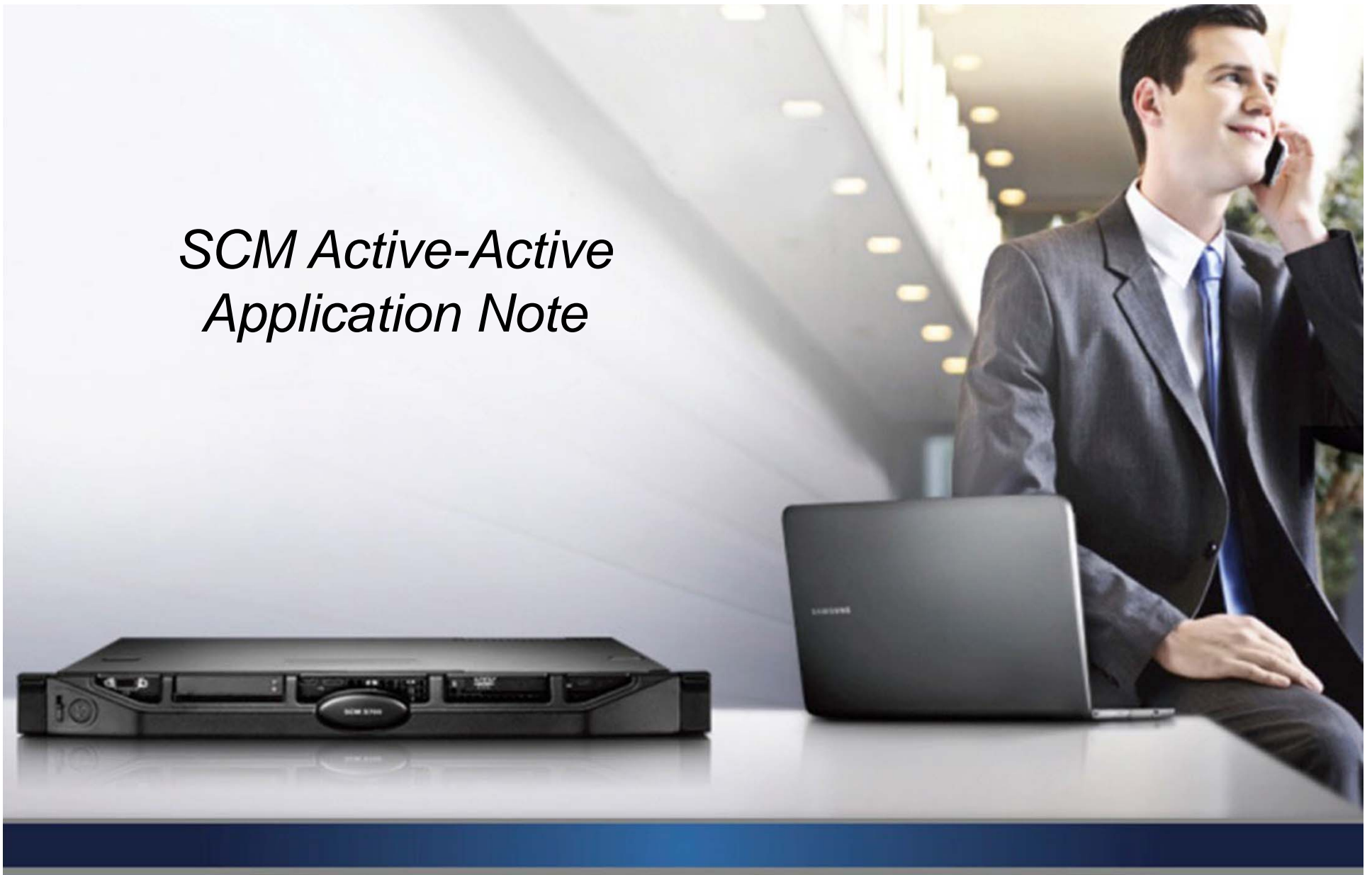


*SCM Active-Active
Application Note*



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SCM Samsung Communication Manager

Active-Active



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Active-Active Architecture
Active-Active Deployment Scenarios
Active-Active Fail Cases
Active-Active Setup
Modes and Status
Helpful Reminders

Active-Active



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Active-Active Architecture

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System Architecture

SBC w/gateway



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Active-Active with SBC and PSTN Gateways

- Total 3000 users supported on the SCM is this scenario
- All users are assigned to the Master as primary system
- The slave SCM will act as the secondary system
- Our Master and Slave nodes are located at 2 different data centers
- All users will use SIP Trunking
- The phones all have a PRI gateway onsite for survivability
- Everything is connected through MPLS provided by the carrier

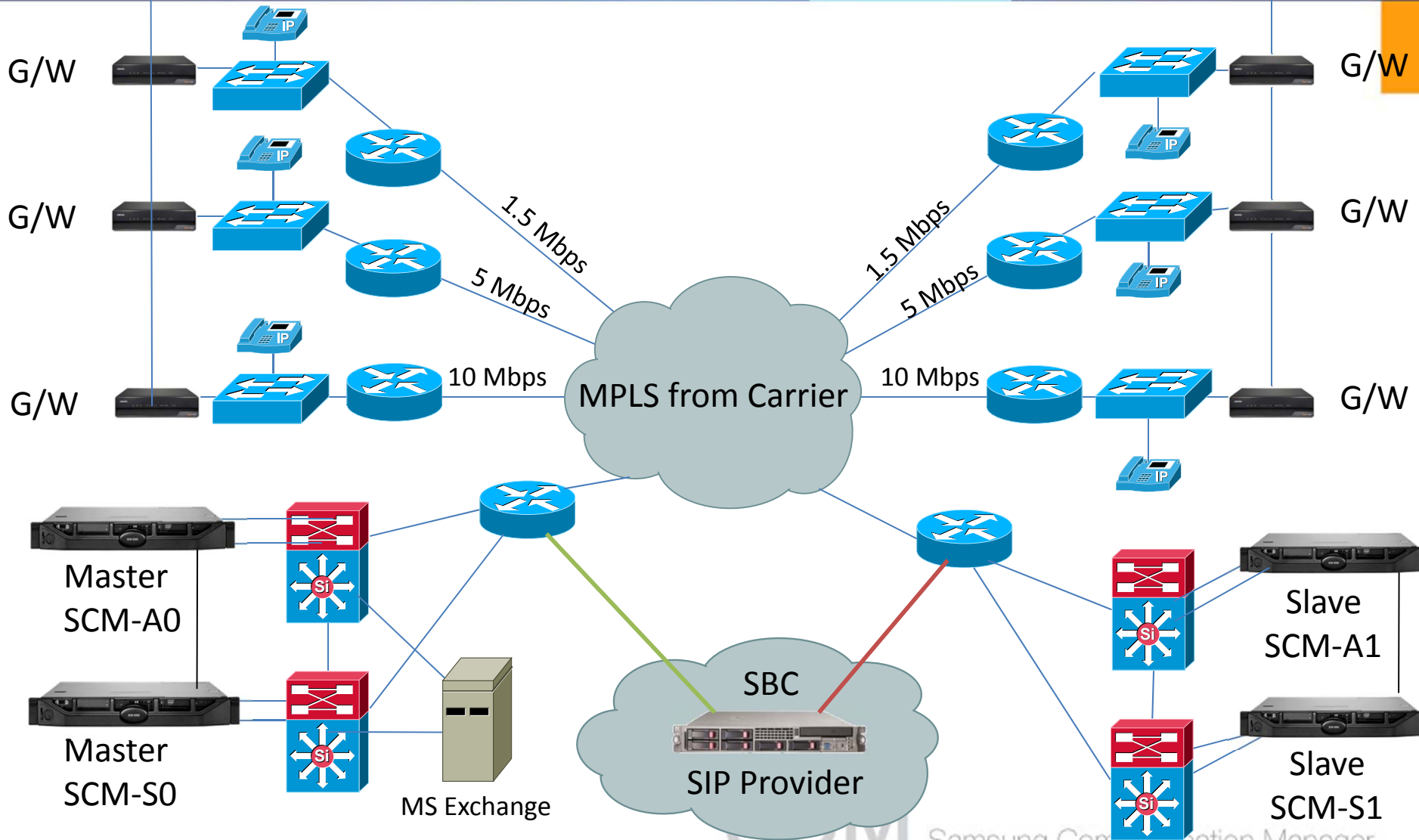
ONLY the users on the Master side can use MS exchange for integration

System Architecture SBC w/gateway



PSTN

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System Architecture Voice Gateways only

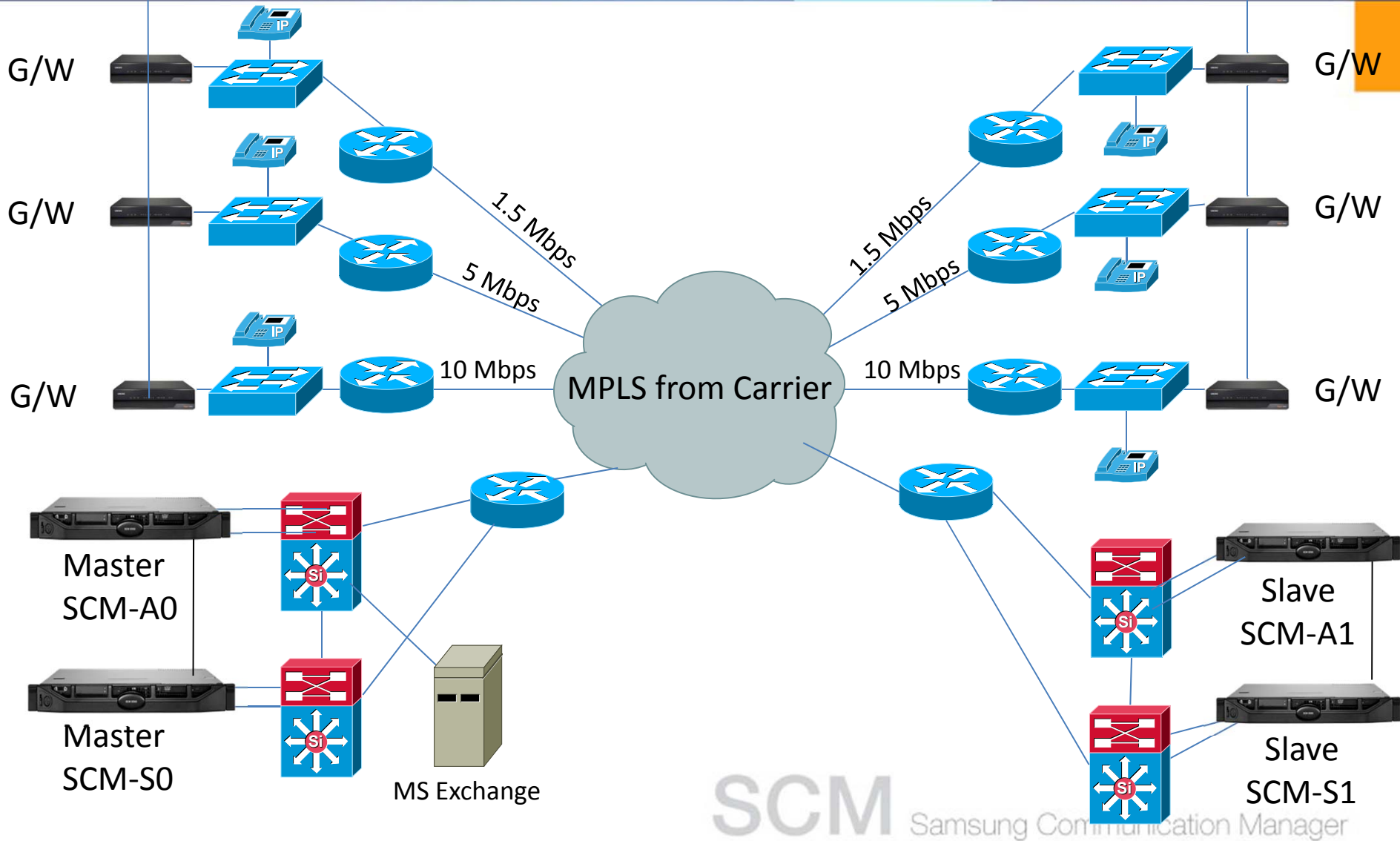


SAMSUNG

Active-Active with PSTN Voice Gateways

- Total 3000 users supported on the SCM is this scenario
- All users are assigned to the Master as primary system
- The slave SCM will act as the secondary system
- The Master node is located at the Head Office #1
- Slave node is located at Head Office #2
- The phones all have a gateway onsite for survivability
- Everything is connected through MPLS provided by the carrier

System Architecture Voice Gateways only



System Architecture

SBC w/gateway “6000 users”



SAMSUNG

Active-Active with SBC and w/voice gateways

- Total 6000 users supported on the SCM is this scenario
- 3000 users are assigned to the Master as primary
- 3000 users are assigned to the Slave as primary
- Each secondary server will backup the primary server
- Our Master and Slave nodes are located at 2 different data centers
- All users will use SIP Trunking and have PSTN gateways for survivability
- Everything is connected through MPLS provided by the carrier

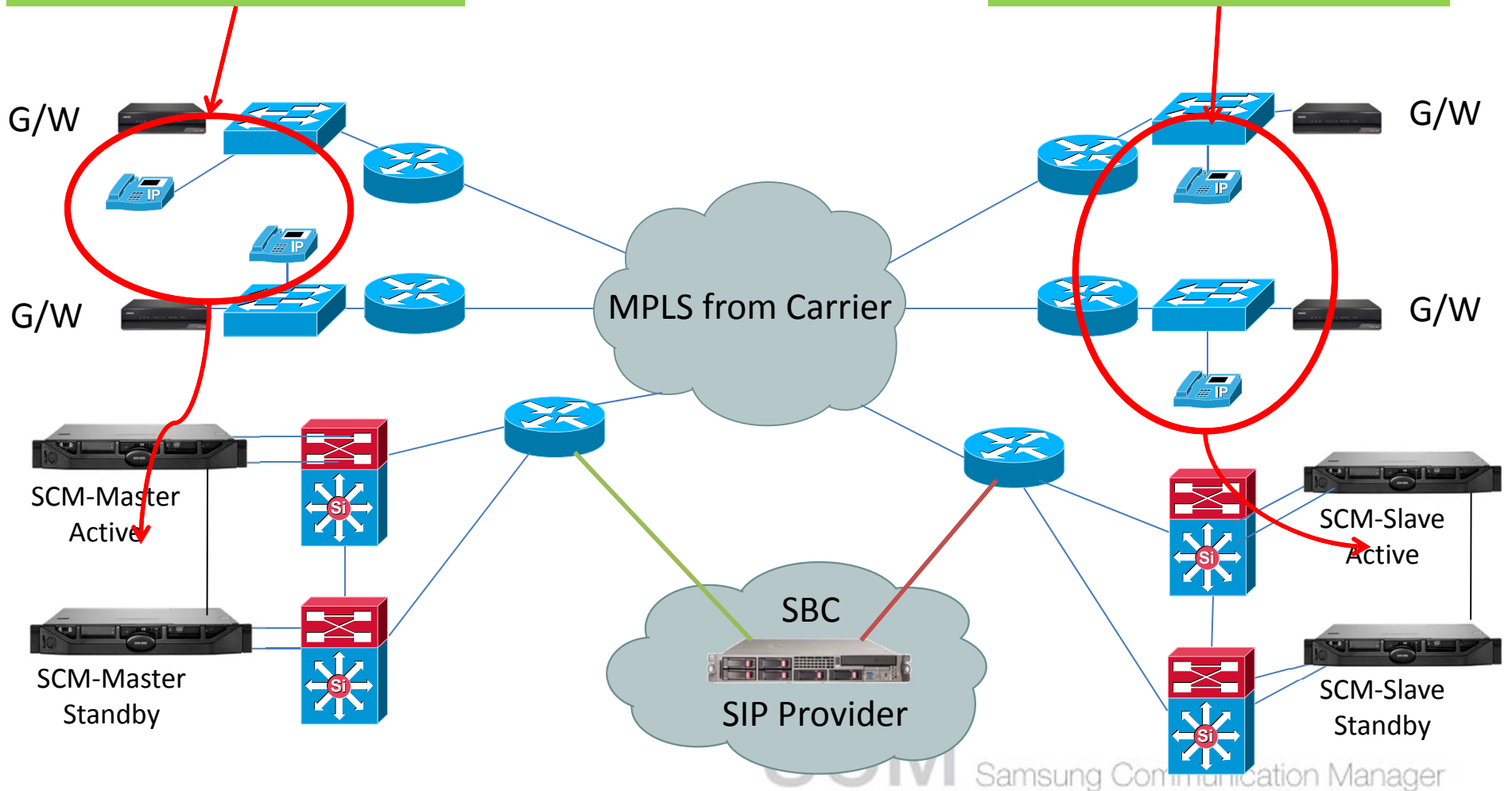
System Architecture SBC w/gateway "6000 users"



SAMSUNG

3000 Phones are registered to Master as Primary

3000 Phones are registered to Slave as Primary



Active-Active Switch Over



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- **Active-Active**
 - If the primary server (**master.active** or **master.standby**) can not provide the service
 - The secondary server (**slave.active** and **slave.standby**) will provide the service on behalf of the primary server.
- **Active-Active switch-over occurs in the following situations :**
 - If the primary server goes down, Secondary server provides the PBX services.
 - If terminals connected to the primary server have been lost, Secondary server provides the services.
 - If the primary server goes into slave node, slave node does not provide the service during full data synchronization. In this case, secondary server of terminals provides the services.

