



Cisco Community Community Live event

UCCE Solution Troubleshooting Based on Comprehensive Call Flow for CVP and IP IVR Deployment Models

German Manvelyan & Konstantin Vaksin
Technical Consulting Engineer

October 22nd, 2020

News & Upcoming events



Ask Me Anything following the event

Now through Friday October 30, 2020



With
German & Konstantin

<https://bit.ly/AMAE-22oct20>



German Manvelyan
Technical Consulting Engineer

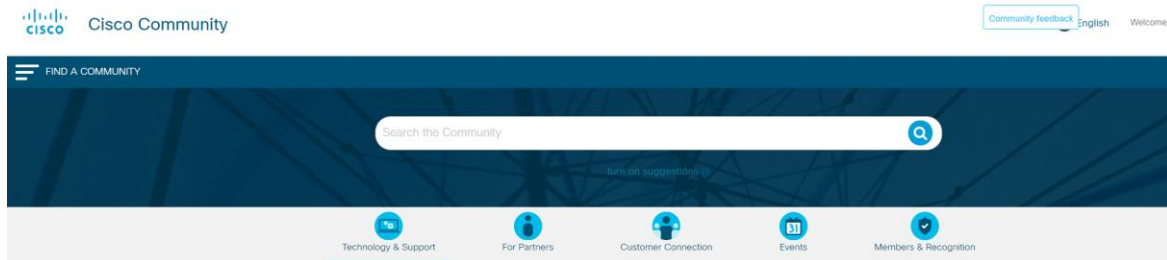


Konstantin Vaksin
Technical Consulting Engineer

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Events Top Contributors



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2014 2013



Julio Carvajal



Ryota Takao



Cisco Designated VIPs

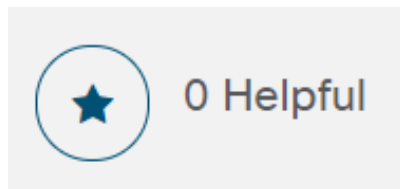


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Cisco Community Experts



German Manvelya
Technical Consulting Engineer



Konstantin Vaksin
Technical Consulting Engineer

Questions Managers



Mohamed Mohasseb
Technical Consulting Engineer



Lazar Obradovic
Technical Consulting Engineer

Thank You For
Joining Us Today!



Download Today's Presentation
<http://bit.ly/Slides-Oct22>

Submit Your Questions Now!

Use the **Q&A** panel to submit your questions and the panel of experts will respond.

They will be answered eventually



Please take a moment to complete the survey at the end of the event



UCCE Solution Troubleshooting Based on Comprehensive Call Flow for CVP and IP IVR Deployment Models

German Manvelyan & Konstantin Vaksin
Technical Consulting Engineer

October 22nd, 2020

Polling Question 1

1. Are you interested in Webinars, covering UCCE technology?
 - A. Yes
 - B. No

UCCE Technology

- Series of online Webinars, that will be delivered quarterly
- Topics will be selected from the survey

Are you interested?

Lead-In



When did it start?

What is your version?

What changes in the environment?

What are the error messages?

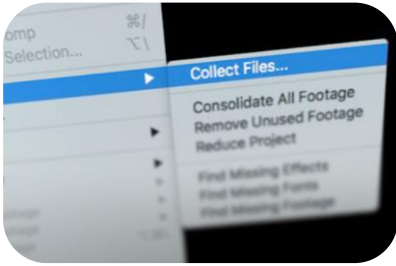
When did it start?

What is your age?

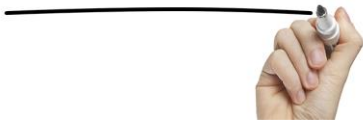
What changes in your life?

What is the color of your..?





ACTION PLAN

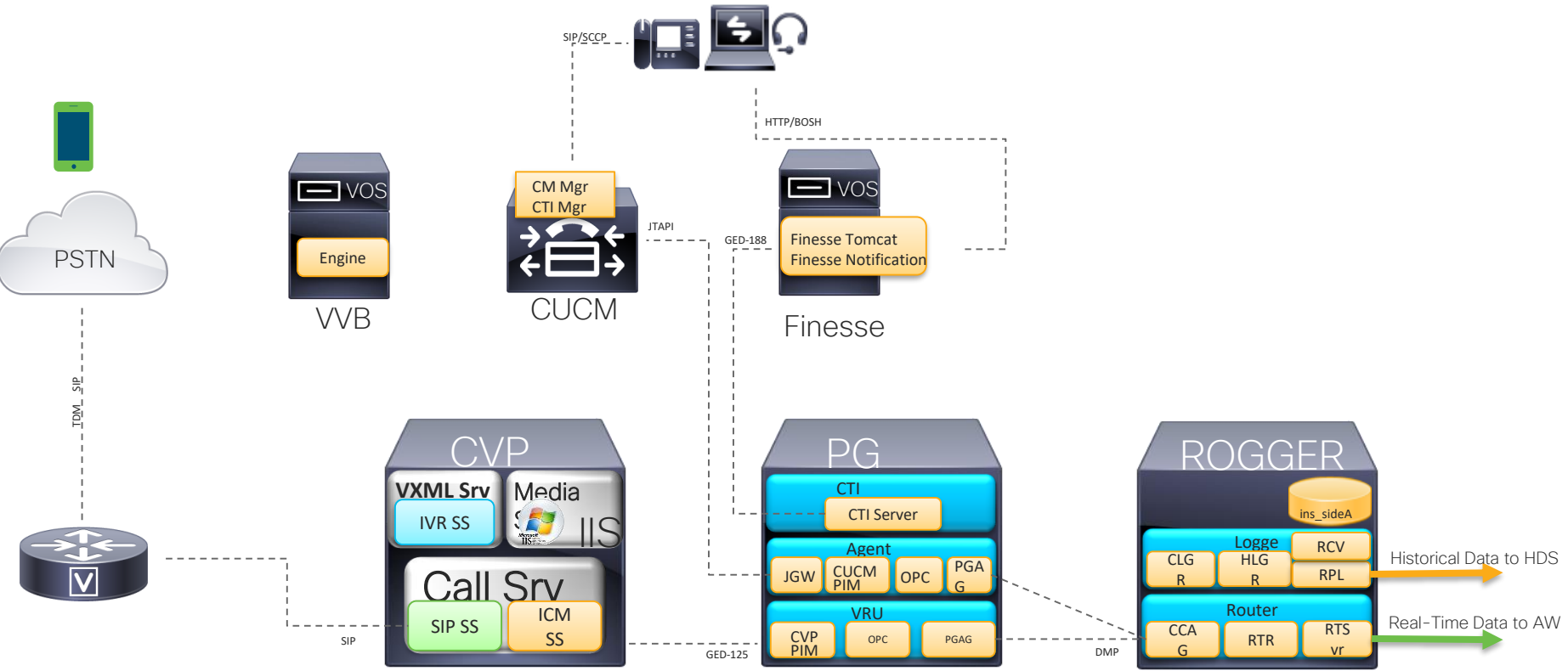


Agenda

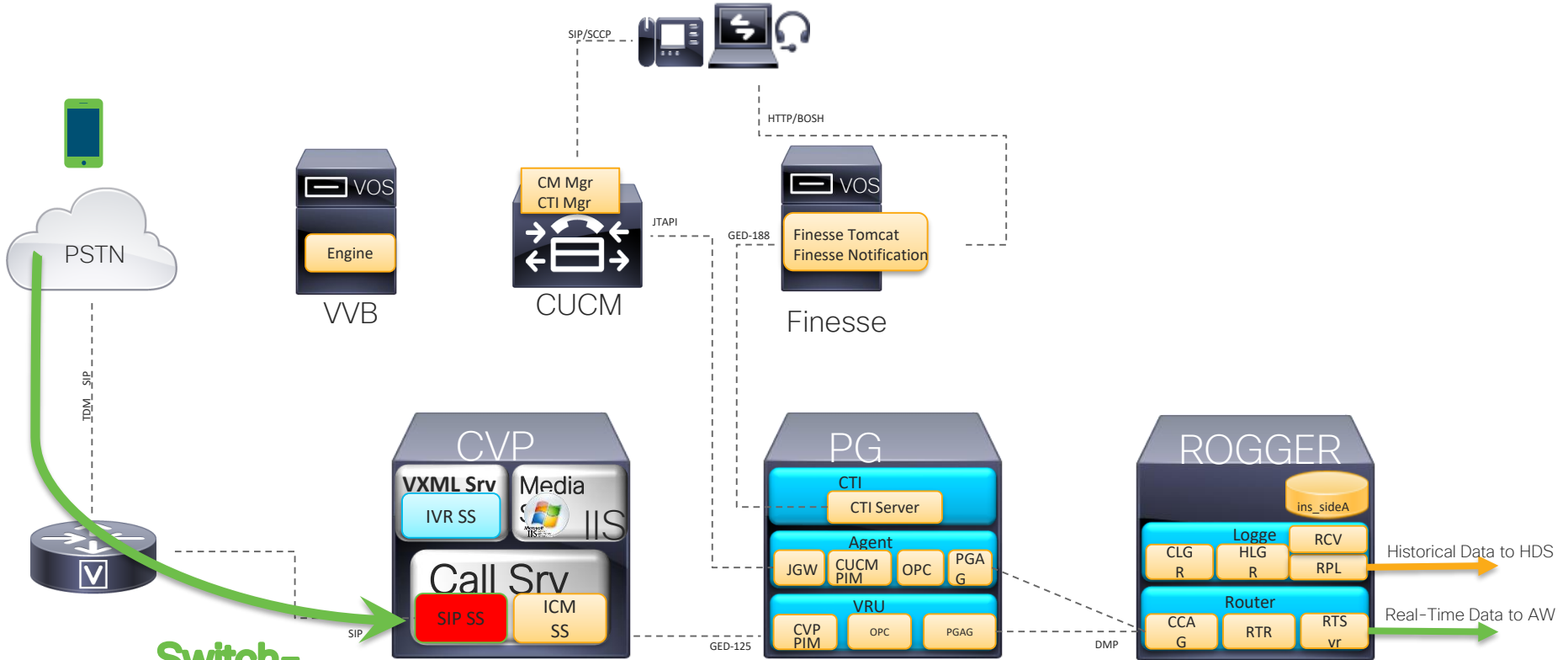
- 1 CVP Comprehensive Call Flow
- 2 CVP Standalone Call Flow
- 3 IP IVR Call Flow
- 4 IP IVR Standalone Call Flow

Comprehensive Call Flow

Comprehensive

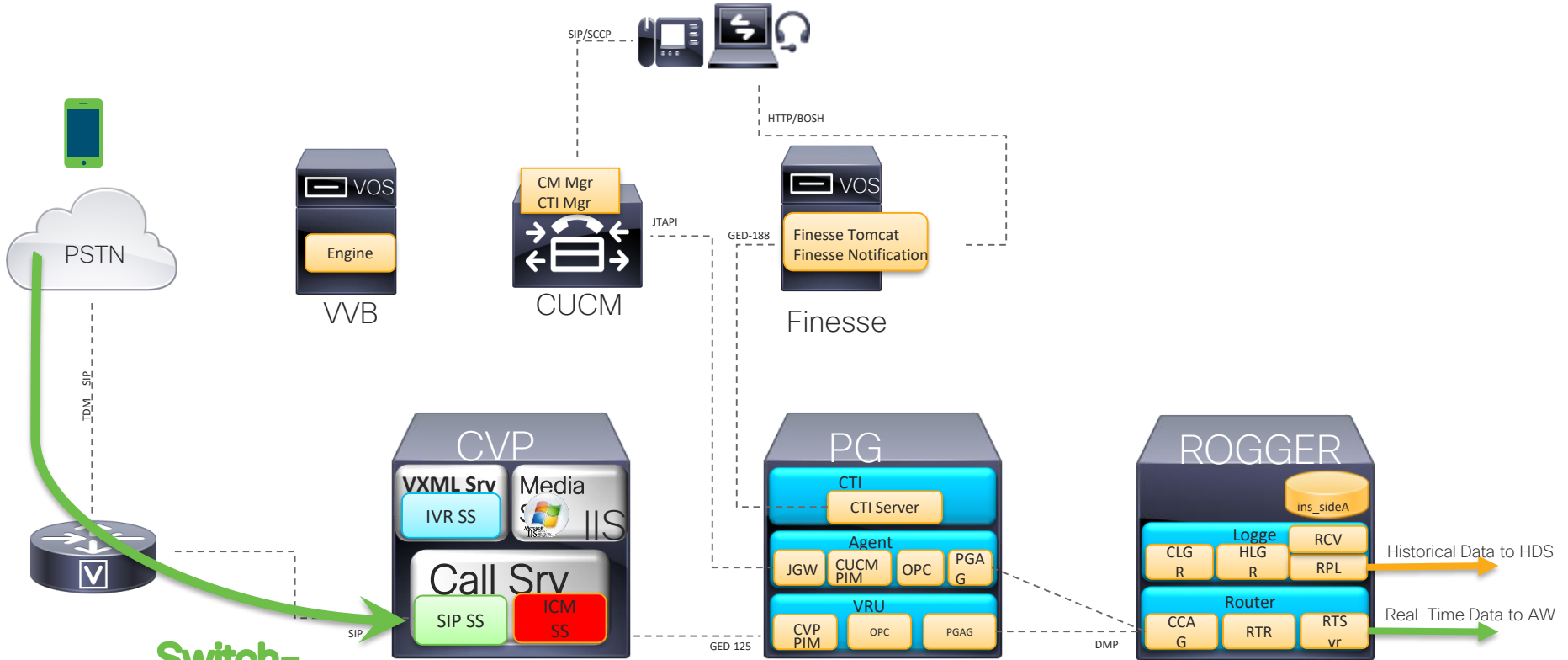


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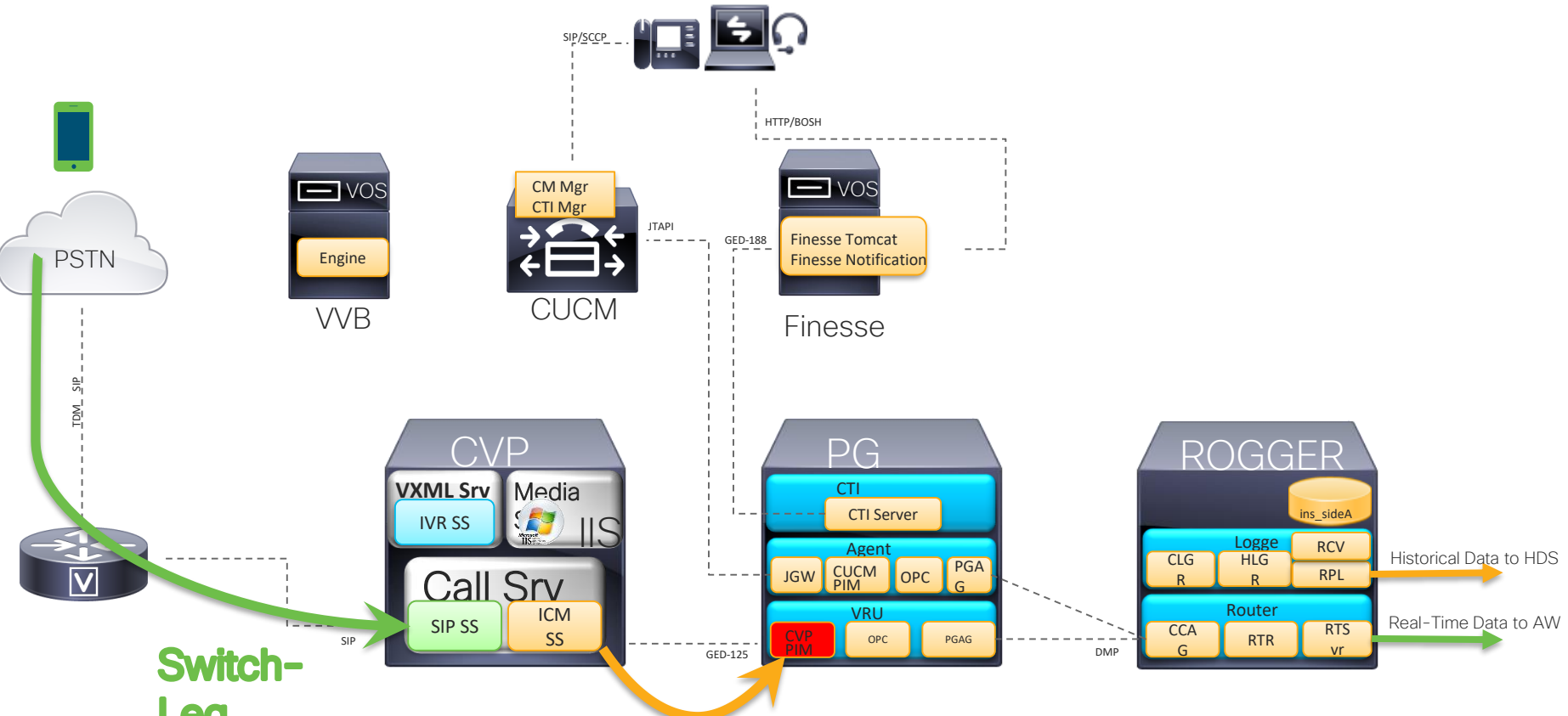
Switch-Leg

