 192.168.26.0 Secure-Subnets
name 192.168.31.224 Mgmt-host-range description Address pool
for IT users
!
interface GigabitEthernet0/0
no nameif
no security-level
no ip address
!
interface GigabitEthernet0/0.26
vlan 26
nameif DCVLAN26
security-level 100
ip address 192.168.26.1 255.255.255.0 standby 192.168.26.2
!
interface GigabitEthernet0/0.27
vlan 27
nameif DCVLAN27
security-level 100
ip address 192.168.27.1 255.255.255.0 standby 192.168.27.2
!
interface GigabitEthernet0/1
no nameif
no security-level
no ip address
!
interface GigabitEthernet0/2
```

```
description LAN/STATE Failover Interface
!
interface GigabitEthernet0/3
nameif outside
security-level 0
ip address 192.168.31.250 255.255.255.0 standby 192.168.31.249
!
interface Management0/0
nameif management
security-level 100
ip address 192.168.1.70 255.255.255.0 standby 192.168.1.71
management-only
!
ftp mode passive
clock timezone PST -8
clock summer-time PDT recurring
object-group network Bypass-Policy
description Open Policy for Server Access
network-object host BladeWeb1Secure
network-object host BladeWeb2Secure
object-group service Mgmt-traffic
service-object tcp eq ssh
service-object udp eq snmp
object-group network Application-Servers
description HTTP, HTTPS, DNS, and MSExchange
network-object host BladeWeb1Secure
network-object host BladeWeb2Secure
object-group service MS-App-Services
service-object tcp eq domain
service-object tcp eq www
service-object tcp eq https
service-object tcp eq netbios-ssn
service-object udp eq domain
service-object udp eq nameserver
service-object udp eq netbios-dgm
service-object udp eq netbios-ns
access-list outside_access_in remark Acces from mgmt-host pool
to both secure su
bnets via ssh and snmp.
access-list outside_access_in extended permit ip any object-
group Bypass-Policy
log disable
access-list outside_access_in remark Acces from mgmt-host pool
to both secure su
bnets via ssh and snmp.
access-list outside_access_in extended permit object-group
Mgmt-traffic Mgmt-hos
```

```

t-range 255.255.255.224 Secure-Subnets 255.255.254.0
access-list outside_access_in extended permit object-group MS-
App-Services any o
bject-group Application-Servers
pager lines 24
logging asdm informational
mtu DCVLAN26 1500
mtu DCVLAN27 1500
mtu outside 1500
mtu management 1500
failover
failover lan unit primary
failover lan interface failover GigabitEthernet0/2
failover polltime unit msec 200 holdtime msec 800
failover polltime interface msec 500 holdtime 5
failover key [key]
failover replication http
failover link failover GigabitEthernet0/2
failover interface ip failover 192.168.36.1 255.255.255.252
standby 192.168.36.2
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable
arp timeout 14400
access-group outside_access_in in interface outside
!
router eigrp 1
no auto-summary
network Secure-Subnets 255.255.255.0
network 192.168.27.0 255.255.255.0
network 192.168.31.0 255.255.255.0
passive-interface DCVLAN26
passive-interface DCVLAN27
!
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp
0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
mgcp-pat 0:05:00
timeout sip 0:30:00 sip media 0:02:00 sip-invite 0:03:00 sip-
disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
http server enable
http 0.0.0.0 0.0.0.0 DCVLAN26
http 0.0.0.0 0.0.0.0 outside
http 0.0.0.0 0.0.0.0 management

```

```

no snmp-server location
no snmp-server contact
snmp-server community cisco123
snmp-server enable traps snmp authentication linkup linkdown
coldstart
service resetoutside
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
telnet timeout 5
ssh timeout 5
console timeout 0
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
ntp server 171.68.10.150 source outside prefer
username ***** password ***** encrypted privilege 15
!
class-map inspection_default
  match default-inspection-traffic
!
!
policy-map type inspect dns preset_dns_map
  parameters
    message-length maximum 512
policy-map global_policy
  class inspection_default
  inspect dns preset_dns_map
  inspect ftp
  inspect h323 h225
  inspect h323 ras
  inspect rsh
  inspect rtsp
  inspect esmtp
  inspect sqlnet
  inspect skinny
  inspect sunrpc
  inspect xdmcp
  inspect sip
  inspect netbios
  inspect tftp
policy-map type inspect dcerpc MExchange
description Access policy for clients to reach Exchange server
parameters
endpoint-mapper epm-service-only
timeout pinhole 0:01:00
!
service-policy global_policy global

```

```
prompt hostname context
Cryptochecksum:4b4c8ccf5bb696e105e08adcfb521d9a
: end
```

ASA 5540 Primary Data Center (Device B)

```
ASA Version 8.0(4)
!
hostname ASA5540DC
enable password 2y4FIGBVyBLau0Q encrypted
passwd 2KFQnbNIdI.2KYOU encrypted
names
name 192.168.26.26 BladeWeb1Secure
name 192.168.26.27 BladeWeb2Secure
name 192.168.26.0 Secure-Subnets
name 192.168.31.224 Mgmt-host-range description Address pool
for IT users
!
interface GigabitEthernet0/0
no nameif
no security-level
no ip address
!
interface GigabitEthernet0/0.26
vlan 26
nameif DCVLAN26
security-level 100
ip address 192.168.26.1 255.255.255.0 standby 192.168.26.2
!
interface GigabitEthernet0/0.27
vlan 27
nameif DCVLAN27
security-level 100
ip address 192.168.27.1 255.255.255.0 standby 192.168.27.2
!
interface GigabitEthernet0/1
no nameif
no security-level
no ip address
!
interface GigabitEthernet0/2
description LAN/STATE Failover Interface
!
interface GigabitEthernet0/3
nameif outside
security-level 0
ip address 192.168.31.250 255.255.255.0 standby 192.168.31.249
```

```
!
interface Management0/0
nameif management
security-level 100
ip address 192.168.1.70 255.255.255.0 standby 192.168.1.71
management-only
!
ftp mode passive
clock timezone PST -8
clock summer-time PDT recurring
object-group network Bypass-Policy
description Open Policy for Server Access
network-object host BladeWeb1Secure
network-object host BladeWeb2Secure
object-group service Mgmt-traffic
service-object tcp eq ssh
service-object udp eq snmp
object-group network Application-Servers
description HTTP, HTTPS, DNS, and MSExchange
network-object host BladeWeb1Secure
network-object host BladeWeb2Secure
object-group service MS-App-Services
service-object tcp eq domain
service-object tcp eq www
service-object tcp eq https
service-object tcp eq netbios-ssn
service-object udp eq domain
service-object udp eq nameserver
service-object udp eq netbios-dgm
service-object udp eq netbios-ns
access-list outside access in remark Acces from mgmt-host pool
to both secure subnets via ssh and snmp.
access-list outside access in extended permit ip any object-
group Bypass-Policy
log disable
access-list outside_access_in remark Acces from mgmt-host pool
to both secure subnets via ssh and snmp.
access-list outside access in extended permit object-group
Mgmt-traffic Mgmt-host-range 255.255.255.224 Secure-Subnets
255.255.254.0
access-list outside access in extended permit object-group MS-
App-Services any object-group Application-Servers
pager lines 24
logging asdm informational
mtu DCVLAN26 1500
mtu DCVLAN27 1500
mtu outside 1500
```

```

mtu management 1500
failover
failover lan unit secondary
failover lan interface failover GigabitEthernet0/2
failover polltime unit msec 200 holdtime msec 800
failover polltime interface msec 500 holdtime 5
failover key [key]
failover replication http
failover link failover GigabitEthernet0/2
failover interface ip failover 192.168.36.1 255.255.255.252
standby 192.168.36.2
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable
arp timeout 14400
access-group outside_access_in in interface outside
!
router eigrp 1
no auto-summary
network Secure-Subnets 255.255.255.0
network 192.168.27.0 255.255.255.0
network 192.168.31.0 255.255.255.0
passive-interface DCVLAN26
passive-interface DCVLAN27
!
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp
0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-
disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
dynamic-access-policy-record DfltAccessPolicy
http server enable
http 0.0.0.0 0.0.0.0 management
http 0.0.0.0 0.0.0.0 outside
http 0.0.0.0 0.0.0.0 DCVLAN26
no snmp-server location
no snmp-server contact
snmp-server community cisco123
snmp-server enable traps snmp authentication linkup linkdown
coldstart
service resetoutside
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
telnet timeout 5

```

```

ssh timeout 5
console timeout 0
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
ntp server 171.68.10.150 source outside prefer
username ***** password ***** encrypted privilege 15
!
class-map inspection_default
  match default-inspection-traffic
!
!
policy-map type inspect dns preset_dns_map
  parameters
    message-length maximum 512
policy-map global_policy
  class inspection_default
    inspect dns preset_dns_map
    inspect ftp
    inspect h323 h225
    inspect h323 ras
    inspect rsh
    inspect rtsp
    inspect esmtp
    inspect sqlnet
    inspect skinny
    inspect sunrpc
    inspect xdmcp
    inspect sip
    inspect netbios
    inspect tftp
policy-map type inspect dcerpc MExchange
description Access policy for clients to reach Exchange server
parameters
  endpoint-mapper epm-service-only
  timeout pinhole 0:01:00
!
service-policy global_policy global
prompt hostname context
Cryptochecksum:e3946a48a41ecc45fd57fdd2f466ad23
: end

```

ASA 5580 Disaster Recovery Data Center (Device A)

```

ASA Version 8.1(2)
!
hostname DCASA5580
enable password 2y4FIGBVyBLau0Q encrypted

```

```

passwd 2y4FIGBVyBLau0Q encrypted
names
name 192.168.154.26 BladeWeb3Secure
name 192.168.166.27 BladeWeb4Secure
name 192.168.154.0 Secure-Subnets
name 192.168.31.224 Mgmt-host-range description Address pool
for IT users
!
interface Management0/0
shutdown
nameif management
security-level 100
no ip address
management-only
!
interface Management0/1
shutdown
no nameif
no security-level
no ip address
management-only
!
interface GigabitEthernet3/0
nameif outside
security-level 0
ip address 192.168.159.252 255.255.255.0 standby
192.168.159.251
!
interface GigabitEthernet3/1
no nameif
no security-level
no ip address
!
interface GigabitEthernet3/2
no nameif
no security-level
no ip address
!
interface GigabitEthernet3/3
description LAN Failover Interface
!
interface GigabitEthernet4/0
nameif DCVLAN154
security-level 100
ip address 192.168.154.1 255.255.255.0 standby 192.168.154.2
!
interface GigabitEthernet4/1

```

```

nameif DCVLAN155
security-level 100
ip address 192.168.155.1 255.255.255.0 standby 192.168.155.2
!
interface GigabitEthernet4/2
no nameif
no security-level
no ip address
!
interface GigabitEthernet4/3
no nameif
no security-level
no ip address
!
ftp mode passive
object-group network Bypass-Rule
description Open Policy for Server Access
object-group service Mgmt-traffic
service-object tcp eq ssh
service-object udp eq snmp
object-group network Application-Servers
description HTTP, HTTPS, DNS, and MExchange
network-object host BladeWeb3Secure
network-object host BladeWeb4Secure
object-group service MS-App-Services
service-object tcp eq domain
service-object tcp eq www
service-object tcp eq https
service-object tcp eq netbios-ssn
service-object udp eq domain
service-object udp eq nameserver
service-object udp eq netbios-dgm
service-object udp eq netbios-ns
service-object tcp eq ftp
access-list outside_access_in extended permit object-group MS-
App-Services any o
bject-group Application-Servers
access-list outside_access_in extended permit object-group
Mgmt-traffic Mgmt-hos
t-range 255.255.255.224 Secure-Subnets 255.255.254.0
pager lines 24
logging asdm informational
mtu management 1500
mtu outside 1500
mtu DCVLAN154 1500
mtu DCVLAN155 1500
failover

```

```

failover lan unit primary
failover lan interface failover GigabitEthernet3/3
failover polltime unit msec 200 holdtime msec 800
failover polltime interface msec 500 holdtime 5
failover key [key]
failover replication http
failover link failover GigabitEthernet3/3
failover interface ip failover 192.168.164.1 255.255.255.252
standby 192.168.164.2
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable
arp timeout 14400
access-group outside_access_in in interface outside
!
router eigrp 1
network Secure-Subnets 255.255.255.0
network 192.168.155.0 255.255.255.0
network 192.168.159.0 255.255.255.0
!
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp
0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-
disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
timeout tcp-proxy-reassembly 0:01:00
dynamic-access-policy-record DfltAccessPolicy
http server enable
http 192.168.1.0 255.255.255.0 management
http 192.168.0.0 255.255.0.0 outside
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown
coldstart
service resetoutside
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
telnet timeout 5
ssh timeout 5
console timeout 0
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
ntp server 171.68.10.150 source outside prefer

```

```

username ***** password ***** encrypted privilege 15
!
!
prompt hostname context
Cryptochecksum:1a6d912b3b599b345fa05719dd3aled8
: end

```

ASA 5580 Disaster Recovery Data Center (Device B)