Key Constrains



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Administrator	Configuration Change/Modification is allowed only through the Master Node <ul style="list-style-type: none">• The Slave-node is just a read-only permitted, except for MOH uploading
Embedded Application	The Following Applications are NOT available on Secondary Server <ul style="list-style-type: none">• Voice Mail, Call Recording, AME, Outlook service. Conference Bridge <ul style="list-style-type: none">• Meet-me Conference feature is NOT available on Secondary Server.• Ad-hoc, Progressive, Predefined, Conference are available both SCM nodes. ACD Lite and CSTA Service are NOT available on Secondary Server <ul style="list-style-type: none">• The ACD group operates on one node only.
Call Services	The Park and Retrieve feature is NOT supported on Secondary Server The Callback feature is NOT supported on Secondary Server
Others	Custom MOH files MUST be loaded on both Master and Slave Nodes Custom AA files MUST be loaded on both Master and Slave Nodes

Active-Active Deployment



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Active-Active Deployment Scenarios

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Supported Active-Active Scenarios



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*We will now cover what scenarios are supported
for
Active-Active*

Scenario #1



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Scenario #1
(SBC w/voice gateways)

SCM Samsung Communication Manager

Scenario #1

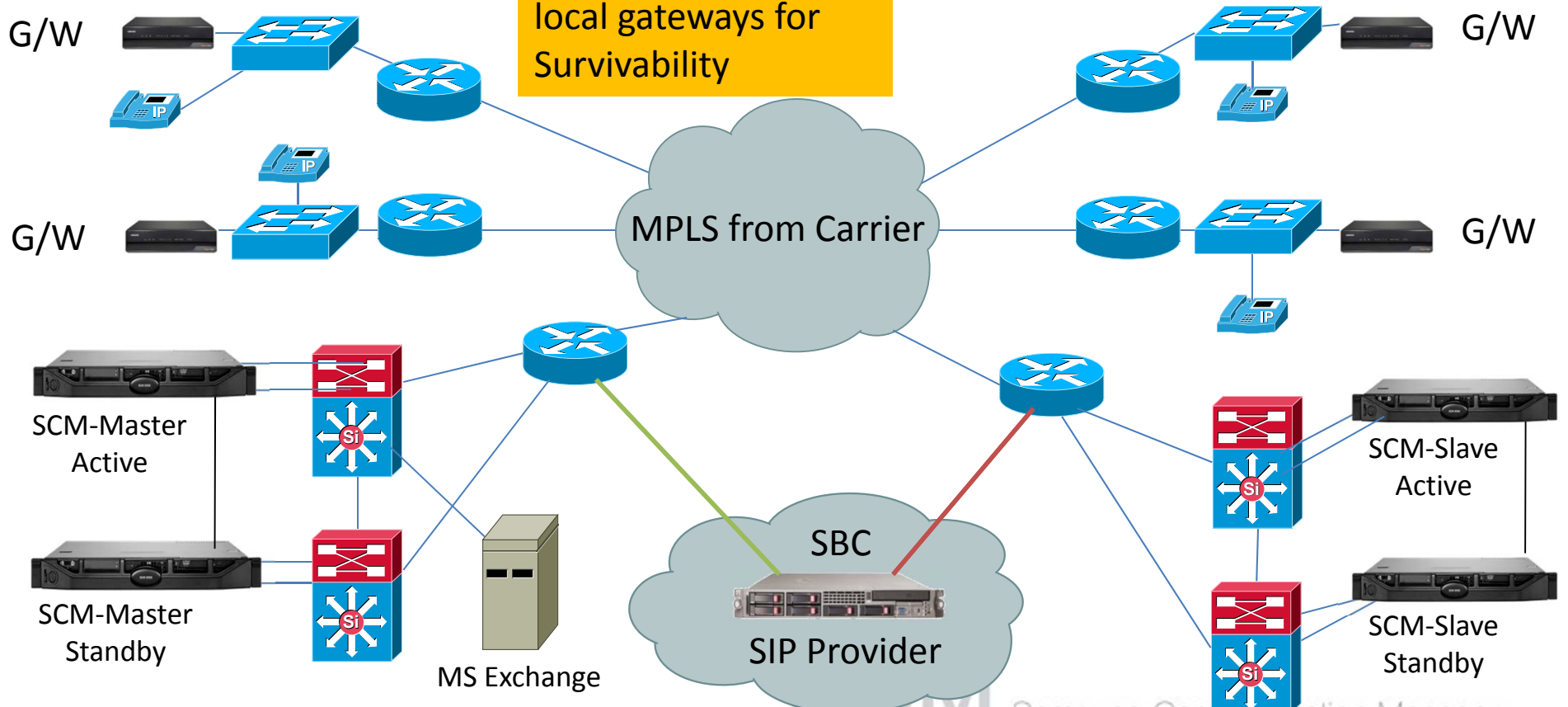


SAMSUNG

All Phone are registered to Master as Primary and Slave as secondary

Users will also be assigned to their local gateways for Survivability

SCM Master and SCM Slave will both have a dual route to the SBC



Scenario #1

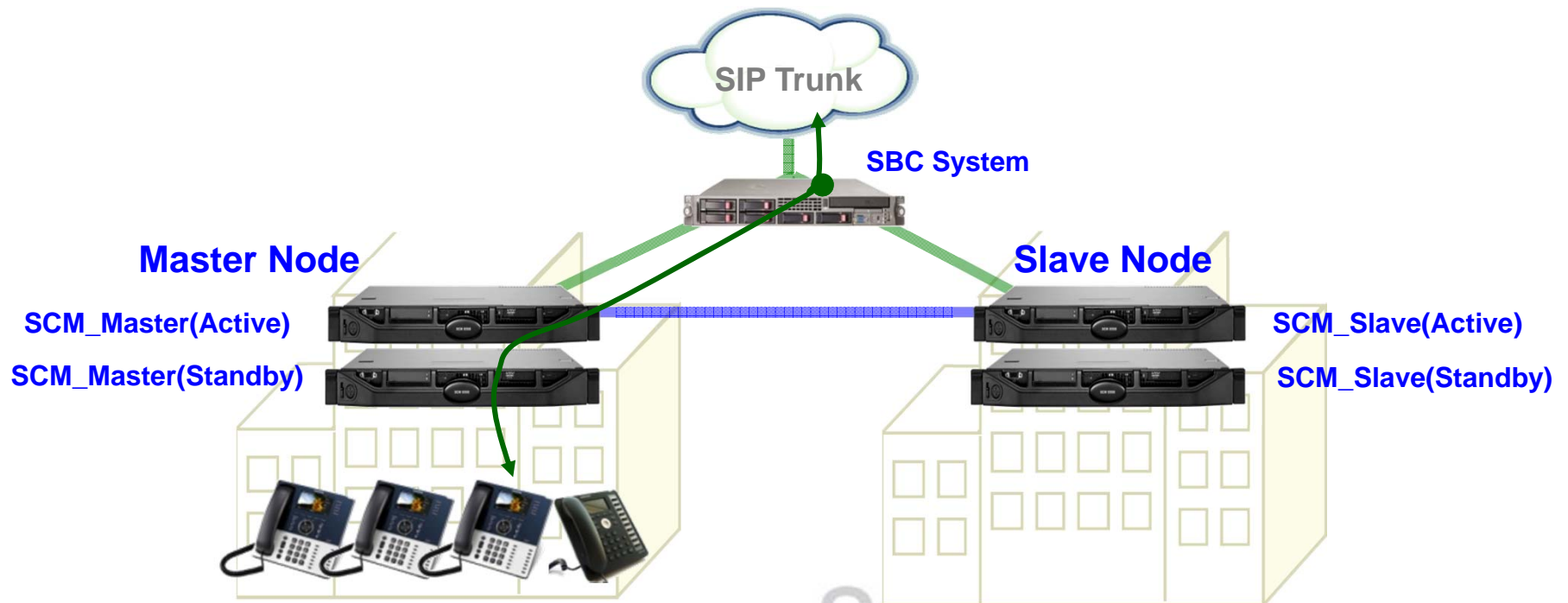
SIP Trunks Active-Active



SAMSUNG

When an SBC is used for call routing

- The SBC is be configured with Multiple Session Targets so that Primary Session Target is pointing to Master Node and Secondary Session Target is pointing to Slave Node.
- If SBC is unable to send the Calls to Master Node than it will use Secondary Session Target to send the calls to the Slave Node.



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Scenario #1



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
- Call Trace
- Call Management
- Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node: [Dropdown]
User Group: usmd
Register Type: Subscriber
IP Address: [Dropdown]
Fail Reason: [Dropdown] MAC Address: [Dropdown]

Search Clear Reset

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	MAC Address
Master-USMD	Master-USMD	usmd	285100	Reg	192.168.60.102	5060	f4:d9:fb:0b:9...
Master-USMD	Master-USMD	usmd	285199	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	285200	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	285299	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	288100	Reg	192.168.50.103	5060	f4:d9:fb:0c:dc..
Master-USMD	Master-USMD	usmd	288101	Reg	192.168.50.102	5060	f4:d9:fb:15:7c..
Master-USMD	Master-USMD	usmd	288299	Reg	192.168.50.103	5060	f4:d9:fb:0c:dc..

Detail SendReg Lock Excel Detach Close

Here you can see that the phones are registered to the Master

Scenario #1



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
- Call Trace
- Call Management
- Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node:

User Group:

Register Type:

IP Address:

Fail Reason:

MAC Address:

Here you can see that the phones are now registered to the Slave system

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	
Master-USMD	Slave-USMD	usmd	285100	Reg	192.168.60....	5060	f
Master-USMD	Slave-USMD	usmd	285199	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	285200	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	285299	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	288100	Reg	192.168.50....	5060	f
Master-USMD	Slave-USMD	usmd	288101	Reg	192.168.50....	5060	f
Master-USMD	Slave-USMD	usmd	288299	Reg	192.168.50....	5060	f

Scenario #1



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Scenario #1

Fail Cases

SCM Samsung Communication Manager

Scenario #1 Fail Case - 1

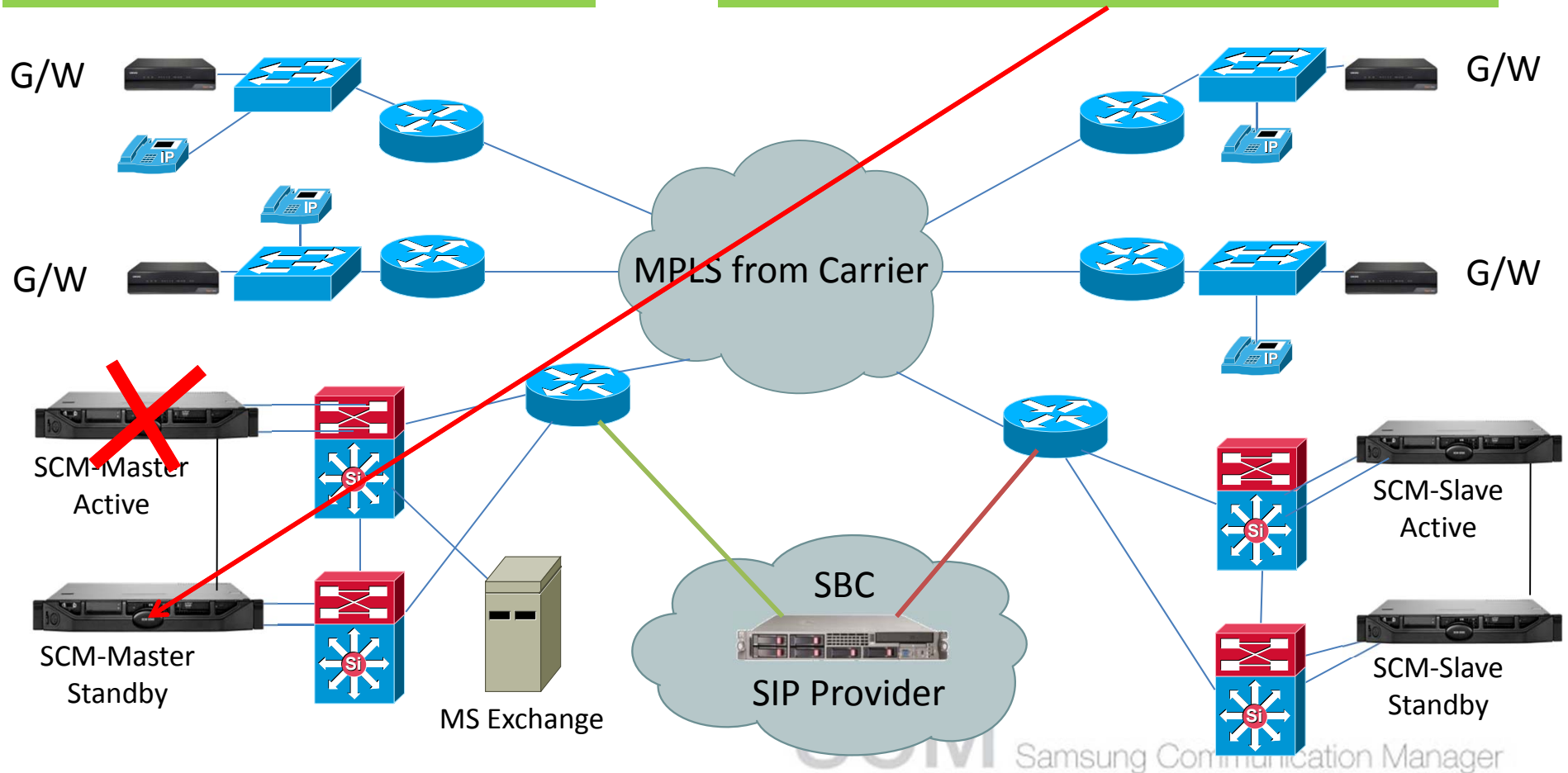


SAMSUNG

Your SCM-Master.active is down!

- SCM will continue to function as normal

- The SCM-Master.standby will take over as the active system.
- All operation will stay the same



Samsung Communication Manager

Scenario #1 Fail Case - 2

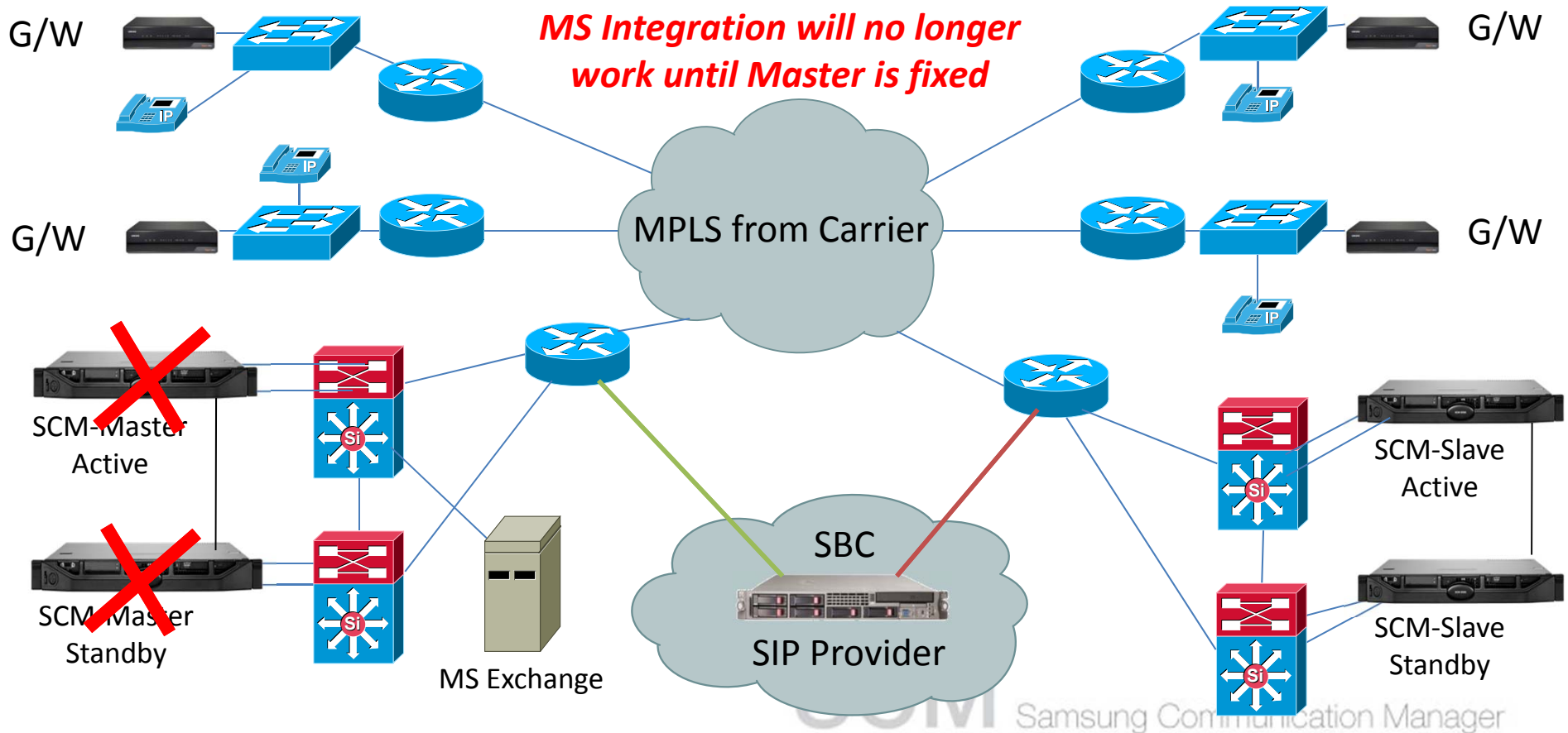


SAMSUNG

SCM Master is down!