Comprehensive

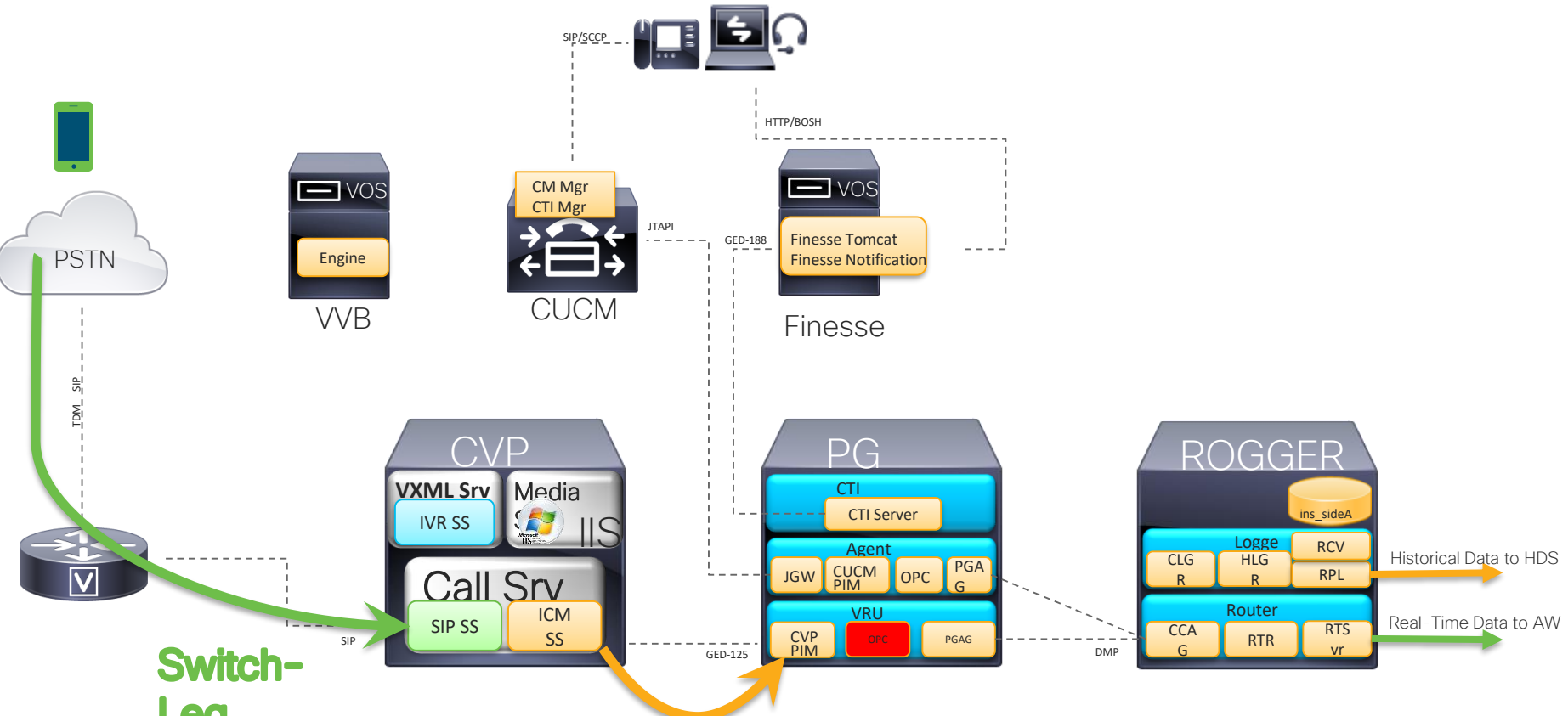


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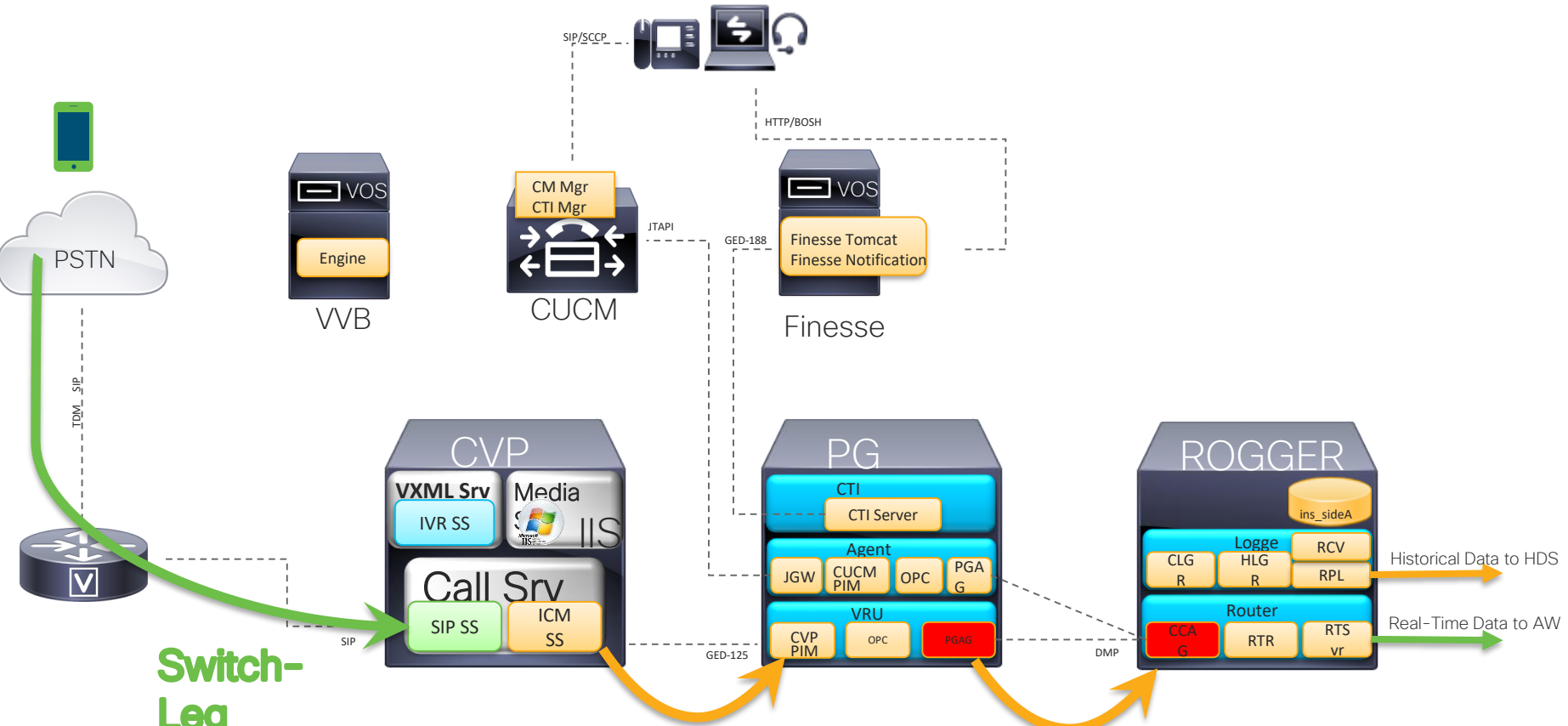
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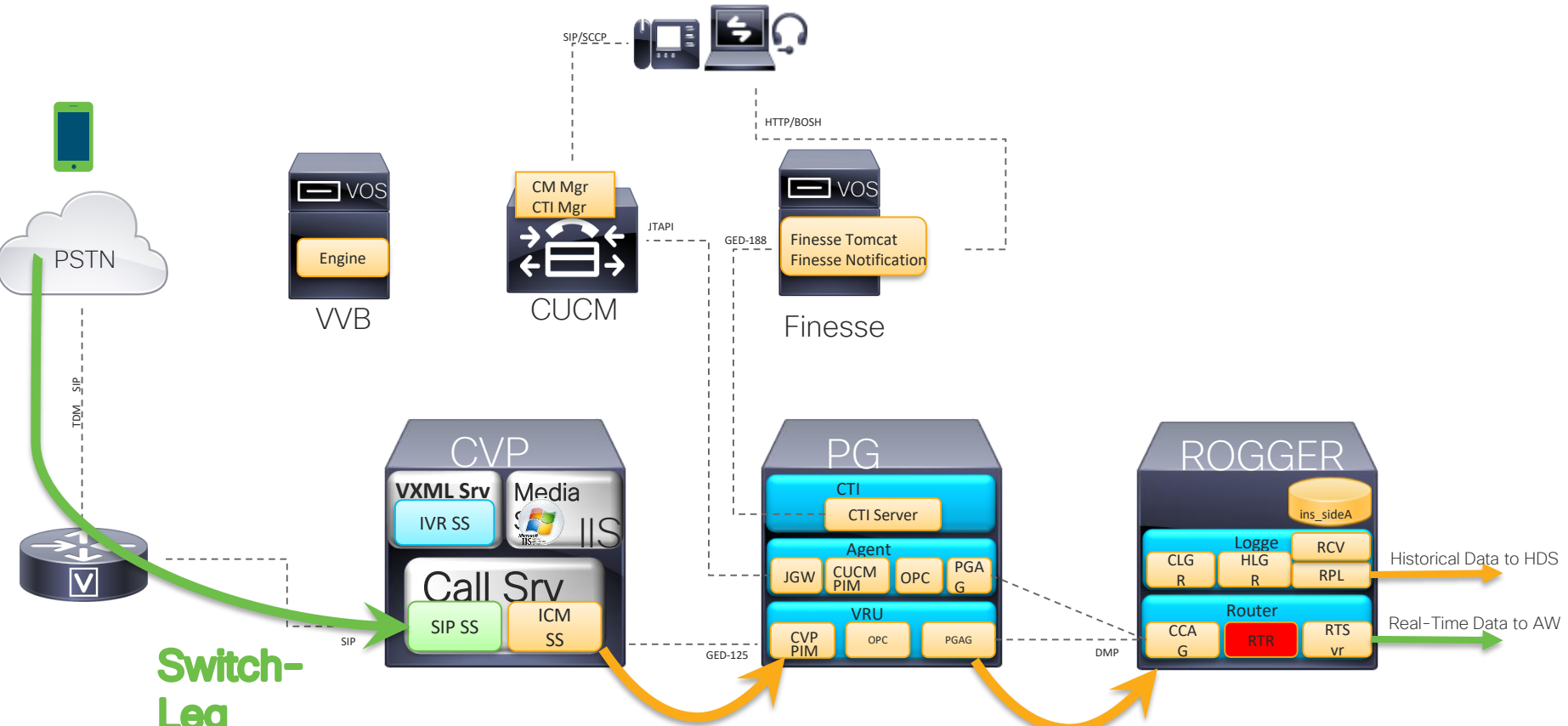
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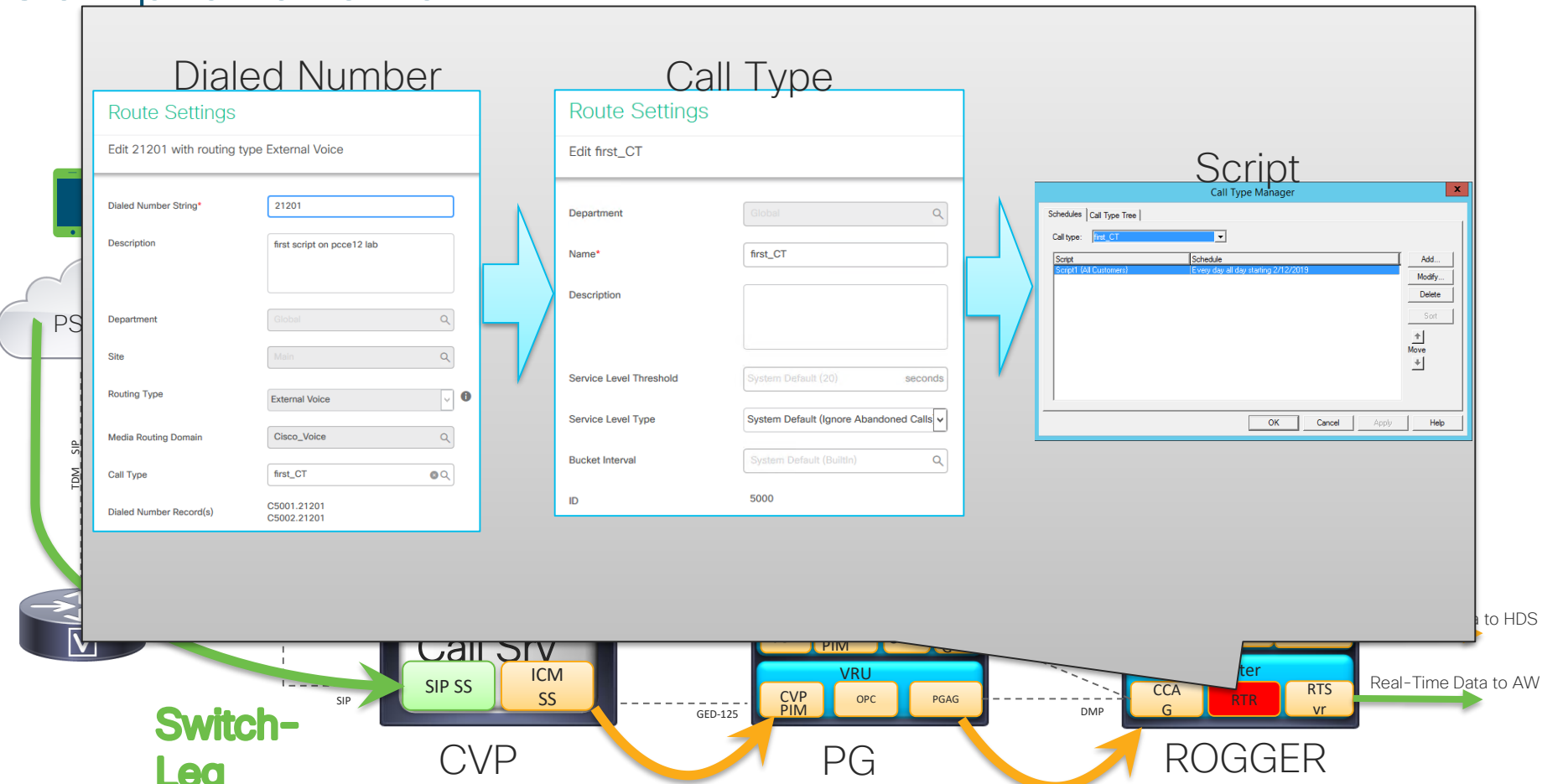
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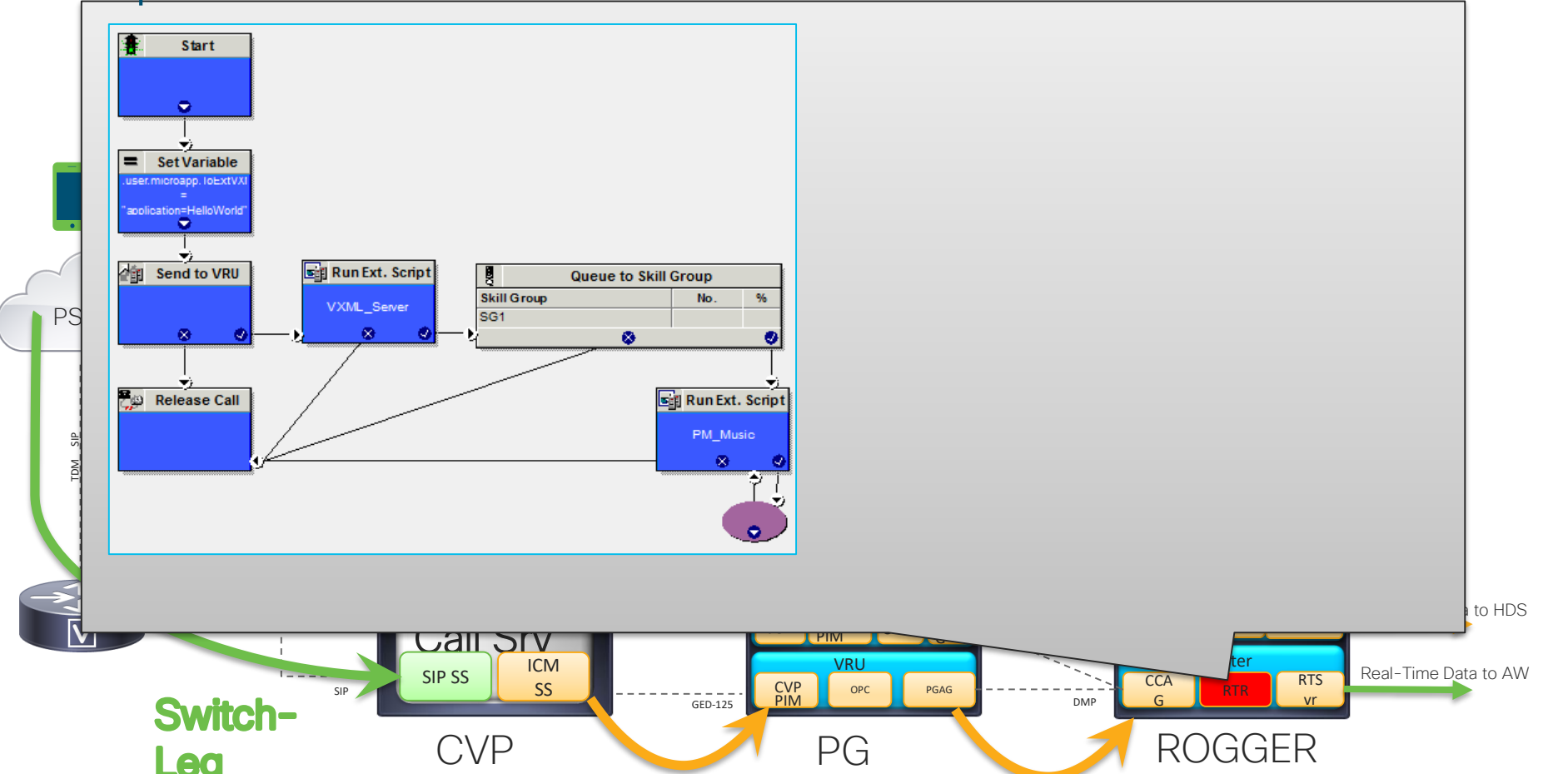
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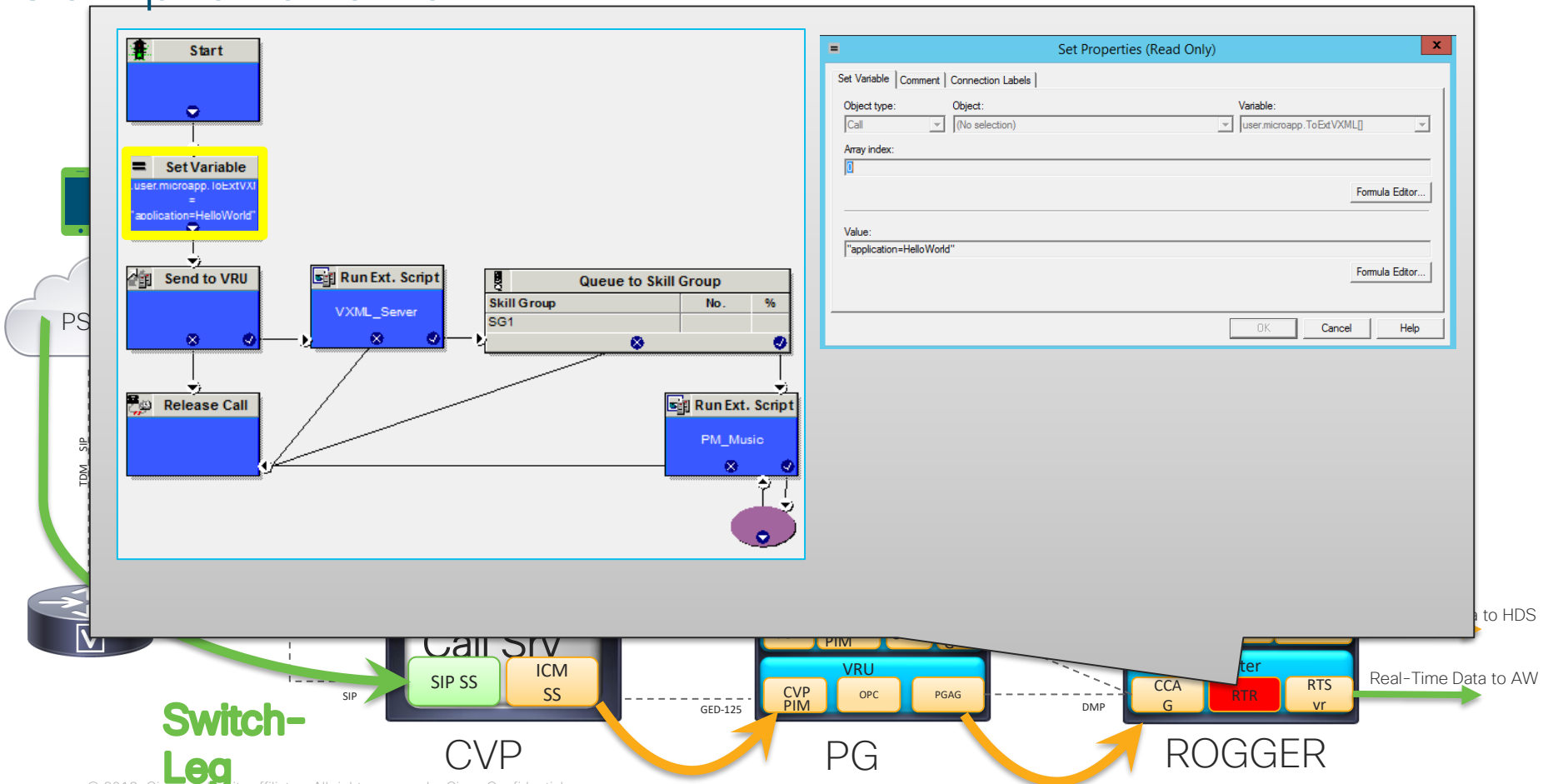
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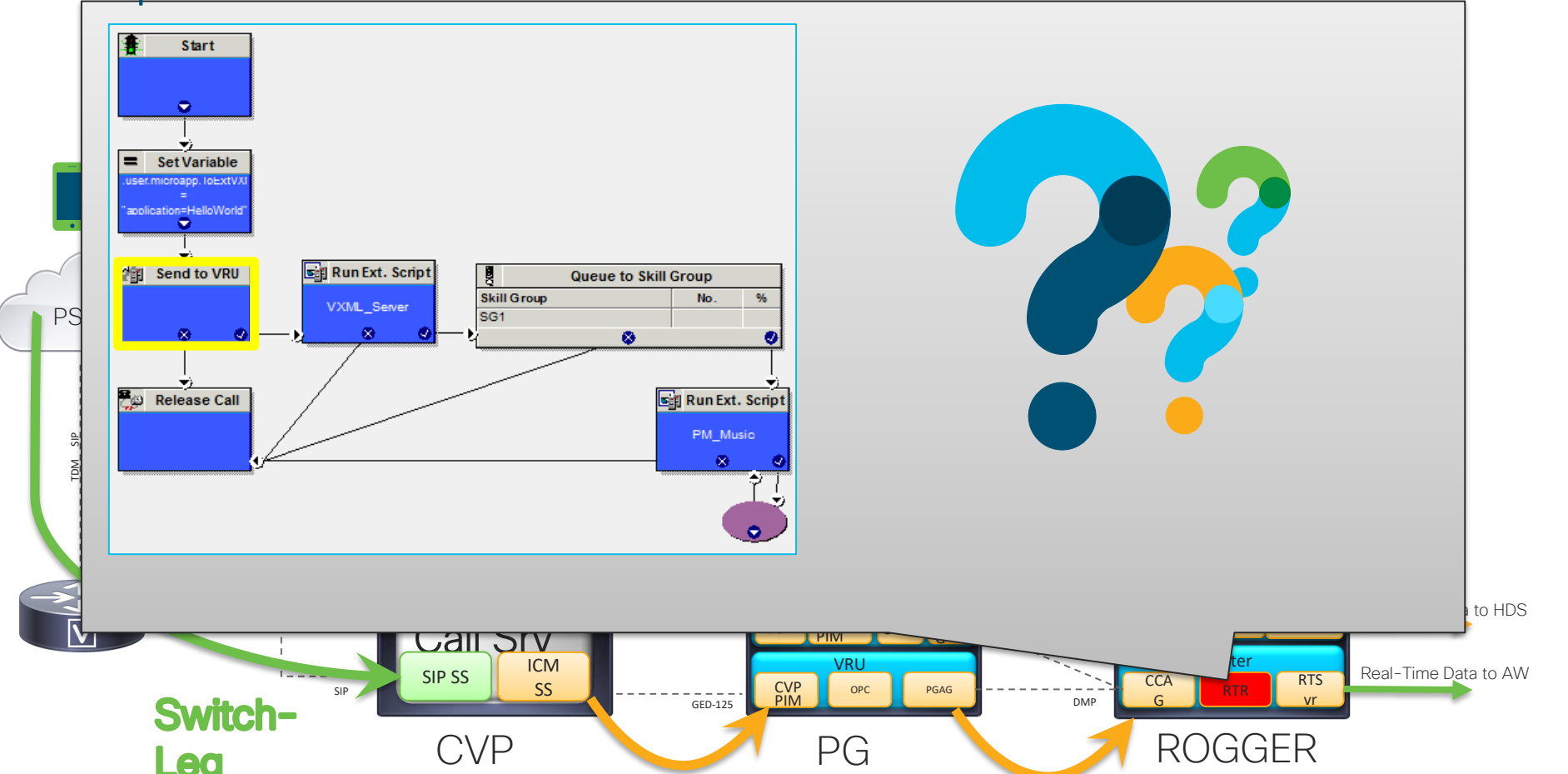
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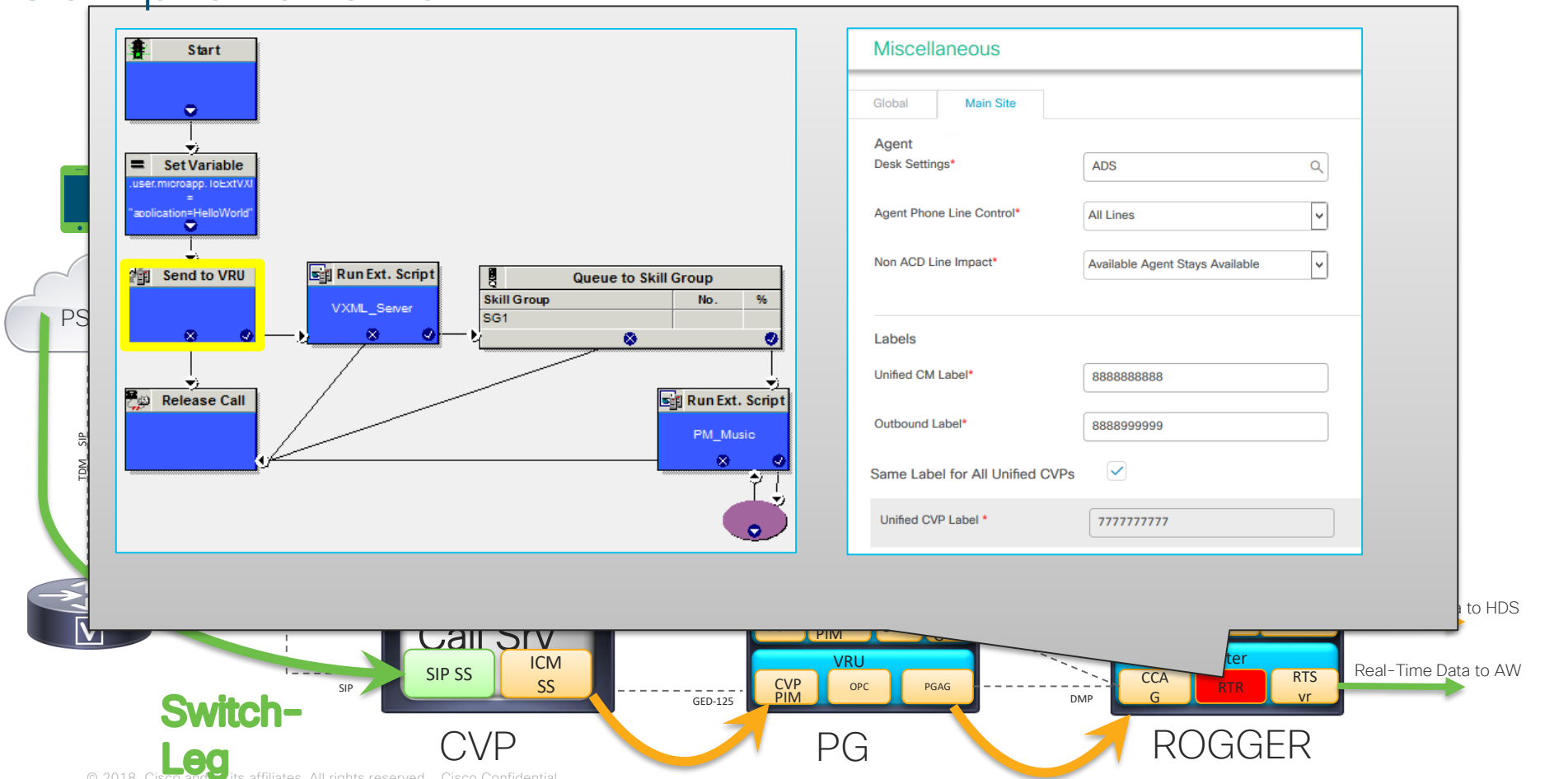
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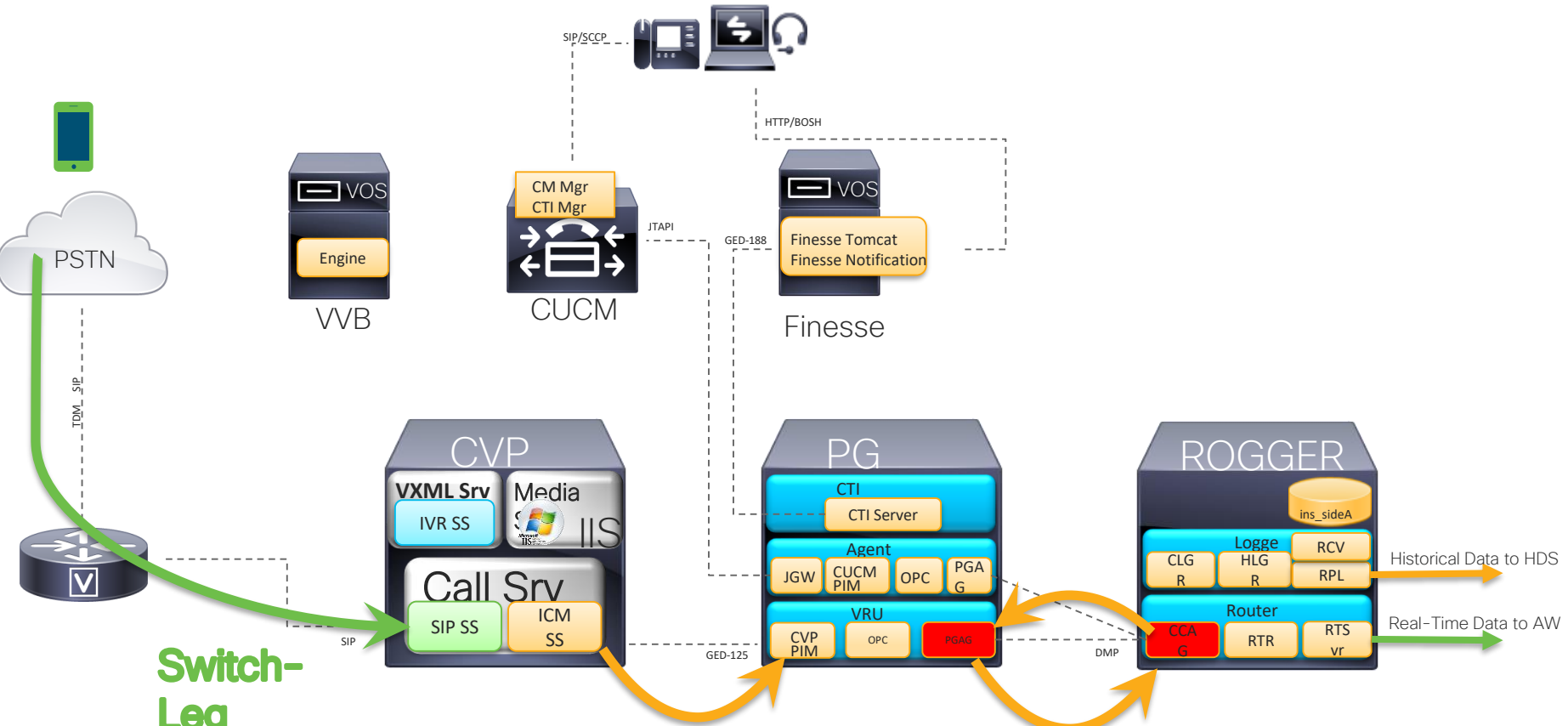
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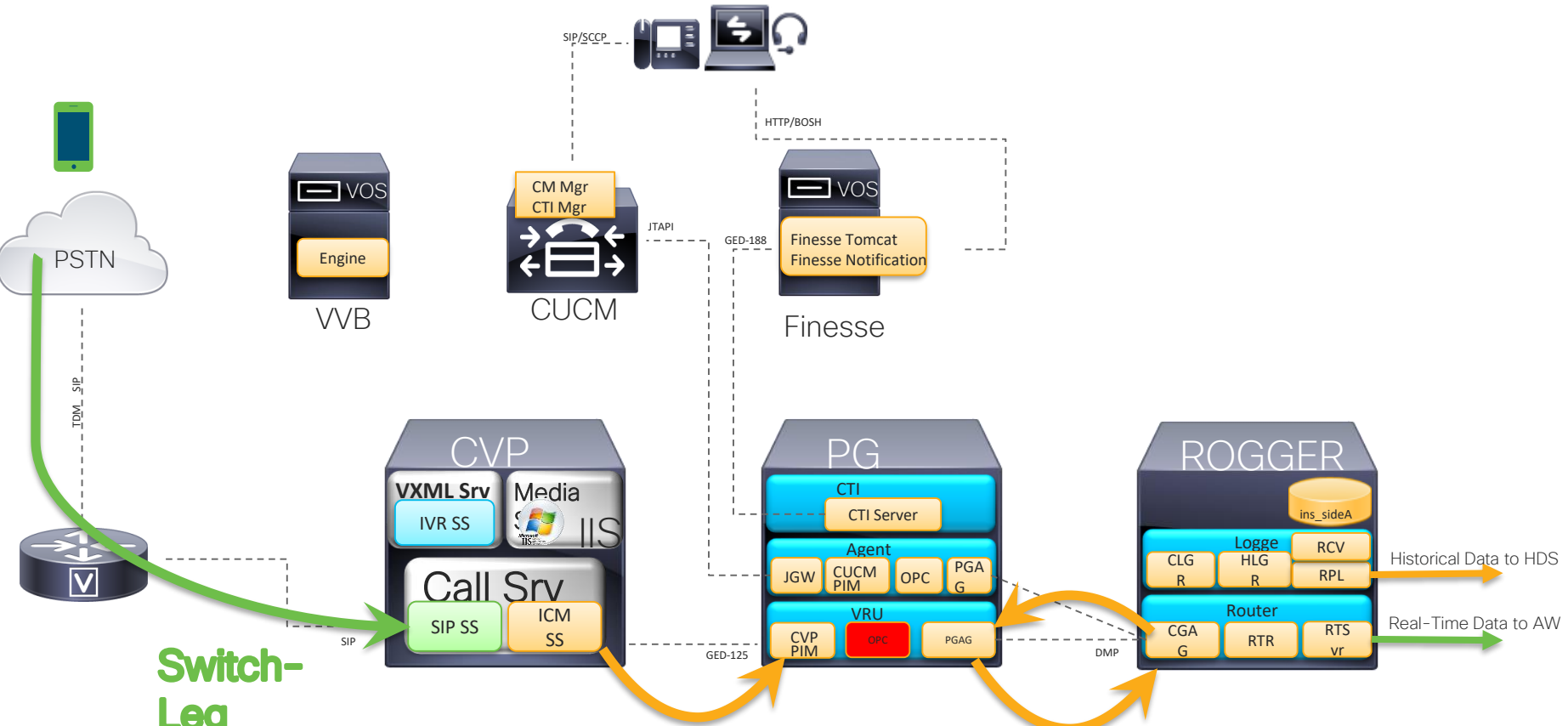
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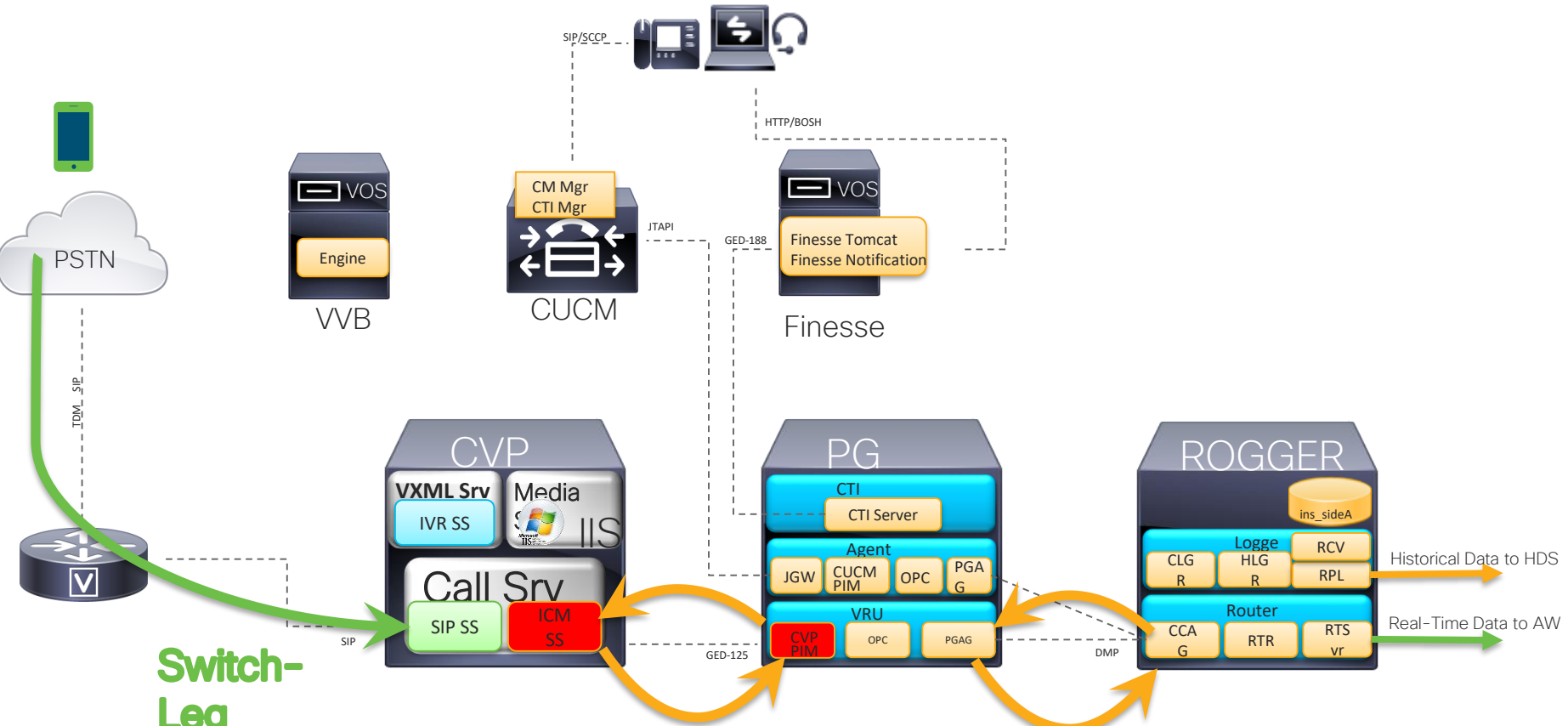
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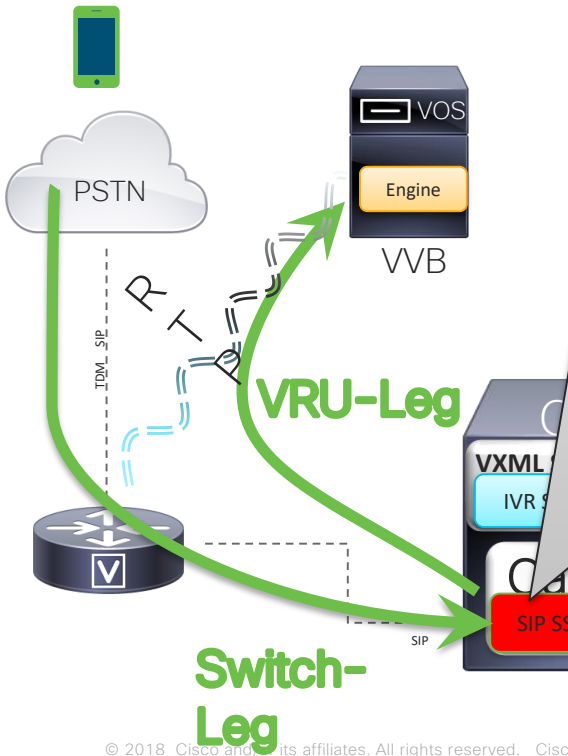
Comprehensive