```

CASA5580# sh run
: Saved
:
ASA Version 8.1(2)
!
hostname DCASA5580
enable password 2y4FIGBVyBLau0Q encrypted
passwd 2y4FIGBVyBLau0Q encrypted
names
name 192.168.154.26 BladeWeb3Secure
name 192.168.166.27 BladeWeb4Secure
name 192.168.154.0 Secure-Subnets
name 192.168.31.224 Mgmt-host-range description Address pool
for IT users
!
interface Management0/0
shutdown
nameif management
security-level 100
no ip address
management-only
!
interface Management0/1
shutdown
no nameif
no security-level
no ip address
management-only
!
interface GigabitEthernet3/0
nameif outside
security-level 0
ip address 192.168.159.252 255.255.255.0 standby
192.168.159.251
!
interface GigabitEthernet3/1
no nameif
no security-level

```

```

no ip address
!
interface GigabitEthernet3/2
no nameif
no security-level
no ip address
!
interface GigabitEthernet3/3
description LAN Failover Interface
!
interface GigabitEthernet4/0
nameif DCVLAN154
security-level 100
ip address 192.168.154.1 255.255.255.0 standby 192.168.154.2
!
interface GigabitEthernet4/1
nameif DCVLAN155
security-level 100
ip address 192.168.155.1 255.255.255.0 standby 192.168.155.2
!
interface GigabitEthernet4/2
no nameif
no security-level
no ip address
!
interface GigabitEthernet4/3
no nameif
no security-level
no ip address
!
ftp mode passive
object-group network Bypass-Rule
description Open Policy for Server Access
object-group service Mgmt-traffic
service-object tcp eq ssh
service-object udp eq snmp
object-group network Application-Servers
description HTTP, HTTPS, DNS, and MExchange
network-object host BladeWeb3Secure
network-object host BladeWeb4Secure
object-group service MS-App-Services
service-object tcp eq domain
service-object tcp eq www
service-object tcp eq https
service-object tcp eq netbios-ssn
service-object udp eq domain
service-object udp eq nameserver

```

```

service-object udp eq netbios-dgm
service-object udp eq netbios-ns
service-object tcp eq ftp
access-list outside access in extended permit object-group MS-
App-Services any object-group Application-Servers
access-list outside access in extended permit object-group
Mgmt-traffic Mgmt-host-range 255.255.255.224 Secure-Subnets
255.255.254.0
pager lines 24
logging asdm informational
mtu management 1500
mtu outside 1500
mtu DCVLAN154 1500
mtu DCVLAN155 1500
failover
failover lan unit secondary
failover lan interface failover GigabitEthernet3/3
failover polltime unit msec 200 holdtime msec 800
failover polltime interface msec 500 holdtime 5
failover key [key]
failover replication http
failover link failover GigabitEthernet3/3
failover interface ip failover 192.168.164.1 255.255.255.252
standby 192.168.164.2
icmp unreachable rate-limit 1 burst-size 1
asdm image disk0:/asdm-615.bin
no asdm history enable
arp timeout 14400
access-group outside_access_in in interface outside
!
router eigrp 1
network Secure-Subnets 255.255.255.0
network 192.168.155.0 255.255.255.0
network 192.168.159.0 255.255.255.0
!
timeout xlate 3:00:00
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 icmp
0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00
mgcp-pat 0:05:00
timeout sip 0:30:00 sip media 0:02:00 sip-invite 0:03:00 sip-
disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
timeout tcp-proxy-reassembly 0:01:00
dynamic-access-policy-record DfltAccessPolicy
http server enable
http 192.168.1.0 255.255.255.0 management

```

```

http 192.168.0.0 255.255.0.0 outside
no snmp-server location
no snmp-server contact
snmp-server enable traps snmp authentication linkup linkdown
coldstart
service resetoutside
crypto ipsec security-association lifetime seconds 28800
crypto ipsec security-association lifetime kilobytes 4608000
telnet timeout 5
ssh timeout 5
console timeout 0
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
ntp server 171.68.10.150 source outside prefer
username ***** password ***** encrypted privilege 15
!
!
prompt hostname context
Cryptochecksum:7c9c2eaa769b04c4bc4e6319fa33fa67
: end

```

SSM-40 Primary Data Center

```

DC-SSM-a# sho conf
! -----
! Current configuration last modified Mon Nov 23 11:55:24 2009
! -----
! Version 7.0(2)
! Host:
!       Realm Keys      key1.0
! Signature Definition:
!       Signature Update  S448.0      2009-11-12
!       Virus Update     V1.4        2007-03-02
! -----
service interface
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
exit
! -----
service host
network-settings
host-ip 192.168.1.61/24,192.168.1.1

```

```

host-name DC-SSM-a
telnet-option enabled
access-list 0.0.0.0/0
dns-primary-server enabled
address 192.168.152.10
exit
dns-secondary-server enabled
address 192.168.28.10
exit
dns-tertiary-server disabled
exit
time-zone-settings
offset -480
standard-time-zone-name GMT-08:00
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name GMT-08:00
exit
auto-upgrade
cisco-server enabled
schedule-option calendar-schedule
times-of-day 16:00:00
days-of-week monday
days-of-week tuesday
days-of-week wednesday
days-of-week thursday
days-of-week friday
exit
user-name <CCO User ID>
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/
locator.pl
exit
exit
exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----

```

```

service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit
! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service global-correlation
exit
! -----
service analysis-engine
virtual-sensor vs0
physical-interface GigabitEthernet0/1
exit
exit

```

SSM-40 Disaster Recovery Data Center

```

SSM-40 Disaster Recovery Data Center
DC_SSM_b# sho conf
! -----
! Current configuration last modified Mon Nov 23 11:57:33 2009
! -----
! Version 7.0(2)
! Host:
!           Realm Keys      key1.0
! Signature Definition:
!           Signature Update  S450.0      2009-11-22
!           Virus Update     V1.4        2007-03-02
! -----
service interface
exit

```

```

! -----
service authentication
exit
! -----
service event-action-rules rules0
exit
! -----
service host
network-settings
host-ip 192.168.1.62/24,192.168.1.1
host-name DC_SSM_b
telnet-option enabled
access-list 0.0.0.0/0
dns-primary-server enabled
address 192.168.152.10
exit
dns-secondary-server enabled
address 192.168.28.10
exit
dns-tertiary-server disabled
exit
time-zone-settings
offset -480
standard-time-zone-name GMT-08:00
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name GMT-08:00
exit
auto-upgrade
cisco-server enabled
schedule-option calendar-schedule
times-of-day 16:00:00
days-of-week monday
days-of-week tuesday
days-of-week wednesday
days-of-week thursday
days-of-week friday
exit
user-name <CCO User ID>
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/
locator.pl
exit
exit

```

```

exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit
! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service global-correlation
exit
! -----
service analysis-engine
virtual-sensor vs0
physical-interface GigabitEthernet0/1
exit
exit

```

IDS/IPS 4260 Primary Data Center

```

4260_DC_a# sho conf
! -----
! Current configuration last modified Mon Nov 23 11:38:37 2009
! -----

```

```

! Version 7.0(2)
! Host:
!           Realm Keys      key1.0
! Signature Definition:
!           Signature Update      S450.0      2009-11-22
!           Virus Update   V1.4    2007-03-02
! -----
service interface
physical-interfaces GigabitEthernet0/1
admin-state disabled
subinterface-type none
exit
physical-interfaces GigabitEthernet2/0
description VLAN 155 Outside to ASA 5580a
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/1
description VLAN 155 Inside to Switch
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/2
description VLAN 154 Outside to ASA 5580b
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/3
description VLAN 154 Inside to Switch
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
inline-interfaces InlinePair1
description VLAN 155
interfacel GigabitEthernet2/1

```

```

interface2 GigabitEthernet2/0
exit
inline-interfaces InlinePair2
description VLAN 154
interface1 GigabitEthernet2/3
interface2 GigabitEthernet2/2
exit
bypass-mode off
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
overrides produce-alert
override-item-status Enabled
risk-rating-range 1-100
exit
exit
! -----
service host
network-settings
host-ip 192.168.128.72/24,192.168.128.1
host-name 4260_DC_a
telnet-option enabled
access-list 0.0.0.0/0
dns-primary-server enabled
address 192.168.152.10
exit
dns-secondary-server enabled
address 192.168.28.10
exit
dns-tertiary-server disabled
exit
time-zone-settings
offset -480
standard-time-zone-name GMT-08:00
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name GMT-08:00
exit
auto-upgrade
cisco-server enabled
schedule-option calendar-schedule

```

```

times-of-day 16:00:00
days-of-week monday
days-of-week tuesday
days-of-week wednesday
days-of-week thursday
days-of-week friday
exit
user-name <CCO User ID>
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/locator.pl
exit
exit
exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit
! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service global-correlation
exit
! -----

```

```

service analysis-engine
virtual-sensor vs0
logical-interface InlinePair1 subinterface-number 0
logical-interface InlinePair2 subinterface-number 0
inline-TCP-session-tracking-mode interface-and-vlan
exit
exit

```

IDS/IPS 4260 Disaster Recovery Data Center

```

4260_DC_b# sho conf
! -----
! Current configuration last modified Mon Nov 23 11:37:34 2009
! -----
! Version 7.0(2)
! Host:
!           Realm Keys      key1.0
! Signature Definition:
!           Signature Update   S450.0      2009-11-22
!           Virus Update      V1.4      2007-03-02
! -----
service interface
physical-interfaces GigabitEthernet0/1
admin-state disabled
subinterface-type none
exit
physical-interfaces GigabitEthernet2/0
description VLAN 155 Outside to ASA 5580 b
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/1
description VLAN 155 Inside to Switch
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/2
description VLAN 154 Outside to ASA 5580 b
admin-state enabled
duplex auto
speed auto

```

```

default-vlan 0
alt-tcp-reset-interface none
exit
physical-interfaces GigabitEthernet2/3
description VLAN 154 Inside to Switch
admin-state enabled
duplex auto
speed auto
default-vlan 0
alt-tcp-reset-interface none
exit
inline-interfaces InlinePair1
description VLAN 155
interface1 GigabitEthernet2/1
interface2 GigabitEthernet2/0
exit
inline-interfaces InlinePair2
description VLAN 154
interface1 GigabitEthernet2/3
interface2 GigabitEthernet2/2
exit
bypass-mode off
exit
! -----
service authentication
exit
! -----
service event-action-rules rules0
overrides produce-alert
override-item-status Enabled
risk-rating-range 1-100
exit
exit
! -----
service host
network-settings
host-ip 192.168.128.73/24,192.168.128.1
host-name 4260_DC_b
telnet-option enabled
access-list 0.0.0.0/0
dns-primary-server enabled
address 192.168.152.10
exit
dns-secondary-server enabled
address 192.168.28.10
exit
dns-tertiary-server disabled

```

```

exit
time-zone-settings
offset -480
standard-time-zone-name GMT-08:00
exit
ntp-option enabled-ntp-unauthenticated
ntp-server 192.168.31.2
exit
summertime-option recurring
summertime-zone-name GMT-08:00
exit
auto-upgrade
cisco-server enabled
schedule-option periodic-schedule
start-time 11:10:00
interval 2
exit
user-name <CCO User ID>
cisco-url https://198.133.219.25//cgi-bin/front.x/ida/locator/
locator.pl
exit
exit
exit
! -----
service logger
exit
! -----
service network-access
exit
! -----
service notification
exit
! -----
service signature-definition sig0
exit
! -----
service ssh-known-hosts
exit
! -----
service trusted-certificates
exit
! -----
service web-server
exit
! -----
service anomaly-detection ad0
exit

```

```

! -----
service external-product-interface
exit
! -----
service health-monitor
exit
! -----
service global-correlation
exit
! -----
service analysis-engine
virtual-sensor vs0
logical-interface InlinePair1 subinterface-number 0
logical-interface InlinePair2 subinterface-number 0
inline-TCP-session-tracking-mode interface-and-vlan
exit
exit

```

Resilient WAN Design

ISR 3845 Primary Data Center

```
!  
version 15.0  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname HQ-ISR3845  
!  
boot-start-marker  
boot system flash:c3845-advipservicesk9-mz.124-24.T.bin  
boot system flash:  
boot-end-marker  
!  
! card type command needed for slot/vwic-slot 0/0  
enable password *****  
!  
no aaa new-model  
!  
dot11 syslog  
ip source-route  
ip cef  
!  
ip wccp 61  
ip wccp 62  
no ipv6 cef  
!  
multilink bundle-name authenticated  
!  
voice-card 0  
!  
license udi pid CISCO3845-MB sn FOC13141YBQ  
archive  
  log config  
  hidekeys  
username ***** privilege 15 password 0 *****  
!  
redundancy  
!  
!
```