- All phones will now function from the SCM Slave system

- The primary server for a phone provides UMS
- Since our phones primary was the SCM Master
- We will no longer have Mailbox func



Scenario #1 Fail Case - 3

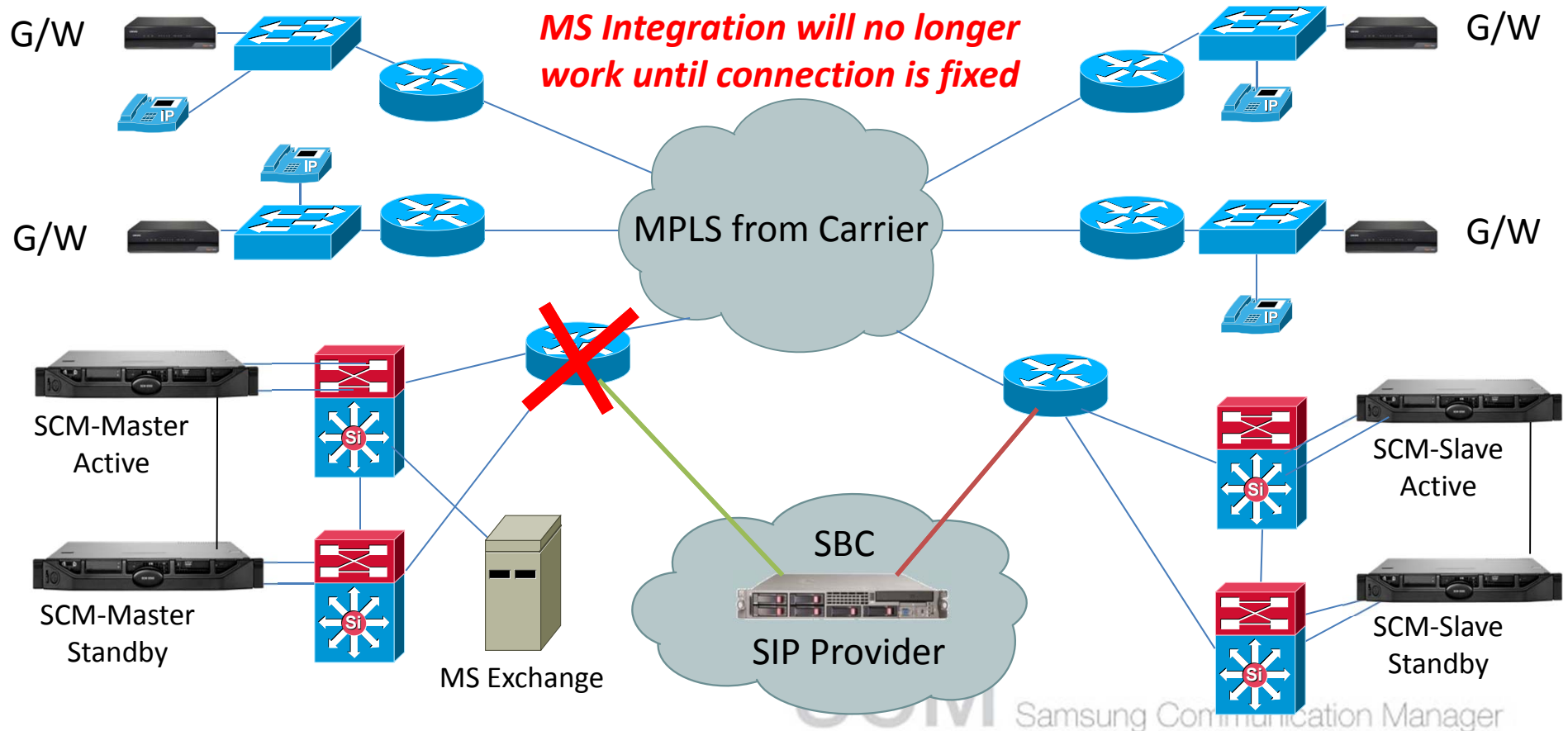


SAMSUNG

Your data center network is down!

- All phones will now function from the SCM Slave system

- The primary server for a phone provides UMS
- Since our phones primary was the SCM Master
- We will no longer have Mailbox func



Scenario #1

Fail Case - 4



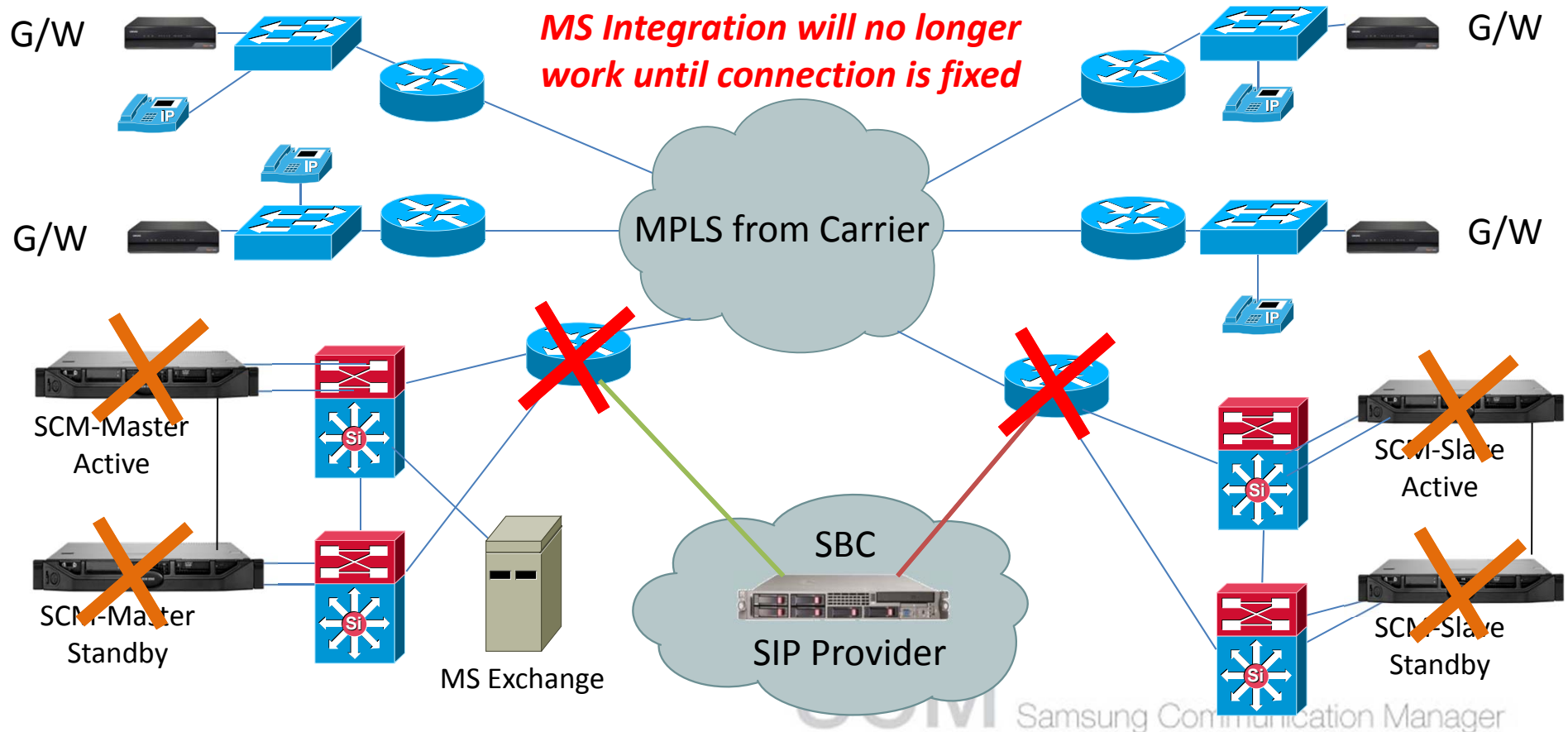
SAMSUNG

Both data centers are down!

- Users will now fail over to the gateways
- A user must be assigned to a gateway

Survivability mode is in place

- Users can make outbound calls only
- We will no longer have Mailbox function



Scenario #2

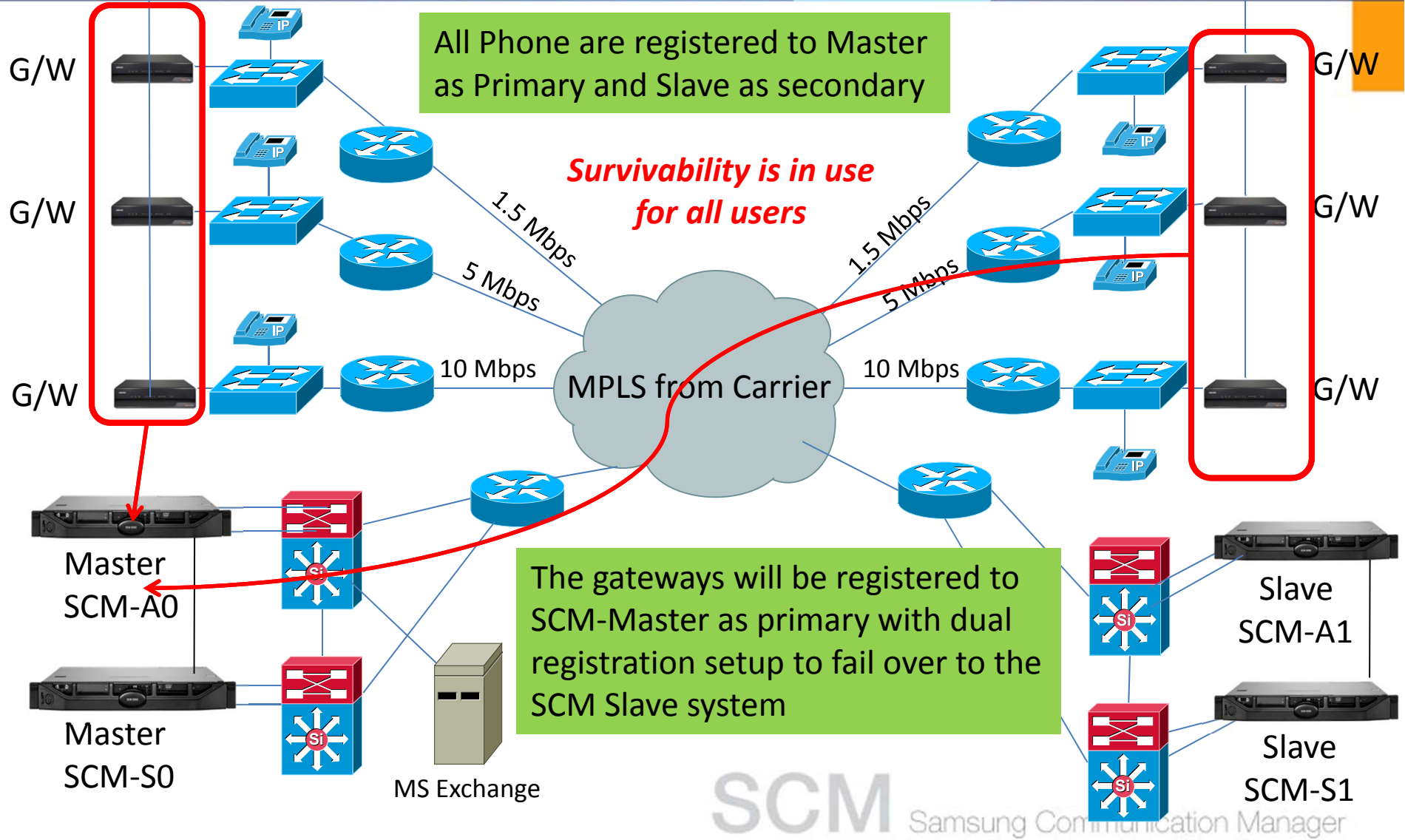


SAMSUNG

Scenario #2 (PRI-Gateways)

SCM Samsung Communication Manager

Scenario #2



Scenario #2



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
- Call Trace
- Call Management
- Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node [dropdown]
User Group usmd [dropdown]
Register Type Subscriber [dropdown]
IP Address [input]
Fail Reason [dropdown] MAC Address [dropdown]

Search Clear Reset

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	MAC Address
Master-USMD	Master-USMD	usmd	285100	Reg	192.168.60.102	5060	f4:d9:fb:0b:9...
Master-USMD	Master-USMD	usmd	285199	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	285200	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	285299	Reg	192.168.60.103	5060	00:16:32:cd:f...
Master-USMD	Master-USMD	usmd	288100	Reg	192.168.50.103	5060	f4:d9:fb:0c:dc..
Master-USMD	Master-USMD	usmd	288101	Reg	192.168.50.102	5060	f4:d9:fb:15:7c..
Master-USMD	Master-USMD	usmd	288299	Reg	192.168.50.103	5060	f4:d9:fb:0c:dc..