Comprehensive



Comprehensive



Route Settings

Edit 777>

Routing Pattern*

Description

Site*

Pattern Type*

Destination*

RNA Timeout

Send to Originator

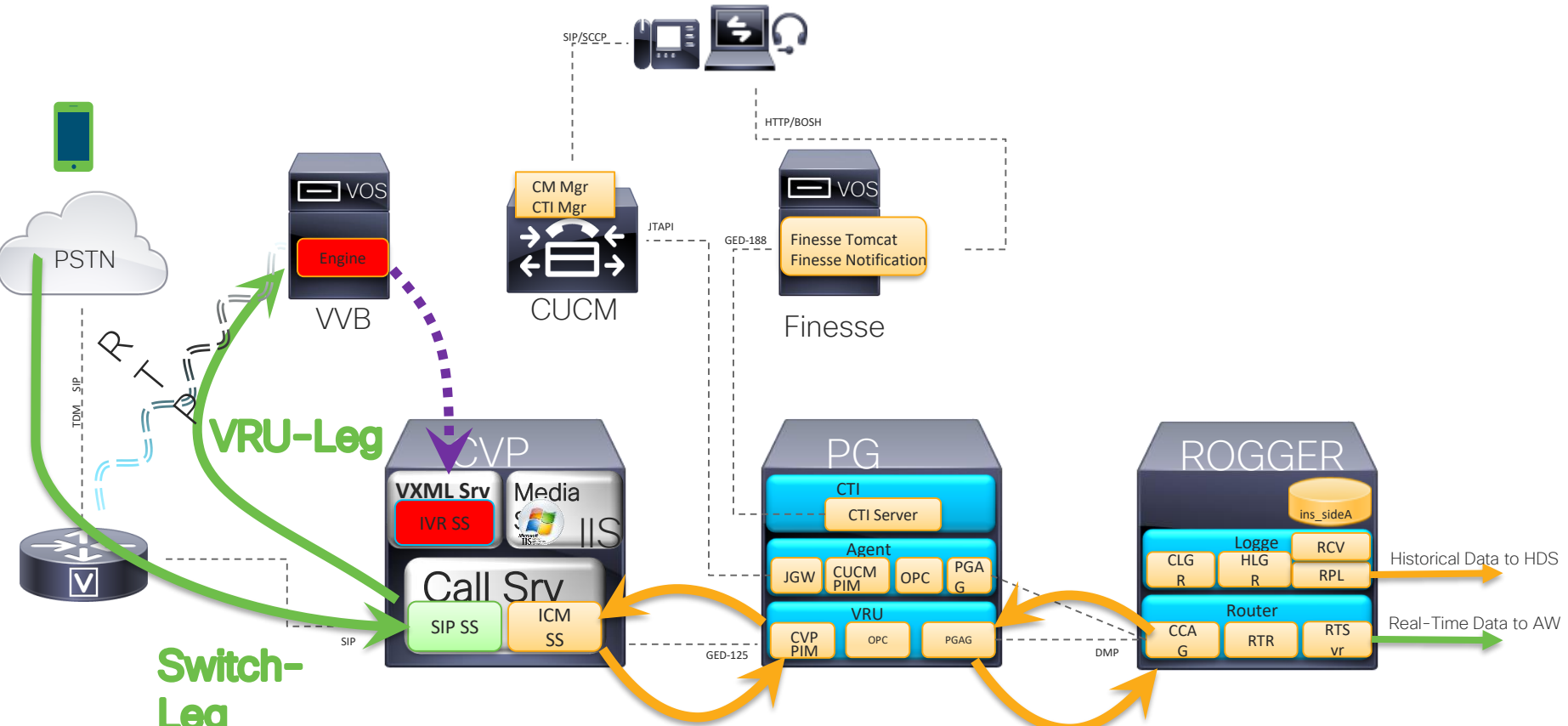
This PC > Local Disk (C:) > Cisco > CVP > conf

sip.properties - Notepad

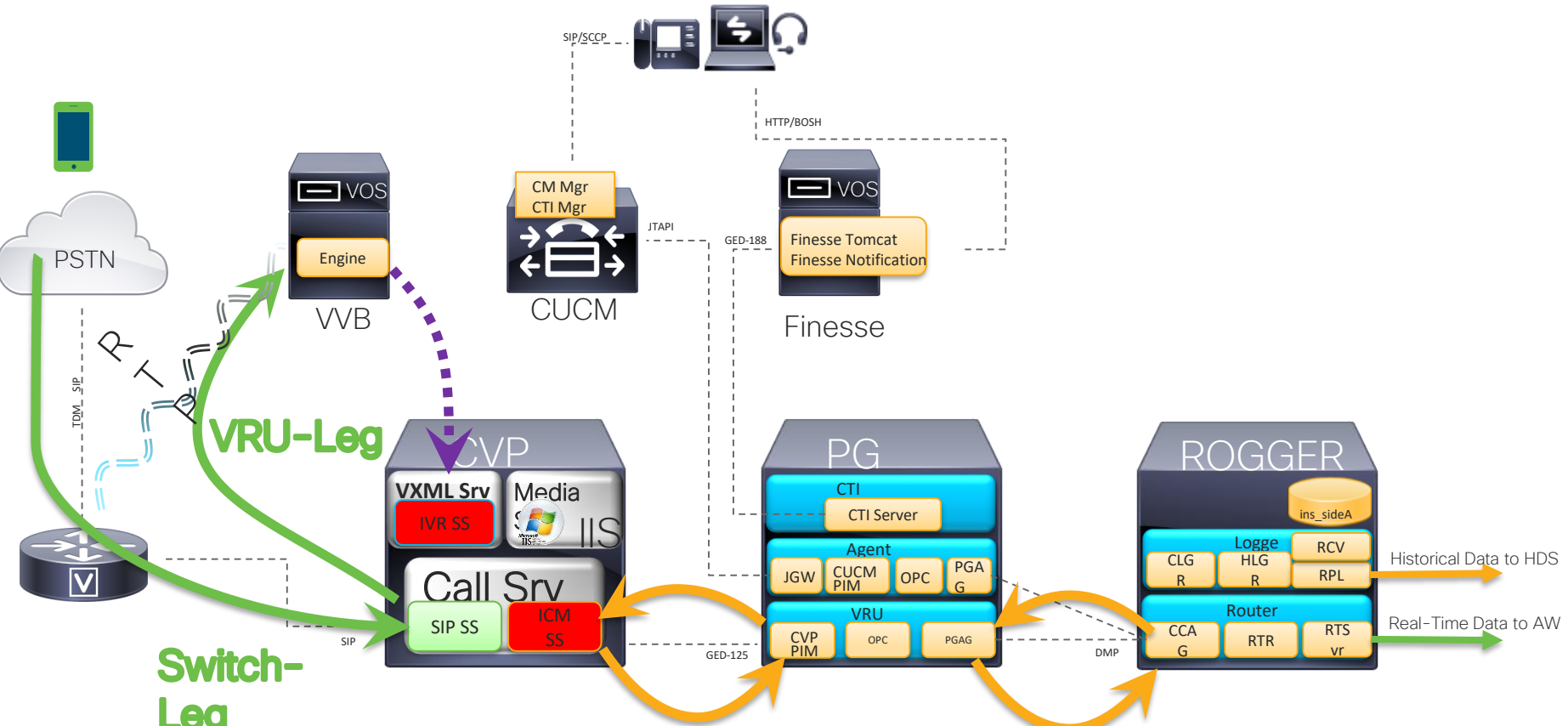
```
File Edit Format View Help
# Static routes for local routing without an outbound proxy.
SIP.Proxy.Route =

# System configuration static routes for local routing without an outbound proxy.
SIP.System.Proxy.Route =
777*, 192.168.33.27;9191*, 192.168.33.27;10*, 192.168.33.20;9292*, 192.168.33.27;
```