```
interface Port-channel1  
no ip address  
ip flow ingress  
!  
hold-queue 150 in  
!  
interface Port-channel1.31  
encapsulation dot1Q 31  
ip address 192.168.31.2 255.255.255.0  
ip wccp 62 redirect in  
ip flow ingress  
ip pim sparse-mode  
!  
interface GigabitEthernet0/0  
no ip address  
ip flow ingress  
duplex auto  
speed auto  
media-type rj45  
channel-group 1  
!  
interface GigabitEthernet0/0.31  
ip flow ingress  
channel-group 1  
!  
interface GigabitEthernet0/1  
no ip address  
ip flow ingress  
duplex auto  
speed auto  
media-type rj45  
channel-group 1  
!  
interface GigabitEthernet0/1.31  
ip flow ingress  
channel-group 1  
!  
interface FastEthernet0/2/0  
ip address 10.0.1.254 255.255.255.252  
ip wccp 61 redirect in  
ip flow ingress  
ip summary-address eigrp 1 192.168.0.0 255.255.224.0 1  
duplex auto  
speed auto  
!  
interface FastEthernet0/3/0  
no ip address
```

```

shutdown
duplex auto
speed auto
!
interface Transport-Opt-Service-Engine1/0
no ip address
shutdown
!
    hold-queue 60 out
!
interface GigabitEthernet2/0
    no ip address
!
router eigrp 1
network 10.0.1.0 0.0.0.255
network 192.168.0.0 0.0.255.255
!
ip forward-protocol nd
ip http server
no ip http secure-server
!
ip flow-cache timeout active 1
ip flow-export version 5
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
tftp-server flash:c3845-advipservicesk9-mz.124-24.T.bin
!
control-plane
!
mgcp fax t38 ecm
mgcp behavior g729-variants static-pt
!
line con 0
line aux 0
line 66
no activation-character
no exec
transport preferred none
transport input all
transport output pad telnet rlogin lapb-ta mop udptn v120 ssh
stopbits 1
speed 115200
line 130
no activation-character
no exec

```

```

transport preferred none
transport input all
transport output pad telnet rlogin lapb-ta mop udptn v120 ssh
line vty 0 4
    login local
line vty 5 15
    login local
!
scheduler allocate 20000 1000
ntp master
end

```

ISR 3925 Disaster Recovery Data Center

```

!
version 15.0
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname DC2ISR
!
boot-start-marker
boot-end-marker
!
enable password *****
!
no aaa new-model
!
no ipv6 cef
ip source-route
ip cef
!
ip wccp 61
ip wccp 62
!
multilink bundle-name authenticated
!
voice-card 0
!
license udi pid C3900-SPE150/K9 sn *****
license boot module c3900 technology-package securityk9
license boot module c3900 technology-package uck9
license boot module c3900 technology-package datak9
!
archive
    log config

```

```

hidekeys
username ***** password 0 *****
username ***** privilege 15 password 0 *****
!
redundancy
!
crypto keyring sba-keys
    pre-shared-key address 0.0.0.0 0.0.0.0 key sba
!
crypto isakmp policy 1
encr aes
authentication pre-share
group 2
crypto isakmp profile sba-profile
keyring sba-keys
match identity address 0.0.0.0
virtual-template 1
!
crypto ipsec transform-set xform esp-aes
!
crypto ipsec profile sba
    set transform-set xform
!
interface Port-channel1
    no ip address
!
    hold-queue 150 in
!
interface Port-channel1.159
encapsulation dot1Q 159
ip address 192.168.159.2 255.255.255.0
ip wccp 62 redirect in
!
interface GigabitEthernet0/0
no ip address
duplex auto
speed auto
channel-group 1
!
interface GigabitEthernet0/0.159
    channel-group 1
!
interface GigabitEthernet0/1
no ip address
duplex auto
speed auto
media-type rj45

```

```

channel-group 1
!
interface FastEthernet0/2/0
ip address 10.0.1.250 255.255.255.252
ip wccp 61 redirect in
duplex auto
speed auto
!
interface FastEthernet0/2/1
ip address 10.194.112.79 255.255.255.192
ip access-group 143 in
ip access-group 143 out
ip policy route-map VPN-ROUTE
shutdown
duplex auto
speed auto
!
interface Virtual-Template1 type tunnel
ip unnumbered Port-channel1.159
tunnel source Port-channel1.159
tunnel mode ipsec ipv4
tunnel protection ipsec profile sba
!
router eigrp 1
network 10.0.1.0 0.0.0.255
network 192.168.0.0 0.0.255.255
!
ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
ip route 192.168.0.0 255.255.255.0 10.194.112.80
!
access-list 122 remark *** Default gateway for remote sites
***
access-list 122 permit ip 192.168.80.0 0.0.1.255 any
access-list 122 permit ip 192.168.84.0 0.0.1.255 any
access-list 143 remark *** ACL to select VPN Traffic ***
access-list 143 permit esp any any
access-list 143 permit udp any any eq non500-isakmp
access-list 143 permit udp any any eq isakmp
!
nls resp-timeout 1
cpd cr-id 1
route-map VPN-ROUTE permit 10
match ip address 143

```

```

set ip next-hop 10.194.112.80
!
control-plane
!
mgcp fax t38 ecm
mgcp behavior g729-variants static-pt
!
gatekeeper
  shutdown
!
line con 0
  exec-timeout 0 0
line aux 0
line vty 0 4
  login
!
exception data-corruption buffer truncate
scheduler allocate 20000 1000
end

```

ISR 2811 Branch

```

!
! Last configuration change at 23:43:15 UTC Wed Dec 2 2009
!
version 15.0
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname BR1ISR
!
boot-start-marker
boot-end-marker
!
card type t1 0 0
logging buffered 51200 warnings
enable secret 5 $1$Fjyp$scx/IdlB6.kJXiIWNyXlw.
enable password 7 070C705F4D06485744
!
no aaa new-model
!
network-clock-participate wic 0
network-clock-select 1 T1 0/0/0
network-clock-select 2 T1 0/0/1
!
dot11 syslog

```

```

ip source-route
!
!
ip cef
ip dhcp excluded-address 192.168.64.0 192.168.64.10
ip dhcp excluded-address 192.168.65.0 192.168.65.10
ip dhcp excluded-address 192.168.68.0 192.168.68.10
ip dhcp excluded-address 192.168.69.0 192.168.69.10
!
ip dhcp pool wired_data
network 192.168.64.0 255.255.255.0
dns-server 192.168.28.10 192.168.152.10
domain-name cisco.local
default-router 192.168.64.1
!
ip dhcp pool wired_voice
network 192.168.65.0 255.255.255.0
dns-server 192.168.28.10 192.168.152.10
default-router 192.168.65.1
domain-name cisco.local
option 150 ip 192.168.28.20 192.168.29.20
!
ip dhcp pool wireless_data
network 192.168.68.0 255.255.255.0
default-router 192.168.68.1
domain-name cisco.local
dns-server 192.168.28.10 192.168.152.10
!
ip dhcp pool wireless_voice
network 192.168.69.0 255.255.255.0
default-router 192.168.69.1
domain-name cisco.local
dns-server 192.168.28.10 192.168.152.10
option 150 ip 192.168.28.20 192.168.29.20
!
ip domain name cisco.local
ip host wwwin 171.71.181.19
ip name-server 192.168.28.10
ip name-server 192.168.152.10
ip multicast-routing
ip wccp 61
ip wccp 62
no ipv6 cef
!
multilink bundle-name authenticated
!
isdn switch-type primary-ni

```

```

!
voice service voip
    sip
bind control source-interface FastEthernet0/0.65
bind media source-interface FastEthernet0/0.65
!
voice class codec 1
codec preference 1 g711ulaw
codec preference 2 g711alaw
codec preference 3 g729r8
codec preference 4 ilbc
!
voice-card 0
!
!
crypto pki trustpoint TP-self-signed-291049566
enrollment selfsigned
subject-name cn=IOS-Self-Signed-Certificate-291049566
revocation-check none
rsa-keypair TP-self-signed-291049566
!
!
crypto pki certificate chain TP-self-signed-291049566
    certificate self-signed 01
30820248 308201B1 A0030201 02020101 300D0609 2A864886 F70D0101
04050030
30312E30 2C060355 04031325 494F532D 53656C66 2D536967 6E65642D
43657274
69666963 6174652D 32393130 34393536 36301E17 0D303931 30303630
31333731
325A170D 32303031 30313030 30303030 5A303031 2E302C06 03550403
1325494F
532D5365 6C662D53 69676E65 642D4365 72746966 69636174 652D3239
31303439
35363630 819F300D 06092A86 4886F70D 01010105 0003818D 00308189
02818100
9ADEA6F2 075154BD 2EC7BDAA 77707450 5A8333AA F3819DA2 235702AA
13790EE0
85E2C320 40425B68 C2F83452 D2F2814F F222DBC2 83F7A844 21D3212C
8CEC4820
05024E7E 76A7B66B 98804C0C 144C8C8C 2D9A7DEC F090FE05 5EB29877
9F42E507
7A5193D2 46ACC480 19B7730B B6C14639 BC578652 8E680FA8 081D0F75
15290DE1
02030100 01A37230 70300F06 03551D13 0101FF04 05300301 01FF301D
0603551D
11041630 14821242 52314953 522E6369 73636F2E 6C6F6361 6C301F06

```

```

03551D23
04183016 80144DB4 62693B84 90B6A36F 8CD9BB94 6D87C9E8 F196301D
0603551D
0E041604 144DB462 693B8490 B6A36F8C D9BB946D 87C9E8F1 96300D06
092A8648
86F70D01 01040500 03818100 6E5C0702 0A3FEACE 7D6570E6 BF2EE08C
21521519
689CCA83 6789E378 B544DB73 5AC560EA AC754347 02D3A37B 847C109D
9CB95B96
2E5DD60B 9FBDFE10 02B0230E 191E97B5 7AC12D07 6717B8F4 EAC50E15
425608F6
00A4007C 5B246DAC D44D2A39 6BECD04A 52A5DDF0 E24B6255 A2D93739
549A4983
AD9B256A F51C8F39 A089B2A8
quit
!
!
license udi pid CISCO2811 sn FTX1307A265
archive
    log config
    hidekeys
username ***** privilege 15 password 7 *****
!
redundancy
!
!
controller T1 0/0/0
cablelength short 110
channel-group 0 timeslots 1-24
!
controller T1 0/0/1
cablelength short 110
channel-group 0 timeslots 1-4
!
!
track 123 interface Serial0/0/0:0 ip routing
!
!
crypto isakmp policy 1
    encr aes
authentication pre-share
group 2
crypto isakmp key sba address 0.0.0.0 0.0.0.0
!
!
crypto ipsec transform-set xform esp-aes
!

```

```

crypto ipsec profile sba
  set transform-set xform
!
!
interface Tunnel0
description ##### Encrypted tunnel to DC2 ISR #####
ip unnumbered FastEthernet0/0.64
shutdown
tunnel source Serial0/0/1:0
tunnel mode ipsec ipv4
tunnel destination 10.194.112.101
tunnel protection ipsec profile sba
!
!
interface FastEthernet0/0
description Uplink to Switch
no ip address
duplex auto
speed auto
!
!
interface FastEthernet0/0.64
description Wired Data
encapsulation dot1Q 64
ip address 192.168.64.1 255.255.255.0
ip wccp 61 redirect in
ip pim sparse-mode
!
interface FastEthernet0/0.65
description Wired Voice
encapsulation dot1Q 65
ip address 192.168.65.1 255.255.255.0
!
interface FastEthernet0/0.68
description Wireless Data
encapsulation dot1Q 68
ip address 192.168.68.1 255.255.255.0
!
interface FastEthernet0/0.69
description Wireless Voice
encapsulation dot1Q 69
ip address 192.168.69.1 255.255.255.0
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto

```

```

speed auto
!
!
interface Integrated-Service-Engine1/0
ip address 192.168.23.1 255.255.255.252
service-module ip address 192.168.23.2 255.255.255.252
!Application: Restarted at Thu May 4 16:00:52 2006
service-module ip default-gateway 192.168.23.1
no keepalive
!
interface IDS-Sensor0/0
no ip address
shutdown
service-module fail-open
!
  hold-queue 60 out
!
interface Serial0/0/0:0
description Primary Wide Area network
ip address 10.0.1.2 255.255.255.252
ip wccp 62 redirect in
ip pim sparse-mode
load-interval 30
!
!
interface Serial0/0/1:0
description Backup Link (Internet)
ip address 10.0.2.2 255.255.255.252
ip wccp 62 redirect in
ip pim sparse-mode
load-interval 30
!
router eigrp 1
network 10.0.1.0 0.0.0.255
network 192.168.0.0 0.0.255.255
passive-interface default
no passive-interface Serial0/0/0:0
no passive-interface Tunnel0
!
ip forward-protocol nd
ip http server
ip http authentication local
ip http secure-server
ip http timeout-policy idle 60 life 86400 requests 10000
!
!
ip pim rp-address 192.168.31.1

```