Detail SendReg Lock Excel Detach Close

Here you can see that the phones are registered to the Master

Scenario #2



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Ubigate Voice Gateway Dual Registration

```
voip-gateway
  host domain-name samsung.com
  bind control interface ethernet 0/1
  bind media interface ethernet 0/1
  rtp payload-type nte 101
  call-server
    ip-address ipv4:192.168.60.10
    ip-address ipv4:192.168.50.10 secondary ← Here we will add the Secondary Server
    gw-uri usmd-master-2016 expires 60
  exit call-server
  sip-ua
    authentication username usmd-master-2016 password usmd-master-2016
    registrar concurrent-registration
    offer call-hold dir-inactive
    disable-star-contact
    reason-header override
    no shutdown
  exit sip-ua
  no shutdown
exit voip-gateway
```

Scenario #2



SAMSUNG

Ubigate Voice Gateway Dual Registration

PERFORMANCE

System Viewer

System: [MINE] master.active
Status: [MASTER] Active
Alarm: CRI (0) MAJ (0) MI... 2)

CPU Memory File

Registration Status Main Monitor

A-A Primary Node
User Group
Register Type
IP Address
Fail Reason

Search Clear Reset

MAC Address

We see here that the gateways have registered to both Master and Slave

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	P...	MAC A
Master-USMD	Master-USMD	usmd	Main-2016-Master	Reg	192.168.60.11	5060	f4:d9:ft
Slave-USMD	Slave-USMD	usmd	Backup-2016-Slave	Reg	192.168.50.11	5060	f4:d9:ft

PERFORMANCE

System Viewer

System: [MINE] slave.active
Status: [SLAVE] Active
Alarm: CRI (0) MAJ (0) MI... 0)

CPU Memory File

Registration Status Main Monitor

A-A Primary Node
User Group
Register Type
IP Address
Fail Reason

Current Serving Node
User Info
Register State
User Agent Info
MAC Address

Search Clear Reset

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	MAC A
Slave-USMD	Slave-USMD	usmd	Backup-2016-Slave	Reg	192.168.50.11	5060	f4:d9:ft
Master-USMD	Master-USMD	usmd	Main-2016-Master	Reg	192.168.60.11	5060	f4:d9:ft

STATUS 2013-06-06 17:06... master.active ROUTE REG STATUS : REG, NAME : Main-2016-... Communication Ro

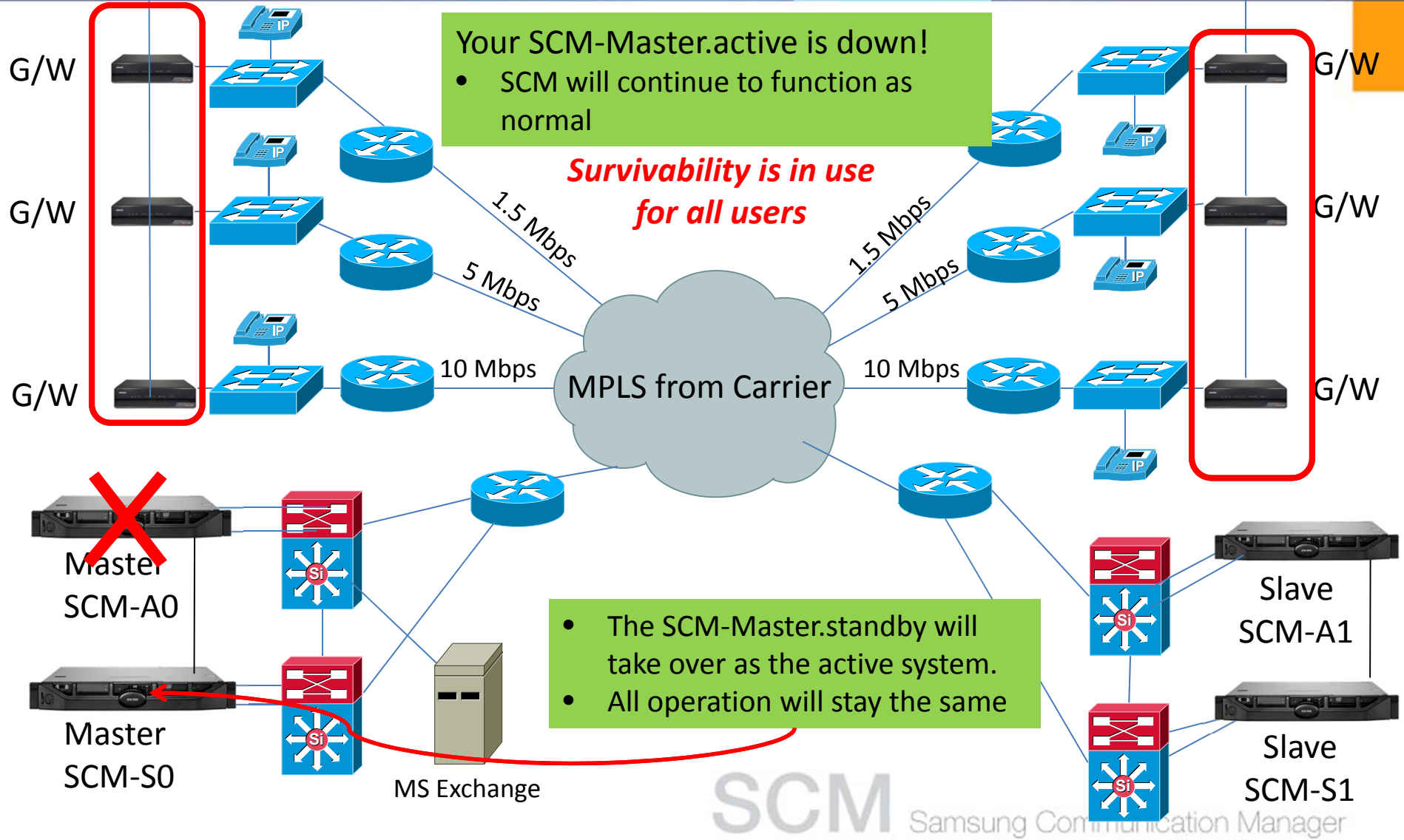
Scenario #2



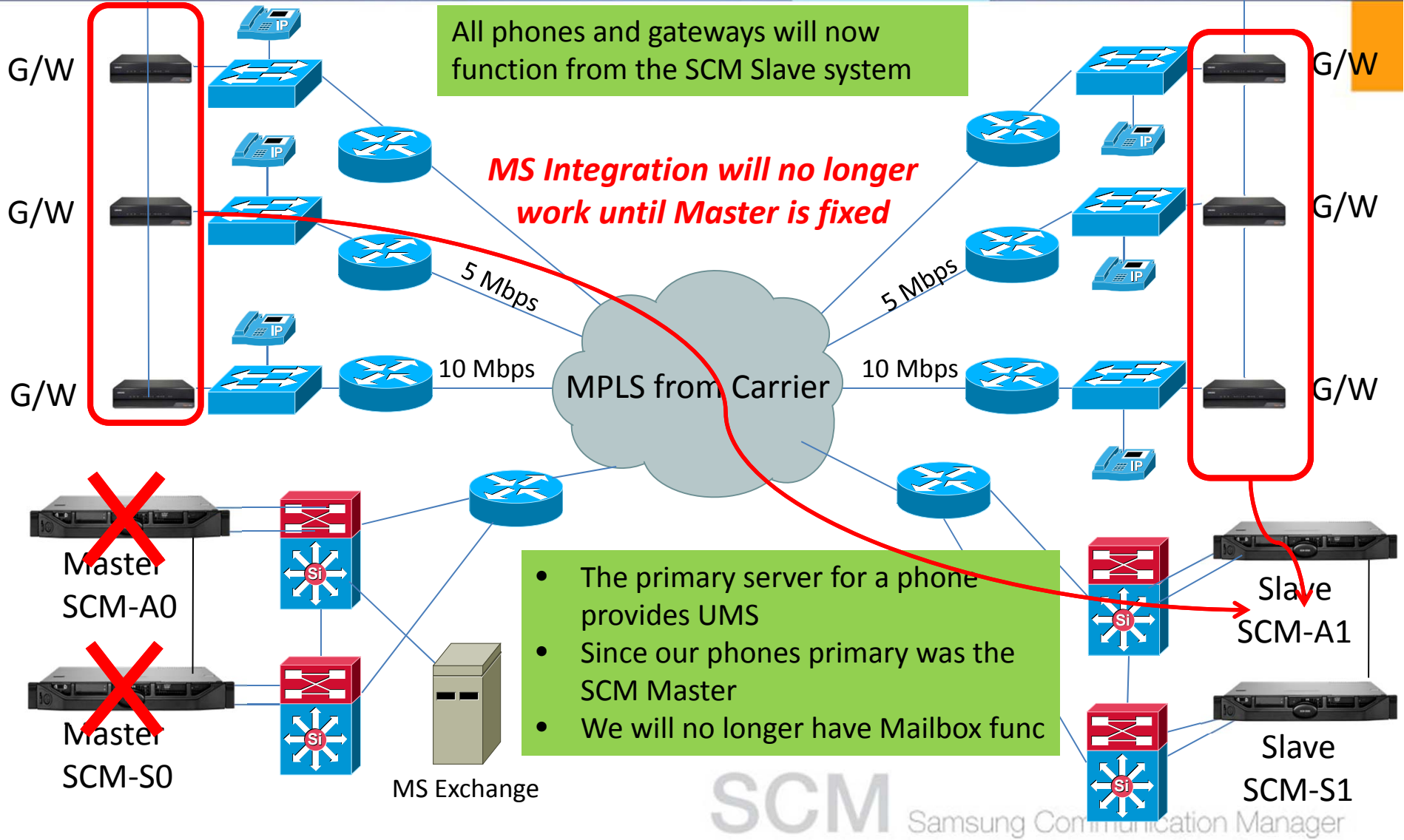
SAMSUNG

Scenario #2 *Fail Cases*

Scenario #2 Fail Case - 1



Scenario #2 Fail Case - 2

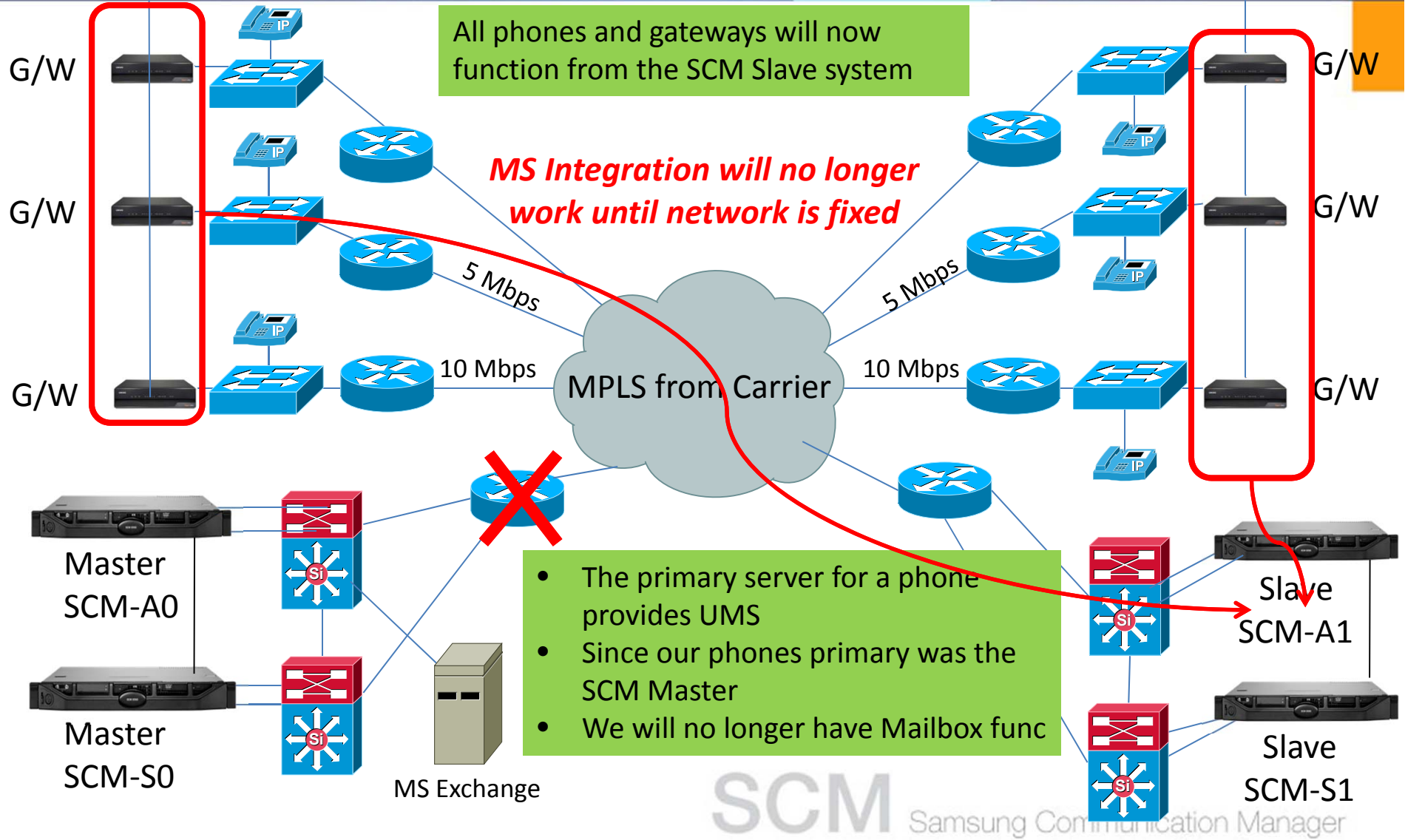


All phones and gateways will now function from the SCM Slave system

MS Integration will no longer work until Master is fixed

- The primary server for a phone provides UMS
- Since our phones primary was the SCM Master
- We will no longer have Mailbox func

Scenario #2 Fail Case - 3



Scenario #2

Fail Case – 3



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
- Call Trace
- Call Management
- Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node:

User Group:

Register Type:

IP Address:

Fail Reason:

MAC Address:

Here you can see that the phones are now registered to the Slave system

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	
Master-USMD	Slave-USMD	usmd	285100	Reg	192.168.60....	5060	f
Master-USMD	Slave-USMD	usmd	285199	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	285200	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	285299	Reg	192.168.60....	5060	C
Master-USMD	Slave-USMD	usmd	288100	Reg	192.168.50....	5060	f
Master-USMD	Slave-USMD	usmd	288101	Reg	192.168.50....	5060	f
Master-USMD	Slave-USMD	usmd	288299	Reg	192.168.50....	5060	f

Scenario #2

Fail Case – 3



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
 - Call Trace
 - Call Management
 - Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node: [Dropdown]
User Group: usmd
Register Type: Endpoint RegReceive
IP Address: [Text]
Fail Reason: [Dropdown]

User Agent Info: [Text]
MAC Address: [Text]

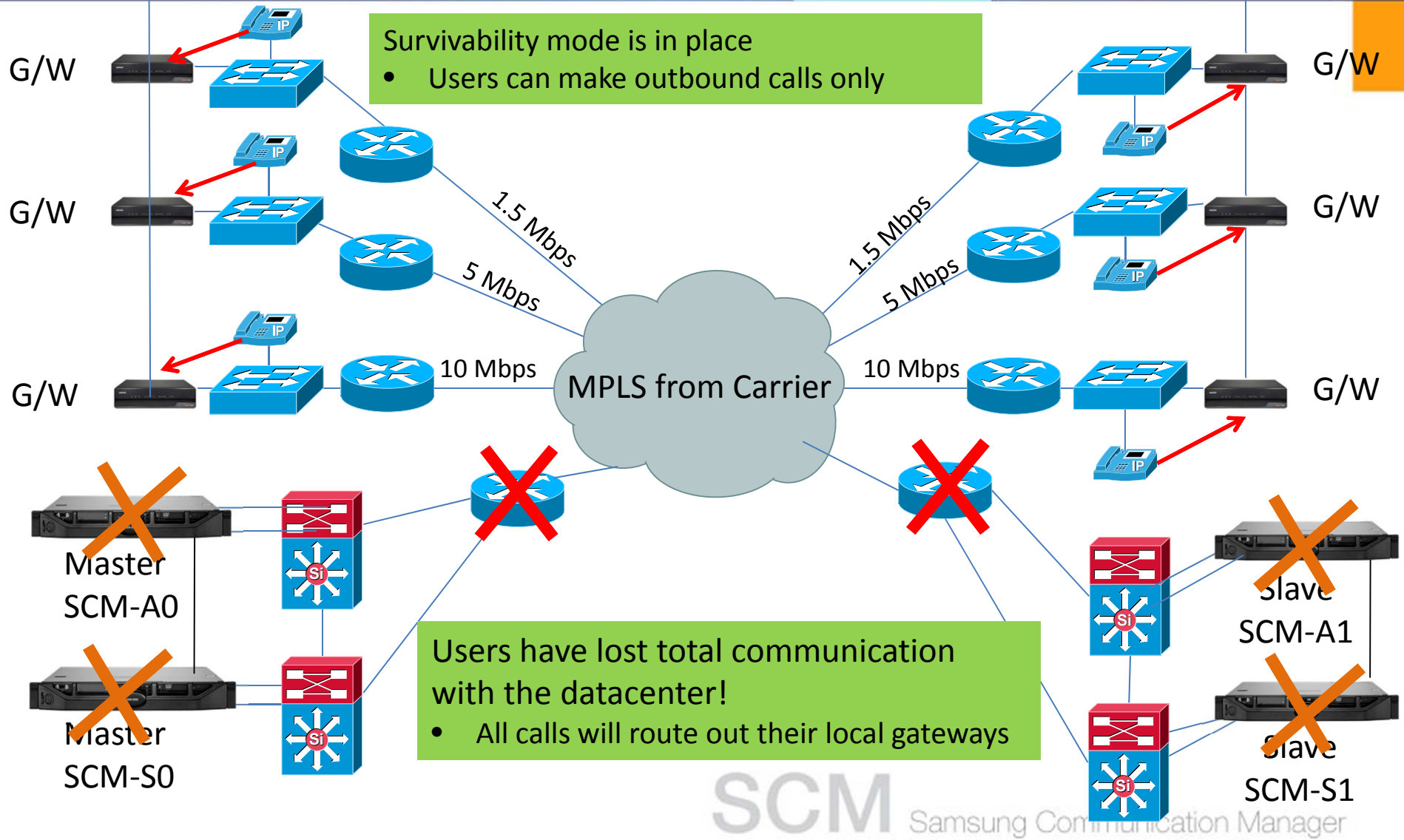
Search Clear Reset

A-A Primary Node	Current Serving Node	User Group	User Info	Register State	IP Address	Port	MAC A
Slave-USMD	Slave-USMD	usmd	Backup-2016-Slave	Reg	192.168.50.11	5060	f4:d9:ft
Master-USMD	Slave-USMD	usmd	Main-2016-Master	Reg	192.168.60.11	5060	f4:d9:ft