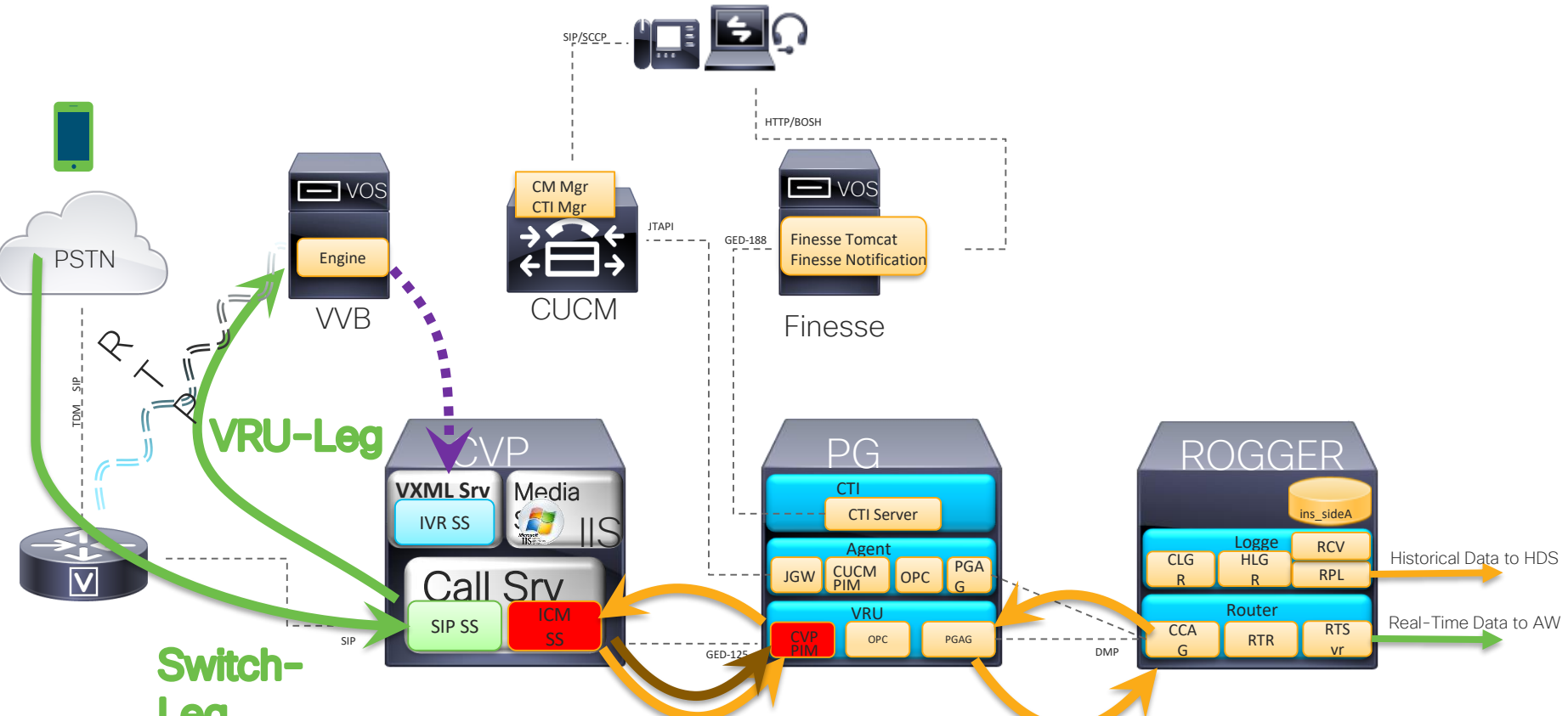

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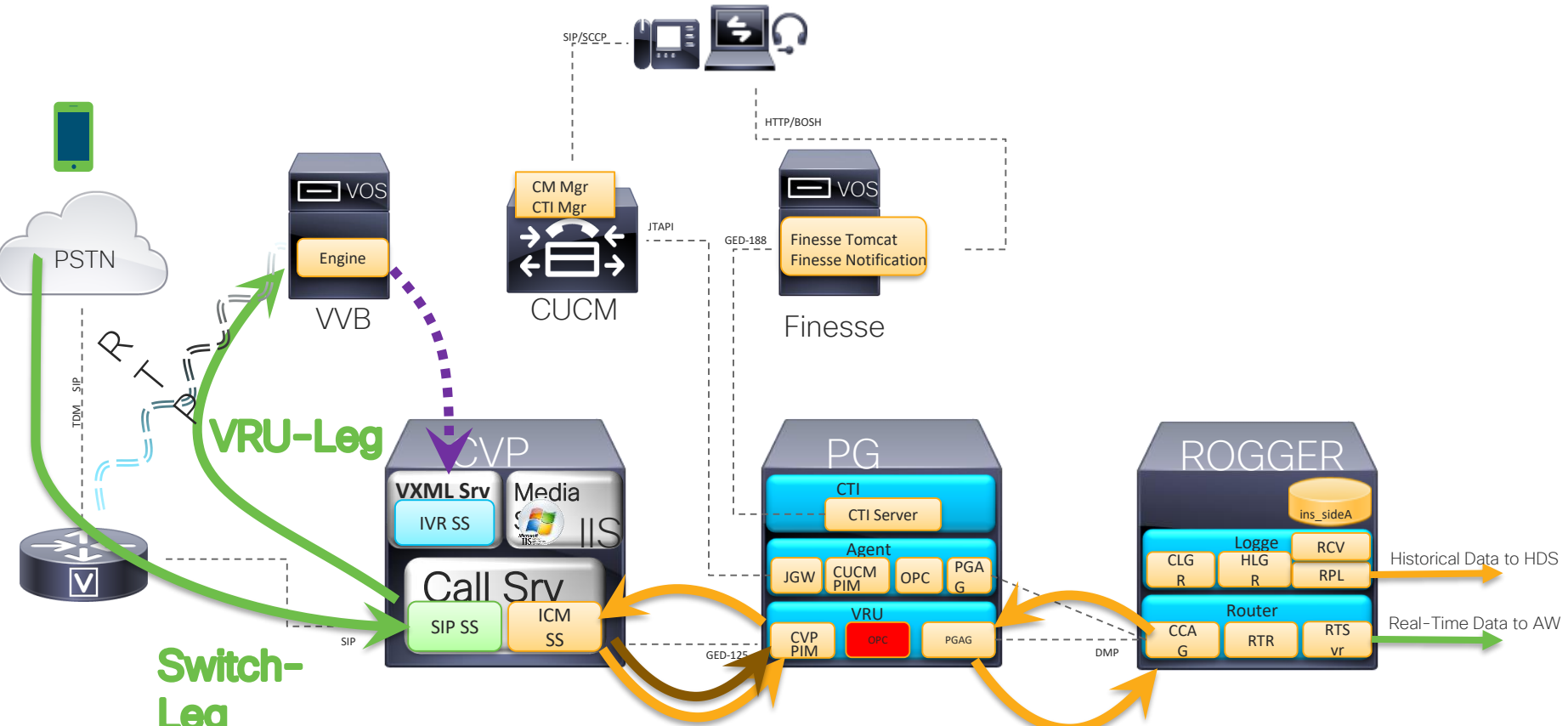
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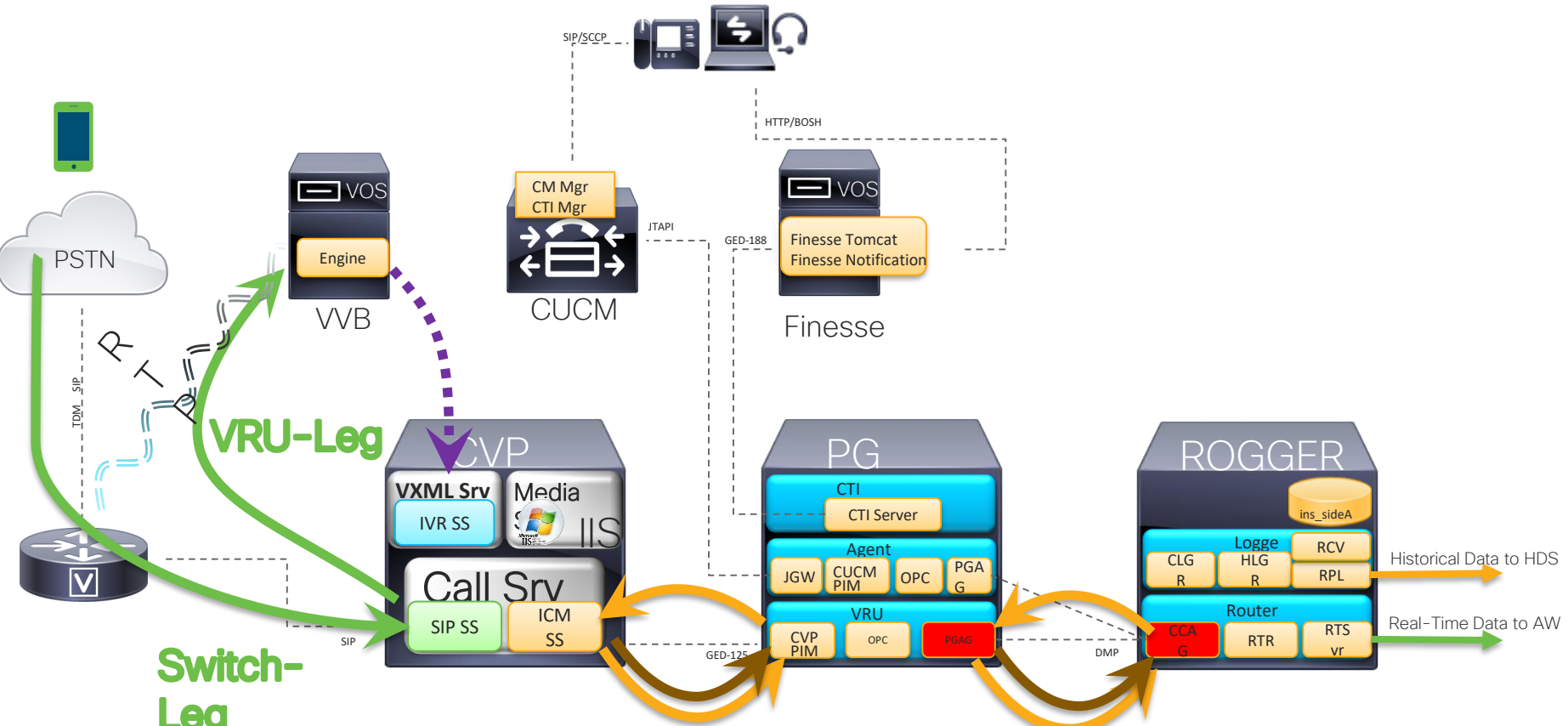
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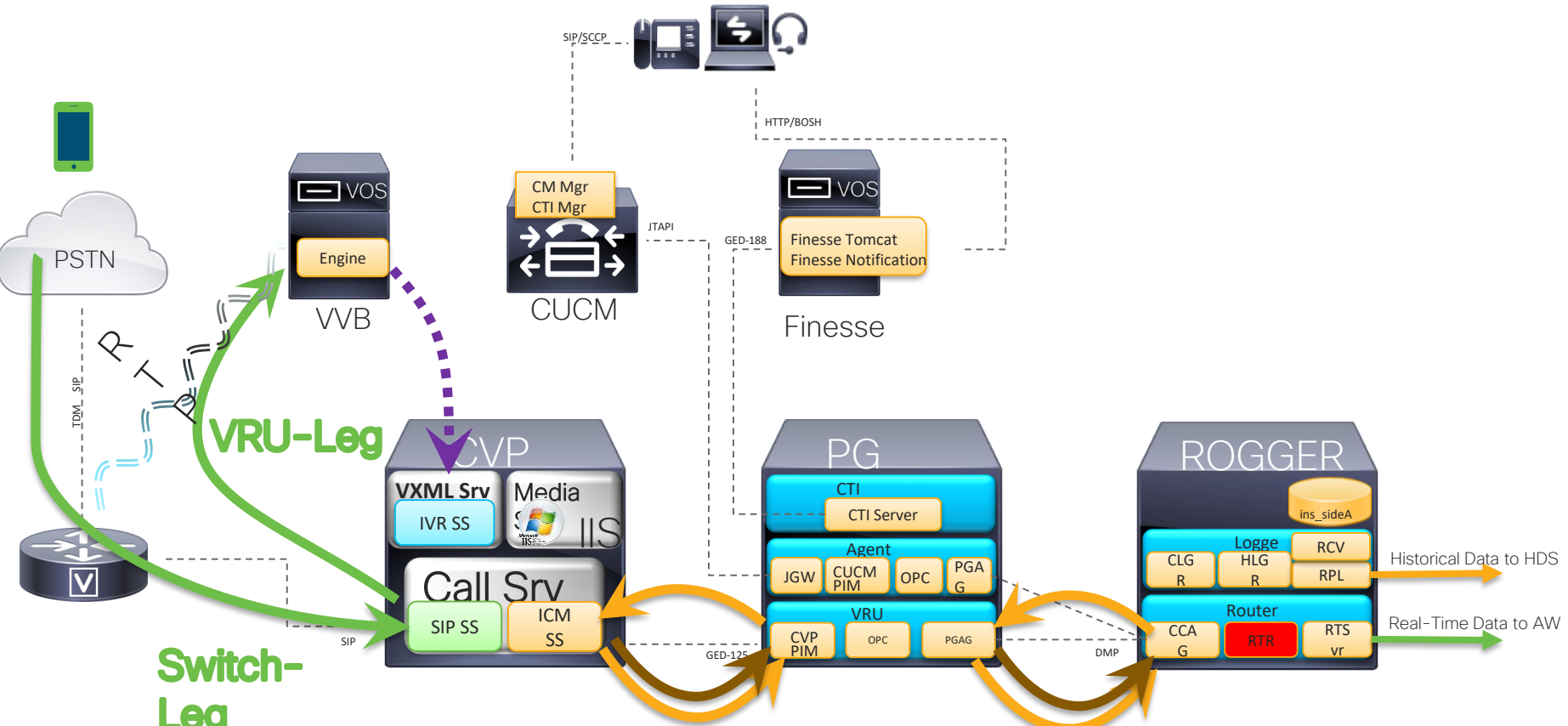
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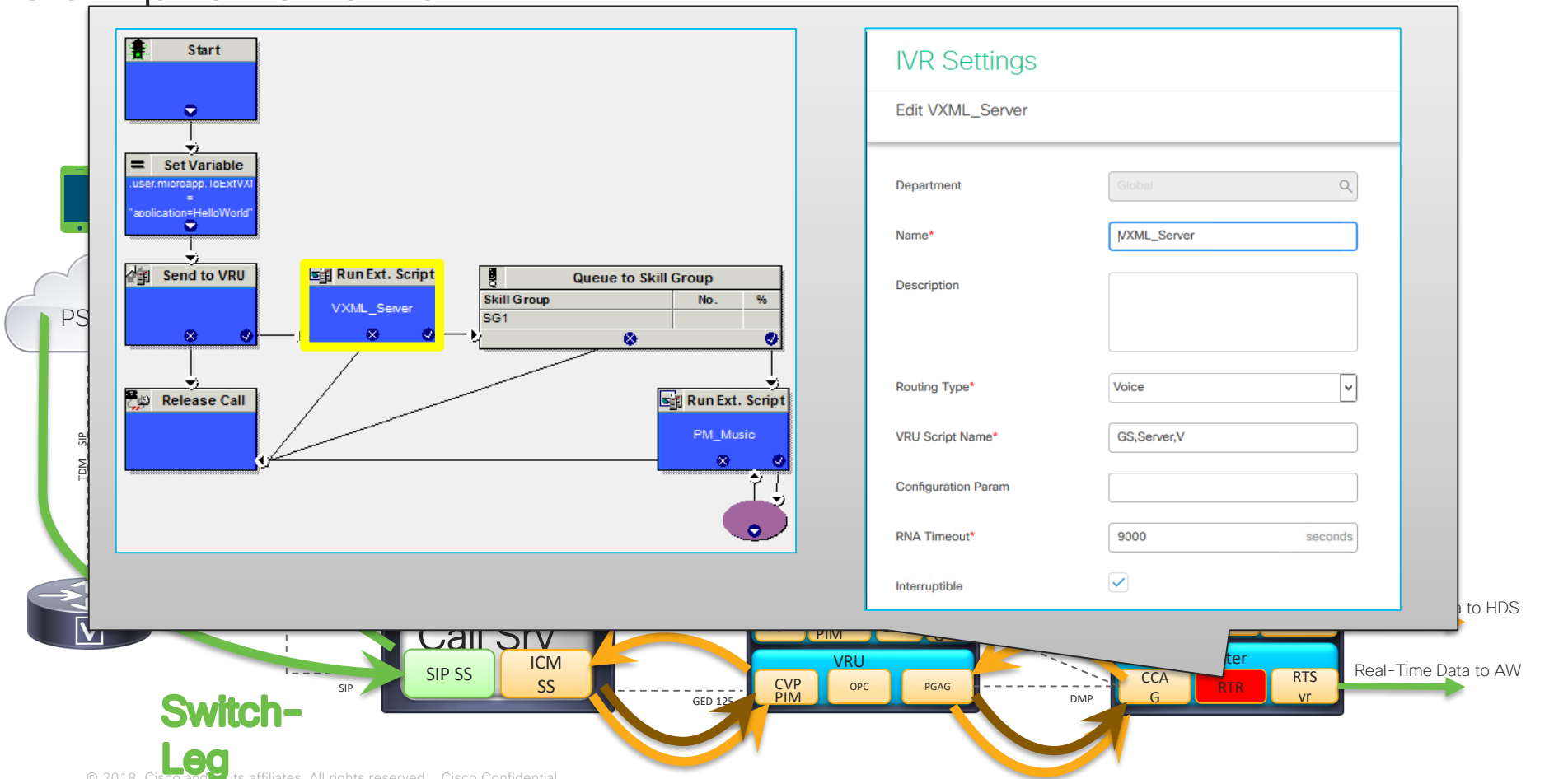
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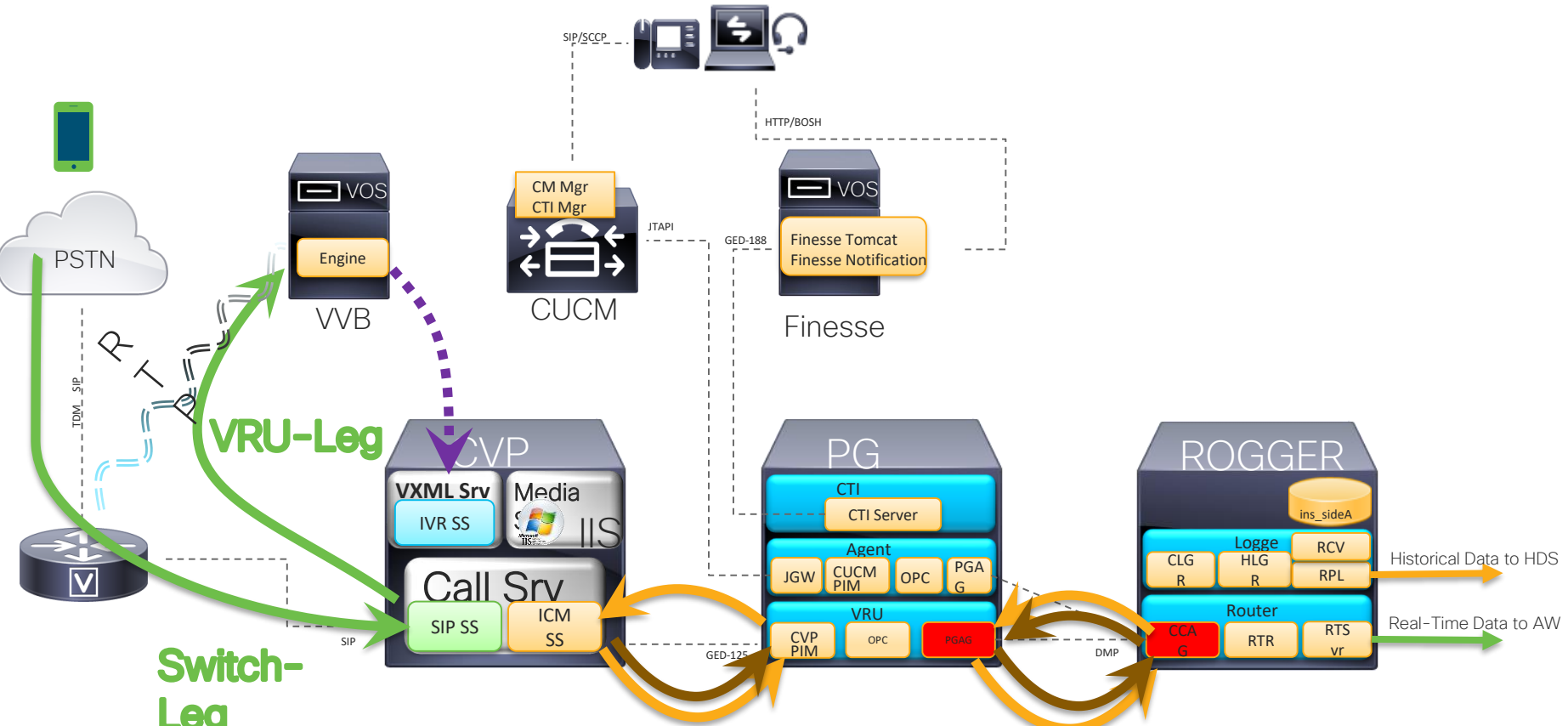
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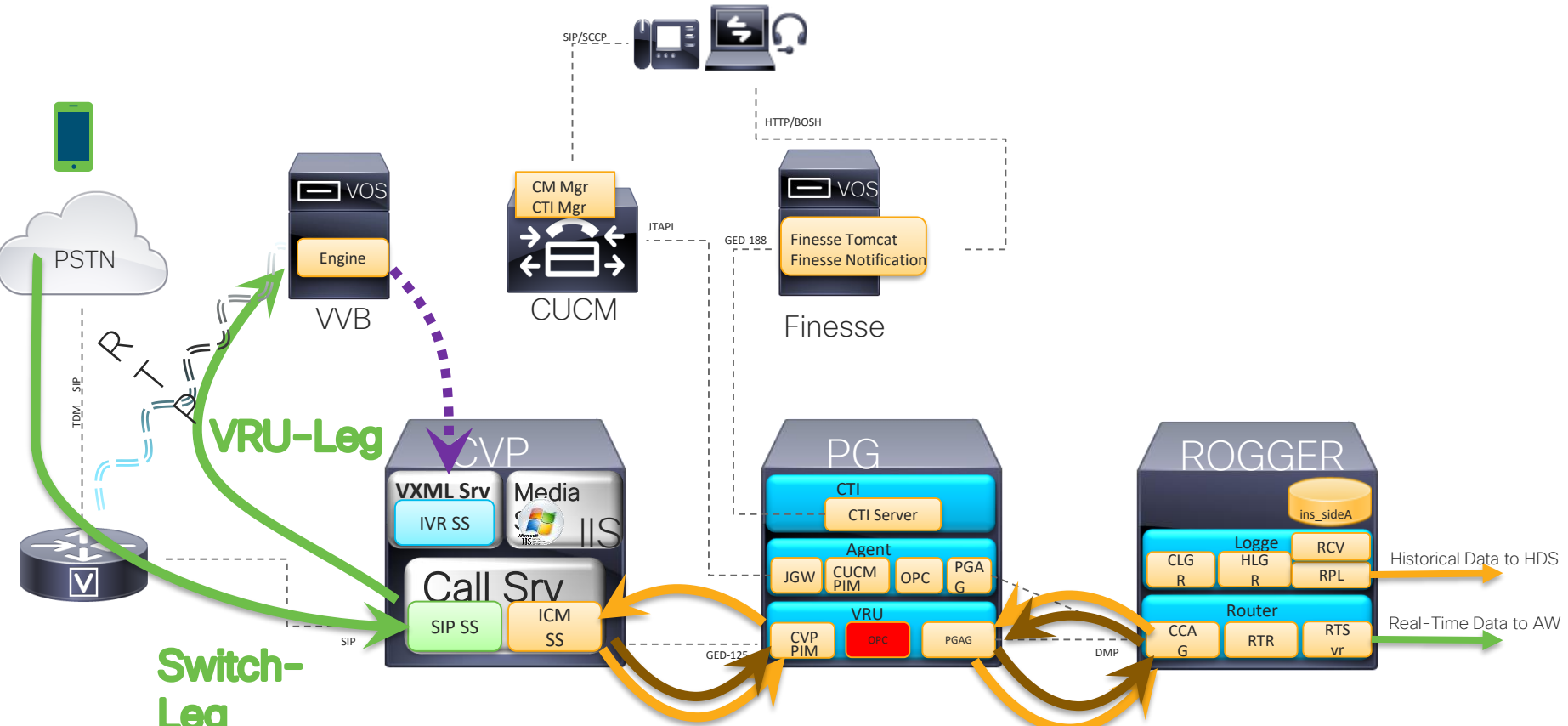
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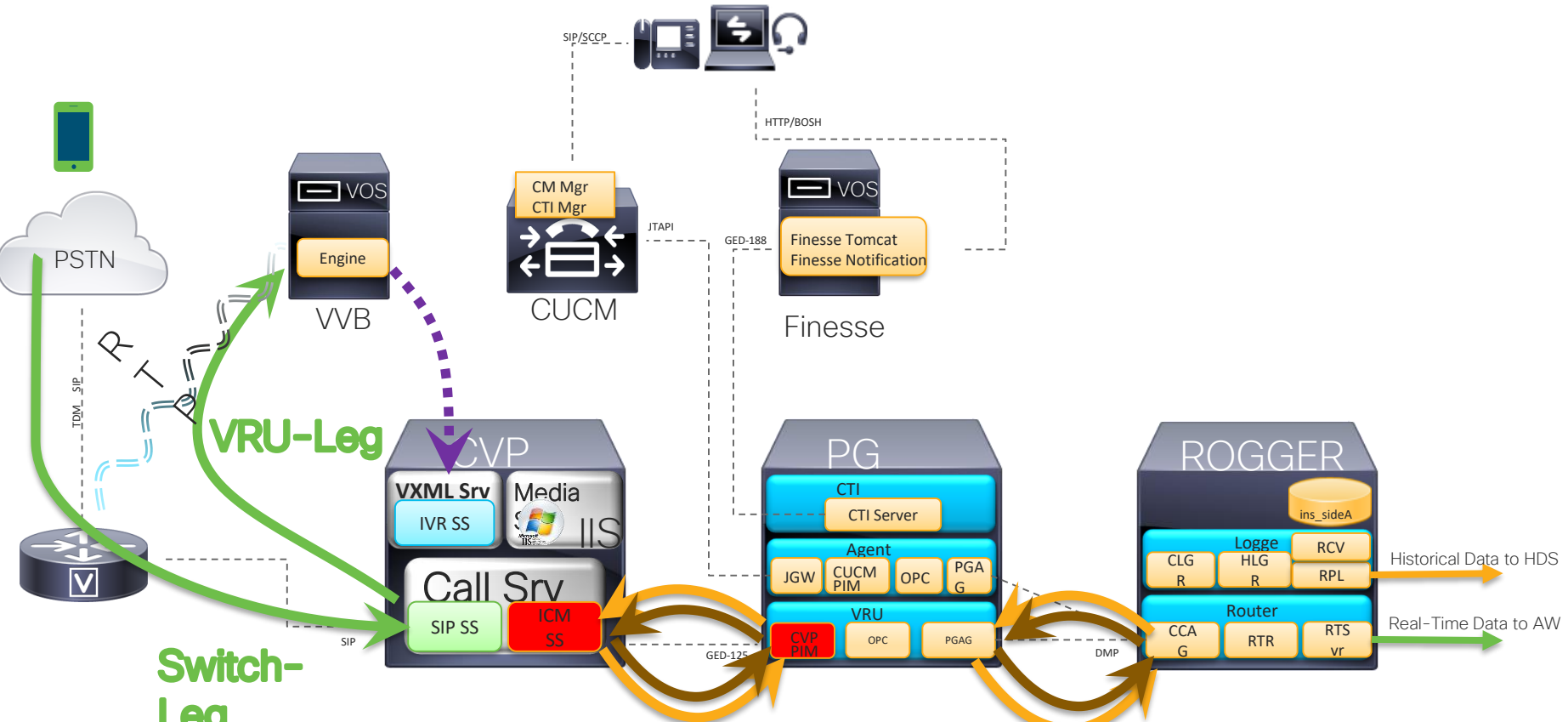
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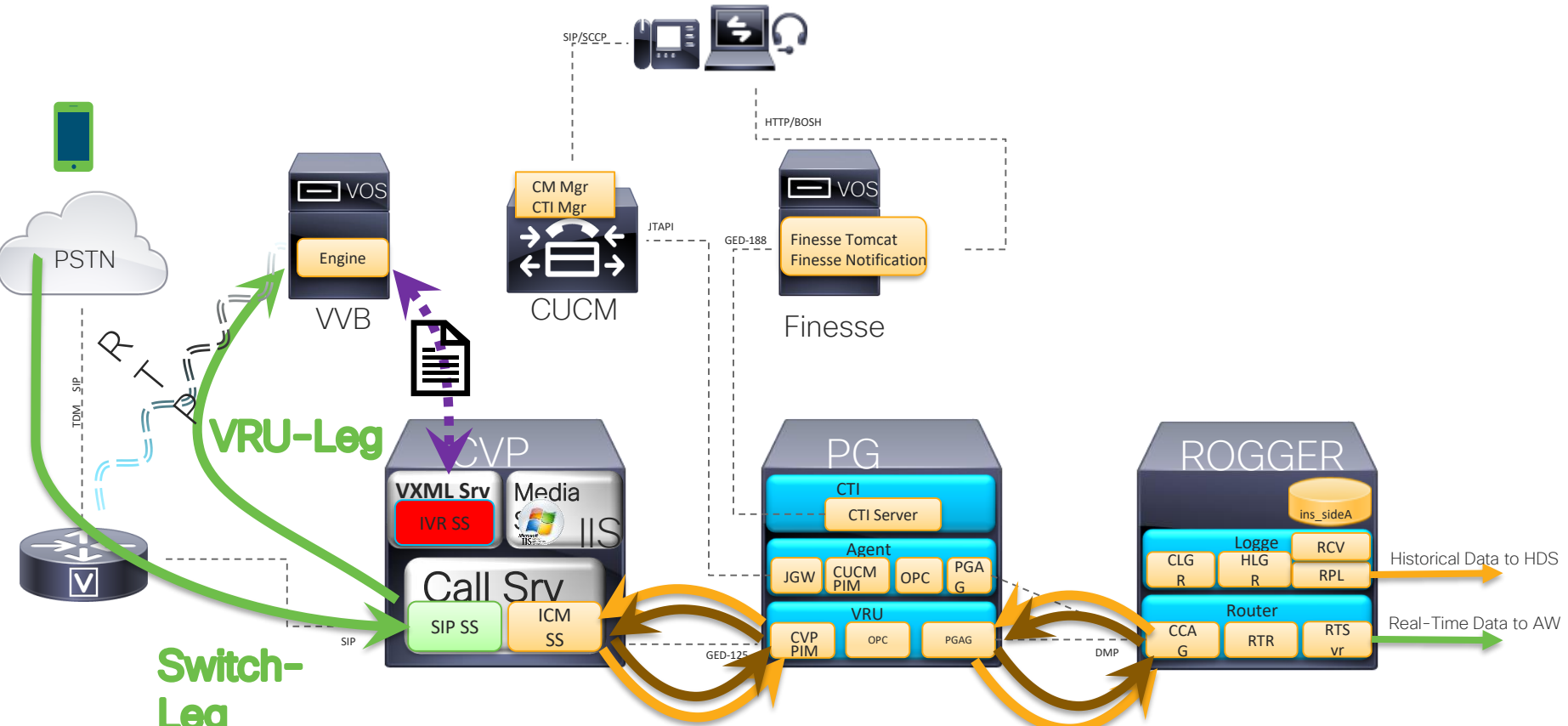
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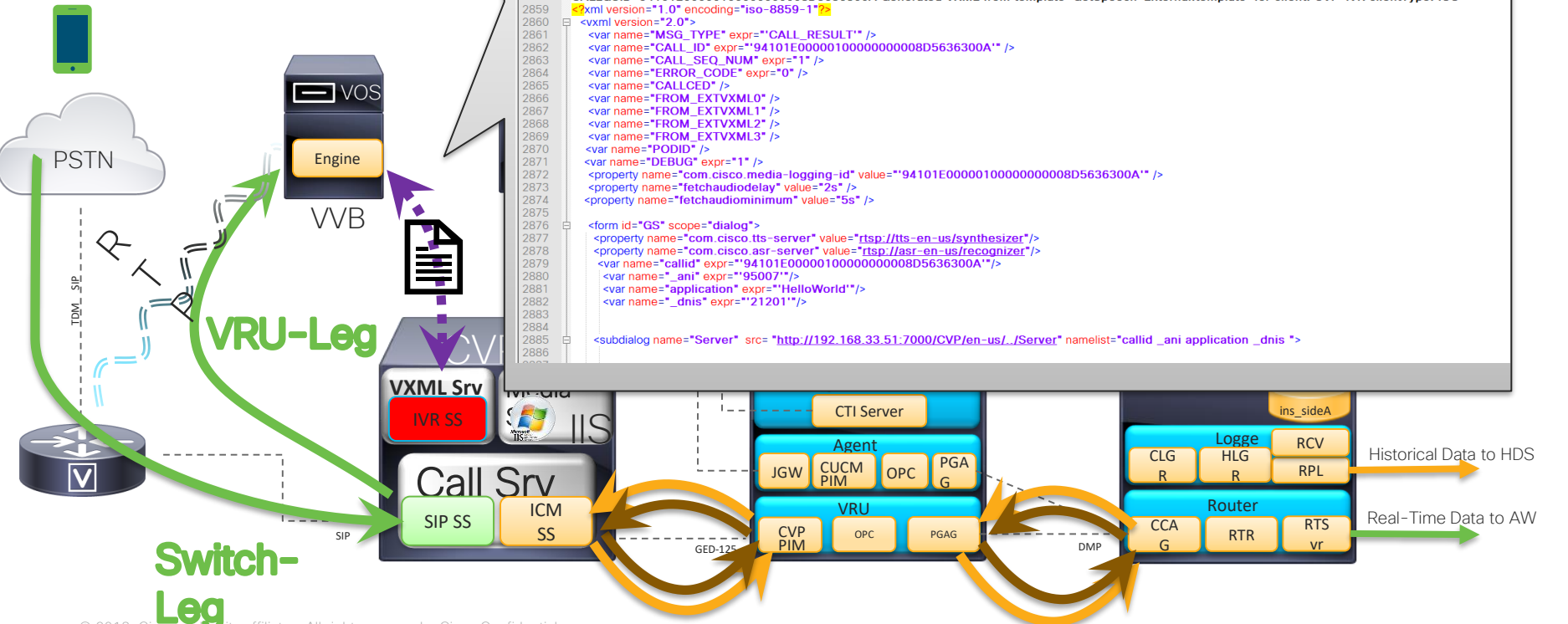
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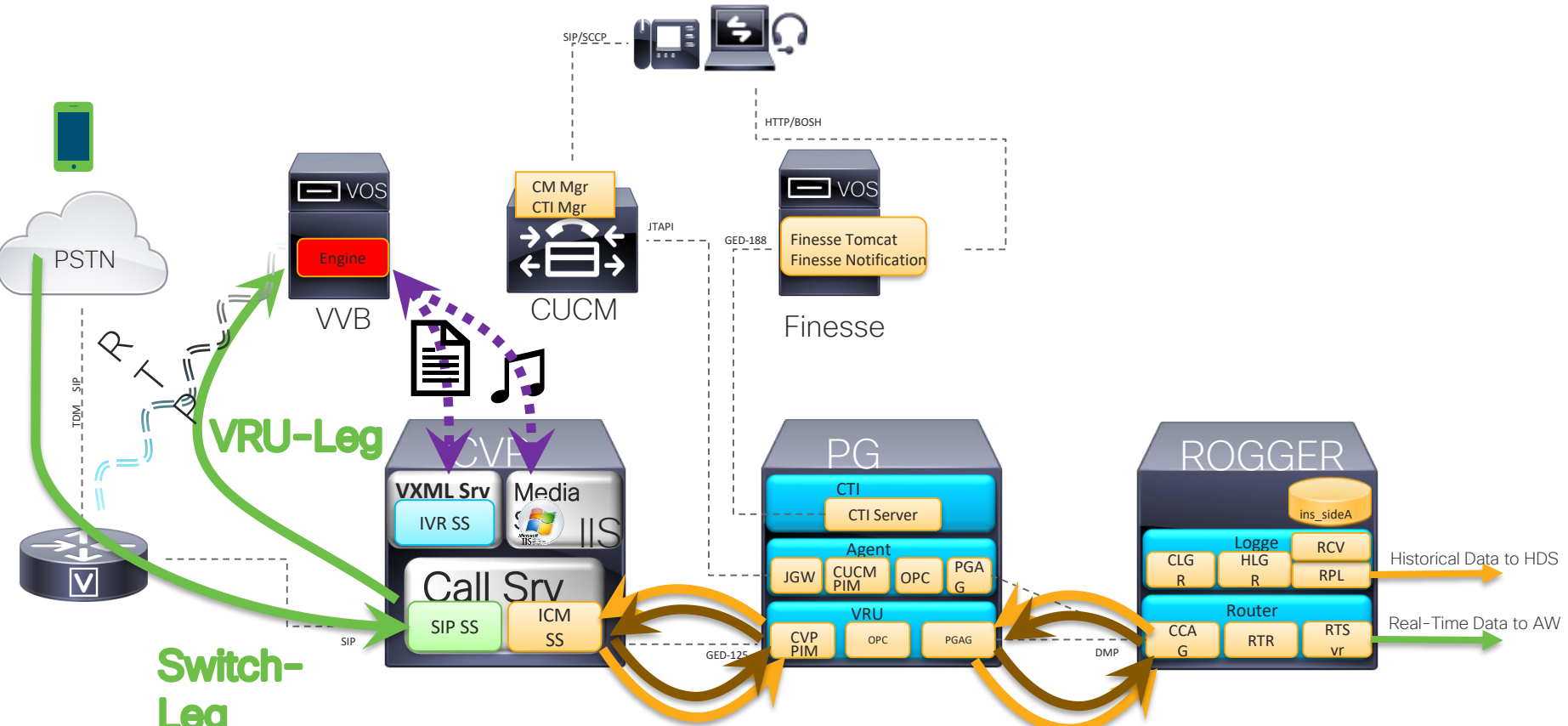
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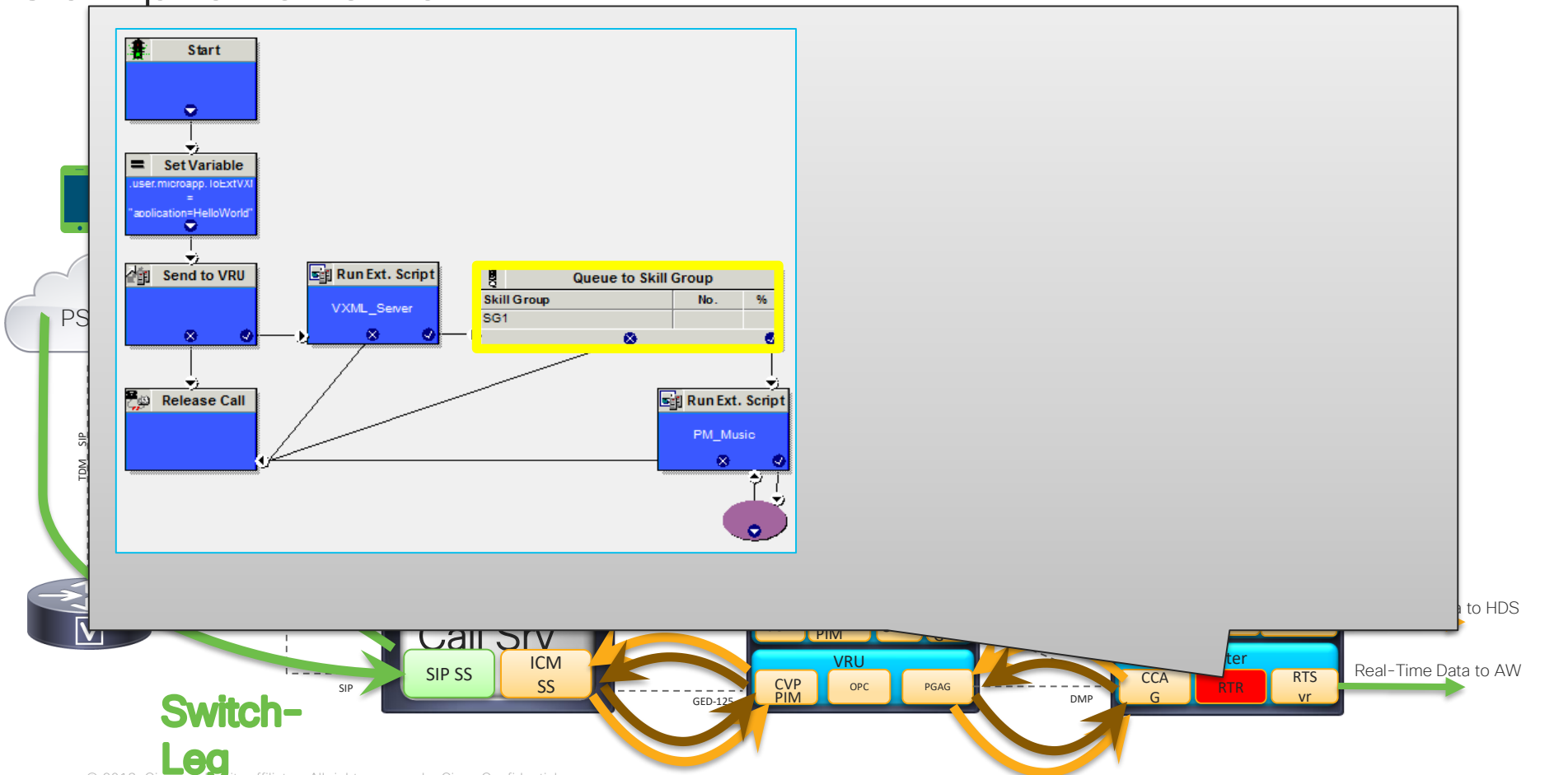
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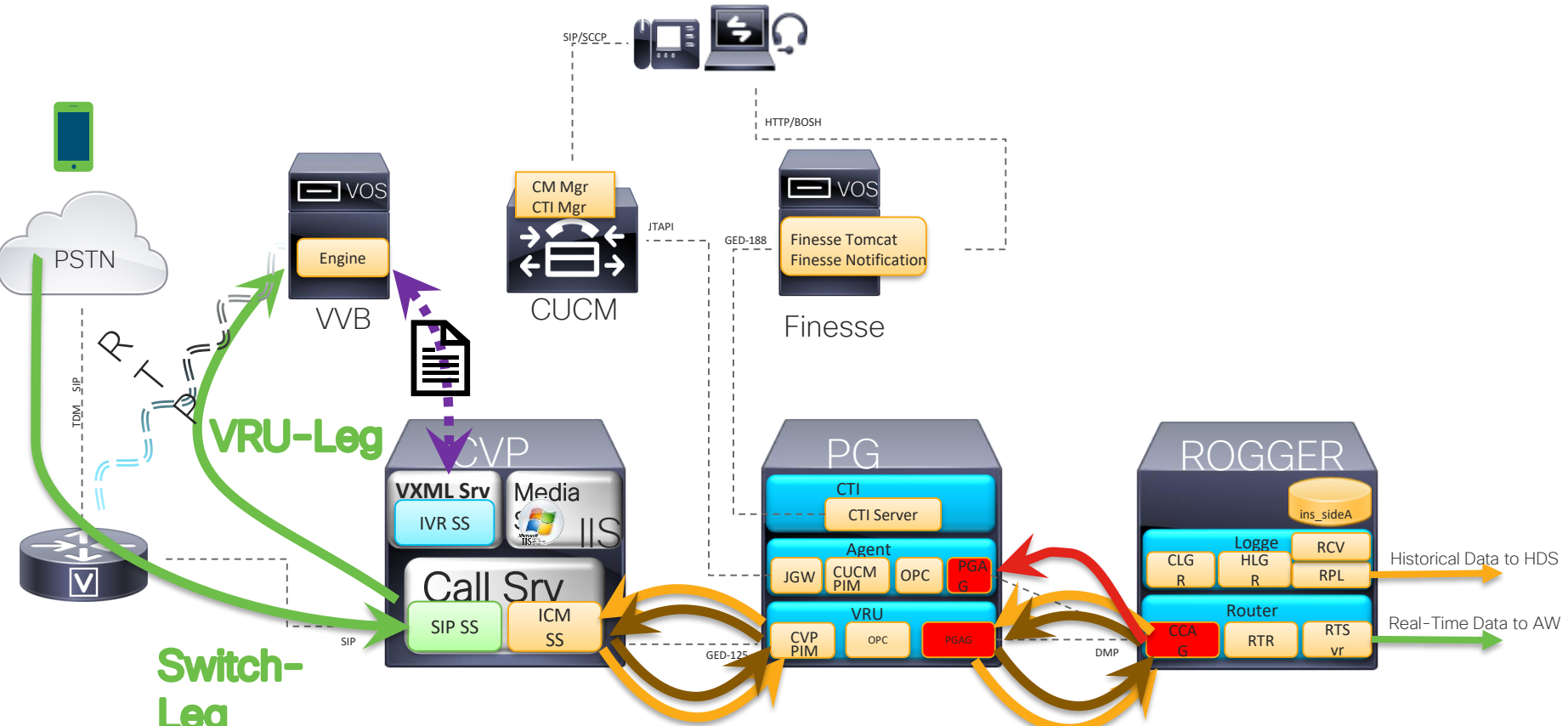