```

ip route 10.194.112.101 255.255.255.255 10.0.2.1
!
snmp-server community cisco RO
snmp-server community cisco123 RW
!
control-plane
!
mgcp fax t38 ecm
mgcp behavior g729-variants static-pt
!
!
dial-peer voice 100 voip
description SIP TRUNK to CUCM1
preference 2
destination-pattern 1408555....
session protocol sipv2
session target ipv4:192.168.28.20
incoming called-number .
voice-class codec 1
!
dial-peer voice 101 voip
description SIP TRUNK to CUCM2
preference 1
destination-pattern 1408555....
session protocol sipv2
session target ipv4:192.168.28.21
incoming called-number .
voice-class codec 1
!
dial-peer voice 123 pots
incoming called-number .
direct-inward-dial
!
dial-peer voice 911 pots
destination-pattern 911
forward-digits 3
!
dial-peer voice 9911 pots
destination-pattern 9911
forward-digits 3
!
dial-peer voice 7 pots
destination-pattern 9[2-9].....
forward-digits 7
!
dial-peer voice 11 pots
destination-pattern 91[2-9]..[2-9].....

```

```

forward-digits 11
!
dial-peer voice 9011 pots
destination-pattern 9011T
incoming called-number .
direct-inward-dial
prefix 011
!
call-manager-fallback
max-conferences 8 gain -6
transfer-system full-consult
ip source-address 192.168.65.1 port 2000
max-ephones 20
dialplan-pattern 1 408555.... extension-length 4
access-code pri 9 direct-inward-dial
!
!
line con 0
exec-timeout 0 0
login local
line aux 0
line 66
no activation-character
no exec
transport preferred none
transport input all
transport output pad telnet rlogin lapb-ta mop udptn v120 ssh
line 194
no activation-character
no exec
transport preferred none
transport input all
transport output pad telnet rlogin lapb-ta mop udptn v120 ssh
stopbits 1
speed 115200
line vty 0 4
exec-timeout 0 0
login local
transport input all
line vty 5 15
exec-timeout 0 0
login local
transport input all
!
scheduler allocate 20000 1000
event manager applet start-tunnel
event track 123 state down

```

```

action 1 cli command "enable"
action 2 cli command "configure terminal"
action 3 cli command "interface tunnel0"
action 4 cli command "no shut"
action 5 cli command "end"
event manager applet stop-tunnel
event track 123 state up
action 1 cli command "enable"
action 2 cli command "configure terminal"
action 3 cli command "interface tunnel0"
action 4 cli command "shut"
action 5 cli command "end"
!
End

```

ISR 2911 Branch

```

version 15.0
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname BR4ISR
boot-start-marker
boot-end-marker
!
card type e1 0 0
enable password *****
!
no aaa new-model
!
network-clock-participate wic 0
network-clock-select 1 E1 0/0/0
!
no ipv6 cef
ip source-route
ip cef
!
!
ip multicast-routing
ip dhcp excluded-address 192.168.88.1 192.168.88.10
ip dhcp excluded-address 192.168.89.1 192.168.89.10
ip dhcp excluded-address 192.168.92.1 192.168.92.10
ip dhcp excluded-address 192.168.93.1 192.168.93.10
!
ip dhcp pool wired _data
network 192.168.88.0 255.255.255.0

```

```

dns-server 192.168.28.10 192.168.152.10
domain-name cisco.local
default-router 192.168.88.1
!
ip dhcp pool wired _voice
network 192.168.89.0 255.255.255.0
dns-server 192.168.28.10 192.168.152.10
default-router 192.168.89.1
domain-name cisco.local
option 150 ip 192.168.28.20 192.168.29.20
!
ip dhcp pool wireless _data
network 192.168.92.0 255.255.255.0
default-router 192.168.92.1
domain-name cisco.local
dns-server 192.168.28.10 192.168.152.10
!
ip dhcp pool wireless _voice
network 192.168.93.0 255.255.255.0
default-router 192.168.93.1
domain-name cisco.local
dns-server 192.168.28.10 192.168.152.10
option 150 ip 192.168.28.20 192.168.29.20
!
ip domain name cisco.local
ip name-server 192.168.28.10
ip name-server 192.168.152.10
ip wccp 61
ip wccp 62
!
multilink bundle-name authenticated
!
cwmmp agent
management server username *****
!
voice-card 0
!
license udi pid CISCO2911/K9 sn *****
license boot module c2900 technology-package securityk9
license boot module c2900 technology-package uck9
license boot module c2900 technology-package datak9
!
!
archive
log config
hidekeys

```

```

username ***** privilege 15 password 0 *****
!
redundancy
!
controller E1 0/0/0
  channel-group 0 timeslots 1-31
!
controller E1 0/1/0
  channel-group 0 timeslots 1-4
!
track 123 interface Serial0/0/0:0 ip routing
!
crypto isakmp policy 1
  encr aes
  authentication pre-share
  group 2
crypto isakmp key sba address 0.0.0.0 0.0.0.0
!
crypto ipsec transform-set xform esp-aes
!
crypto ipsec profile sba
  set transform-set xform
!
interface Tunnel0
  ip unnumbered GigabitEthernet0/0.88
  shutdown
  tunnel source Serial0/1/0:0
  tunnel mode ipsec ipv4
  tunnel destination 10.194.112.101
  tunnel protection ipsec profile sba
!
interface GigabitEthernet0/0
  description Uplink to Switch
  no ip address
  duplex auto
  speed auto
!
interface GigabitEthernet0/0.88
  description Wired Data
  encapsulation dot1Q 88
  ip address 192.168.88.1 255.255.255.0
  ip pim sparse-dense-mode
!
interface GigabitEthernet0/0.89
  description Wired Voice
  encapsulation dot1Q 89
  ip address 192.168.89.1 255.255.255.0

```

```

ip pim sparse-dense-mode
!
interface GigabitEthernet0/0.92
  description Wireless Data
  encapsulation dot1Q 92
  ip address 192.168.92.1 255.255.255.0
!
interface GigabitEthernet0/0.93
  description Wireless Voice
  encapsulation dot1Q 93
  ip address 192.168.93.1 255.255.255.0
!
interface GigabitEthernet0/1
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface GigabitEthernet0/2
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface Serial0/0/0:0
  description Primary Wide Area Network
  ip address 10.0.1.14 255.255.255.252
  ip wccp 62 redirect in
  ip pim sparse-dense-mode
!
interface Serial0/1/0:0
  ip address 10.0.2.14 255.255.255.252
!
interface Integrated-Service-Engine1/0
  ip address 192.168.23.9 255.255.255.252
  service-module ip address 192.168.23.10 255.255.255.252
  !Application: Restarted at Fri May 5 00:01:02 2006
  service-module ip default-gateway 192.168.23.9
  no keepalive
!
router eigrp 1
  network 10.0.1.0 0.0.0.255
  network 192.168.0.0 0.0.255.255
  passive-interface default
  no passive-interface Serial0/0/0:0
  no passive-interface Tunnel0
!

```

```

ip forward-protocol nd
!
no ip http server
no ip http secure-server
!
ip route 10.194.112.101 255.255.255.255 10.0.2.13
!
snmp-server community *****
snmp-server community *****
!
control-plane
!
mgcp fax t38 ecm
mgcp behavior g729-variants static-pt
!
gatekeeper
    shutdown
!
line con 0
line aux 0
line 67
no activation-character
no exec
transport preferred none
transport input all
transport output lat pad telnet rlogin lapb-ta mop udptn v120
ssh
line vty 0 3
    login local
!
exception data-corruption buffer truncate
scheduler allocate 20000 1000
event manager applet start-tunnel
event track 123 state down
action 1 cli command "enable"
action 2 cli command "configure terminal"
action 3 cli command "interface tunnel0"
action 4 cli command "no shut"
action 5 cli command "end"
event manager applet stop-tunnel
event track 123 state up
action 1 cli command "enable"
action 2 cli command "configure terminal"
action 3 cli command "interface tunnel0"
action 4 cli command "shut"
!
!
End

```

Notes

Resilient WAN Optimization Design

WAAS WAVE 274 Central Manager

```
WAAS-CM#sh run
! WAAS version 4.1.5b (build b7 Oct 27 2009)
!
device mode central-manager
!
hostname WAAS-CM
!
clock timezone PST -8 0
!
!
ip domain-name cisco.local
!
!
primary-interface GigabitEthernet 1/0
!
!
interface GigabitEthernet 1/0
ip address 192.168.28.100 255.255.255.0
exit
!
!
ip default-gateway 192.168.28.1
!
! ip path-mtu-discovery is disabled in WAAS by default
!
ip name-server 192.168.28.10
!
!
ntp server 192.168.31.2
!
!
username ***** password *****
username ***** privilege 15
username ***** print-admin-password *****
!
authentication login local enable primary
authentication configuration local enable primary
```

```
!
inetd enable ftp
!
cms enable
!
! End of WAAS configuration
```

WAAS WAVE 574 DC Application Accelerator

```
WAAS-HE#sh run
! WAAS version 4.1.5b (build b7 Oct 27 2009)
!
device mode application-accelerator
!
hostname WAAS-HE
!
clock timezone PST -8 0
!
ip domain-name cisco.local
!
primary-interface PortChannel 1
!
interface PortChannel 1
ip address 192.168.31.10 255.255.255.0
exit
!
interface GigabitEthernet 1/0
channel-group 1
exit
interface GigabitEthernet 2/0
channel-group 1
exit
interface InlineGroup 1/1
inline vlan all
shutdown
exit
!
!
!
ip default-gateway 192.168.31.1
!
!
no auto-register enable
!
! ip path-mtu-discovery is disabled in WAAS by default
!
ip name-server 192.168.28.10
!
ntp server 192.168.31.2
```

```

!
wccp router-list 8 192.168.31.2
wccp tcp-promiscuous router-list-num 8
wccp version 2
!
egress-method negotiated-return intercept-method wccp
!
!
username ***** password *****
username ***** privilege 15
username ***** print-admin-password *****
!
authentication login local enable primary
authentication configuration local enable primary
!
tfo tcp optimized-send-buffer 2048
tfo tcp optimized-receive-buffer 2048
!
!
virtual-blade enable
policy-engine application
set-dscp copy
name Web
name Authentication
name Backup
name CAD
name Call-Management
name Conferencing
name Console
name Content-Management
name Directory-Services
name Email-and-Messaging
name Enterprise-Applications
name File-System
name File-Transfer
name Instant-Messaging
name Name-Services
name P2P
name Printing
name Remote-Desktop
name Replication
name SQL
name SSH
name Storage
name Streaming
name Systems-Management
name VPN

```

```

name Version-Management
name WAFS
name SSL
name Other
    classifier AFS
        match dst port range 7000 7009
    exit
    classifier AOL
        match dst port range 5190 5193
    exit
    classifier Altiris-CarbonCopy
        match dst port eq 1680
    exit
    classifier Amanda
        match dst port eq 10080
    exit
    classifier AppSocket
        match dst port eq 9100
    exit
    classifier Apple-AFP
        match dst port eq 548
    exit
    classifier Apple-NetAssistant
        match dst port eq 3283
    exit
    classifier Apple-iChat
        match dst port eq 5297
        match dst port eq 5298
    exit
    classifier BFTP
        match dst port eq 152
    exit
    classifier BGP
        match dst port eq 179
    exit
    classifier BMC-Patrol
        match dst port eq 6161
        match dst port eq 6162
        match dst port eq 8160
        match dst port eq 8161
        match dst port eq 6767
        match dst port eq 6768
        match dst port eq 10128
    exit
    classifier BackupExpress
        match dst port eq 6123
    exit

```

```

classifier Basic-TCP-services
    match dst port range 1 19
exit
classifier BitTorrent
match dst port range 6881 6889
match dst port eq 6969
exit
classifier Borland-Interbase
    match dst port eq 3050
exit
classifier CIFS
match dst port eq 139
match dst port eq 445
exit
classifier CU-SeeMe
match dst port eq 7640
match dst port eq 7642
match dst port eq 7648
match dst port eq 7649
exit
classifier CVS
    match dst port eq 2401
exit
classifier Cisco-CallManager
match dst port eq 2748
match dst port eq 2443
exit
classifier Citrix-ICA
match dst port eq 1494
match dst port eq 2598
exit
classifier Clearcase
    match dst port eq 371
exit
classifier CommVault
    match dst port range 8400 8403
exit
classifier Connected-DataProtector
    match dst port eq 16384
exit
classifier ControlIT
    match dst port eq 799
exit
classifier DNS
    match dst port eq 53
exit
classifier Danware-NetOp

```

```

    match dst port eq 6502
exit
classifier Documentum
    match dst port eq 1489
exit
classifier Double-Take
match dst port eq 1100
match dst port eq 1105
exit
classifier EMC-Celerra-Replicator
    match dst port eq 8888
exit
classifier EMC-SRDF-IP
    match dst port eq 1748
exit
classifier FCIP
    match dst port eq 3225
exit
classifier FTP-Control
    match dst port eq 21
exit
classifier FTP-Data
    match src port eq 20
exit
classifier FTPS
    match dst port eq 990
exit
classifier FTPS-Control
    match src port eq 989
exit
classifier Filenet
    match dst port range 32768 32774
exit
classifier Gnutella
match dst port range 6346 6349
match dst port eq 6355
match dst port eq 5634
exit
classifier Grouper
    match dst port eq 8038
exit
classifier HP-OpenMail
match dst port eq 5755
match dst port eq 5757
match dst port eq 5766
match dst port eq 5767
match dst port eq 5768

```