Detail SendReg Lock Excel Detach Close

Here you can see that the Main Gateway is now serving the Slave SCM system

Scenario #2 Fail Case – 4



Scenario #3



SAMSUNG

*Scenario #3
(w/6000 users)*

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Scenario #3



SAMSUNG

Active-Active with SBC and w/voice gateways

- Total 6000 users supported on the SCM is this scenario
- 3000 users are assigned to the Master as primary
- 3000 users are assigned to the Slave as primary
- Each secondary server will backup the primary server
- Our Master and Slave nodes are located at 2 different data centers
- All users will use SIP Trunking and have PSTN gateways for survivability
- Everything is connected through MPLS provided by the carrier

Scenario #3

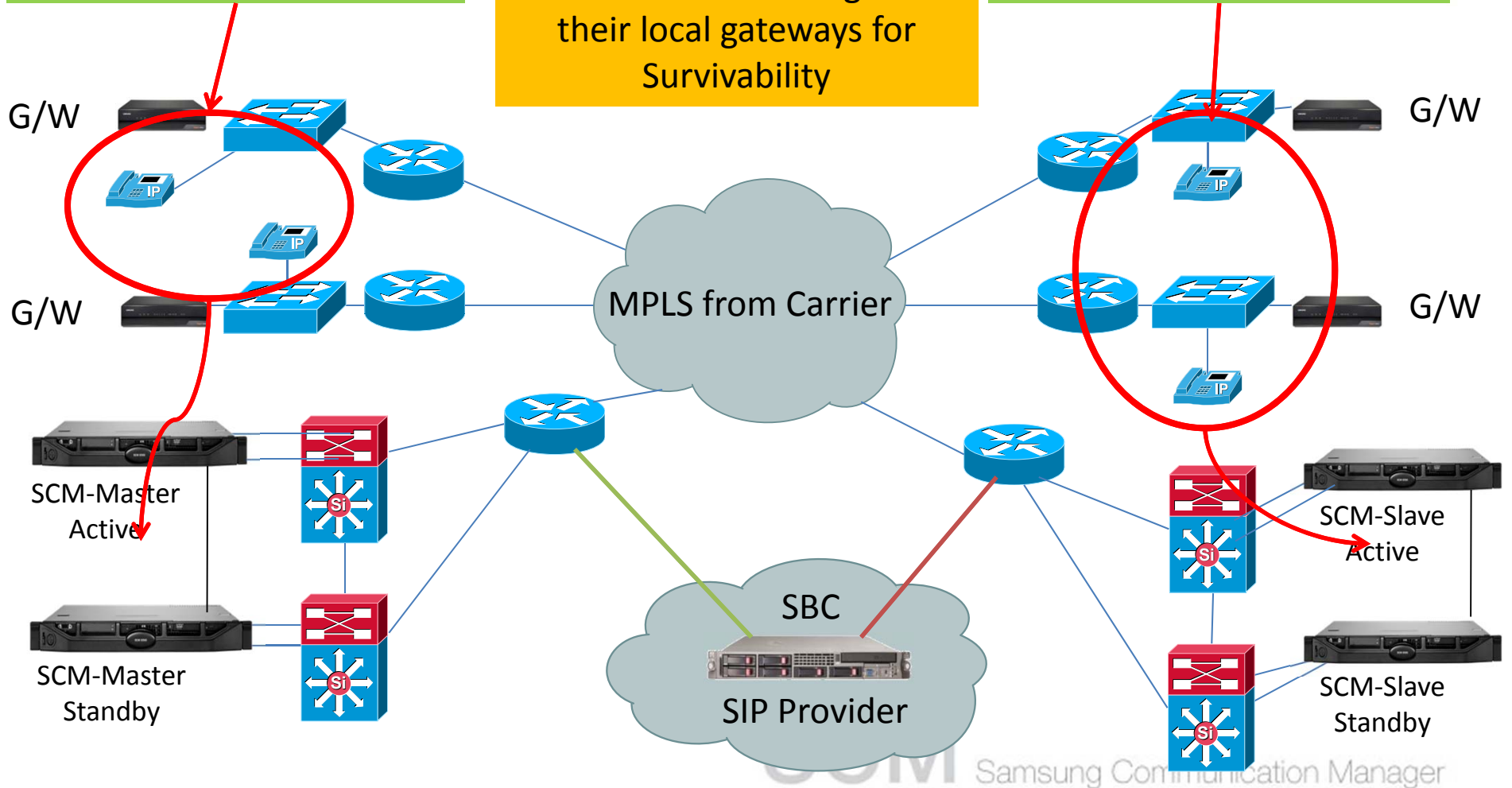


SAMSUNG

3000 Phones are registered to Master as Primary

Users will also be assigned to their local gateways for Survivability

3000 Phones are registered to Slave as Primary



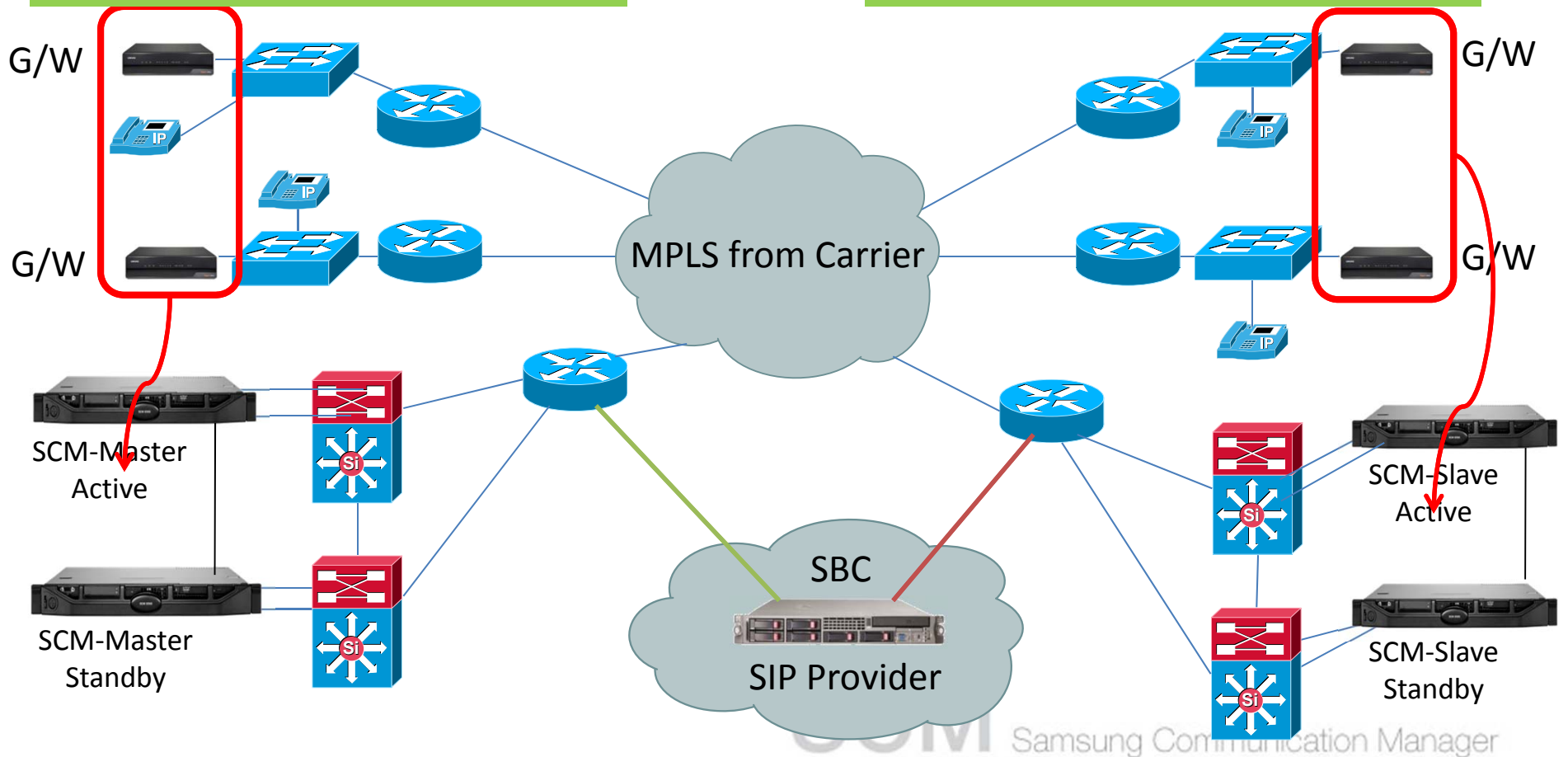
Scenario #3



SAMSUNG

These gateways are registered to Master as Primary and the Slave as secondary

These gateways are registered to Slave as Primary and the Master as secondary



Scenario #3

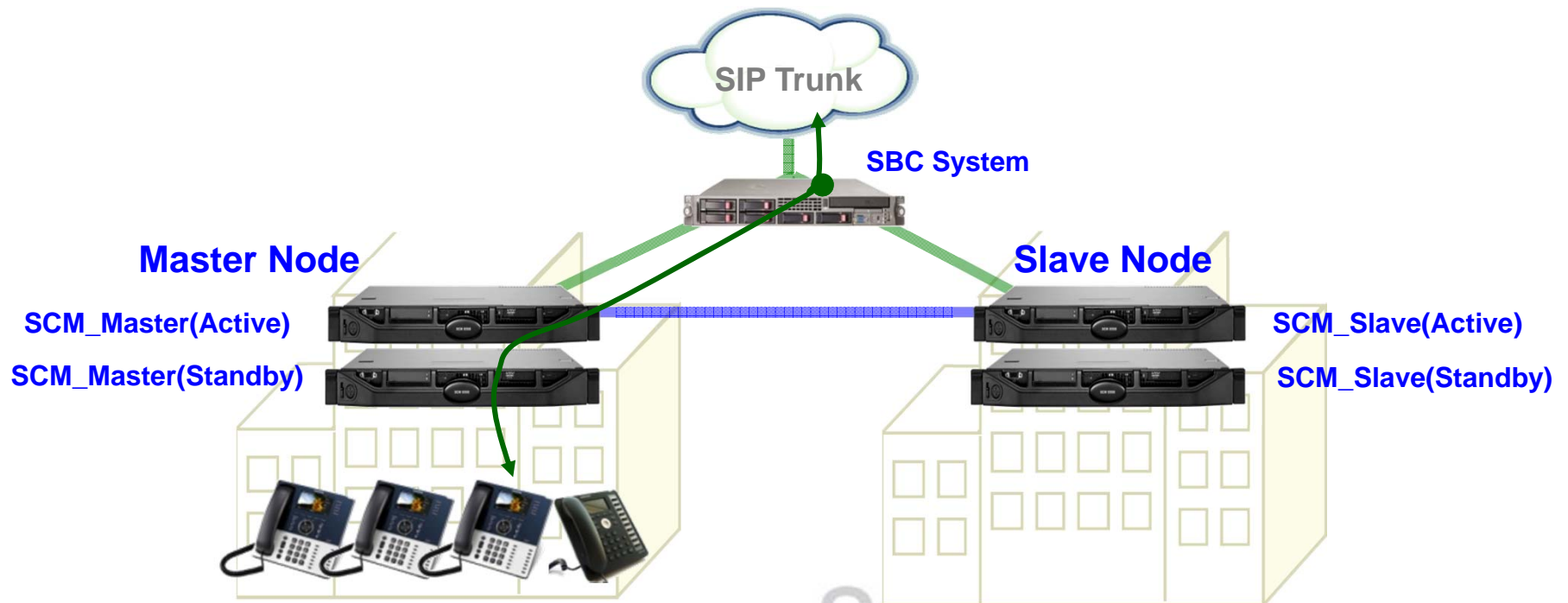
SIP Trunks Active-Active



SAMSUNG

When an SBC is used for call routing

- The SBC is be configured with Multiple Session Targets so that Primary Session Target is pointing to Master Node and Secondary Session Target is pointing to Slave Node.
- If SBC is unable to send the Calls to Master Node than it will use Secondary Session Target to send the calls to the Slave Node.



SCM Samsung Communication Manager

Scenario #3



SAMSUNG

PERFORMANCE

- Main Monitor
- Registration Status
 - Registration Status
 - Registration Summary By Kind
 - Registration Summary By Phone
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
 - Call Trace
 - Call Management
 - Call Count
- Server Resources
- System Management
- Detailed Event History

Registration Status Main Monitor

A-A Primary Node:
User Group: usmd
Register Type: Subscriber
IP Address:
Fail Reason:

Here you can see that we have phones registered to Slave as primary and phones registered to Master as primary

A-A Primary No...	Current Serving ...	User Group	User Info	Register State	IP Address	Port	MAC A
Slave-USMD	Slave-USMD	usmd	280100	Reg	192.168.50.102	5060	f4:d9:ft
Slave-USMD	Slave-USMD	usmd	280101	Reg	192.168.50.103	5060	f4:d9:ft
Master-USMD	Master-USMD	usmd	285100	Reg	192.168.60.102	5060	f4:d9:ft
Master-USMD	Master-USMD	usmd	285199	Reg	192.168.60.103	5060	00:16:3
Master-USMD	Master-USMD	usmd	285200	Reg	192.168.60.103	5060	00:16:3
Master-USMD	Master-USMD	usmd	285299	Reg	192.168.60.103	5060	00:16:3
Master-USMD	Master-USMD	usmd	288101	Reg	192.168.50.102	5060	f4:d9:ft

Scenario #3



SAMSUNG

Scenario #3 *Fail Cases*

Scenario #3 Fail Case - 1

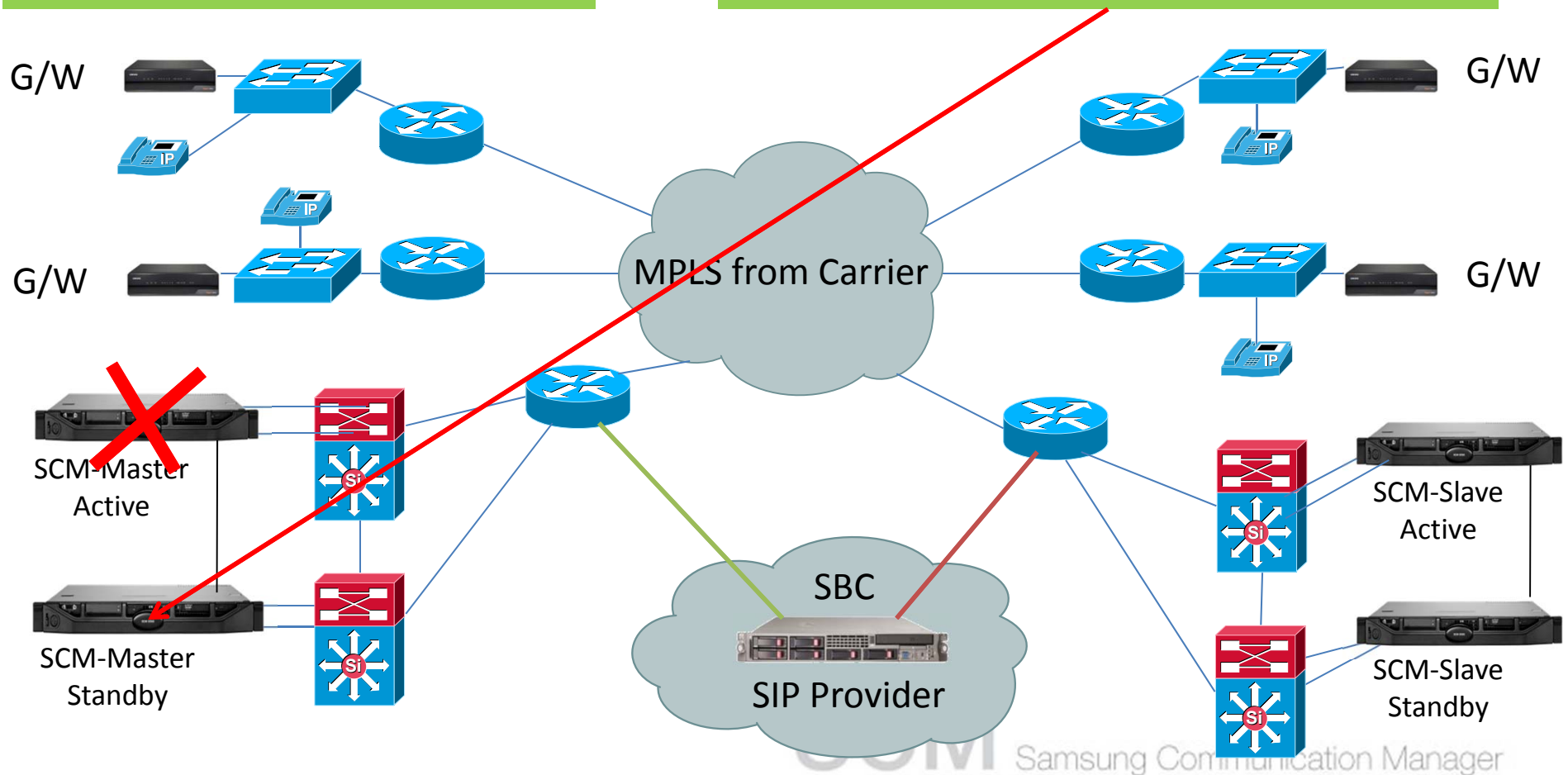


SAMSUNG

Your SCM-Master.active is down!