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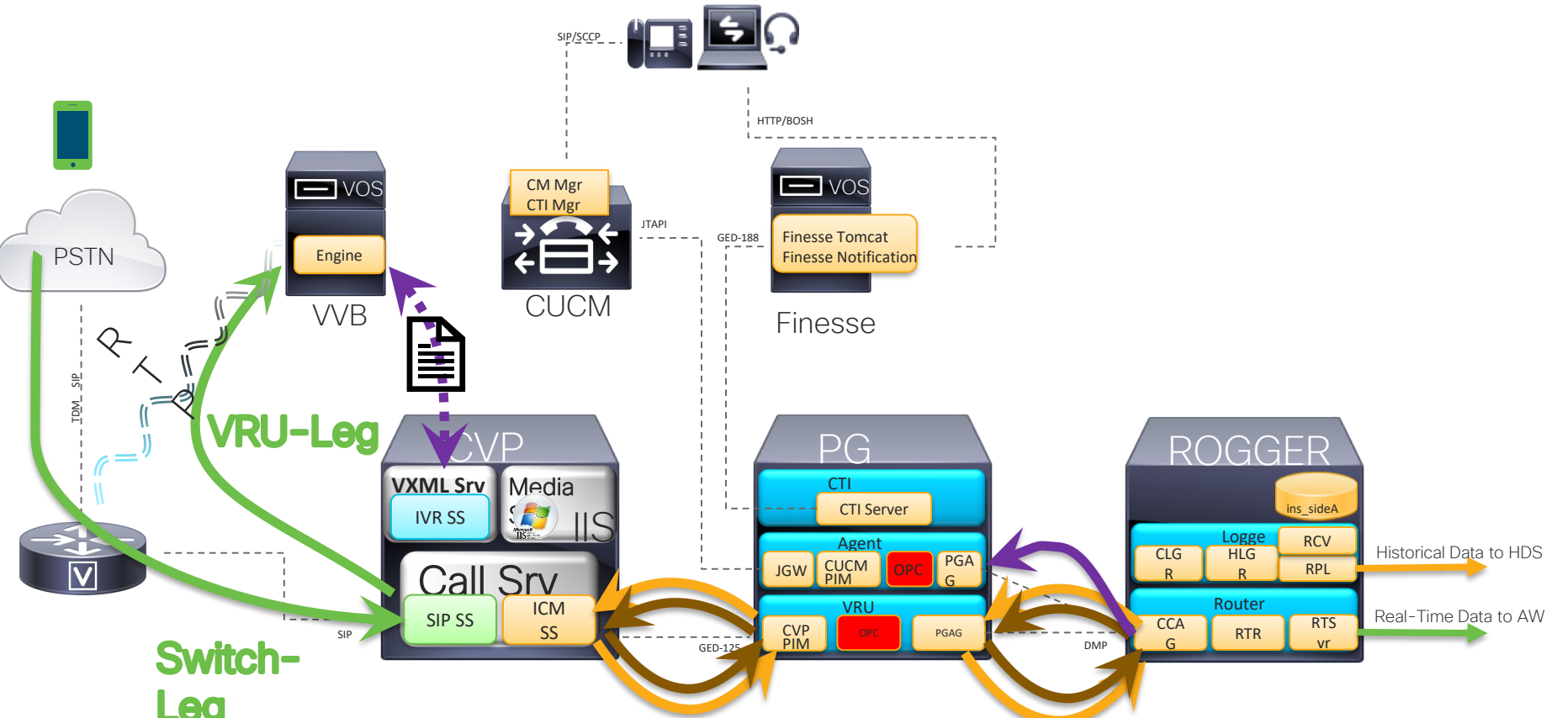