```

match dst port eq 5729
exit
classifier HP-OpenView
match dst port range 7426 7431
match dst port eq 7501
match dst port eq 7510
exit
classifier HP-Radia
match dst port eq 3460
match dst port eq 3461
match dst port eq 3464
match dst port eq 3466
exit
classifier HTTP
match dst port eq 80
match dst port eq 8080
match dst port eq 8000
match dst port eq 8001
match dst port eq 3128
exit
classifier HTTPS
    match dst port eq 443
exit
classifier HotLine
    match dst port range 5500 5503
exit
classifier IBM-DB2
    match dst port eq 523
exit
classifier IBM-NetView
    match dst port range 729 731
exit
classifier IBM-TSM
    match dst port range 1500 1502
exit
classifier IBM-Tivoli
match dst port eq 94
match dst port eq 627
match dst port eq 1965
match dst port eq 1580
match dst port eq 1581
exit
classifier IPP
    match dst port eq 631
exit
classifier IRC
match dst port eq 531

```

```

match dst port range 6660 6669
exit
classifier Intel-Proshare
    match dst port range 5713 5717
exit
classifier InterSystems-Cache
    match dst port eq 1972
exit
classifier Internet-Mail
match dst port eq 25
match dst port eq 110
match dst port eq 143
match dst port eq 220
exit
classifier Internet-Mail-secure
match dst port eq 995
match dst port eq 993
match dst port eq 465
exit
classifier Jabber
match dst port eq 5222
match dst port eq 5269
exit
classifier Kazaa
    match dst port eq 1214
exit
classifier Kerberos
match dst port eq 88
match dst port eq 2053
match dst port eq 754
match dst port eq 888
match dst port eq 543
match dst port eq 464
match dst port eq 544
match dst port eq 749
exit
classifier L2TP
    match dst port eq 1701
exit
classifier LANDesk
match dst port eq 9535
match dst port range 9593 9595
exit
classifier LDAP
match dst port eq 389
match dst port eq 8404
exit

```

```

classifier LDAP-Global-Catalog
    match dst port eq 3268
exit
classifier LDAP-Global-Catalog-Secure
    match dst port eq 3269
exit
classifier LDAP-secure
    match dst port eq 636
exit
classifier Laplink-Host
    match dst port eq 1547
exit
classifier Laplink-PCSync
    match dst port eq 8444
exit
classifier Laplink-PCSync-secure
    match dst port eq 8443
exit
classifier Laplink-ShareDirect
    match dst port eq 2705
exit
classifier Legato-NetWorker
    match dst port eq 7937
    match dst port eq 7938
    match dst port eq 7939
exit
classifier Legato-RepliStor
    match dst port eq 7144
    match dst port eq 7145
exit
classifier Liquid-Audio
    match dst port eq 18888
exit
classifier Lotus-Notes
    match dst port eq 1352
exit
classifier Lotus-Sametime-Connect
    match dst port eq 1533
exit
classifier MDaemon
    match dst port eq 3000
    match dst port eq 3001
exit
classifier MS-Chat
    match dst port eq 6665
    match dst port eq 6667
exit

```

```

classifier MS-Content-Replication-Service
    match dst port eq 560
    match dst port eq 507
exit
classifier MS-EndPointMapper
    match dst port eq 135
exit
classifier MS-Message-Queuing
    match dst port eq 1801
    match dst port eq 2101
    match dst port eq 2103
    match dst port eq 2105
exit
classifier MS-NetMeeting
    match dst port eq 522
    match dst port eq 1503
    match dst port eq 1731
exit
classifier MS-NetShow
    match dst port eq 1755
exit
classifier MS-SQL
    match dst port eq 1433
exit
classifier MS-Terminal-Services
    match dst port eq 3389
exit
classifier MSN-Messenger
    match dst port eq 1863
    match dst port range 6891 6900
exit
classifier MySQL
    match dst port eq 3306
exit
classifier NFS
    match dst port eq 2049
exit
classifier NNTP
    match dst port eq 119
exit
classifier NNTP-secure
    match dst port eq 563
exit
classifier NTP
    match dst port eq 123
exit
classifier Napster

```

```

match dst port eq 8875
match dst port eq 7777
match dst port eq 6700
match dst port eq 6666
match dst port eq 6677
match dst port eq 6688
exit
classifier NetApp-SnapMirror
    match dst port range 10565 10569
exit
classifier NetIQ
match dst port eq 2220
match dst port eq 2735
match dst port range 10113 10116
exit
classifier Netopia-Timbuktu
match dst port eq 407
match dst port range 1417 1420
exit
classifier Netopia-netOctopus
match dst port eq 1917
match dst port eq 1921
exit
classifier Novell-Groupwise
match dst port eq 1677
match dst port eq 1099
match dst port eq 9850
match dst port eq 7205
match dst port eq 3800
match dst port eq 7100
match dst port eq 7180
match dst port eq 7101
match dst port eq 7181
match dst port eq 2800
exit
classifier Novell-NetWare
    match dst port eq 524
exit
classifier Novell-ZenWorks
match dst port range 1761 1763
match dst port eq 517
match dst port eq 2544
match dst port eq 8039
match dst port eq 2037
exit
classifier OpenVPN
    match dst port eq 1194

```

```

exit
classifier Oracle
match dst port eq 66
match dst port eq 1525
match dst port eq 1521
exit
classifier Other-Secure
match dst port eq 261
match dst port eq 448
match dst port eq 684
match dst port eq 695
match dst port eq 994
match dst port eq 2252
match dst port eq 2478
match dst port eq 2479
match dst port eq 2482
match dst port eq 2484
match dst port eq 2679
match dst port eq 2762
match dst port eq 2998
match dst port eq 3077
match dst port eq 3078
match dst port eq 3183
match dst port eq 3191
match dst port eq 3220
match dst port eq 3410
match dst port eq 3424
match dst port eq 3471
match dst port eq 3496
match dst port eq 3509
match dst port eq 3529
match dst port eq 3539
match dst port eq 3660
match dst port eq 3661
match dst port eq 3747
match dst port eq 3864
match dst port eq 3885
match dst port eq 3896
match dst port eq 3897
match dst port eq 3995
match dst port eq 4031
match dst port eq 5007
match dst port eq 5989
match dst port eq 5990
match dst port eq 7674
match dst port eq 9802
match dst port eq 12109

```

```

exit
classifier PCAnywhere
match dst port eq 73
match dst port range 5631 5632
match dst port eq 65301
exit
classifier PCMail-Server
    match dst port eq 158
exit
classifier PDMWorks
match dst port eq 30000
match dst port eq 40000
exit
classifier PPTP
    match dst port eq 1723
exit
classifier Pervasive-SQL
    match dst port eq 1583
exit
classifier PostgreSQL
    match dst port eq 5432
exit
classifier ProjectWise-FileTransfer
    match dst port eq 5800
exit
classifier QMTP
    match dst port eq 209
exit
classifier Qnext
match dst port eq 44
match dst port eq 5555
exit
classifier RAdmin
    match dst port eq 4899
exit
classifier RTSP
match dst port eq 554
match dst port eq 8554
exit
classifier Remote-Anything
    match dst port range 3999 4000
exit
classifier Remote-Replication-Agent
    match dst port eq 5678
exit
classifier Rsync
    match dst port eq 873

```

```

exit
classifier SAP
match dst port range 3200 3219
match dst port range 3221 3224
match dst port range 3226 3267
match dst port range 3270 3282
match dst port range 3284 3305
match dst port range 3307 3388
match dst port range 3390 3399
match dst port range 3600 3659
match dst port range 3662 3699
exit
classifier SASL
    match dst port eq 3659
exit
classifier SIP-secure
    match dst port eq 5061
exit
classifier SOAP
    match dst port eq 7627
exit
classifier SQL-Service
    match dst port eq 156
exit
classifier SSH
    match dst port eq 22
exit
classifier SSL-Shell
    match dst port eq 614
exit
classifier SUN-Xprint
    match dst port eq 8100
exit
classifier Scalable-SQL
    match dst port eq 3352
exit
classifier Service-Location
    match dst port eq 427
exit
classifier Siebel
match dst port eq 8448
match dst port eq 2320
match dst port eq 2321
exit
classifier Simple-FTP
    match dst port eq 115
exit

```

```

classifier SoulSeek
match dst port eq 2234
match dst port eq 5534
exit
classifier Sun-RPC
    match dst port eq 111
exit
classifier Sybase-SQL
match dst port eq 1498
match dst port eq 2638
match dst port eq 2439
match dst port eq 3968
exit
classifier Symantec-AntiVirus
match dst port eq 2847
match dst port eq 2848
match dst port eq 2967
match dst port eq 2968
match dst port eq 38037
match dst port eq 38292
exit
classifier TACACS
    match dst port eq 49
exit
classifier TFTP
    match dst port eq 69
exit
classifier TFTPSP
    match dst port eq 3713
exit
classifier Telnet
match dst port eq 23
match dst port eq 107
match dst port eq 513
exit
classifier Telnets
    match dst port eq 992
exit
classifier UniSQL
match dst port eq 1978
match dst port eq 1979
exit
classifier Unix-Printing
match dst port eq 515
match dst port eq 170
exit
classifier Unix-Remote-Execution

```

```

match dst port eq 514
match dst port eq 512
exit
classifier VDOLive
    match dst port eq 7000
exit
classifier VNC
match dst port range 5801 5809
match dst port range 6900 6909
exit
classifier Veritas-BackupExec
match dst port eq 6101
match dst port eq 6102
match dst port eq 6106
match dst port eq 3527
match dst port eq 1125
exit
classifier Veritas-NetBackup
match dst port eq 13720
match dst port eq 13721
match dst port eq 13782
match dst port eq 13785
exit
classifier Vmware-VMConsole
    match dst port eq 902
exit
classifier VoIP-Control
match dst port eq 1300
match dst port eq 2428
match dst port range 2000 2002
match dst port range 1718 1720
match dst port eq 5060
match dst port range 11000 11999
exit
classifier VocalTec
match dst port eq 1490
match dst port eq 6670
match dst port eq 25793
match dst port eq 22555
exit
classifier WAAS-FlowMonitor
    match dst port eq 7878
exit
classifier WASTE
    match dst port eq 1337
exit
classifier WBEM

```

```

match dst port eq 5987
match dst port eq 5988
exit
classifier WINS
match dst port eq 42
match dst port eq 137
match dst port eq 1512
exit
classifier WinMX
    match dst port eq 6699
exit
classifier X400
    match dst port eq 102
exit
classifier XWindows
    match dst port range 6000 6063
exit
classifier Yahoo-Messenger
match dst port range 5000 5001
match dst port eq 5050
match dst port eq 5100
exit
classifier eDonkey
    match dst port range 4661 4662
exit
classifier ezMeeting
match dst port range 10101 10103
match dst port range 26260 26261
exit
classifier iFCP
    match dst port eq 3420
exit
classifier iSCSI
    match dst port eq 3260
exit
classifier iSNS
    match dst port eq 3205
exit
map basic
name File-System classifier AFS action optimize full
name Instant-Messaging classifier AOL action pass-through
name Remote-Desktop classifier Altiris-CarbonCopy action pass-through
name Backup classifier Amanda action optimize DRE no
compression none
name Printing classifier AppSocket action optimize full
name File-System classifier Apple-AFP action optimize full

```