- SCM will continue to function as normal

- The SCM-Master.standby will take over as the active system.
- All operation will stay the same



Scenario #3 Fail Case - 2

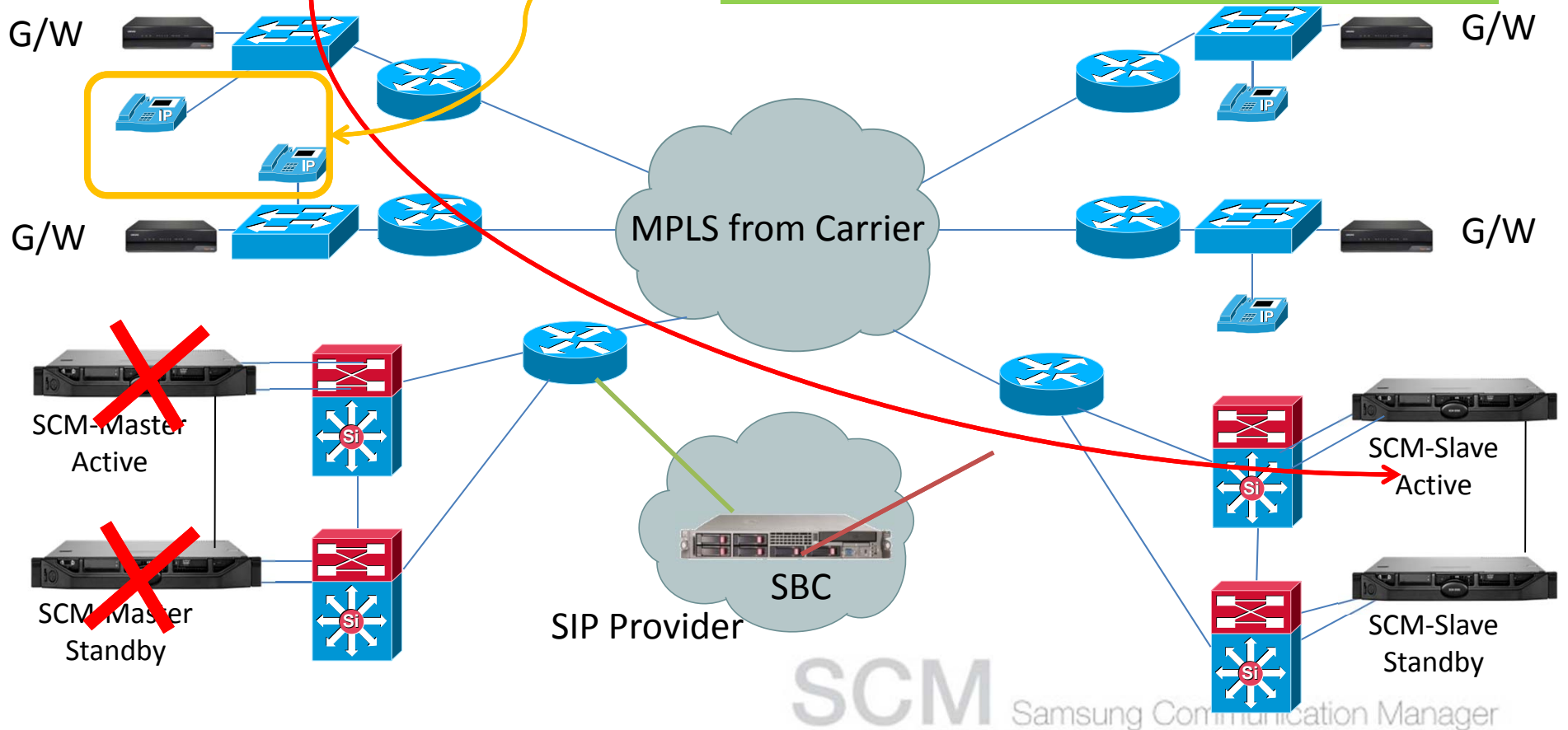


SAMSUNG

SCM Master is down!

- All phones and gateways will now function from the SCM Slave system

- Users assigned to the Master will no longer have Mailbox Function
- Users assigned to the Slave as primary will still have Mailbox Function



Scenario #3 Fail Case - 3

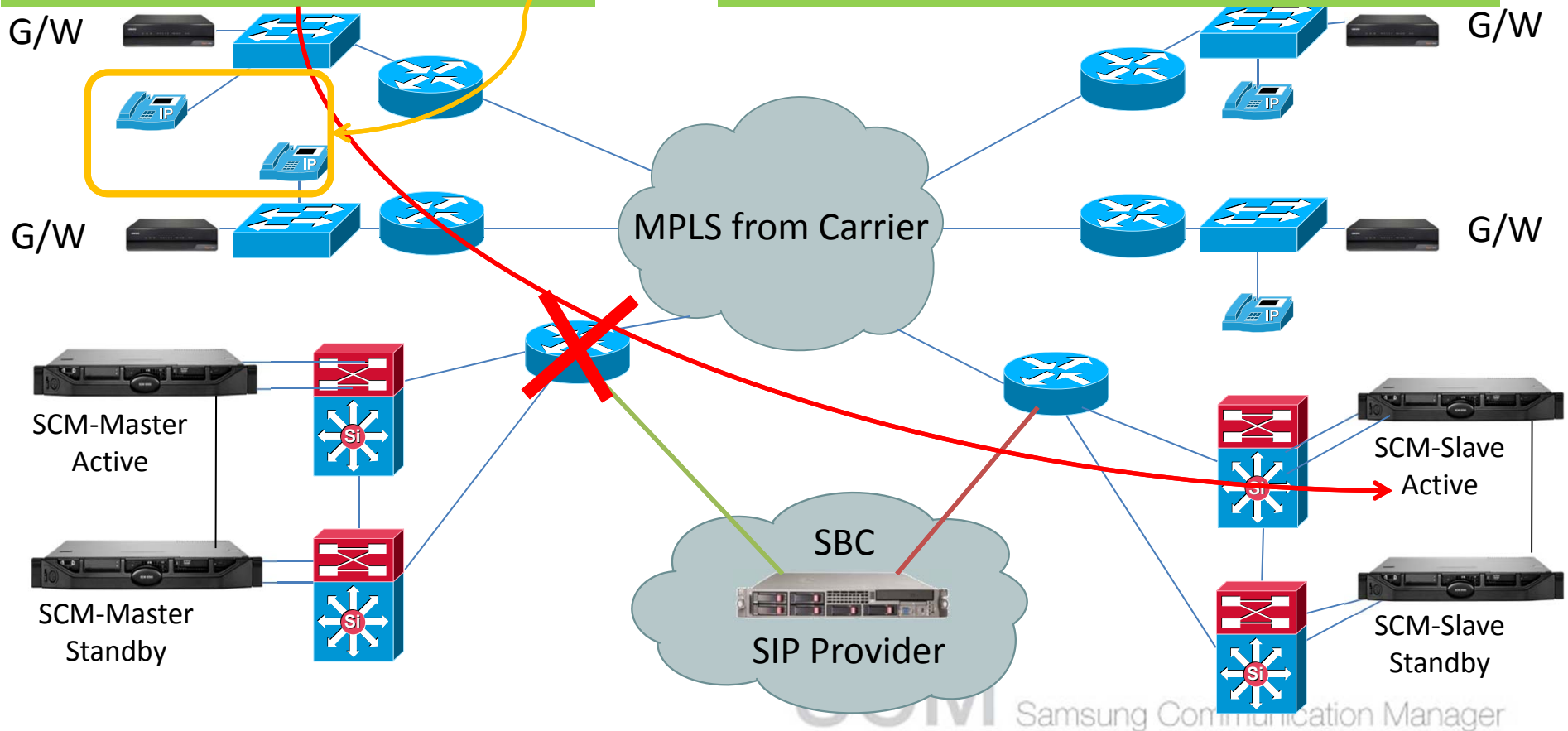


SAMSUNG

Data center network is down!

- All phones and gateways will now function from the SCM Slave system

- Users assigned to the Master will no longer have Mailbox Function
- Users assigned to the Slave as primary will still have Mailbox Function



Scenario #3 Fail Case - 4

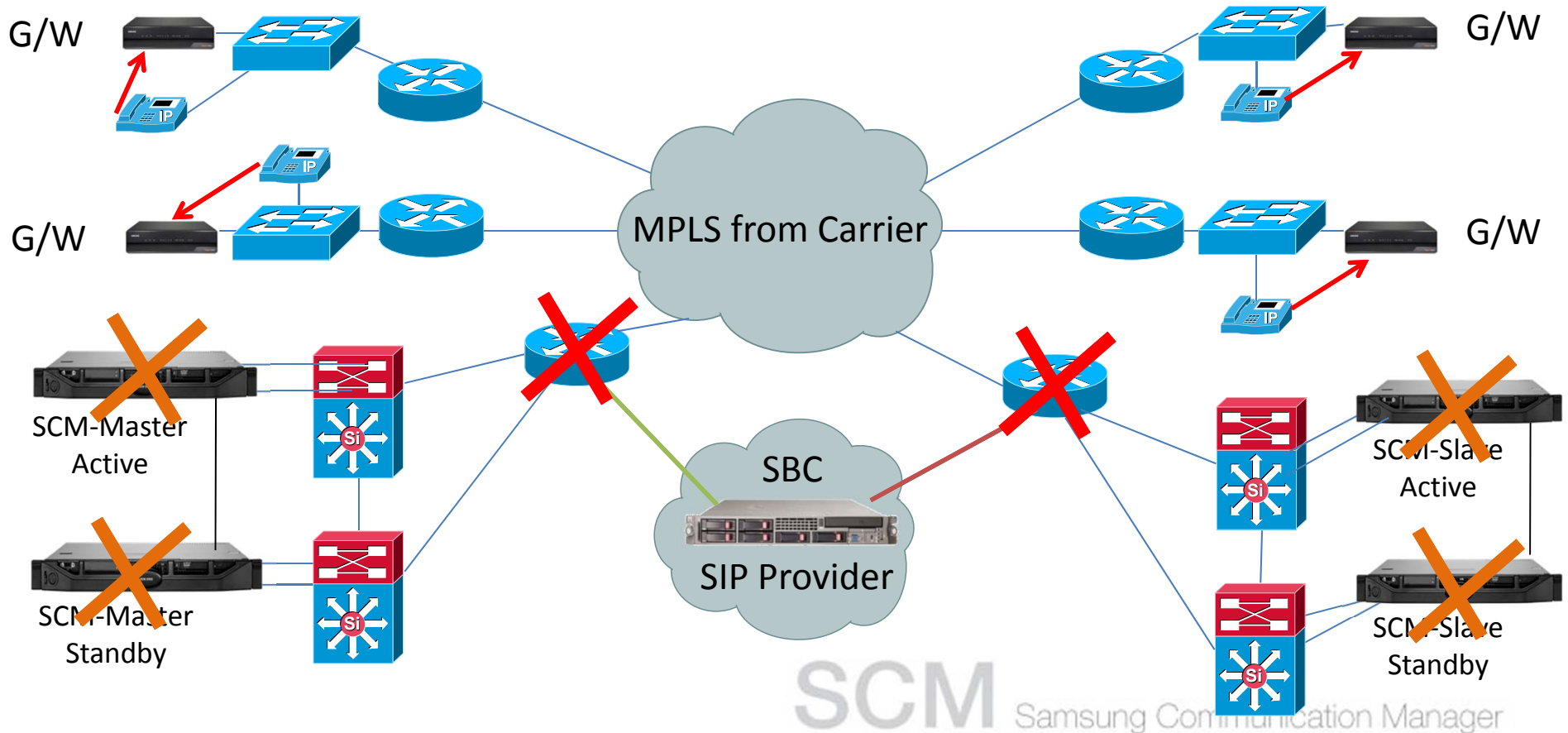


SAMSUNG

Both data centers network is down!

- Users assigned to gateways will now function in Survivability mode

- No phone system = no application servers!
- Outbound calls only!



SCM Samsung Communication Manager



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Active-Active Setup

SCM Samsung Communication Manager

Method 1



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Method 1 (Beginning with A/A)

Method 1 Setup



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Method 1 Setup Configuration

- **Master-Node 0 (Component) IP : 192.168.60.10**
- **Slave-Node 1 (Component) IP : 192.168.50.10**
- **Master Node Name : Dallas**
- **Slave Node Name : Irving**
- **User Group profile created at Administrator of Master**
- **SBC sip routing setup for Dual registration setup**
- **Gateway Dual registration setup**
- **PSTN Routing setup on Master for Dual registration setup**
- **Users will be automatically setup for Dual registration**
- **Master as Primary and Slave as Secondary**

Method 1 “Part 1”



SAMSUNG

Login to the Administrator for Master Node

- URL = 192.168.60.10/scm.jnlp

Level	User Name	Password
Administrator	admin	samsung*#
Administrator	root	samsung*#

SCM Administrator

admin OK

***** Cancel

English ▼

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Method 1



SAMSUNG

- Configure the system information
- Select and configure the node configuration

[DIALOG] WIZARD

Configuring System Information (1/6)

Country: USA/Canada
System Language: English-America
VM/AA Mode: Advanced VM/AA
Time Zone: GMT -06:00 America/Chicago
System IP Address: 192.168.60.10
System Public IP Address:

Node Configuration

Master Node: Node0
Node 0's IP: 192.168.60.10
Node 1's IP: 192.168.50.10
Force Write Access to DB: Disable

My Node: Node0
Node 0's Name: Dallas-Master-Node
Node 1's Name: Irving-Slave-Node

Node Configuration

Master Node: Node0
Node 0's IP: 192.168.60.10
Node 1's IP: 192.168.50.10
Force Write Access to DB: Disable

DO NOT CHANGE

Method 1



SAMSUNG

- Important Notes

[DIALOG] WIZARD

Configuring System Information (1/6)

Country: USA/Canada
System Language: English-America
VM/AA Mode: Advanced VM/AA
Time Zone: GMT -06:00 America/Chicago
System IP Address: 192.168.60.10
System Public IP Address: [Empty]

Node Configuration:

Master Node: Node0
My Node: Node0
Node 0's IP: 192.168.60.10
Node 1's IP: 192.168.50.10
Node 0's Name: Dallas-Master-Node
Node 1's Name: Irving-Slave-Node
Force Write Access to DB: Disable

License Key

Node0 SCM User [Empty]
Node0 Embedded Application [Empty]

Input the name of the node 0

Reset Next

This window only runs the first time you launch the administrator

If [Master Node] is not the same as [My Node] then this system is for slave and the next pages will be skipped

Method 1



SAMSUNG

- Create the Global User Group
- UMS & Conference Server for Master Node (Default in place)
- UMS & Conference Server for Slave Node (Default in place)

[DIALOG] WIZARD

Configuring User Group (2/6) Reset Previous Next

User Group Name
Domain Name
Location Name
Service Group Name

Access Code (Common)

Operator Call **Outbound Call**
Voice Mail Call **Conference Call**

Access Code (Node0)

UMS Server Number **Conference Server Number**
Conference Start Channel **Conference End Channel**

Access Code (Node1)

UMS Server Number **Conference Server Number**
Conference Start Channel **Conference End Channel**

Operator Group

Group Number
Member Number

It is an extension number of Subscriber belonging to a Operator Group.