Switch-Leg

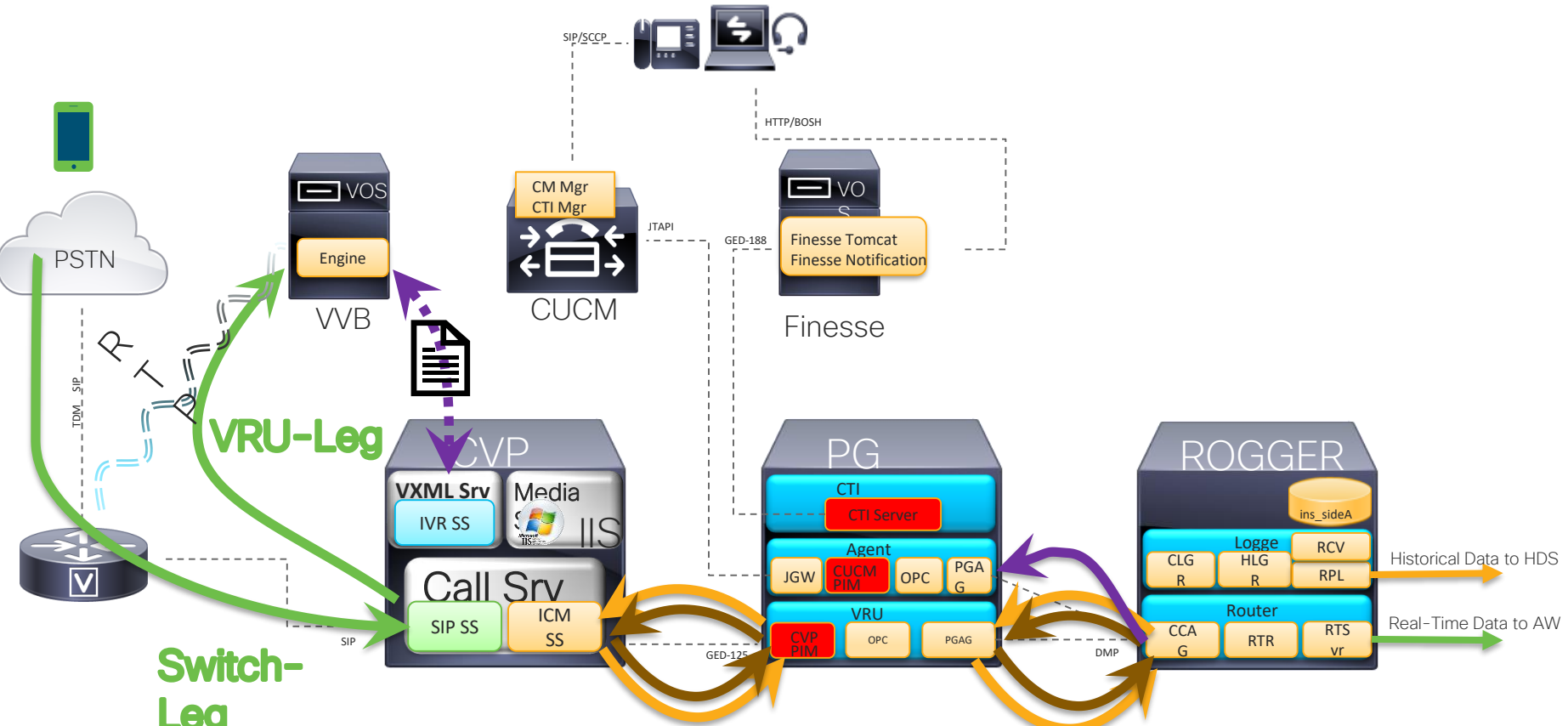
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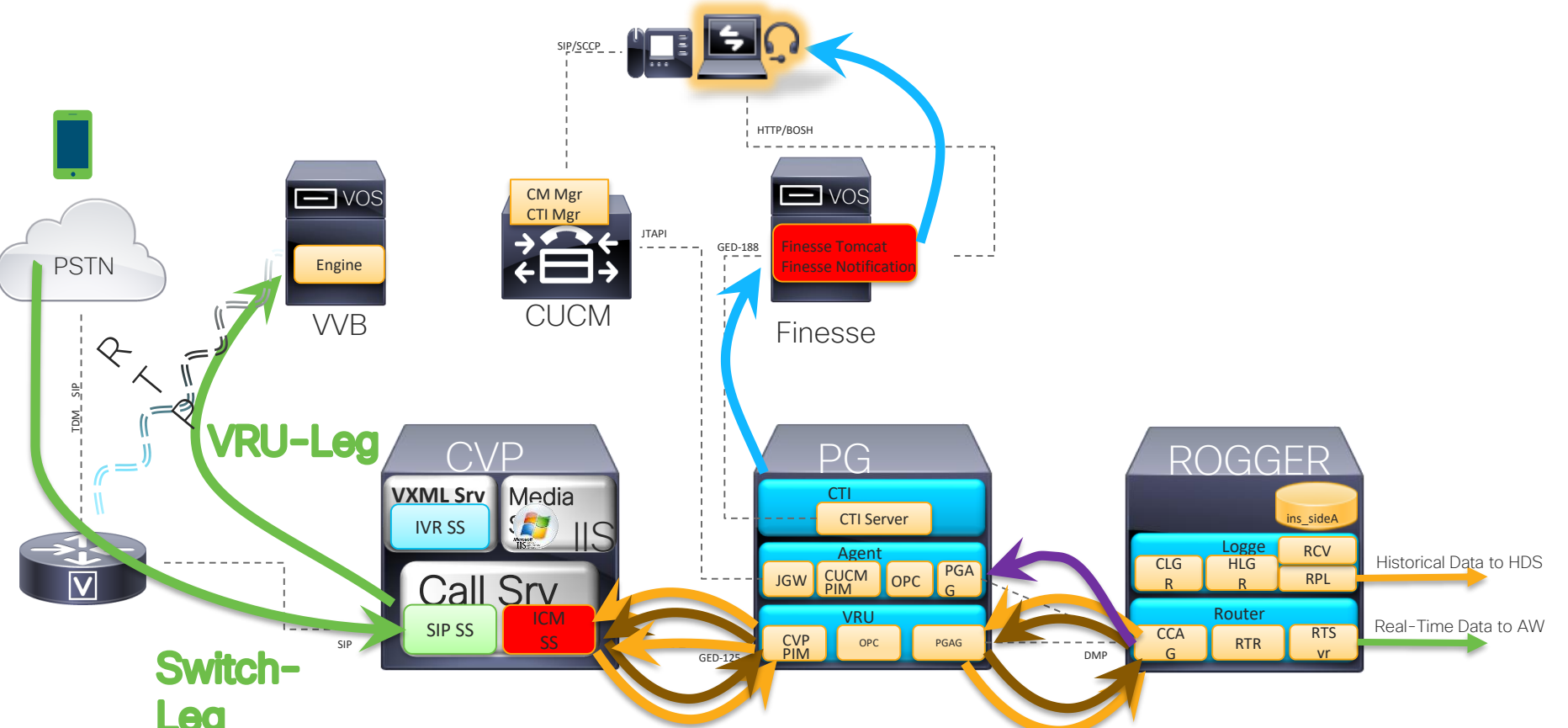
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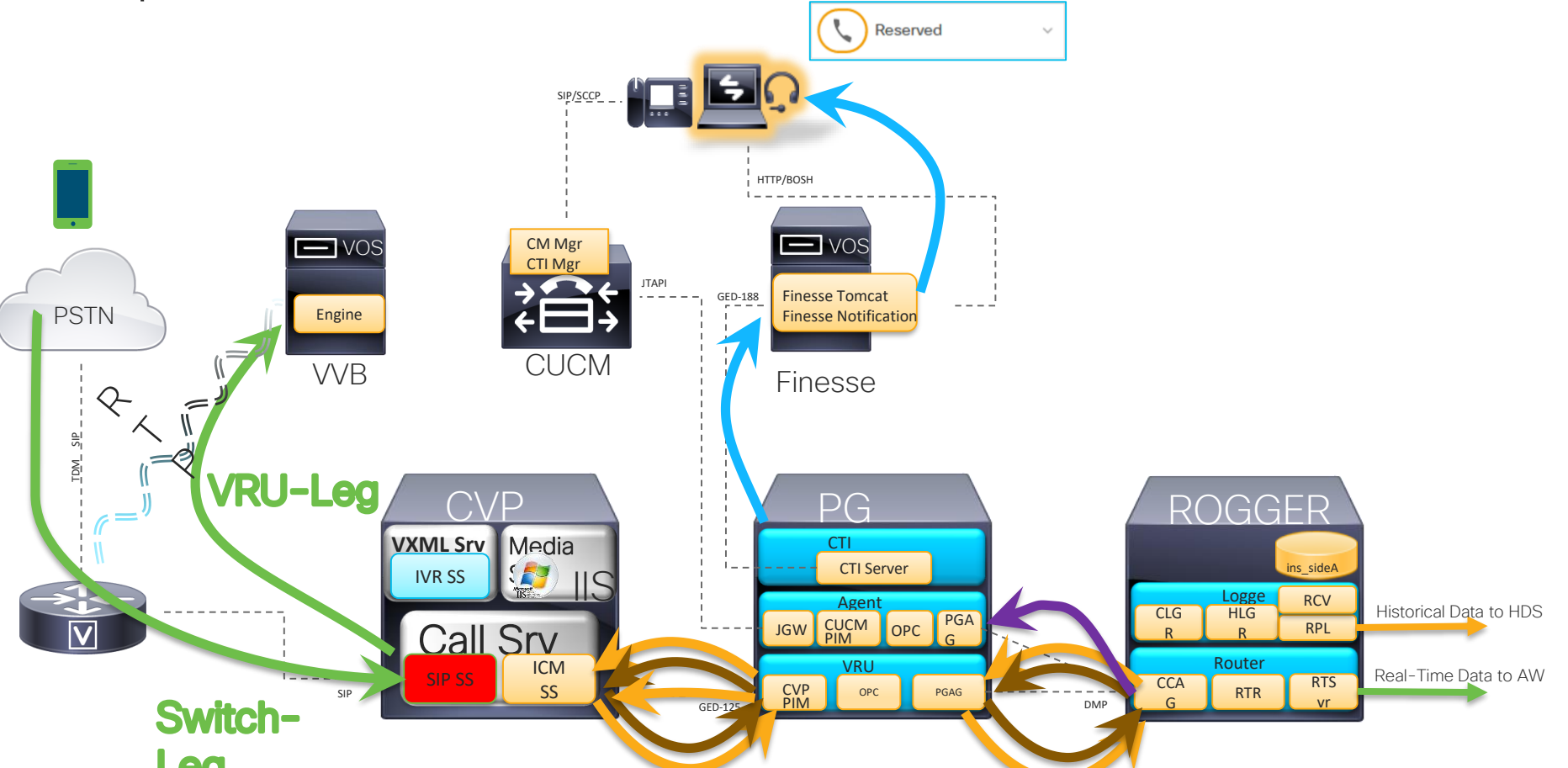
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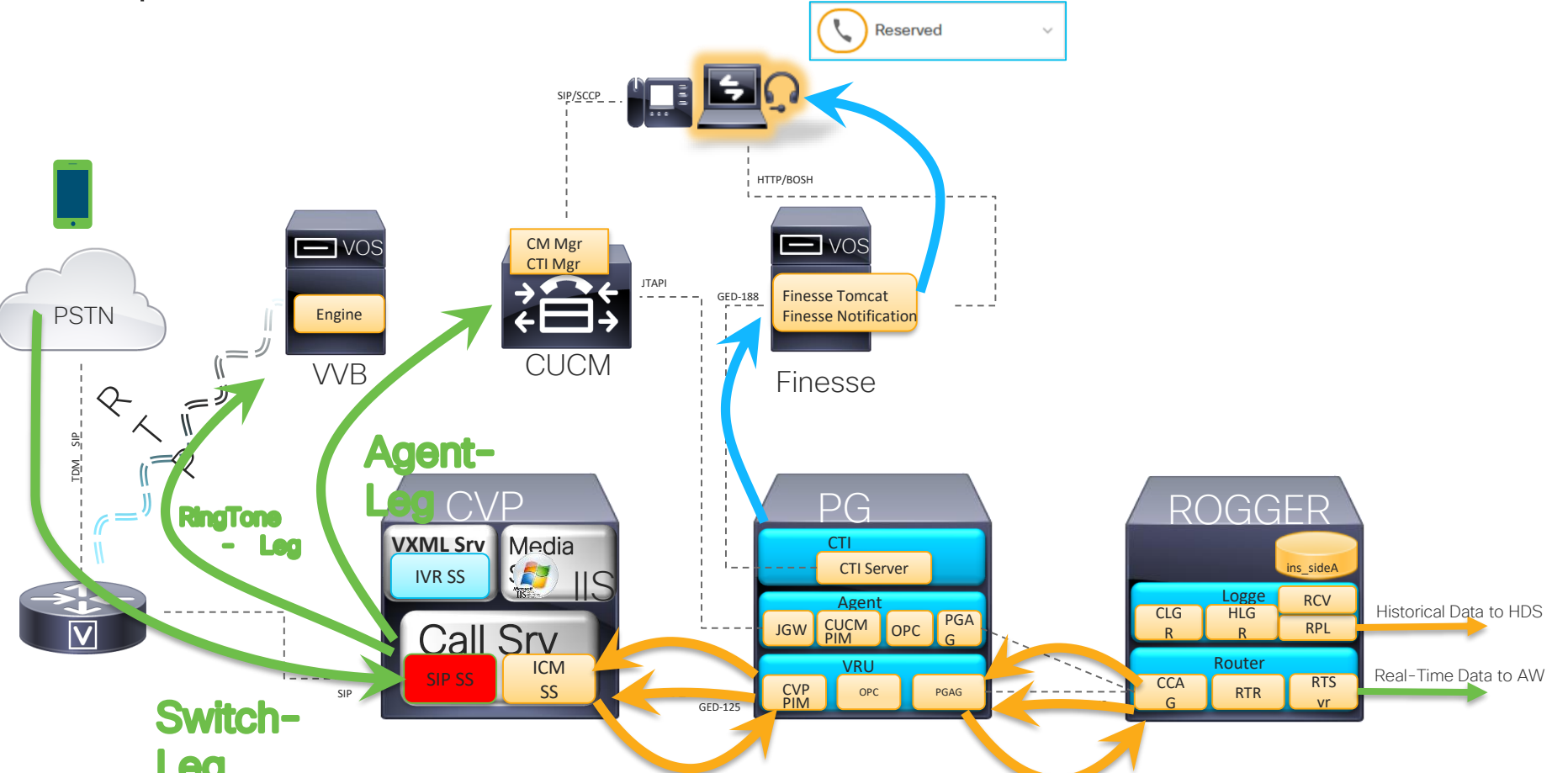
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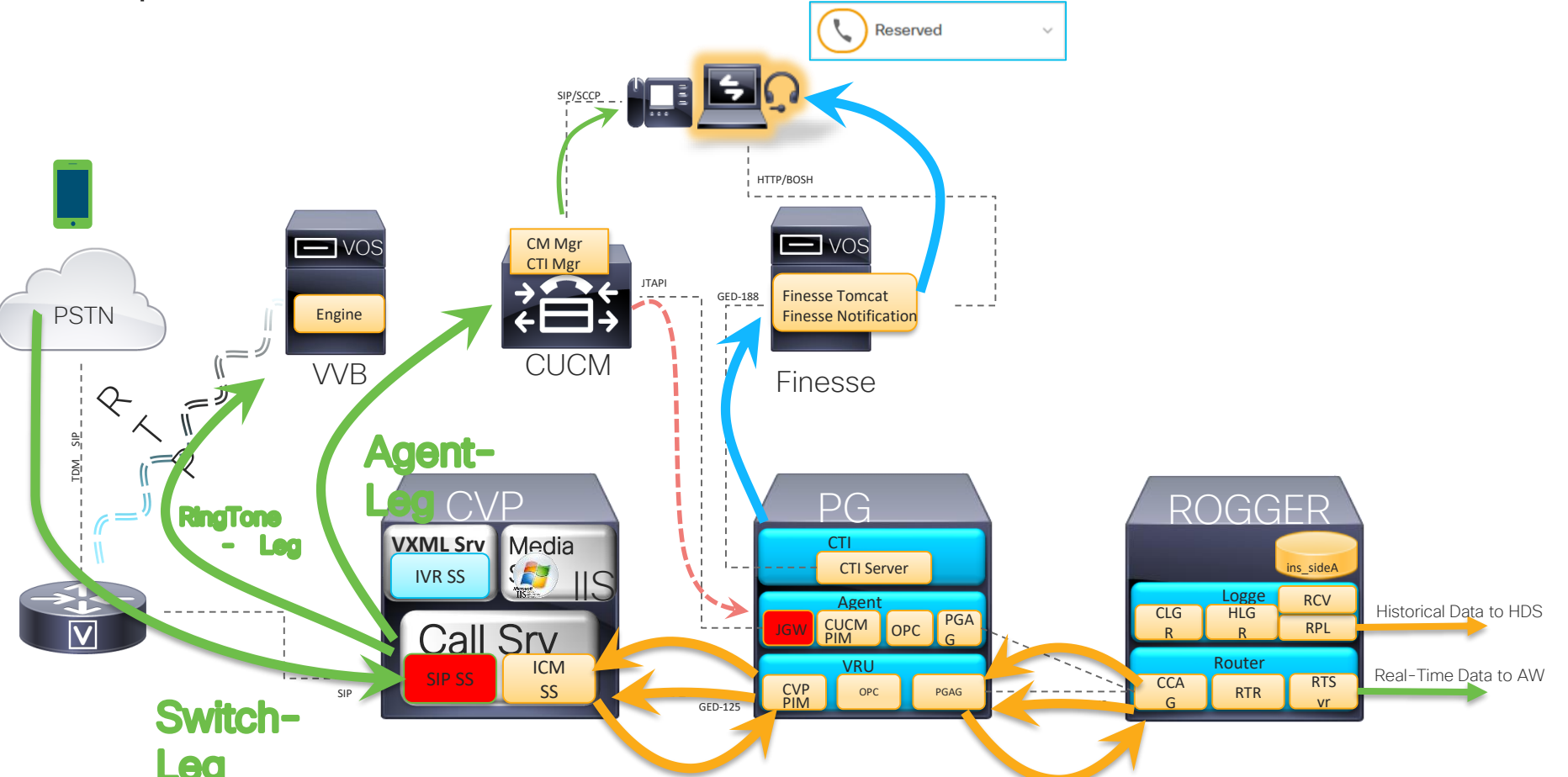
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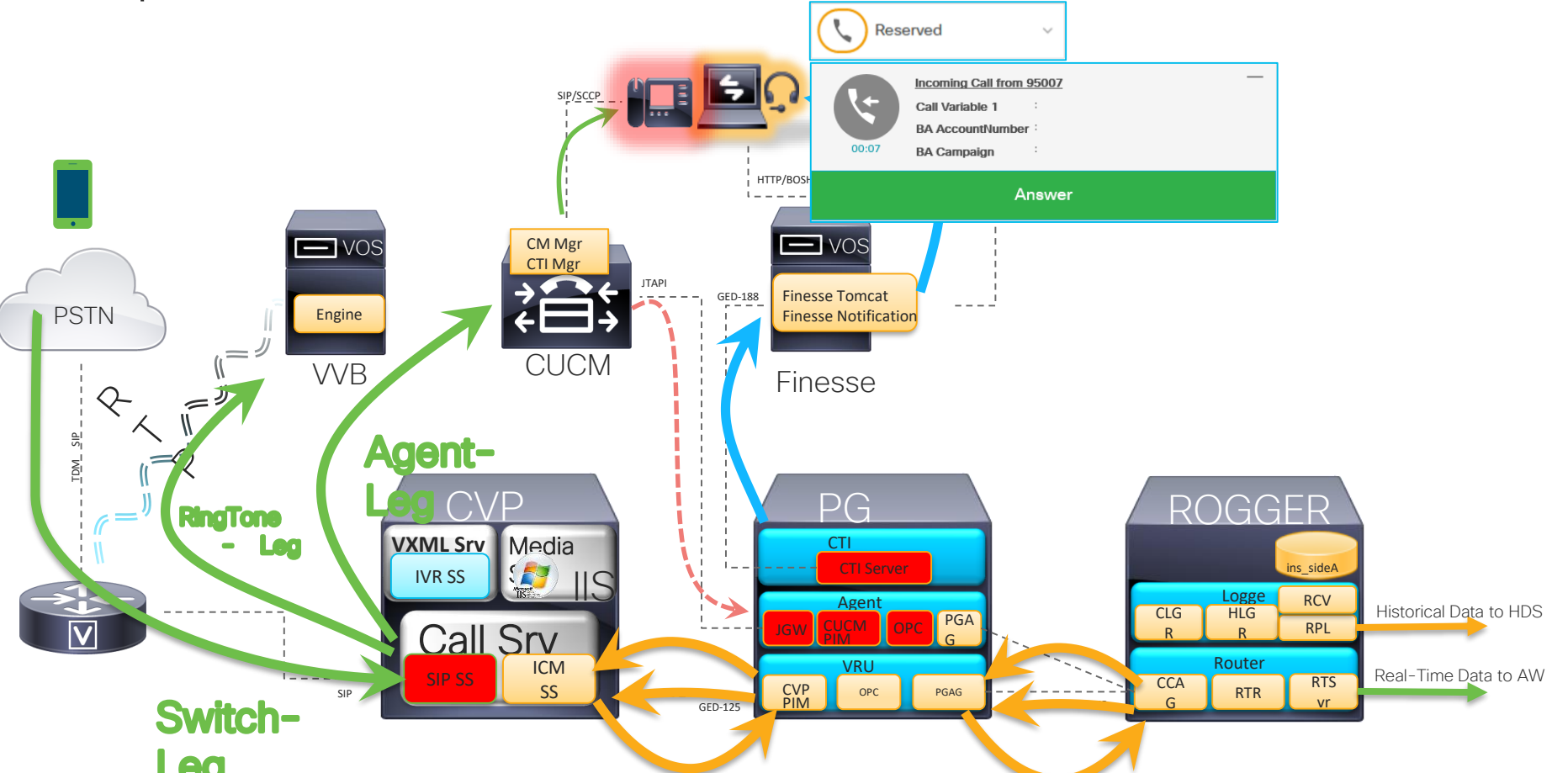
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Comprehensive



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Reserved

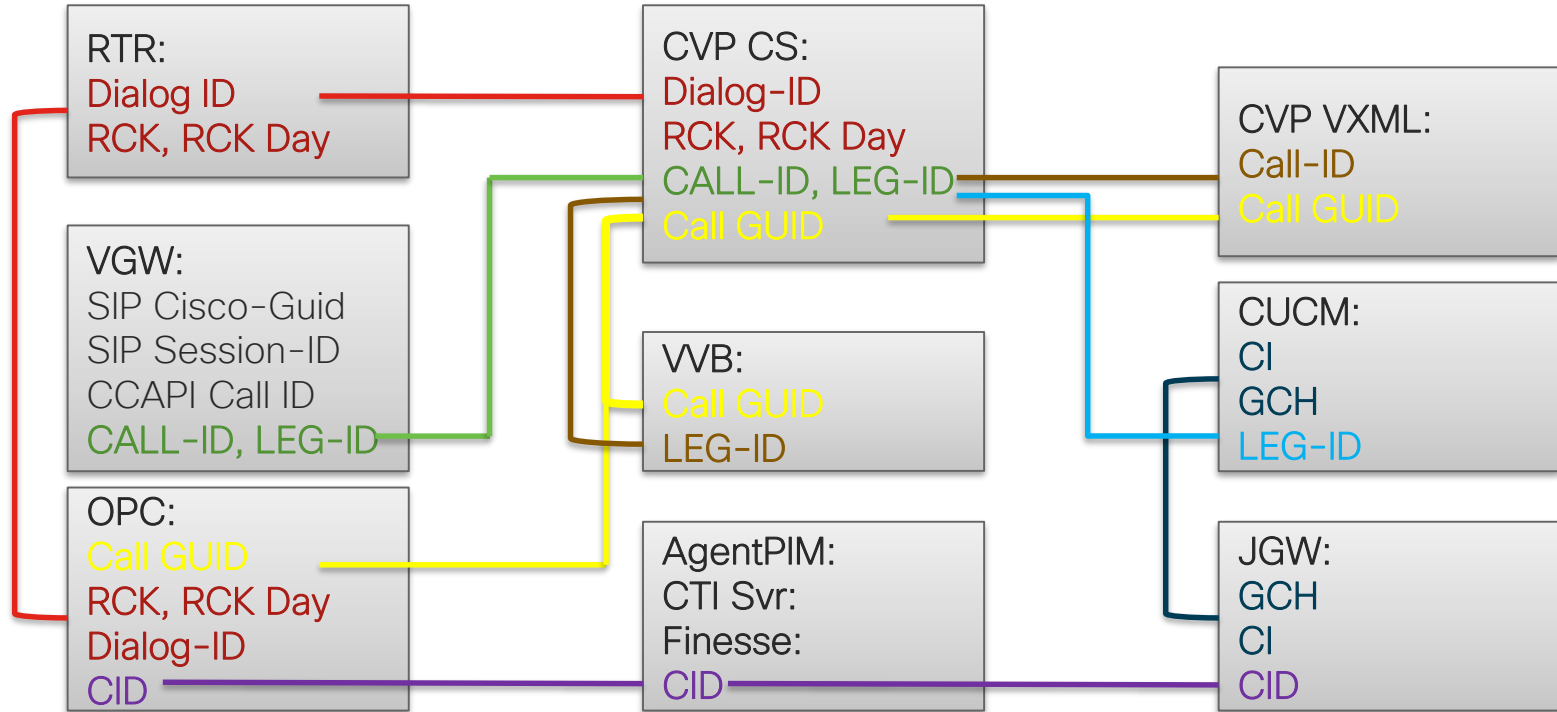
Incoming Call from 95007

Call Variable 1 :
 BA AccountNumber :
 BA Campaign :

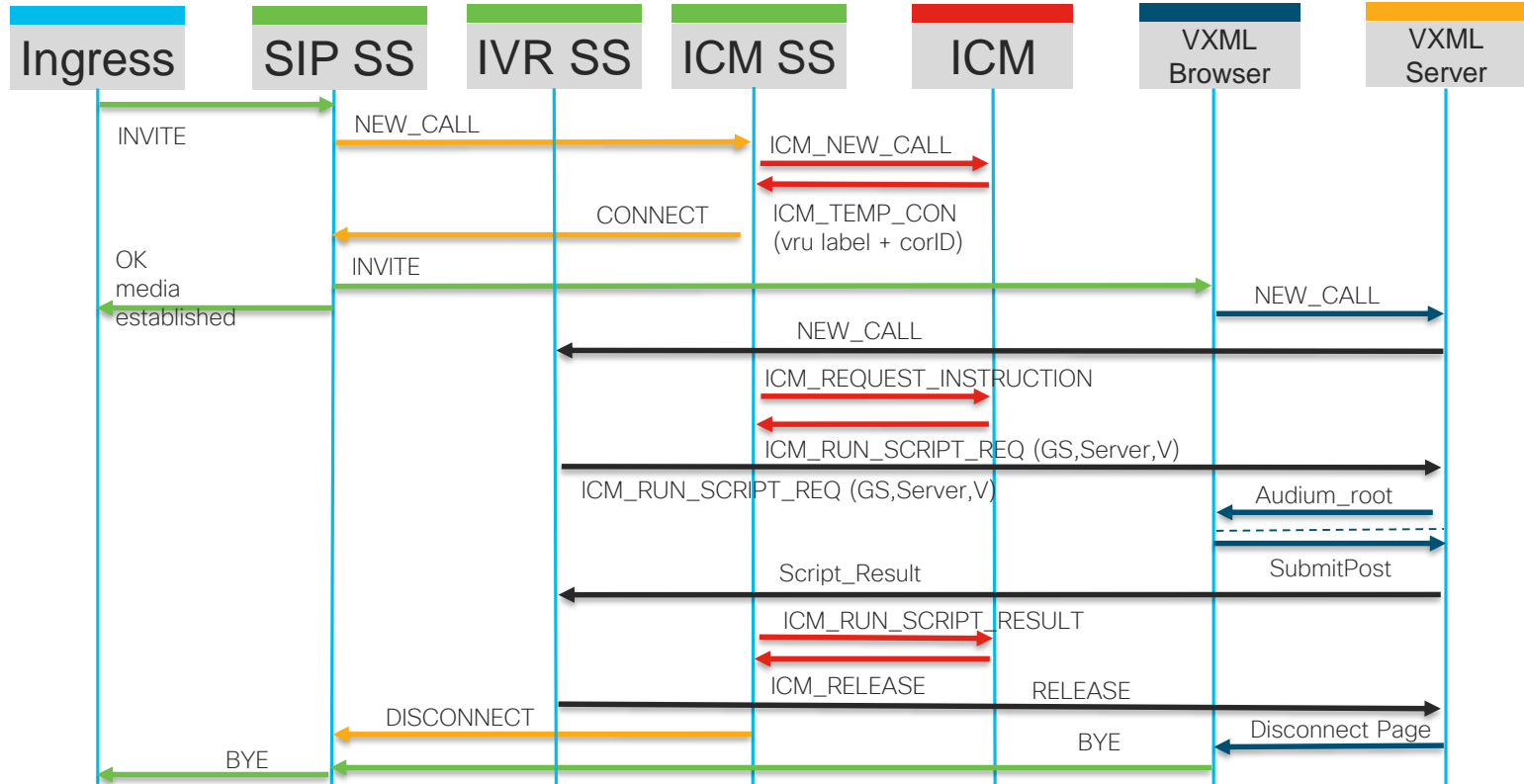
00:07

Answer

Correlation between components



Message flow



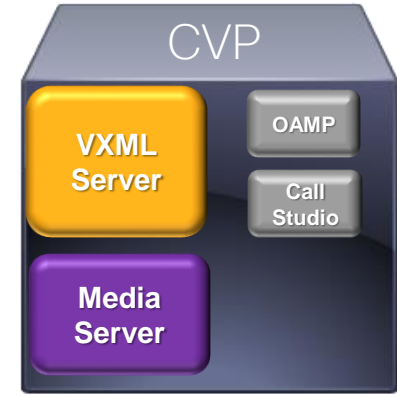
Polling Question 2

What will happen with the Agent, when Router generates Label with Agent extension?