```

name Remote-Desktop classifier Apple-NetAssistant action pass-through
name Instant-Messaging classifier Apple-iChat action pass-through
name File-Transfer classifier BFTP action optimize full
name Other classifier BGP action optimize full
name Systems-Management classifier BMC-Patrol action pass-through
name Backup classifier BackupExpress action optimize DRE no
compression none
name Other classifier Basic-TCP-services action pass-through
name P2P classifier BitTorrent action pass-through
name SQL classifier Borland-Interbase action optimize full
name WAFS classifier CIFS action optimize full accelerate cifs
name Conferencing classifier CU-SeeMe action pass-through
name Version-Management classifier CVS action optimize full
name Call-Management classifier Cisco-CallManager action pass-through
name Remote-Desktop classifier Citrix-ICA action optimize full
name Version-Management classifier Clearcase action optimize
full
name Backup classifier CommVault action optimize DRE no
compression none
name Backup classifier Connected-DataProtector action optimize
DRE no compression none
name Remote-Desktop classifier ControlIT action optimize DRE
no compression none
name Name-Services classifier DNS action pass-through
name Remote-Desktop classifier Danware-NetOp action optimize
DRE no compression none
name Content-Management classifier Documentum action optimize
full
name Replication classifier Double-Take action optimize full
name Replication classifier EMC-Celerra-Replicator action
optimize full
name Storage classifier EMC-SRDFA-IP action optimize full
name Storage classifier FCIP action optimize full
name File-Transfer classifier FTP-Control action pass-through
name File-Transfer classifier FTP-Data action optimize full
name File-Transfer classifier FTPS action optimize DRE no
compression none
name File-Transfer classifier FTPS-Control action pass-through
name Content-Management classifier Filenet action optimize
full
name P2P classifier Gnutella action pass-through
name P2P classifier Grouper action pass-through
name Email-and-Messaging classifier HP-OpenMail action

```

optimize full
name Systems-Management classifier HP-OpenView action pass-through
name Systems-Management classifier HP-Radia action optimize full
name Web classifier HTTP action optimize full accelerate http
name SSL classifier HTTPS action optimize DRE no compression none
name P2P classifier HotLine action pass-through
name SQL classifier IBM-DB2 action optimize full
name Systems-Management classifier IBM-NetView action pass-through
name Backup classifier IBM-TSM action optimize full
name Systems-Management classifier IBM-Tivoli action optimize full
name Printing classifier IPP action optimize full
name Conferencing classifier Intel-Proshare action pass-through
name SQL classifier InterSystems-Cache action optimize full
name Email-and-Messaging classifier Internet-Mail action optimize full
name Email-and-Messaging classifier Internet-Mail-secure action optimize DRE no compression none
name Instant-Messaging classifier Jabber action pass-through
name P2P classifier Kazaa action pass-through
name Authentication classifier Kerberos action pass-through
name VPN classifier L2TP action optimize DRE no compression none
name Systems-Management classifier LANDesk action optimize full
name Directory-Services classifier LDAP action optimize full
name Directory-Services classifier LDAP-Global-Catalog action optimize full
name Directory-Services classifier LDAP-Global-Catalog-Secure action pass-through
name Directory-Services classifier LDAP-secure action pass-through
name Remote-Desktop classifier Laplink-Host action optimize DRE no compression none
name Remote-Desktop classifier Laplink-PCSync action optimize DRE no compression none
name Remote-Desktop classifier Laplink-PCSync-secure action optimize DRE no compression none
name P2P classifier Laplink-ShareDirect action pass-through
name Backup classifier Legato-NetWorker action optimize DRE no compression none

name Backup classifier Legato-RepliStor action optimize DRE no compression none
name Streaming classifier Liquid-Audio action optimize full
name Email-and-Messaging classifier Lotus-Notes action optimize full
name Instant-Messaging classifier Lotus-Sametime-Connect action pass-through
name Email-and-Messaging classifier MDaemon action optimize full
name Instant-Messaging classifier MS-Chat action pass-through
name Replication classifier MS-Content-Replication-Service action optimize DRE no compression none
name Other classifier MS-EndPointMapper action optimize DRE no compression none accelerate MS-port-mapper
name Other classifier MS-Message-Queuing action optimize full
name Conferencing classifier MS-NetMeeting action pass-through
name Streaming classifier MS-NetShow action optimize full
name SQL classifier MS-SQL action optimize full
name Remote-Desktop classifier MS-Terminal-Services action optimize DRE no compression none
name Instant-Messaging classifier MSN-Messenger action pass-through
name SQL classifier MySQL action optimize full
name File-System classifier NFS action optimize full accelerate nfs
name Email-and-Messaging classifier NNTP action optimize full
name Email-and-Messaging classifier NNTP-secure action optimize DRE no compression none
name Other classifier NTP action pass-through
name P2P classifier Napster action pass-through
name Replication classifier NetApp-SnapMirror action optimize full
name Systems-Management classifier NetIQ action pass-through
name Remote-Desktop classifier Netopia-Timbuktu action optimize DRE no compression none
name Systems-Management classifier Netopia-netOctopus action pass-through
name Email-and-Messaging classifier Novell-Groupwise action optimize full
name File-System classifier Novell-NetWare action optimize full
name Systems-Management classifier Novell-ZenWorks action optimize full
name VPN classifier OpenVPN action optimize DRE no compression none
name SQL classifier Oracle action optimize full
name Other classifier Other-Secure action pass-through

name Remote-Desktop classifier PCAnywhere action optimize DRE
no compression none
name Email-and-Messaging classifier PCMail-Server action
optimize full
name CAD classifier PDMWorks action optimize full
name VPN classifier PPTP action optimize DRE no compression
none
name SQL classifier Pervasive-SQL action optimize full
name SQL classifier PostgreSQL action optimize full
name Content-Management classifier ProjectWise-FileTransfer
action optimize full
name Email-and-Messaging classifier QMTP action optimize full
name P2P classifier Qnext action pass-through
name Remote-Desktop classifier RAdmin action optimize DRE no
compression none
name Streaming classifier RTSP action optimize full accelerate
video
name Remote-Desktop classifier Remote-Anything action optimize
DRE no compression none
name Replication classifier Remote-Replication-Agent action
optimize DRE no compression none
name Replication classifier Rsync action optimize full
name Authentication classifier SASL action pass-through
name Call-Management classifier SIP-secure action pass-through
name Other classifier SOAP action optimize full
name SQL classifier SQL-Service action optimize full
name SSH classifier SSH action optimize DRE no compression
none
name Console classifier SSL-Shell action pass-through
name Printing classifier SUN-Xprint action optimize full
name SQL classifier Scalable-SQL action optimize full
name Name-Services classifier Service-Location action pass-
through
name Enterprise-Applications classifier Siebel action optimize
full
name File-Transfer classifier Simple-FTP action optimize full
name P2P classifier SoulSeek action pass-through
name File-System classifier Sun-RPC action pass-through
name SQL classifier Sybase-SQL action optimize full
name Other classifier Symantec-AntiVirus action optimize full
name Authentication classifier TACACS action pass-through
name File-Transfer classifier TFTP action optimize full
name File-Transfer classifier TFTP action optimize DRE no
compression none
name Console classifier Telnet action pass-through
name Console classifier Telnets action pass-through
name SQL classifier UniSQL action optimize full

name Printing classifier Unix-Printing action optimize full
name Console classifier Unix-Remote-Execution action pass-
through
name Streaming classifier VDOLive action optimize full
name Backup classifier Veritas-BackupExec action optimize DRE
no compression none
name Backup classifier Veritas-NetBackup action optimize DRE
no compression none
name Remote-Desktop classifier Vmware-VMConsole action
optimize DRE no compression none
name Call-Management classifier VoIP-Control action pass-
through
name Conferencing classifier VocalTec action pass-through
name Systems-Management classifier WAAS-FlowMonitor action
optimize DRE no compression LZ
name P2P classifier WASTE action pass-through
name Systems-Management classifier WBEM action pass-through
name Name-Services classifier WINS action pass-through
name P2P classifier WinMX action pass-through
name Email-and-Messaging classifier X400 action optimize full
name Remote-Desktop classifier XWindows action optimize DRE no
compression none
name Instant-Messaging classifier Yahoo-Messenger action pass-
through
name P2P classifier eDonkey action pass-through
name Conferencing classifier ezMeeting action pass-through
name Storage classifier iFCP action optimize full
name Storage classifier iSCSI action optimize full
name Name-Services classifier iSNS action pass-through
name Instant-Messaging classifier IRC action pass-through
map adaptor WAFS transport
name WAFS All action optimize full
exit
map adaptor EPM 1544f5e0-613c-11d1-93df-00c04fd7bd09
name Email-and-Messaging All action pass-through
exit
map adaptor EPM ms-sql-rpc
name SQL All action optimize full
exit
map adaptor EPM mapi
name Email-and-Messaging All action optimize full accelerate
mapi
exit
map adaptor EPM ms-ad-replication
name Replication All action optimize full
exit
map adaptor EPM ms-frs

```

        name Replication All action optimize full
exit
map adaptor EPM f5cc5a18-4264-101a-8c59-08002b2f8426
        name Email-and-Messaging All action pass-through
exit
map other optimize full
exit
!
central-manager address 192.168.28.100
cms enable
!
!
! End of WAAS configuration

```

NME-WAE 502 Branch Application Accelerator

```

WAAS-BR3#sh run
! WAAS version 4.1.5b (build b7 Oct 27 2009)
!
device mode application-accelerator
!
!
hostname WAAS-BR3
!
clock timezone PST -8 0
!
!
ip domain-name cisco.local
!
!
primary-interface GigabitEthernet 1/0
!
interface GigabitEthernet 1/0
ip address 192.168.83.2 255.255.255.0
no autosense
bandwidth 1000
full-duplex
exit
interface GigabitEthernet 2/0
shutdown
exit
!
!
ip default-gateway 192.168.83.1
!
no auto-register enable
!

```

```

! ip path-mtu-discovery is disabled in WAAS by default
!
ip name-server 192.168.28.10
!
ntp server 192.168.31.2
!
wccp router-list 8 192.168.83.1
wccp tcp-promiscuous router-list-num 8
wccp version 2
!
username ***** password *****
username ***** privilege 15
username ***** print-admin-password *****
!
!
!
!
authentication login local enable primary
authentication configuration local enable primary
!
!
policy-engine application
set-dscp copy
name Authentication
name Backup
name CAD
name Call-Management
name Conferencing
name Console
name Content-Management
name Directory-Services
name Email-and-Messaging
name Enterprise-Applications
name File-System
name File-Transfer
name Instant-Messaging
name Name-Services
name P2P
name Printing
name Remote-Desktop
name Replication
name SQL
name SSH
name SSL
name Storage
name Streaming
name Systems-Management

```

```

name VPN
name Version-Management
name WAFS
name Web
name Other
classifier AFS
    match dst port range 7000 7009
exit
classifier AOL
    match dst port range 5190 5193
exit
classifier Altiris-CarbonCopy
    match dst port eq 1680
exit
classifier Amanda
    match dst port eq 10080
exit
classifier AppSocket
    match dst port eq 9100
exit
classifier Apple-AFP
    match dst port eq 548
exit
classifier Apple-NetAssistant
    match dst port eq 3283
exit
classifier Apple-iChat
    match dst port eq 5297
    match dst port eq 5298
exit
classifier BFTP
    match dst port eq 152
exit
classifier BGP
    match dst port eq 179
exit
classifier BMC-Patrol
    match dst port eq 6161
    match dst port eq 6162
    match dst port eq 8160
    match dst port eq 8161
    match dst port eq 6767
    match dst port eq 6768
    match dst port eq 10128
exit
classifier BackupExpress
    match dst port eq 6123

```

```

exit
classifier Basic-TCP-services
    match dst port range 1 19
exit
classifier BitTorrent
    match dst port range 6881 6889
    match dst port eq 6969
exit
classifier Borland-Interbase
    match dst port eq 3050
exit
classifier CIFS
    match dst port eq 139
    match dst port eq 445
exit
classifier CU-SeeMe
    match dst port eq 7640
    match dst port eq 7642
    match dst port eq 7648
    match dst port eq 7649
exit
classifier CVS
    match dst port eq 2401
exit
classifier Cisco-CallManager
    match dst port eq 2748
    match dst port eq 2443
exit
classifier Citrix-ICA
    match dst port eq 1494
    match dst port eq 2598
exit
classifier Clearcase
    match dst port eq 371
exit
classifier CommVault
    match dst port range 8400 8403
exit
classifier Connected-DataProtector
    match dst port eq 16384
exit
classifier ControlIT
    match dst port eq 799
exit
classifier DNS
    match dst port eq 53
exit

```

```

classifier Danware-NetOp
    match dst port eq 6502
exit
classifier Documentum
    match dst port eq 1489
exit
classifier Double-Take
match dst port eq 1100
match dst port eq 1105
exit
classifier EMC-Celerra-Replicator
    match dst port eq 8888
exit
classifier EMC-SRDFA-IP
    match dst port eq 1748
exit
classifier FCIP
    match dst port eq 3225
exit
classifier FTP-Control
    match dst port eq 21
exit
classifier FTP-Data
    match src port eq 20
exit
classifier FTPS
    match dst port eq 990
exit
classifier FTPS-Control
    match src port eq 989
exit
classifier Filenet
    match dst port range 32768 32774
exit
classifier Gnutella
match dst port range 6346 6349
match dst port eq 6355
match dst port eq 5634
exit
classifier Grouper
    match dst port eq 8038
exit
classifier HP-OpenMail
match dst port eq 5755
match dst port eq 5757
match dst port eq 5766
match dst port eq 5767

```

```

match dst port eq 5768
match dst port eq 5729
exit
classifier HP-OpenView
match dst port range 7426 7431
match dst port eq 7501
match dst port eq 7510
exit
classifier HP-Radia
match dst port eq 3460
match dst port eq 3461
match dst port eq 3464
match dst port eq 3466
exit
classifier HTTP
match dst port eq 80
match dst port eq 8080
match dst port eq 8000
match dst port eq 8001
match dst port eq 3128
exit
classifier HTTPS
    match dst port eq 443
exit
classifier HotLine
    match dst port range 5500 5503
exit
classifier IBM-DB2
    match dst port eq 523
exit
classifier IBM-NetView
    match dst port range 729 731
exit
classifier IBM-TSM
    match dst port range 1500 1502
exit
classifier IBM-Tivoli
match dst port eq 94
match dst port eq 627
match dst port eq 1965
match dst port eq 1580
match dst port eq 1581
exit
classifier IPP
    match dst port eq 631
exit
classifier IRC

```