Method 1



SAMSUNG

- You can choose to create all users assigned to the Master as primary
- You can also choose to have users assigned to the Slave as primary

Phone Type	Count	Start Number	Make Mailbox
Desktop Phone (90)	10	288200	<input checked="" type="checkbox"/>
Soft Phone (10)			<input type="checkbox"/>
Mobile Soft Phone (100)			<input type="checkbox"/>
3rd Party SIP Phone (50)			<input type="checkbox"/>
Analog FXS Phone (50)			<input type="checkbox"/>

Method 1 "Part 2"



SAMSUNG

Login to the Administrator for Slave Node

- URL = 192.168.50.10/scm.jnlp

Level	User Name	Password
Administrator	admin	samsung*#
Administrator	root	samsung*#

SCM Administrator

admin OK

***** Cancel

English ▼

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Method 1



SAMSUNG

- Select and configure the node configuration

[DIALOG] WIZARD

Configuring System Information (1/6)

Country: USA/Canada
System Language: English-America
VM/AA Mode: Advanced VM/AA
Time Zone: GMT -06:00 America/Chicago
System IP Address: 192.168.50.10
System Public IP Address:

Node Configuration

Master Node: Node0
Node 0's IP: 192.168.60.10
Node 1's IP: 192.168.50.10
Force Write Access to DB: Disable

My Node: Node1
Node 0's Name: Dallas-Master-Node
Node 1's Name: Irving-Slave-Node

License Key

Node0 SCM User:
Embedded Application:

Submit

Reset Next

Input the name of the node 1

You can see that this information is grayed out

Because the [Master Node] is not the same as [My Node] then this system is for slave and the next pages will be skipped

Method 1



SAMSUNG

[DIALOG] WIZARD

Configuring System Information (1/6) Reset Next

Country USA/Canada
System Language English-America
VM/AA Mode Advanced VM/AA
Time Zone GMT -06:00 America/Chicago
System IP Address 192.168.50.10
System Public IP Address

Node Configuration

Master Node	Node0	My Node	Node1
Node 0's IP	192.168.60.10	Node 0's Name	Dallas-Master-Node
Node 1's IP	192.168.50.10	Node 1's Name	Irving-Slave-Node
Force Write Access to DB	Disable		

License Key

Node0	SCM User	
	Embedded Application	

Complete Submit

Input the name of the node 1

After hitting Next Next

[SCM Express] The job is finished(Slave Node) OK

Method 1



SAMSUNG

- Systems are syncing “Please **WAIT** until done before going forward!”

The screenshots show the SCM Administrator interface with the following data:

Left Screenshot: Dallas-Master-Node

- Master: [MASTER] Dallas-Master-Node (master.active)
- Slave: [SLAVE] Irving-Slave-Node (slave.active)
- System Viewer: System: [MINE] master.active, Status: [Master Sync]Active, Alarm: CRI (0) MAJ (0) MI... 0)

Right Screenshot: Irving-Slave-Node

- Master: [SLAVE] Irving-Slave-Node (slave.active)
- Slave: [MASTER] Dallas-Master-Node (master.active)
- System Viewer: System: slave.active, Status: [Slave Sync]Active, Alarm: CRI (0) MAJ (0) MI... 0)

Level	Type	Date/Time	System
STATUS	STATUS	2013-06-11 11:53...	slave
STATUS	STATUS	2013-06-11 11:53...	
STATUS	STATUS	2013-06-11 11:47	

Method 1



SAMSUNG

How to know when its done syncing?

Look for this on both Master and Slave side

The image shows two side-by-side screenshots of the SCM Administrator interface. The left screenshot is for the Master node (Dallas-Master-Node) and the right is for the Slave node (Irving-Slave-Node). Both show an 'EVENT VIEWER' window with a table of events. A red box highlights the text 'Look for this on both Master and Slave side' with two red arrows pointing to the 'A/S DATA SYNCHRONIZATION COMPLETE' event in both event logs.

System Name	Description
master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/S DATA SYNCHRONIZATION COMPLETE
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/S DATA SYNCHRONIZATION START
master.active	HA MODE CHANGE [HA_ACT_ALONE]->[HA_ACTIVE]
master.standby	master.standby is UP
master.active	HA MODE CHANGE [HA_ACTIVE]->[HA_ACT_ALONE]
master.standby	master.standby is Down
master.standby	A/A NODE CONFIGURATION CHANGED
master.active	A/A DATA(ALL) SYNCHRONIZATION COMPLETE
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/A DATA(ALL) SYNCHRONIZATION START
master.active	SUBSCRIBER REG TIMEOUT : NAME[288201]
master.active	A/A NODE CONFIGURATION CHANGED

System Name	Description
slave.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
slave.active	A/S DATA SYNCHRONIZATION COMPLETE
slave.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
slave.active	A/S DATA SYNCHRONIZATION START
slave.active	HA MODE CHANGE [HA_ACT_ALONE]->[HA_ACTIVE]
slave.standby	slave.standby is UP
slave.active	HA MODE CHANGE [HA_ACTIVE]->[HA_ACT_ALONE]
slave.standby	slave.standby is Down
slave.standby	A/A NODE CONFIGURATION CHANGED
slave.active	A/A DATA(ALL) SYNCHRONIZATION COMPLETE
slave.standby	A/A NODE CONFIGURATION CHANGED
slave.active	A/A DATA(ALL) SYNCHRONIZATION COMPLETE
slave.active	[PROFILE] Profile Creation END : Available for database m...
slave.active	[PROFILE] Profile Creation START
slave.active	A/A NODE CONFIGURATION CHANGED

Method 1



SAMSUNG

All systems are a go!

Main Monitor

[MASTER] Dallas-Master-Node

master.standby master.active

[SLAVE] Irving-Slave-Node

slave.standby slave.active

OAMS	ISOL	HMS	MPS
0 / 21	0 / 12	0 /	0 / 2
BCCS	SMS	MP	CDSS
0 / 3	0 / 7	0 / 2	0 / 1
SSVCS	AAMS	APPS	
0 / 4	0 / 6	0 / 14	

System Viewer

System: [MINE] master.active
Status: [MASTER] Active
Alarm: CRI (0) MAJ (0) MI... (0)

CPU Memory File

Event Viewer

System Name	Description	Category	ID
master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/* .sql]	Communication	DB Backup
master.active	A/S DATA SYNCHRONIZATION COMPLETE	Communication	Data Sync
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/* .sql]	Communication	DB Backup

Message The job is finished successfully [2013-06-11 11:41:00] 2013-06-11 12:09:22

SCM Samsung Communication Manager

Please note



SAMSUNG

*Changes or adds can only be made from the
Master-Node*

Method 1 "Part 3"



SAMSUNG

- Setting up the SBC sip connection

Enable Dual Registration here

Our Primary is the Dallas-Node
Our Secondary is the Irving0Node

[DIALOG] Route - Create

Route Type	User Group	User Group	united.com
Route Name	lab-sbc-112	Location	united.com-LOC1
Access Number		Register Type	None
Proxy Server	172.30.112.1	Port	5060
User Name	sbc112	Domain Name	sbc112
Authentication User Name	sbc112	Authentication Password	sbc112
DNS		Outbound CLI Prefix	sbc112
DTS Mode		A-A Primary Node	Dallas-Master-Node
A-A Dual Registration	Enable		

System Viewer

System: [MINE] master.active
Status: [MASTER] Active
Alarm: CRI (0) MAJ (0) MI... 0)

CPU Memory File

Event Viewer

Date/Time	System Name	Description	Category	ID
2013-06-11 12:00...	master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]	Communication	DB Backup
2013-06-11 12:00...	master.active	A/S DATA SYNCHRONIZATION COMPLETE	Communication	Data Sync
2013-06-11 11:57...	master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]	Communication	DB Backup
2013-06-11 11:57...	master.active	A/S DATA SYNCHRONIZATION START	Communication	Data Sync

Method 1 "Users"



SAMSUNG

Users created here

Phone Type	Count	Start Number	Make Mailbox
Desktop Phone (90)	10	288200	<input checked="" type="checkbox"/>
Soft Phone (10)			<input type="checkbox"/>
Mobile Soft Phone (100)			<input type="checkbox"/>
3rd Party SIP Phone (50)			<input type="checkbox"/>
Analog FXS Phone (50)			<input type="checkbox"/>

Are automatically assigned to Master as primary w/dual registration set to Enable

Authentication Password	****	Service Group	united.com-SG1
IP Address		Extension Number	288200
Profile Login ID	united.com288200	Extension Name	288200
Profile Login Passcode	****	PIN Number	****
Mobile Phone Number		Phone Verification	None
Protocol	UDP	MAC Address	
TLS Connection	Normal	Private IP Address	
A-A Primary Node	Dallas-Master-Node	Phone Type	Samsung-Desktop-Phone
		Language	English
		Use Mobile Phone Number	None
		Media	RTP
		Ping Ring Type	None
		A-A Dual Registration	Enable

Method 1 "Users"



SAMSUNG

When creating a user after setup you can decide what Node to make primary and can Enable dual registration

[DIALOG] Single Phone User - Create

User Group	united.com	Service Group	united.com-SG1
Location	united.com-LOC1	Extension Number	7500
Application User ID	7500@united.com	Extension Name	Eddie
Application Password	samsung	PIN Number	0000
Authentication User ID	7500	Phone Verification	None
Authentication Password	0000	MAC Address	
IP Address		Private IP Address	
Profile Login ID	7500	Phone Type	Samsung-Desktop-Phone
Profile Login Passcode	0000	Language	English
Mobile Phone Number		Use Mobile Phone Number	
Protocol		Media	
TLS Connection	Normal	Ping Ring Type	Audio+Visual
A-A Primary Node	Dallas-Master-Node	A-A Dual Registration	Enable
Make Mailbox	Irving-Slave-Node		

Apply Close

Method 1 “Part 4”



SAMSUNG

- You must setup Dual Registration for each gateway like below
- Make sure to add the secondary server IP

```
voip-gateway
  host domain-name samsung.com
  bind control interface ethernet 0/1
  bind media interface ethernet 0/1
  rtp payload-type nte 101
  call-server
    ip-address ipv4:192.168.60.10
    ip-address ipv4:192.168.50.10 secondary ← Here we will add the Secondary Server
    gw-uri usmd-master-2016 expires 60
  exit call-server
  sip-ua
    authentication username usmd-master-2016 password usmd-master-2016
    registrar concurrent-registration
    offer call-hold dir-inactive
    disable-star-contact
    reason-header override
    no shutdown
  exit sip-ua
  no shutdown
exit voip-gateway
```

Method 1 "PSTN Route"



SAMSUNG

- You must setup Dual Registration for the PSTN route
- And select which node will be its primary

[DIALOG] Route - Create

Route Type	User Group	User Group	united.com
Route Name	PSTN-united-master	Location	united.com-LOC1
Access Number		Register Type	Receive REGISTER
Proxy Server	192.168.60.11	Port	5060
User Name	united-master2016	Domain Name	
Authentication User Name	united-master2016	Authentication Password	united-master2016
DNS		Outbound CLI Prefix	
DTS Mode		A-A Primary Node	Dallas-Master-Node
A-A Dual Registration	Enable		Irving-Slave-Node

Event Viewer

Level	Type	Date/Time	System Name	Description
Minor	ALARM	2013-06-11 13:44...	master.active	[GW=united-master2016] DISCONNECTION
Normal	ALARM	2000-01-08 22:36...	united-master2016	T1/E1 Loss of Signal 0/0/0 CLEAR
Critical	ALARM	2000-01-08 22:36...	united-master2016	T1/E1 Loss of Signal 0/0/0 RAISE
	STATUS	2013-06-11 13:34...	master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]

Method 1 "PSTN Route"



SAMSUNG

If done correctly, you should see that your gateway is Registered on both Master and Slave

A-A Prima...	Current S...	User Group	User Info	Register State	IP Address	Port	MAC Address	Re
Dallas-Mas...	Dallas-Mas...	united.com	PSTN-united-...	Reg	192.168.60...	5060	f4:d9:fb:24:5...	Endp

Method 2



SAMSUNG

Method 2 (Converting to A/A)

Please Note



SAMSUNG

Converting to Active-Active

- *When you convert to A/A, all users and routes will have the Master as Primary*
- *The newly added Slave will act as the secondary server for all users and routes*
- *You will need to setup dual registration for any gateways on the network*
- *You will need to reassign the Announcement language*

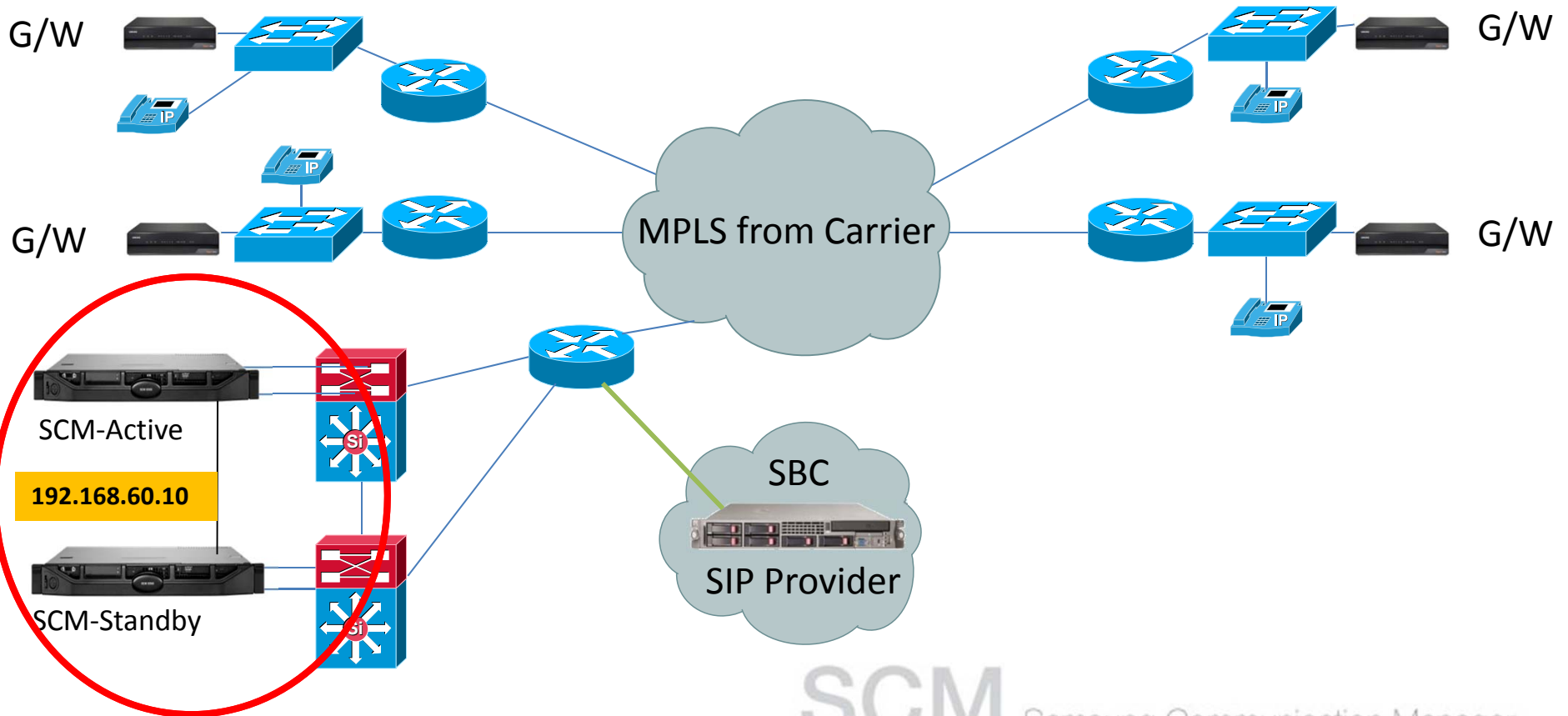
Method 2 Setup



SAMSUNG

Current setup is 2 servers setup with High Availability

All users and gateways are assigned to the current SCM

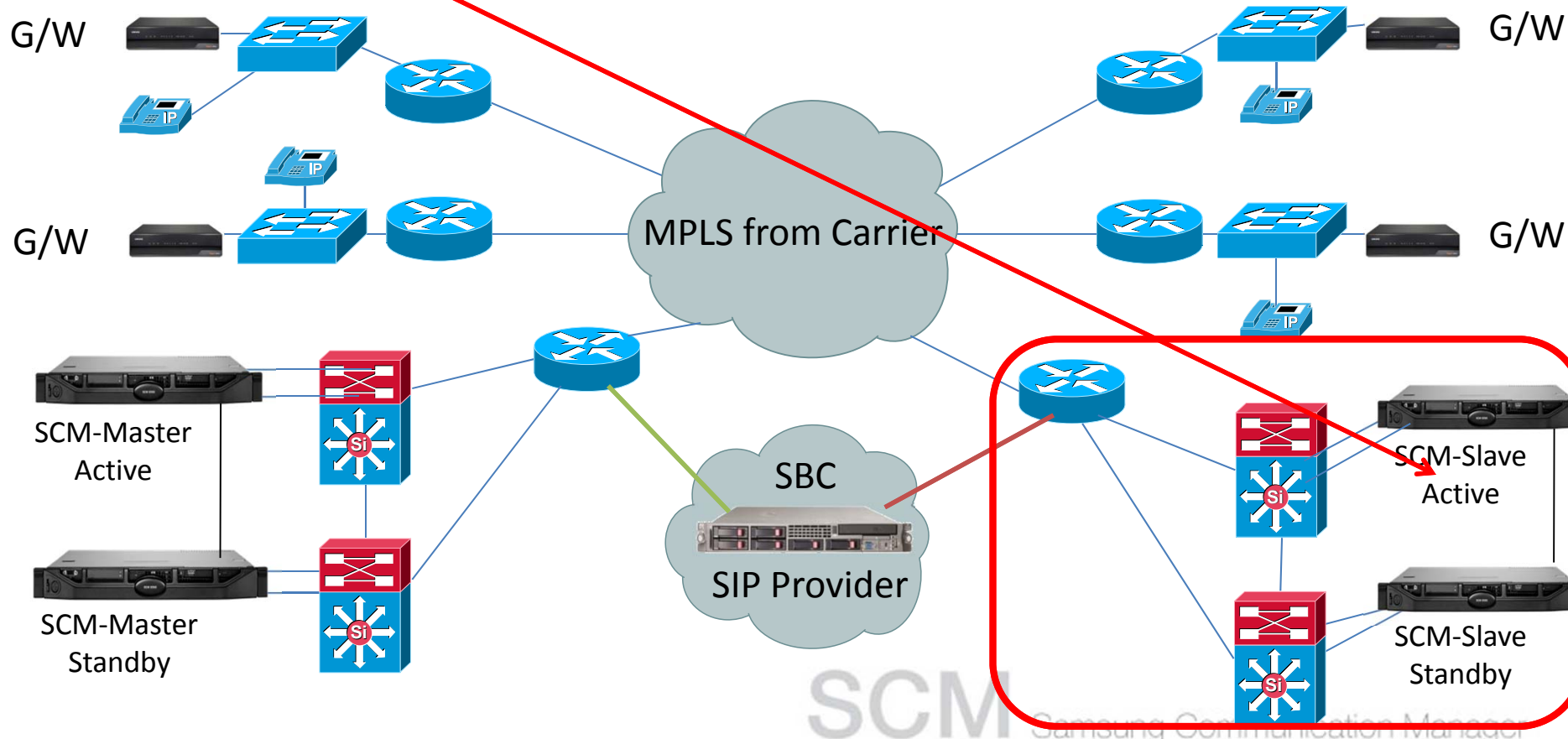


Method 2 Setup



SAMSUNG

Future plan is to add 2 servers for Active-Active feature



Method 2 Setup



SAMSUNG

Method 2 Setup Configuration

- **Master-Node 0 (Component) IP : 192.168.60.10**
- **Slave-Node 1 (Component) IP : 192.168.50.10**
- **Master Node Name : Dallas**
- **Slave Node Name : Irving**