- A. Call will be dropped
- B. Agent will go to Reserved state
- C. Agent phone will start Ringing
- D. Call will be send to VRU

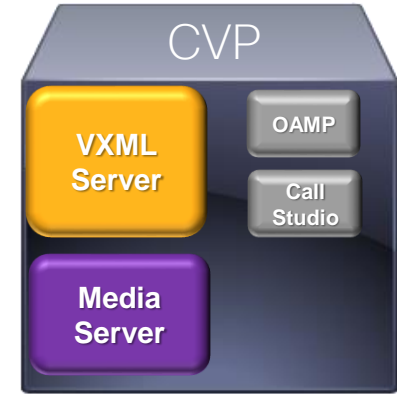
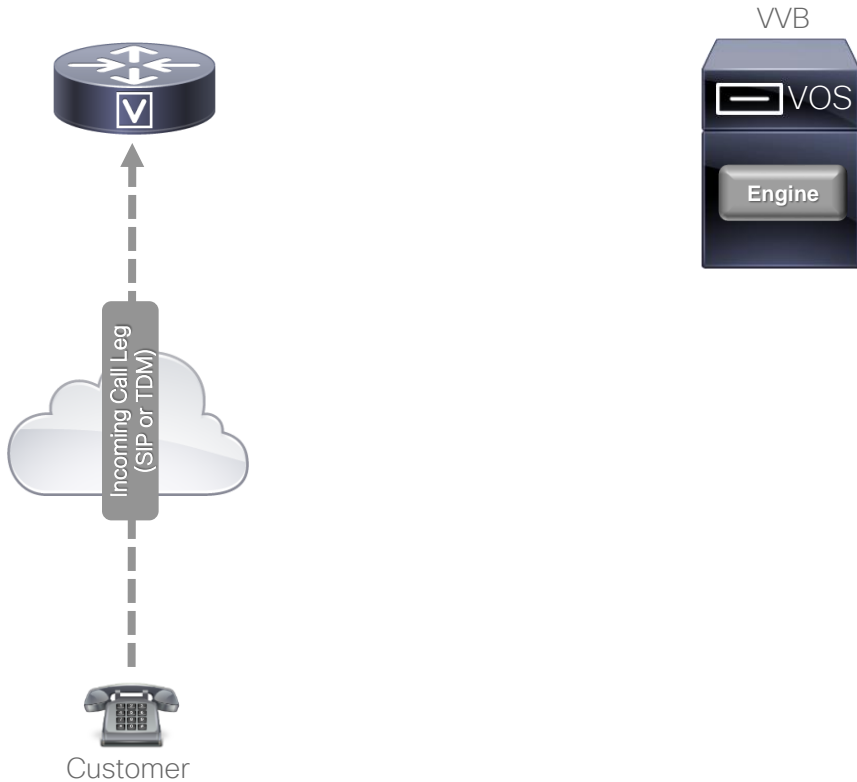
CVP Standalone Call Flow

CVP Standalone Call Flow

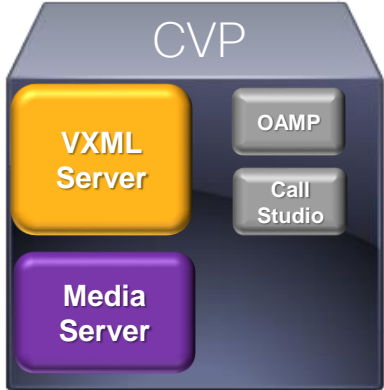
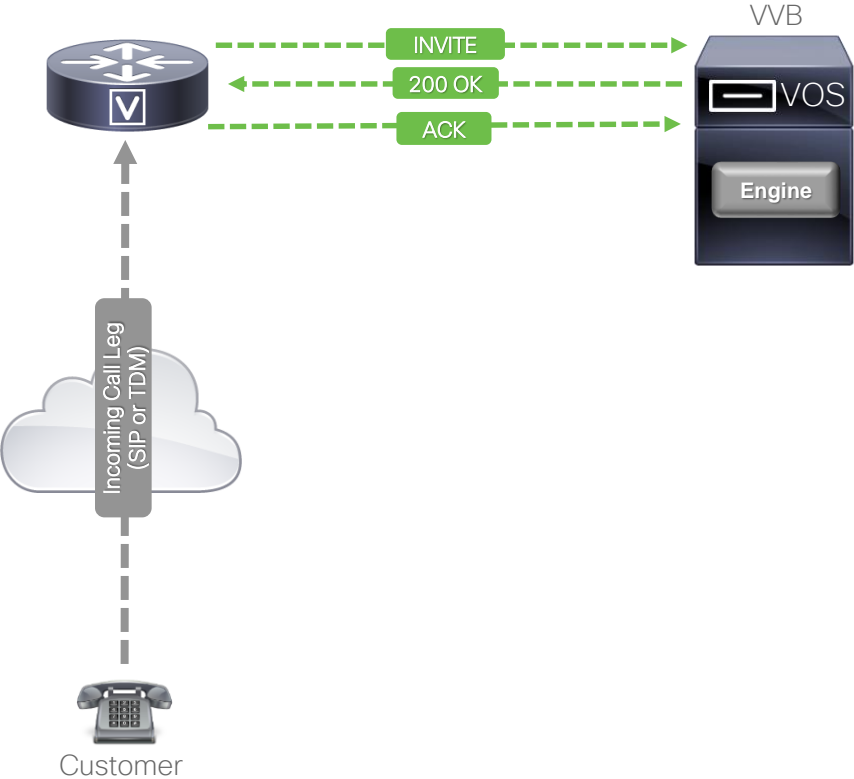