```

match dst port eq 531
match dst port range 6660 6669
exit
classifier Intel-Proshare
    match dst port range 5713 5717
exit
classifier InterSystems-Cache
    match dst port eq 1972
exit
classifier Internet-Mail
match dst port eq 25
match dst port eq 110
match dst port eq 143
match dst port eq 220
exit
classifier Internet-Mail-secure
match dst port eq 995
match dst port eq 993
match dst port eq 465
exit
classifier Jabber
match dst port eq 5222
match dst port eq 5269
exit
classifier Kazaa
    match dst port eq 1214
exit
classifier Kerberos
match dst port eq 88
match dst port eq 2053
match dst port eq 754
match dst port eq 888
match dst port eq 543
match dst port eq 464
match dst port eq 544
match dst port eq 749
exit
classifier L2TP
    match dst port eq 1701
exit
classifier LANDesk
match dst port eq 9535
match dst port range 9593 9595
exit
classifier LDAP
match dst port eq 389
match dst port eq 8404

```

```

exit
classifier LDAP-Global-Catalog
    match dst port eq 3268
exit
classifier LDAP-Global-Catalog-Secure
    match dst port eq 3269
exit
classifier LDAP-secure
    match dst port eq 636
exit
classifier Laplink-Host
    match dst port eq 1547
exit
classifier Laplink-PCSync
    match dst port eq 8444
exit
classifier Laplink-PCSync-secure
    match dst port eq 8443
exit
classifier Laplink-ShareDirect
    match dst port eq 2705
exit
classifier Legato-NetWorker
match dst port eq 7937
match dst port eq 7938
match dst port eq 7939
exit
classifier Legato-RepliStor
match dst port eq 7144
match dst port eq 7145
exit
classifier Liquid-Audio
    match dst port eq 18888
exit
classifier Lotus-Notes
    match dst port eq 1352
exit
classifier Lotus-Sametime-Connect
    match dst port eq 1533
exit
classifier MDAemon
match dst port eq 3000
match dst port eq 3001
exit
classifier MS-Chat
match dst port eq 6665
match dst port eq 6667

```

```

exit
classifier MS-Content-Replication-Service
match dst port eq 560
match dst port eq 507
exit
classifier MS-EndPointMapper
    match dst port eq 135
exit
classifier MS-Message-Queuing
match dst port eq 1801
match dst port eq 2101
match dst port eq 2103
match dst port eq 2105
exit
classifier MS-NetMeeting
match dst port eq 522
match dst port eq 1503
match dst port eq 1731
exit
classifier MS-NetShow
    match dst port eq 1755
exit
classifier MS-SQL
    match dst port eq 1433
exit
classifier MS-Terminal-Services
    match dst port eq 3389
exit
classifier MSN-Messenger
match dst port eq 1863
match dst port range 6891 6900
exit
classifier MySQL
    match dst port eq 3306
exit
classifier NFS
    match dst port eq 2049
exit
classifier NNTP
    match dst port eq 119
exit
classifier NNTP-secure
    match dst port eq 563
exit
classifier NTP
    match dst port eq 123
exit

```

```

classifier Napster
match dst port eq 8875
match dst port eq 7777
match dst port eq 6700
match dst port eq 6666
match dst port eq 6677
match dst port eq 6688
exit
classifier NetApp-SnapMirror
    match dst port range 10565 10569
exit
classifier NetIQ
match dst port eq 2220
match dst port eq 2735
match dst port range 10113 10116
exit
classifier Netopia-Timbuktu
match dst port eq 407
match dst port range 1417 1420
exit
classifier Netopia-netOctopus
match dst port eq 1917
match dst port eq 1921
exit
classifier Novell-Groupwise
match dst port eq 1677
match dst port eq 1099
match dst port eq 9850
match dst port eq 7205
match dst port eq 3800
match dst port eq 7100
match dst port eq 7180
match dst port eq 7101
match dst port eq 7181
match dst port eq 2800
exit
classifier Novell-NetWare
    match dst port eq 524
exit
classifier Novell-ZenWorks
match dst port range 1761 1763
match dst port eq 517
match dst port eq 2544
match dst port eq 8039
match dst port eq 2037
exit
classifier OpenVPN

```

```

        match dst port eq 1194
exit
classifier Oracle
match dst port eq 66
match dst port eq 1525
match dst port eq 1521
exit
classifier Other-Secure
match dst port eq 261
match dst port eq 448
match dst port eq 684
match dst port eq 695
match dst port eq 994
match dst port eq 2252
match dst port eq 2478
match dst port eq 2479
match dst port eq 2482
match dst port eq 2484
match dst port eq 2679
match dst port eq 2762
match dst port eq 2998
match dst port eq 3077
match dst port eq 3078
match dst port eq 3183
match dst port eq 3191
match dst port eq 3220
match dst port eq 3410
match dst port eq 3424
match dst port eq 3471
match dst port eq 3496
match dst port eq 3509
match dst port eq 3529
match dst port eq 3539
match dst port eq 3660
match dst port eq 3661
match dst port eq 3747
match dst port eq 3864
match dst port eq 3885
match dst port eq 3896
match dst port eq 3897
match dst port eq 3995
match dst port eq 4031
match dst port eq 5007
match dst port eq 5989
match dst port eq 5990
match dst port eq 7674
match dst port eq 9802

```

```

match dst port eq 12109
exit
classifier PCAnywhere
match dst port eq 73
match dst port range 5631 5632
match dst port eq 65301
exit
classifier PCMail-Server
        match dst port eq 158
exit
classifier PDMWorks
match dst port eq 30000
match dst port eq 40000
exit
classifier PPTP
        match dst port eq 1723
exit
classifier Pervasive-SQL
        match dst port eq 1583
exit
classifier PostgreSQL
        match dst port eq 5432
exit
classifier ProjectWise-FileTransfer
        match dst port eq 5800
exit
classifier QMTP
        match dst port eq 209
exit
classifier Qnext
match dst port eq 44
match dst port eq 5555
exit
classifier RAdmin
        match dst port eq 4899
exit
classifier RTSP
match dst port eq 554
match dst port eq 8554
exit
classifier Remote-Anything
        match dst port range 3999 4000
exit
classifier Remote-Replication-Agent
        match dst port eq 5678
exit
classifier Rsync

```

```

        match dst port eq 873
exit
classifier SAP
match dst port range 3200 3219
match dst port range 3221 3224
match dst port range 3226 3267
match dst port range 3270 3282
match dst port range 3284 3305
match dst port range 3307 3388
match dst port range 3390 3399
match dst port range 3600 3659
match dst port range 3662 3699
exit
classifier SASL
        match dst port eq 3659
exit
classifier SIP-secure
        match dst port eq 5061
exit
classifier SOAP
        match dst port eq 7627
exit
classifier SQL-Service
        match dst port eq 156
exit
classifier SSH
        match dst port eq 22
exit
classifier SSL-Shell
        match dst port eq 614
exit
classifier SUN-Xprint
        match dst port eq 8100
exit
classifier Scalable-SQL
        match dst port eq 3352
exit
classifier Service-Location
        match dst port eq 427
exit
classifier Siebel
match dst port eq 8448
match dst port eq 2320
match dst port eq 2321
exit
classifier Simple-FTP
        match dst port eq 115

```

```

exit
classifier SoulSeek
match dst port eq 2234
match dst port eq 5534
exit
classifier Sun-RPC
        match dst port eq 111
exit
classifier Sybase-SQL
match dst port eq 1498
match dst port eq 2638
match dst port eq 2439
match dst port eq 3968
exit
classifier Symantec-AntiVirus
match dst port eq 2847
match dst port eq 2848
match dst port eq 2967
match dst port eq 2968
match dst port eq 38037
match dst port eq 38292
exit
classifier TACACS
        match dst port eq 49
exit
classifier TFTP
        match dst port eq 69
exit
classifier TFTPSP
        match dst port eq 3713
exit
classifier Telnet
match dst port eq 23
match dst port eq 107
match dst port eq 513
exit
classifier Telnets
        match dst port eq 992
exit
classifier UniSQL
match dst port eq 1978
match dst port eq 1979
exit
classifier Unix-Printing
match dst port eq 515
match dst port eq 170
exit

```

```

classifier Unix-Remote-Execution
match dst port eq 514
match dst port eq 512
exit
classifier VDOLive
    match dst port eq 7000
exit
classifier VNC
match dst port range 5801 5809
match dst port range 6900 6909
exit
classifier Veritas-BackupExec
match dst port eq 6101
match dst port eq 6102
match dst port eq 6106
match dst port eq 3527
match dst port eq 1125
exit
classifier Veritas-NetBackup
match dst port eq 13720
match dst port eq 13721
match dst port eq 13782
match dst port eq 13785
exit
classifier Vmware-VMConsole
    match dst port eq 902
exit
classifier VoIP-Control
match dst port eq 1300
match dst port eq 2428
match dst port range 2000 2002
match dst port range 1718 1720
match dst port eq 5060
match dst port range 11000 11999
exit
classifier VocalTec
match dst port eq 1490
match dst port eq 6670
match dst port eq 25793
match dst port eq 22555
exit
classifier WAAS-FlowMonitor
    match dst port eq 7878
exit
classifier WASTE
    match dst port eq 1337
exit

```