Method 2 “Part 1”



SAMSUNG

Login to the Administrator for Master Node

- URL = 192.168.60.10/scm.jnlp

Level	User Name	Password
Administrator	admin	samsung*#
Administrator	root	samsung*#

SCM Administrator

admin OK

***** Cancel

English ▼

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Method 2



SAMSUNG

Configuration → Active/Active Redundancy → Node Configuration

When setting up Master be sure to select [My Node] as Node 0

Enter the correct Component IP for each SCM system
Name your Node's here

Field	Value
Master Node	Node 0
My Node	Node 0
Node 0's IP	192.168.60.10
Node 1's IP	192.168.50.10
Force Write Access to DB	Disable
Node 0's Name	Dallas-Master-Node
Node 1's Name	Irving-Slave-Node

Method 2 “Part 2”



SAMSUNG

Login to the Administrator for Slave Node

- URL = 192.168.50.10/scm.jnlp

Level	User Name	Password
Administrator	admin	samsung*#
Administrator	root	samsung*#

SCM Administrator

admin OK

***** Cancel

English ▼

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Method 2



SAMSUNG

- Select and configure the node configuration

[DIALOG] WIZARD

Configuring System Information (1/6)

Country: USA/Canada
System Language: English-America
VM/AA Mode: Advanced VM/AA
Time Zone: GMT -06:00 America/Chicago
System IP Address: 192.168.50.10
System Public IP Address:

Node Configuration

Master Node: Node0
Node 0's IP: 192.168.60.10
Node 1's IP: 192.168.50.10
Force Write Access to DB: Disable

My Node: Node1
Node 0's Name: Dallas-Master-Node
Node 1's Name: Irving-Slave-Node

License Key

Node0 SCM User:
Embedded Application:

Submit

Reset Next

Input the name of the node 1

You can see that this information is grayed out

Because the [Master Node] is not the same as [My Node] then this system is for slave and the next pages will be skipped

Method 2



SAMSUNG

[DIALOG] WIZARD

Configuring System Information (1/6) Reset Next

Country USA/Canada
System Language English-America
VM/AA Mode Advanced VM/AA
Time Zone GMT -06:00 America/Chicago
System IP Address 192.168.50.10
System Public IP Address

Node Configuration

Master Node	Node0	My Node	Node1
Node 0's IP	192.168.60.10	Node 0's Name	Dallas-Master-Node
Node 1's IP	192.168.50.10	Node 1's Name	Irving-Slave-Node
Force Write Access to DB	Disable		

License Key

Node0	SCM User	
	Embedded Application	

Complete Submit

Input the name of the node 1

After hitting Next Next

[SCM Express] The job is finished(Slave Node) OK

Method 2



SAMSUNG

- Systems are syncing “Please **WAIT** until done before going forward!”

The screenshots show the SCM Administrator interface with the following data:

Left Screenshot: Dallas-Master-Node

- Master: Dallas-Master-Node (master.active)
- Slave: Irving-Slave-Node (slave.active)
- System Viewer: System: [MINE] master.active, Status: [Master Sync]Active, Alarm: CRI (0) MAJ (0) MI... 0)

Right Screenshot: Irving-Slave-Node

- Master: Irving-Slave-Node (slave.active)
- Slave: Dallas-Master-Node (master.active)
- System Viewer: System: slave.active, Status: [Slave Sync]Active, Alarm: CRI (0) MAJ (0) MI... 0)

Method 2



SAMSUNG

How to know when its done syncing?

Look for this on both Master and Slave side

The Event Viewer on the Master side shows the following events:

System Name	Description
master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/S DATA SYNCHRONIZATION COMPLETE
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/S DATA SYNCHRONIZATION START
master.active	HA MODE CHANGE [HA_ACT_ALONE]->[HA_ACTIVE]
master.standby	master.standby is UP
master.active	HA MODE CHANGE [HA_ACTIVE]->[HA_ACT_ALONE]
master.standby	master.standby is Down
master.standby	A/A NODE CONFIGURATION CHANGED
master.active	A/A DATA(ALL) SYNCHRONIZATION COMPLETE
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
master.active	A/A DATA(ALL) SYNCHRONIZATION START
master.active	SUBSCRIBER REG TIMEOUT : NAME[288201]
master.active	A/A NODE CONFIGURATION CHANGED

The Event Viewer on the Slave side shows the following events:

System Name	Description
slave.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
slave.active	A/S DATA SYNCHRONIZATION COMPLETE
slave.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
slave.active	A/S DATA SYNCHRONIZATION START
slave.active	HA MODE CHANGE [HA_ACT_ALONE]->[HA_ACTIVE]
slave.standby	slave.standby is UP
slave.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.sql]
slave.active	HA MODE CHANGE [HA_ACTIVE]->[HA_ACT_ALONE]
slave.standby	slave.standby is Down
slave.standby	A/A NODE CONFIGURATION CHANGED
slave.active	A/A DATA(ALL) SYNCHRONIZATION COMPLETE
slave.active	[PROFILE] Profile Creation END : Available for database m...
slave.active	[PROFILE] Profile Creation START
slave.active	A/A NODE CONFIGURATION CHANGED

Method 2



SAMSUNG

All systems are a go!

SCM Administrator

File Tool Tab Dialog Help

Server192.168.60.10 Useradmin LevelENGINEERING

PERFORMANCE

- Main Monitor
- Registration Status
- Fault
- Statistics
- Voice Quality Monitor
- Process Debug Logging
- Call Trace
- Call Management
- Call Count
- Server Resources
- System Management
- Detailed Event History

Main Monitor

[MASTER] Dallas-Master-Node

master.standby master.active

[SLAVE] Irving-Slave-Node

slave.standby slave.active

OAMS	ISOL	HMS	MPS
0 / 21	0 / 12	0 / 4	0 / 2
BCCS	SMS	MP	CDSS
0 / 3	0 / 7	0 / 2	0 / 1
SSVCS	AAAS	APPS	
0 / 4	0 / 6	0 / 14	

System Viewer

System: [MINE] master.active
Status: [MASTER] Active
Alarm: CRI (0) MAJ (0) MI... (0)

CPU Memory File

Event Viewer

System Name	Description	Category	ID
master.standby	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.*sql]	Communication	DB Backup
master.active	A/S DATA SYNCHRONIZATION COMPLETE	Communication	Data Sync
master.active	DATABASE BACKUP COMPLETE : PATH[/usr/local/*.*sql]	Communication	DB Backup

Message: The job is finished successfully [2013-06-11 11:41:00] 2013-06-11 12:09:22

SCM Samsung Communication Manager

Method 2 "Part 3"



SAMSUNG

- Resetting the announcement language
- This must be done here, simply reselect your language

The screenshot displays the SCM Administrator interface. The main configuration area is titled 'Language Main Monitor' and shows 'Announcement Language' set to 'English-America'. A red circle highlights the 'Language' dropdown menu in the 'Service Announcement' section, which is currently set to 'English-America'. Another red circle highlights the 'System Viewer' section at the bottom left, showing system status information: System: [MINE] master.active, Status: [MASTER] Active, Alarm: CRI (0) MAJ (0) MI... (0), CPU, Memory, File. The interface also includes a menu bar (File, Tool, Tab, Dialog, Help), a search bar, and an event viewer table at the bottom.

Level	Type	Date/Time	System Name	Description	Category
-------	------	-----------	-------------	-------------	----------

Method 2 “Part 4”



SAMSUNG

- You must setup Dual Registration for each gateway like below
- Make sure to add the secondary server IP

```
voip-gateway
  host domain-name samsung.com
  bind control interface ethernet 0/1
  bind media interface ethernet 0/1
  rtp payload-type nte 101
  call-server
    ip-address ipv4:192.168.60.10
    ip-address ipv4:192.168.50.10 secondary ← Here we will add the Secondary Server
    gw-uri usmd-master-2016 expires 60
  exit call-server
  sip-ua
    authentication username usmd-master-2016 password usmd-master-2016
    registrar concurrent-registration
    offer call-hold dir-inactive
    disable-star-contact
    reason-header override
    no shutdown
  exit sip-ua
  no shutdown
exit voip-gateway
```

Lab Time



SAMSUNG

Lab Time

- Work with a partner to setup Active-Active
- Use method #2
- Initialize one of the databases
- We will cover Scenario #1 and #3

Modes and Status



SAMSUNG

Modes and Status

SCM Samsung Communication Manager

Role of Active-Active Nodes



SAMSUNG

🟡 Data management

🟡 Master Node

- In the Active-Active system, this node can change the data using the Administrator.

🟡 Slave Node

- In the Active-Active system, this node can be only display the data using the Administrator.

🟡 Data changed on the master node is copied to the slave node.

🟡 You must setup a sync time or sync the system manually.

🟡 Call service (Active-Active Priority Server)

🟡 Primary Server (Node-0)

- Server that provide call services to subscribers.

🟡 Secondary Server (Node-1)

- If the subscriber's primary server can not provide call service, secondary server provides call service on behalf of the primary server.

🟡 Current Serving Server

- Server that provide call service to subscribers.

Active-Active Status



SAMSUNG

● **MASTER state**

- With the Active-Active configuration system, when the master and slave node is connected, it refers to the state of the master system.

● **Master Alone state**

- With the Active-Active configuration system, when the master and slave node is not connected, it refers to the state of the master system.

● **SLAVE state**

- With the Active-Active configuration system, when the master and slave node is connected, it refers to the state of the slave system.

● **Slave Alone state**

- With the Active-Active configuration system, when the master and slave node is not connected, it refers to the state of the slave system.

Active-Active Synchronization



SAMSUNG

● Active-Active Synchronization

- When Active-Active systems are connected, you can setup a schedule when they perform synchronization.
- When the FULL synchronization happens
 - Data is copied from the master node to the slave node.
- PARTIAL synchronization
 - It is to copy only the changed data during the time between Master and Slave is disconnected.

● Active-Active Partial synchronization execution condition

- Systems perform the partial synchronization except in the case of conditions to perform the all synchronization of the above.

Active-Active Synchronization



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● **Active-Active All synchronization execution condition**

- The master and slave node was connected after you change the Active-Active node configuration.
- The master and slave node was connected after the operator is forced to change the node configuration in a disconnected state.
- If it fails to transfer important node configuration, systems perform the all synchronization when SCM is restarted.
- The operator performs the all synchronization using manual synchronization command.

Recovery between nodes



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● Logical Links between active and active nodes

- Link to check alive state between nodes (TCP)

● Link Down between nodes

- If any of the following conditions occurred, the link between the nodes was disconnected.
 - TCP connection to check the alive state was disconnected.
 - Local node did not receive the Heartbeat message from the remote node for 10 seconds.
Note : Each node sends a Heartbeat message at 1 second intervals.
 - Three TCP connections to send/receive data were disconnected.
 - Three TLS connections to send/receive data were disconnected.

● Link Up between nodes

- If all the conditions below are met, the link between nodes was connected.
 - TCP connection to check the alive state was connected and each nodes received a heartbeat message.
 - TCP/TLS connection to send/receive data are all connected and nodes successfully send/receive internal initialization messages.

Helpful Reminders



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Helpful Reminders

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Active-Active “Force Write”

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Active-Active “Force Write”



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If Node0 is unrecoverable, select the master item and change to Node1.

Master No...	Node 0's IP	Node 0's Name	Node 1's IP	Node 1's Name	Force Writ..
Node 0	Q.Q.Q.Q	NODE 0	Q.Q.Q.Q	NODE 1	Disable

[DIALOG]Node Configuration - Change

Master Node: Node 0
Node 0's IP: Q.Q.Q.Q
Node 1's IP: Q.Q.Q.Q
Force Write Access to DB: Disable

My Node: Node 0
Node 0's Name: NODE 0
Node 1's Name: NODE 1

Change Apply Close

Node Configuration

Manual Database Sync.
Slave Node Reboot
Inter-Node Link Configuration

Detail Change Delete Excel Close

If Link between A-A nodes disconnect , operator can select this item and can change database settings
(Don't change this item to Enable after Active-Active connection.)

If my node is slave, change the Node1.
(required checklist)

Gateway Dual Registration



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Gateway Dual Registration

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Gateway Dual Registration



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- *You will need to setup a backup call-server for each gateway you have.*
- *Simply login to your gateway and add the secondary call server like this.*

```
usmd-Master-2016/configure/voip-gateway#
voip-gateway
  host domain-name usmd.com
  bind control interface ethernet 0/1
  bind media interface ethernet 0/1
  rtp payload-type rtp 101
  call-server
    ip-address ipv4:192.168.60.10
    ip-address ipv4:192.168.50.10 secondary
  gw uni usmd master 2016 expires 60
  exit call-server
  sip-ua
    authentication username usmd-master-2016 password usmd-master-2016
    registrar concurrent-registration
    offer call-hold dir-inactive
    disable-star-contact
    reason-header override
    no shutdown
  exit sip-ua
  shutdown
  exit voip-gateway
usmd-Master-2016/configure/voip-gateway# no shutdown
```

Gateway Dual Registration



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If done correctly, you can check the status on the master and slave

The screenshot shows the 'Registration Status' page in the SCM Administrator. The left sidebar lists various performance and monitoring tools. The main content area has a search form with fields for A-A Primary Node, User Group, Register Type, IP Address, and Fail Reason. Below the search form is a table with the following data:

A-A Primary ...	Current Servi...	User Group	User Info	Register State	IP Address
Master-USMD	Master-USMD	usmd	master-2016-PRI-000	Reg	192.168.60.11
Master-USMD	Master-USMD	usmd	master-2016-PRI-001	Reg	192.168.60.11
Master-USMD	Master-USMD	usmd	masterROUTING-2016	Reg	192.168.60.11
Slave-USMD	Slave-USMD	usmd	slave-2016-Route-PRI	Reg	192.168.50.11

Database Sync



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Database Sync

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Database Sync



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Reminder

- When Active-Active systems are connected, you must setup a schedule when they perform synchronization.

[DIALOG]Manual Database Sync. - Create

Sync. Type: Now

Weekday: [Empty]

Sync. Time (HHMM): 00:00

Max Backup File Count: [Empty]

Buttons: Create, Apply, Close

CONFIGURATION

Manual Database Sync. | Language | Main Monitor

Location: [Search]

[DIALOG]Manual Database Sync. - Create

Sync. Type: Day

Weekday: [Empty]

Sync. Time (HHMM): 23:00

Max Backup File Count: 10

Buttons: Create, Apply, Close

Lab Time



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Lab Time

- Lets do it again!
- Using Method #1
- Initialize all servers
- Setup Scenario #2

The End



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The End

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