```

classifier WBEM
match dst port eq 5987
match dst port eq 5988
exit
classifier WINS
match dst port eq 42
match dst port eq 137
match dst port eq 1512
exit
classifier WinMX
    match dst port eq 6699
exit
classifier X400
    match dst port eq 102
exit
classifier XWindows
    match dst port range 6000 6063
exit
classifier Yahoo-Messenger
match dst port range 5000 5001
match dst port eq 5050
match dst port eq 5100
exit
classifier eDonkey
    match dst port range 4661 4662
exit
classifier ezMeeting
match dst port range 10101 10103
match dst port range 26260 26261
exit
classifier iFCP
    match dst port eq 3420
exit
classifier iSCSI
    match dst port eq 3260
exit
classifier iSNS
    match dst port eq 3205
    exit
    map basic
name File-System classifier AFS action optimize full
name Instant-Messaging classifier AOL action pass-through
name Remote-Desktop classifier Altiris-CarbonCopy action pass-through
name Backup classifier Amanda action optimize DRE no compression none

```

name Printing classifier AppSocket action optimize full
name File-System classifier Apple-AFP action optimize full
name Remote-Desktop classifier Apple-NetAssistant action pass-through
name Instant-Messaging classifier Apple-iChat action pass-through
name File-Transfer classifier BFTP action optimize full
name Other classifier BGP action optimize full
name Systems-Management classifier BMC-Patrol action pass-through
name Backup classifier BackupExpress action optimize DRE no compression none
name Other classifier Basic-TCP-services action pass-through
name P2P classifier BitTorrent action pass-through
name SQL classifier Borland-Interbase action optimize full
name WAFS classifier CIFS action optimize full accelerate cifs
name Conferencing classifier CU-SeeMe action pass-through
name Version-Management classifier CVS action optimize full
name Call-Management classifier Cisco-CallManager action pass-through
name Remote-Desktop classifier Citrix-ICA action optimize full
name Version-Management classifier Clearcase action optimize full
name Backup classifier CommVault action optimize DRE no compression none
name Backup classifier Connected-DataProtector action optimize DRE no compression none
name Remote-Desktop classifier ControlIT action optimize DRE no compression none
name Name-Services classifier DNS action pass-through
name Remote-Desktop classifier Danware-NetOp action optimize DRE no compression none
name Content-Management classifier Documentum action optimize full
name Replication classifier Double-Take action optimize full
name Replication classifier EMC-Celerra-Replicator action optimize full
name Storage classifier EMC-SRDFA-IP action optimize full
name Storage classifier FCIP action optimize full
name File-Transfer classifier FTP-Control action pass-through
name File-Transfer classifier FTP-Data action optimize full
name File-Transfer classifier FTPS action optimize DRE no compression none
name File-Transfer classifier FTPS-Control action pass-through
name Content-Management classifier Filenet action optimize full

name P2P classifier Gnutella action pass-through
name P2P classifier Grouper action pass-through
name Email-and-Messaging classifier HP-OpenMail action optimize full
name Systems-Management classifier HP-OpenView action pass-through
name Systems-Management classifier HP-Radia action optimize full
name Web classifier HTTP action optimize full accelerate http
name SSL classifier HTTPS action optimize DRE no compression none
name P2P classifier HotLine action pass-through
name SQL classifier IBM-DB2 action optimize full
name Systems-Management classifier IBM-NetView action pass-through
name Backup classifier IBM-TSM action optimize full
name Systems-Management classifier IBM-Tivoli action optimize full
name Printing classifier IPP action optimize full
name Conferencing classifier Intel-Proshare action pass-through
name SQL classifier InterSystems-Cache action optimize full
name Email-and-Messaging classifier Internet-Mail action optimize full
name Email-and-Messaging classifier Internet-Mail-secure action optimize DRE no compression none
name Instant-Messaging classifier Jabber action pass-through
name P2P classifier Kazaa action pass-through
name Authentication classifier Kerberos action pass-through
name VPN classifier L2TP action optimize DRE no compression none
name Systems-Management classifier LANDesk action optimize full
name Directory-Services classifier LDAP action optimize full
name Directory-Services classifier LDAP-Global-Catalog action optimize full
name Directory-Services classifier LDAP-Global-Catalog-Secure action pass-through
name Directory-Services classifier LDAP-secure action pass-through
name Remote-Desktop classifier Laplink-Host action optimize DRE no compression none
name Remote-Desktop classifier Laplink-PCSync action optimize DRE no compression none
name Remote-Desktop classifier Laplink-PCSync-secure action optimize DRE no compression none

name P2P classifier Laplink-ShareDirect action pass-through
name Backup classifier Legato-NetWorker action optimize DRE no
compression none
name Backup classifier Legato-RepliStor action optimize DRE no
compression none
name Streaming classifier Liquid-Audio action optimize full
name Email-and-Messaging classifier Lotus-Notes action
optimize full
name Instant-Messaging classifier Lotus-Sametime-Connect
action pass-through
name Email-and-Messaging classifier MDaemon action optimize
full
name Instant-Messaging classifier MS-Chat action pass-through
name Replication classifier MS-Content-Replication-Service
action optimize DRE no compression none
name Other classifier MS-EndPointMapper action optimize DRE no
compression none accelerate MS-port-mapper
name Other classifier MS-Message-Queuing action optimize full
name Conferencing classifier MS-NetMeeting action pass-through
name Streaming classifier MS-NetShow action optimize full
name SQL classifier MS-SQL action optimize full
name Remote-Desktop classifier MS-Terminal-Services action
optimize DRE no compression none
name Instant-Messaging classifier MSN-Messenger action pass-
through
name SQL classifier MySQL action optimize full
name File-System classifier NFS action optimize full
accelerate nfs
name Email-and-Messaging classifier NNTP action optimize full
name Email-and-Messaging classifier NNTP-secure action
optimize DRE no compression none
name Other classifier NTP action pass-through
name P2P classifier Napster action pass-through
name Replication classifier NetApp-SnapMirror action optimize
full
name Systems-Management classifier NetIQ action pass-through
name Remote-Desktop classifier Netopia-Timbuktu action
optimize DRE no compression none
name Systems-Management classifier Netopia-netOctopus action
pass-through
name Email-and-Messaging classifier Novell-Groupwise action
optimize full
name File-System classifier Novell-NetWare action optimize
full
name Systems-Management classifier Novell-ZenWorks action
optimize full

name VPN classifier OpenVPN action optimize DRE no compression
none
name SQL classifier Oracle action optimize full
name Other classifier Other-Secure action pass-through
name Remote-Desktop classifier PCAnywhere action optimize DRE
no compression none
name Email-and-Messaging classifier PCMail-Server action
optimize full
name CAD classifier PDMWorks action optimize full
name VPN classifier PPTP action optimize DRE no compression
none
name SQL classifier Pervasive-SQL action optimize full
name SQL classifier PostgreSQL action optimize full
name Content-Management classifier ProjectWise-FileTransfer
action optimize full
name Email-and-Messaging classifier QMTP action optimize full
name P2P classifier Qnext action pass-through
name Remote-Desktop classifier RAdmin action optimize DRE no
compression none
name Streaming classifier RTSP action optimize full accelerate
video
name Remote-Desktop classifier Remote-Anything action optimize
DRE no compression none
name Replication classifier Remote-Replication-Agent action
optimize DRE no compression none
name Replication classifier Rsync action optimize full
name Authentication classifier SASL action pass-through
name Call-Management classifier SIP-secure action pass-through
name Other classifier SOAP action optimize full
name SQL classifier SQL-Service action optimize full
name SSH classifier SSH action optimize DRE no compression
none
name Console classifier SSL-Shell action pass-through
name Printing classifier SUN-Xprint action optimize full
name SQL classifier Scalable-SQL action optimize full
name Name-Services classifier Service-Location action pass-
through
name Enterprise-Applications classifier Siebel action optimize
full
name File-Transfer classifier Simple-FTP action optimize full
name P2P classifier SoulSeek action pass-through
name File-System classifier Sun-RPC action pass-through
name SQL classifier Sybase-SQL action optimize full
name Other classifier Symantec-AntiVirus action optimize full
name Authentication classifier TACACS action pass-through
name File-Transfer classifier TFTP action optimize full

```

name File-Transfer classifier TFTP action optimize DRE no
compression none
name Console classifier Telnet action pass-through
name Console classifier Telnets action pass-through
name SQL classifier UniSQL action optimize full
name Printing classifier Unix-Printing action optimize full
name Console classifier Unix-Remote-Execution action pass-
through
name Streaming classifier VDOLive action optimize full
name Backup classifier Veritas-BackupExec action optimize DRE
no compression none
name Backup classifier Veritas-NetBackup action optimize DRE
no compression none
name Remote-Desktop classifier Vmware-VMConsole action
optimize DRE no compression none
name Call-Management classifier VoIP-Control action pass-
through
name Conferencing classifier VocalTec action pass-through
name Systems-Management classifier WAAS-FlowMonitor action
optimize DRE no compression LZ
name P2P classifier WASTE action pass-through
name Systems-Management classifier WBEM action pass-through
name Name-Services classifier WINS action pass-through
name P2P classifier WinMX action pass-through
name Email-and-Messaging classifier X400 action optimize full
name Remote-Desktop classifier XWindows action optimize DRE no
compression none
name Instant-Messaging classifier Yahoo-Messenger action pass-
through
name P2P classifier eDonkey action pass-through
name Conferencing classifier ezMeeting action pass-through
name Storage classifier iFCP action optimize full
name Storage classifier iSCSI action optimize full
name Name-Services classifier iSNS action pass-through
name Instant-Messaging classifier IRC action pass-through
name Enterprise-Applications classifier SAP action optimize
full
name Remote-Desktop classifier VNC action optimize DRE no
compression none exit
    map adaptor WAFS transport
        name WAFS All action optimize full
    exit
    map adaptor EPM 1544f5e0-613c-11d1-93df-00c04fd7bd09
        name Email-and-Messaging All action pass-through
exit
map adaptor EPM ms-sql-rpc
    name SQL All action optimize full

```

```

exit
map adaptor EPM mapi
name Email-and-Messaging All action optimize full accelerate
mapi
exit
map adaptor EPM ms-ad-replication
    name Replication All action optimize full
exit
map adaptor EPM ms-frs
    name Replication All action optimize full
exit
map adaptor EPM f5cc5a18-4264-101a-8c59-08002b2f8426
    name Email-and-Messaging All action pass-through
exit
map other optimize full
exit
!
central-manager address 192.168.28.100
cms enable
!
! End of WAAS configuration

```

Resilient Server Design

Application Control Engine 4710 Primary Data Center

```
boot system image:c4710ace-mz.A3_2_2.bin
hostname ace-4710-1
interface gigabitEthernet 1/1
channel-group 1
no shutdown
interface gigabitEthernet 1/2
channel-group 1
no shutdown
interface gigabitEthernet 1/3
shutdown
interface gigabitEthernet 1/4
shutdown
interface port-channel 1
switchport trunk allowed vlan 1,24
no shutdown
```

```
access-list ALL line 8 extended permit ip any any
probe http basic-http-get
interval 15
passdetect interval 60
request method head
open 1
rserver host webserver1
ip address 192.168.24.12
inservice
rserver host webserver2
ip address 192.168.24.13
inservice
```

```
serverfarm host webfarm
probe basic-http-get
serverfarm host webserver-farm
rserver webserver1 80
inservice
rserver webserver2 80
class-map match-all http-vip
2 match virtual-address 192.168.24.100 tcp eq www
class-map type management match-any remote_access
2 match protocol xml-https any
```

```
3 match protocol icmp any
4 match protocol telnet any
5 match protocol ssh any
6 match protocol http any
7 match protocol https any
8 match protocol snmp any
policy-map type management first-match remote_mgmt_allow
policy
class remote_access
permit
policy-map type loadbalance first-match http-vip-l7slb
class class-default
serverfarm webserver-farm
policy-map multi-match int24
class http-vip
loadbalance vip inservice
loadbalance policy http-vip-l7slb
loadbalance vip icmp-reply active
nat dynamic 1 vlan 24
interface vlan 24
ip address 192.168.24.2 255.255.255.0
access-group input ALL
nat-pool 1 192.168.24.99 192.168.24.99 netmask 255.255.255.0
pat
service-policy input remote_mgmt_allow_policy
service-policy input int24
no shutdown
ip route 0.0.0.0 0.0.0.0 192.168.24.1
snmp-server community public group Network-Monitor

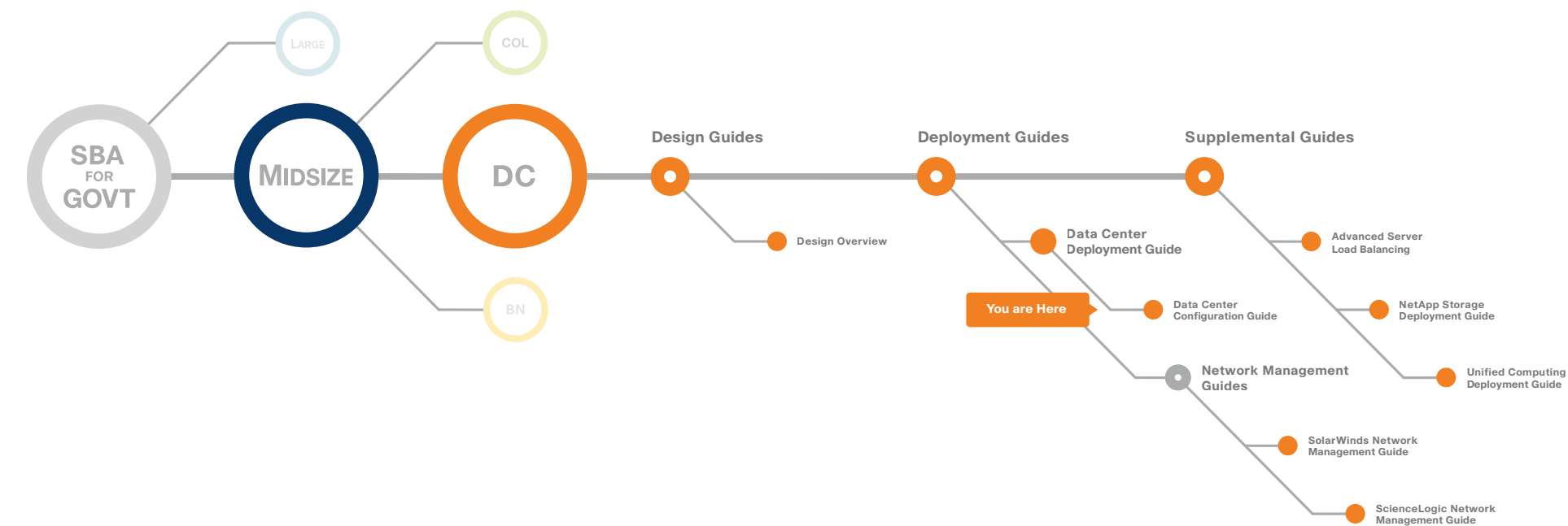
username ***** password 5 ***** role Admin domain
default-domain
username www password 5 ***** role Admin domain default-
domain
```

Appendix A:

Data Center for Midsize Agencies Product List

Functional Area	Product	Part Numbers	Software Version
Virtualized Storage	MDS9124	DS-C9134-K9	3.3(2)
	MDS9134	DS-C9124-K9	4.1(1c)
	4Gig SFP	DS-SFP-FC4G-SW	
DC Switching	Catalyst 3750G	WS-C3750G-24TS-S1U	12.2-40.SE
	Nexus 5010	N5K-C5010P-BF	4.1.(3)
	Nexus 2148T	N2K-C2148T-1GE	4.1(3)
Application Services	Application Control Engine (ACE) 4710 Appliance	ACE-4710-0.5F-K9	A3.2.2
Application Services Wide- Area Application Services (WAAS)	HQ CM WAAS Appliance	WAVE-274-K9	All use 4.1.3b
	HQ AA WAAS Appliance	WAVE-574-K9	
	Remote Site WAAS Network Module	NME-WAE-502-K9	
Wireless	Wireless LAN Controller 5508	AIR-CT5508-100-K9	AIR-CT5500- K9-6-0-188-0.aes
Wireless Access Points	1140 Fixed with Internal Antennas	AIR-LAP1142N (Country-specific)	Controller-Based Software
	1250 Ruggedized, External Ant.	AIR-LAP1252AG (Country-specific)	
Security	HQ Site		ASA software: 8.2.2 IPS software: 7.0.2E3
	2x ASA5540 w/ ASA-SSM-40	ASA5540-AIP40-K8	
	DR Site		
	2x ASA5580-20	ASA5580-20-8GE-K8	
	2x IPS-4260-K9	PS-4260-K9	

Appendix B: SBA for Midsize Agencies Document System





SMART BUSINESS ARCHITECTURE



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV
Amsterdam, The Netherlands

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C07-641156-00 12/10