Customer

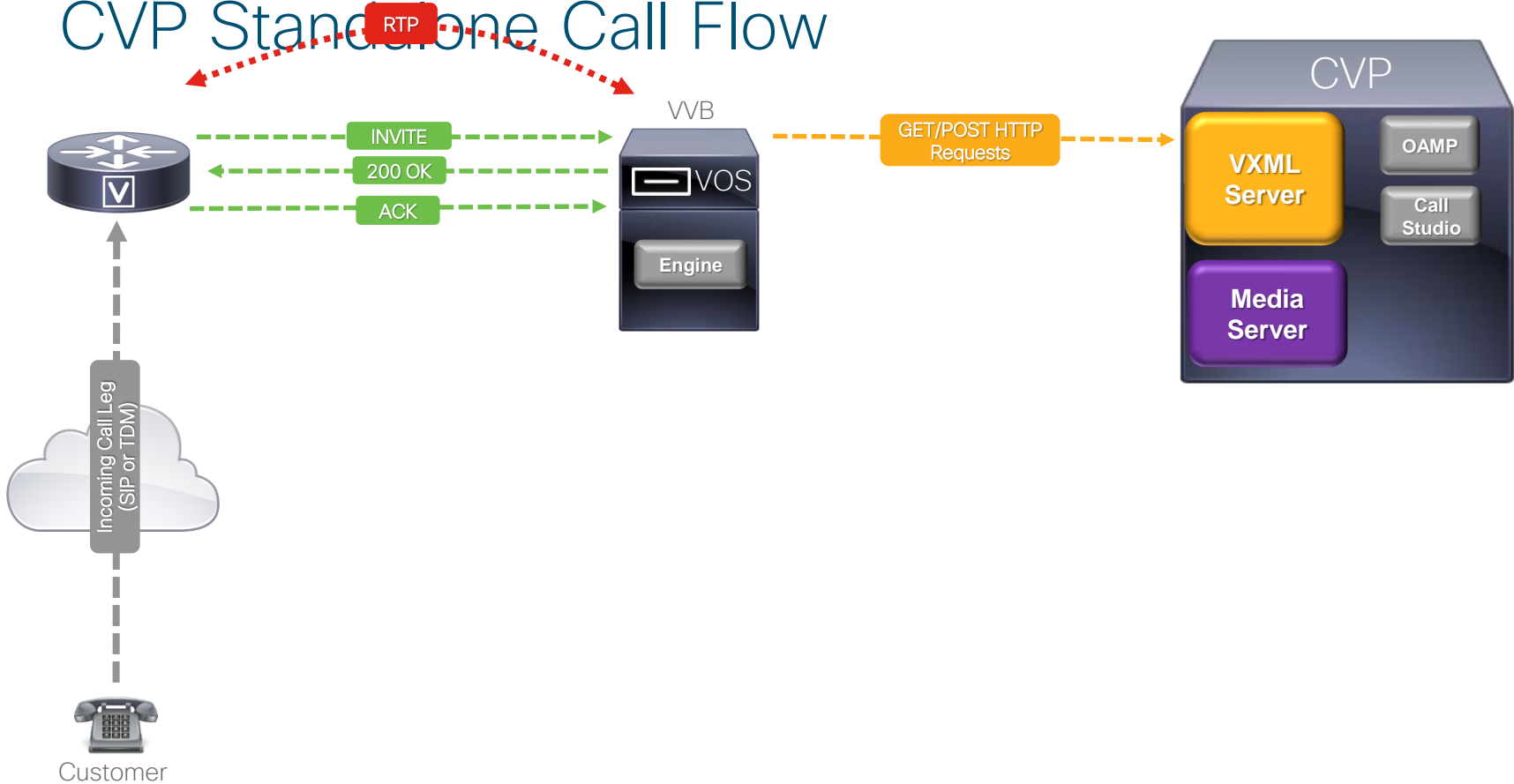
CVP Standalone Call Flow



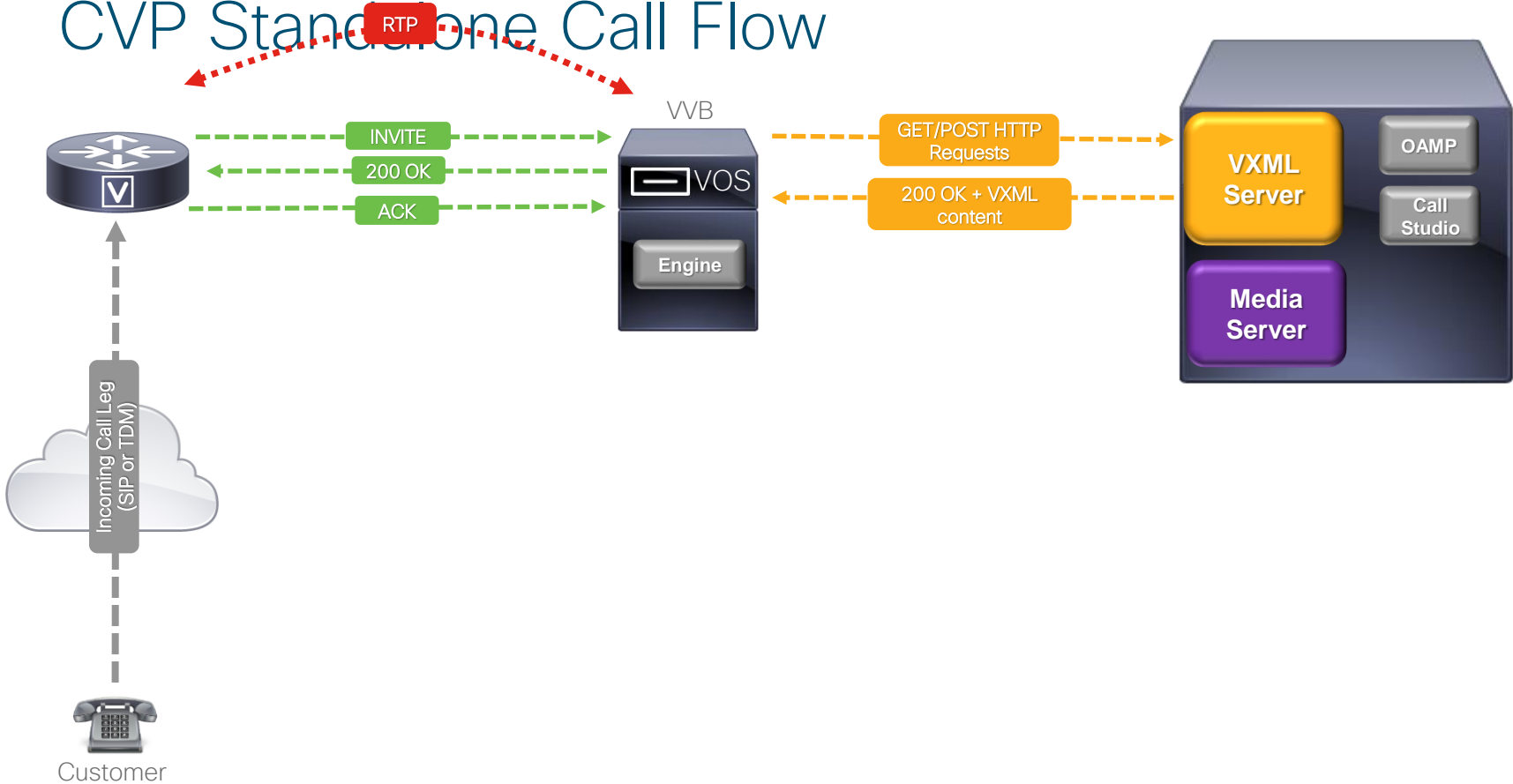
CVP Standalone Call Flow



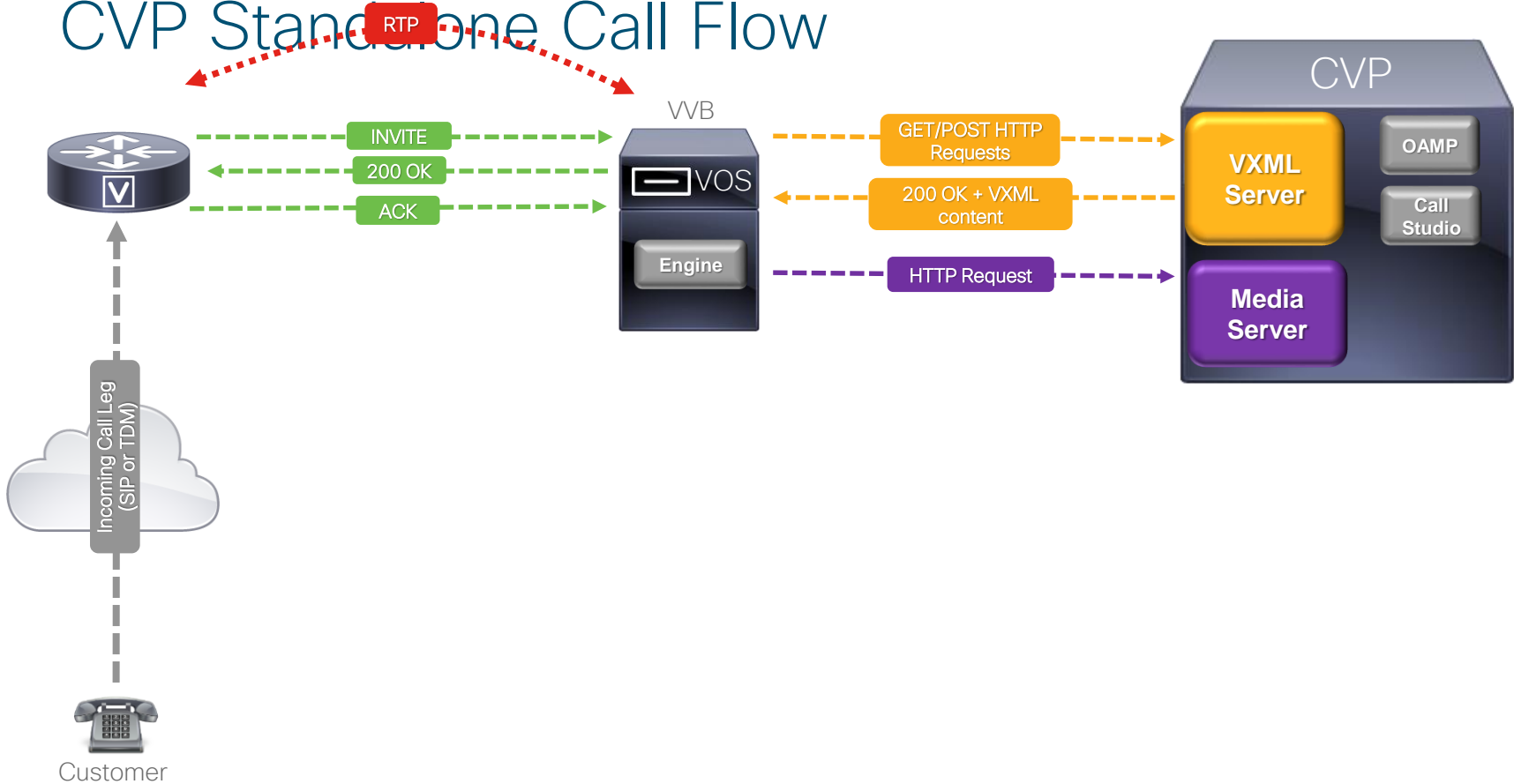
CVP Standalone Call Flow



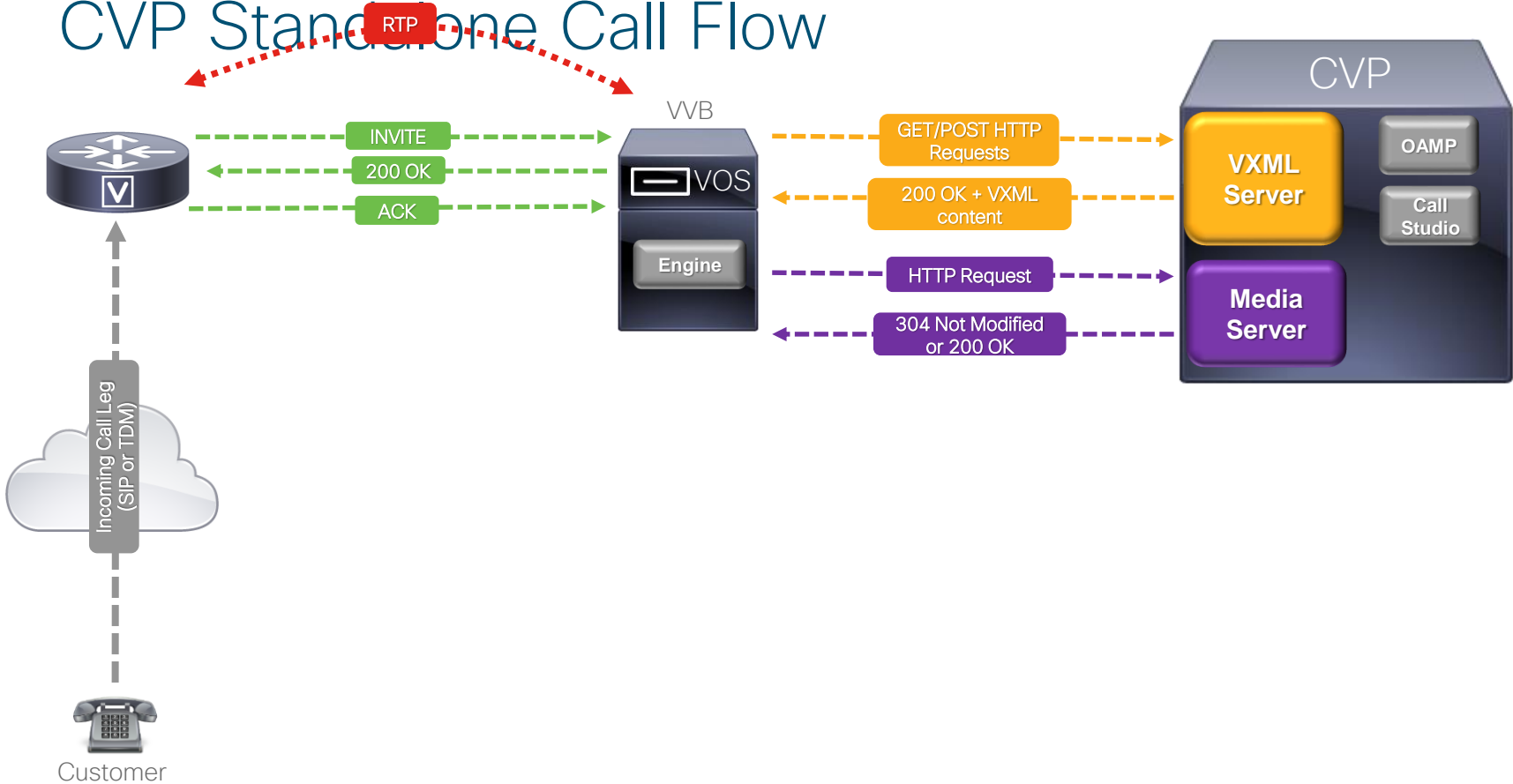
CVP Standalone Call Flow



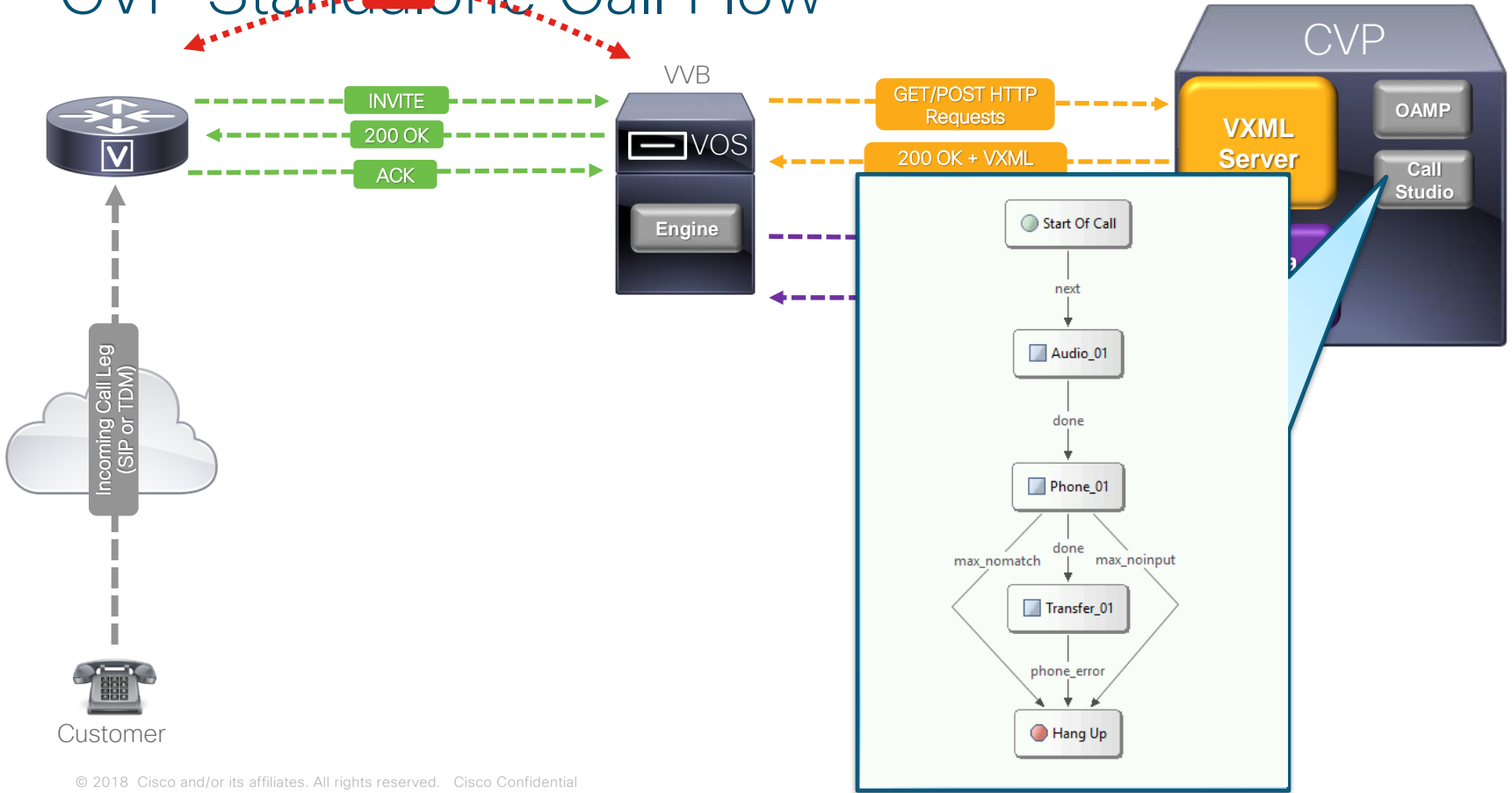
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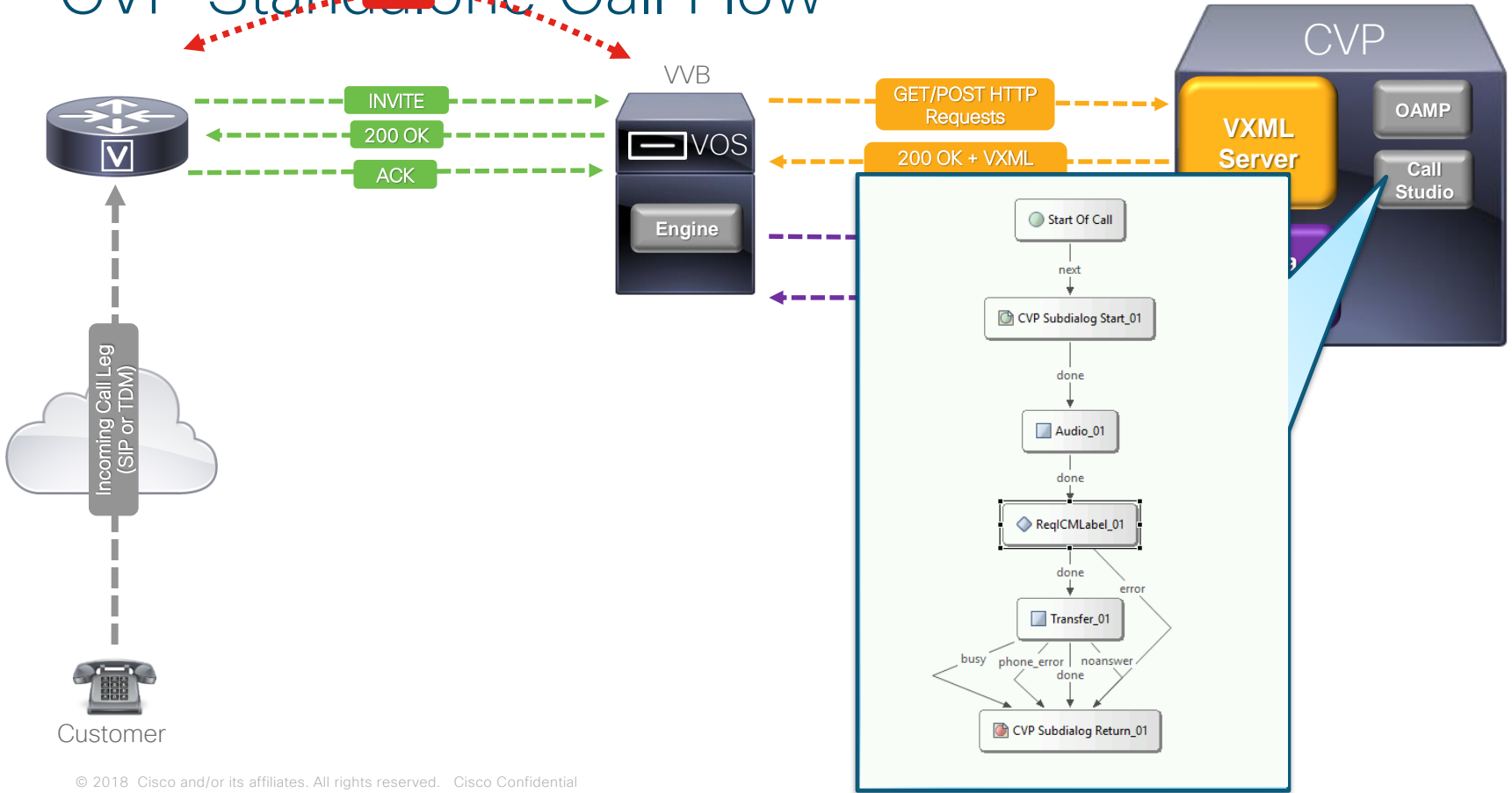
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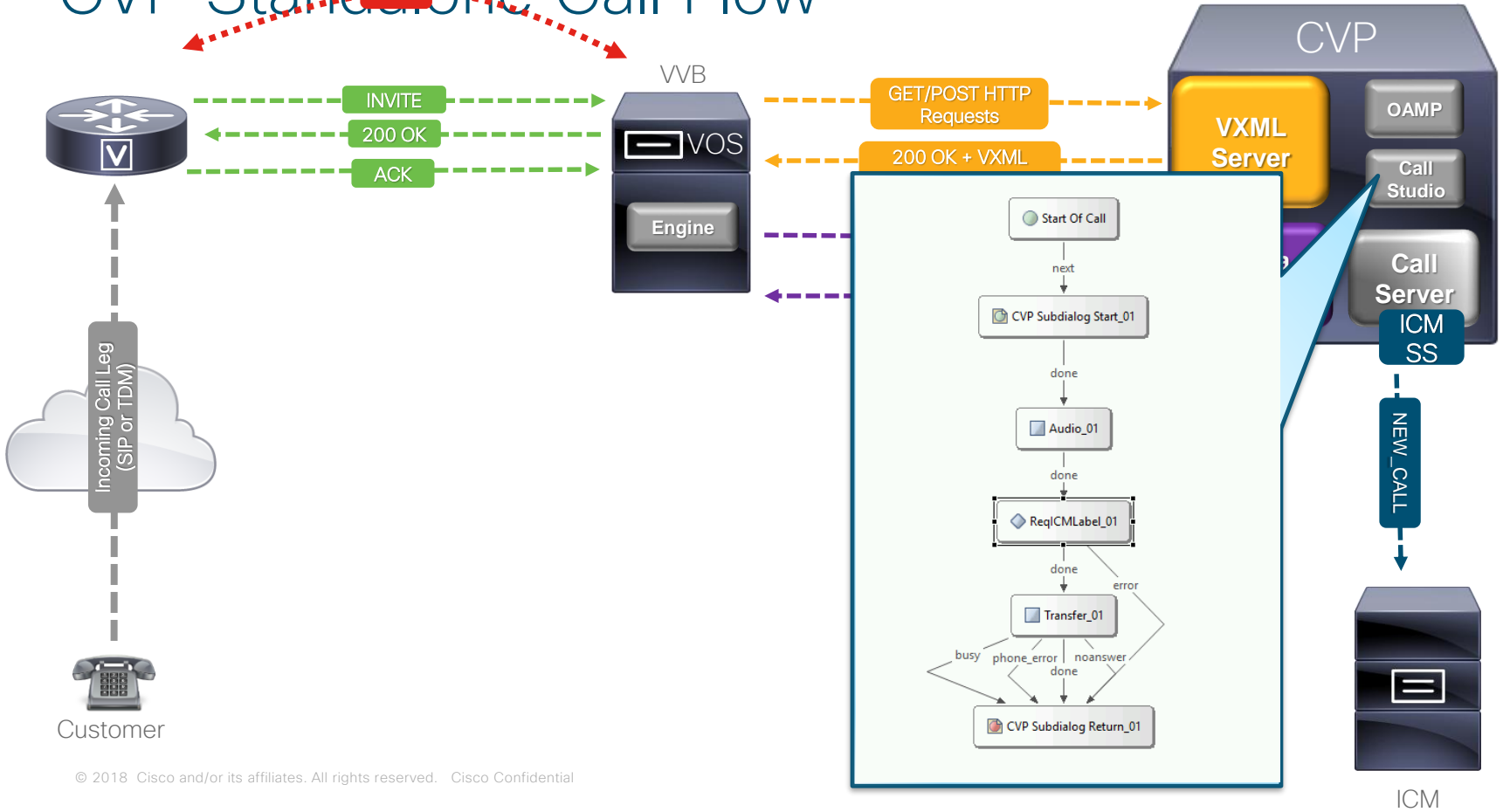
CVP Standalone Call Flow



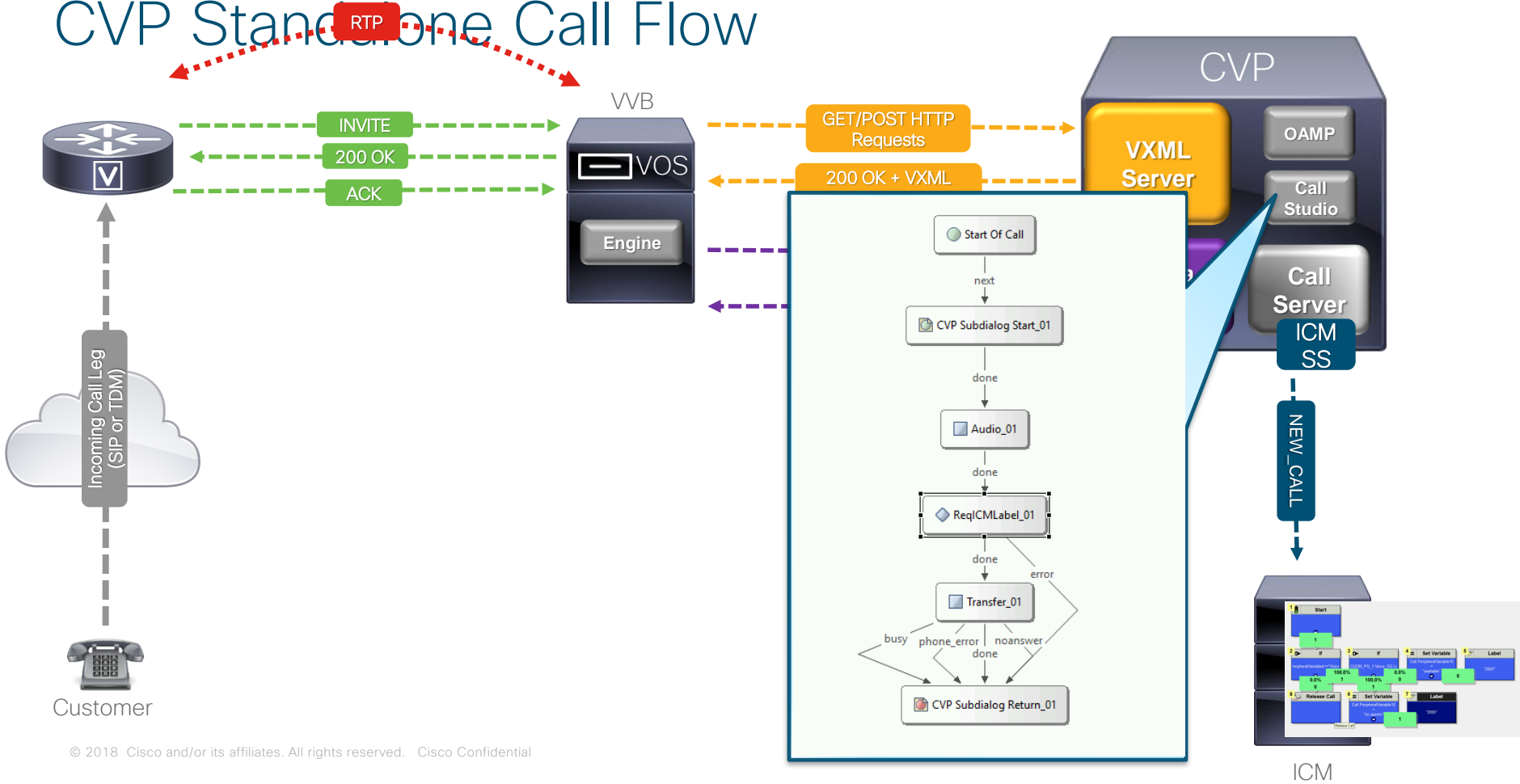
CVP Standalone Call Flow



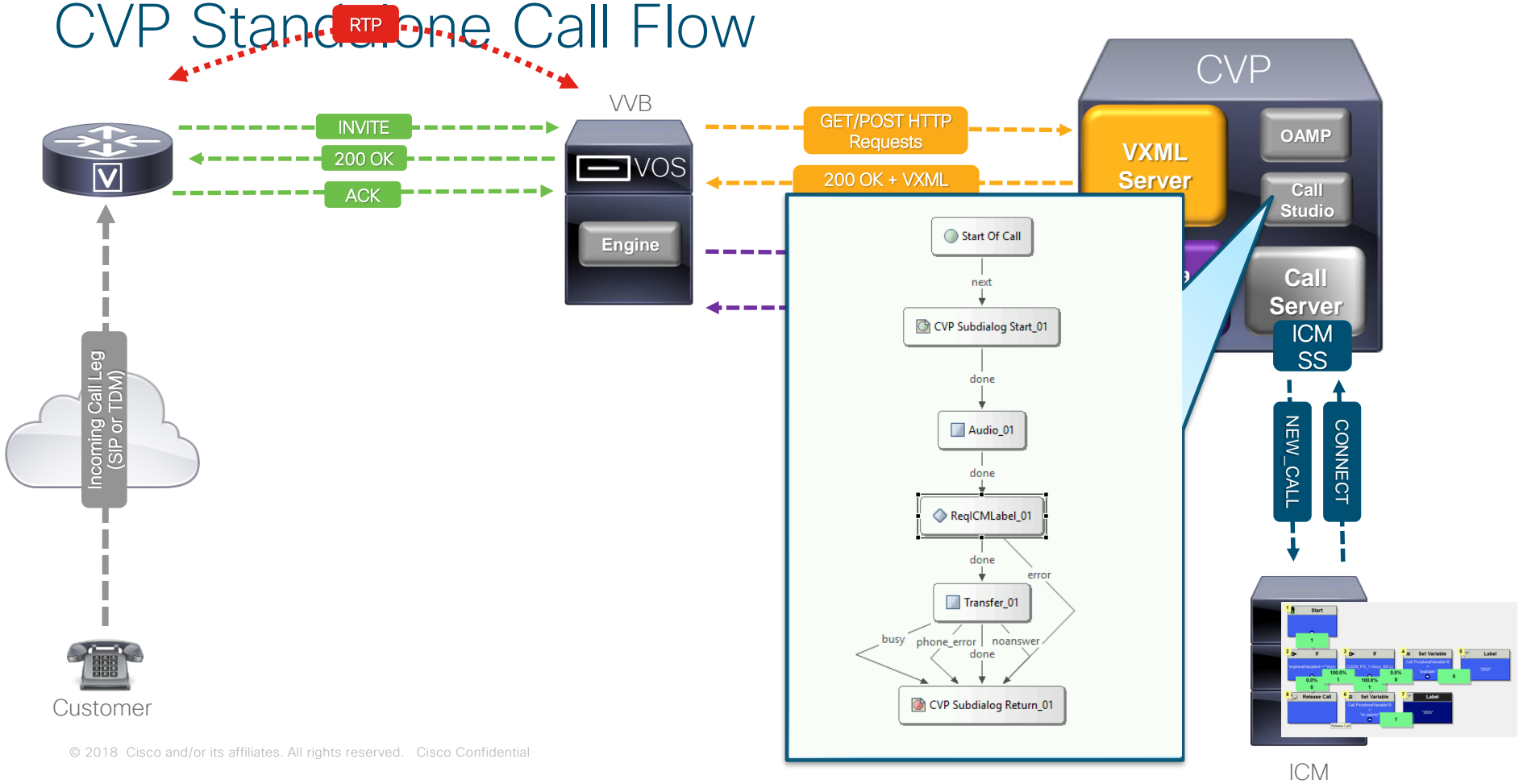
CVP Standalone Call Flow



CVP Standalone Call Flow



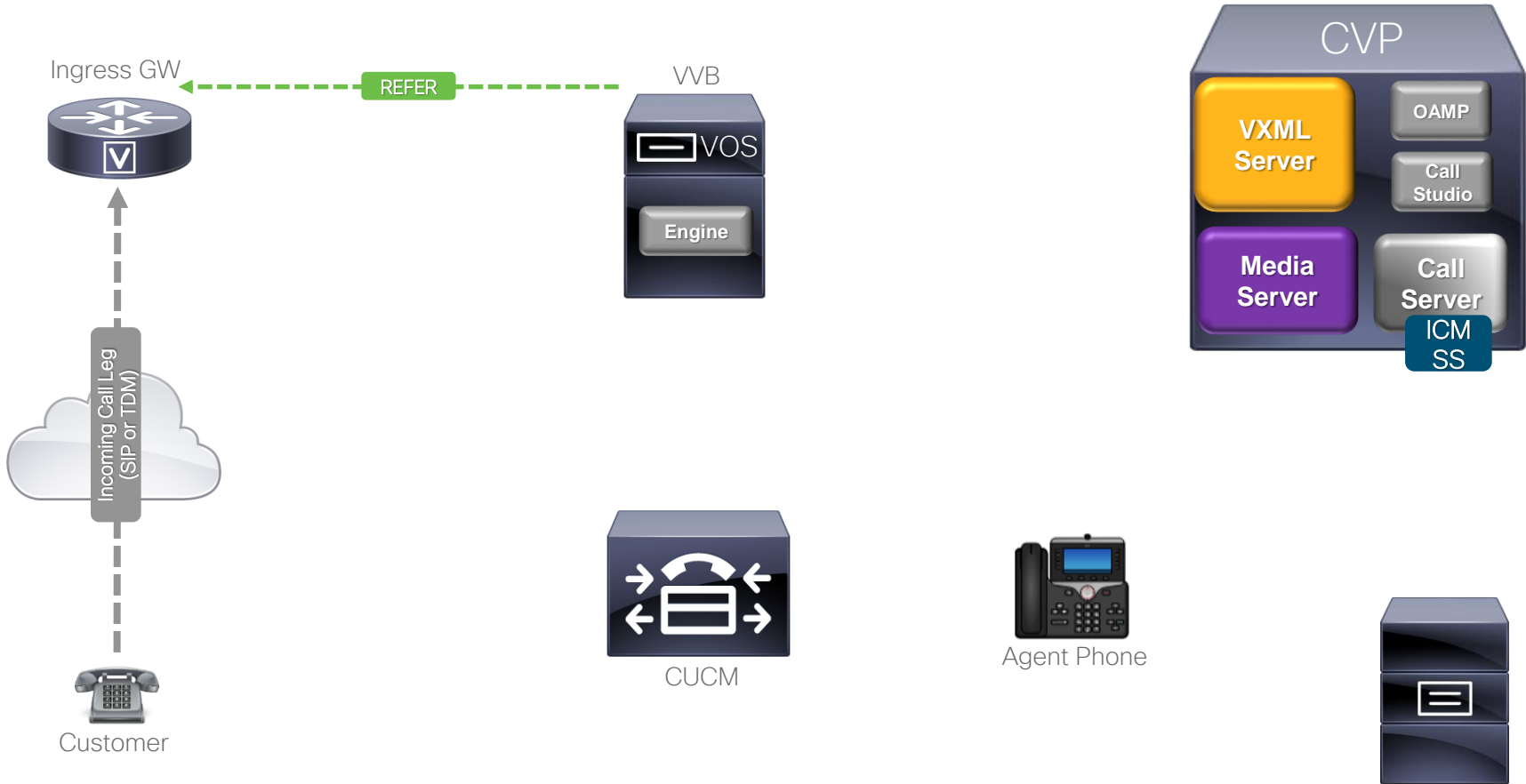
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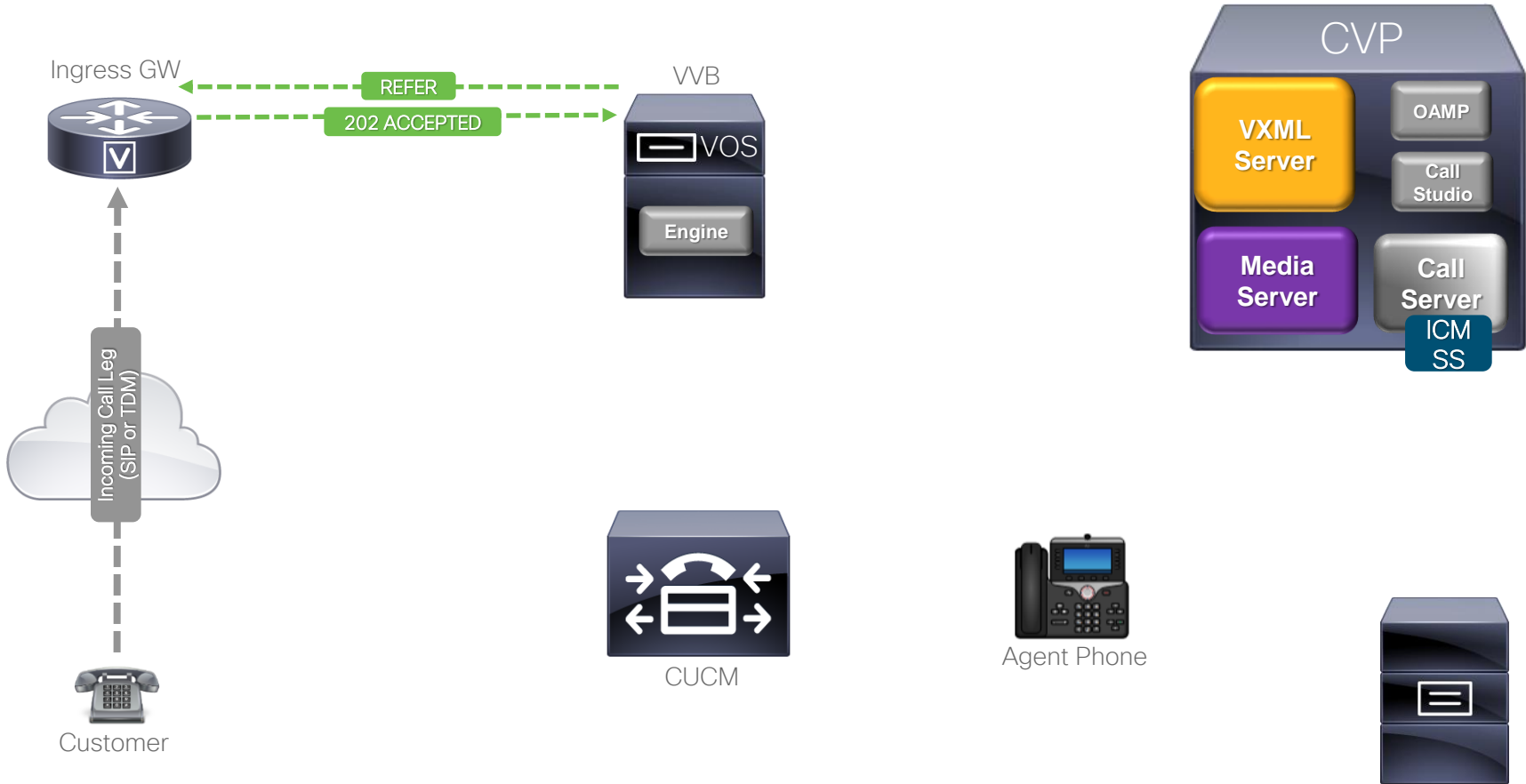
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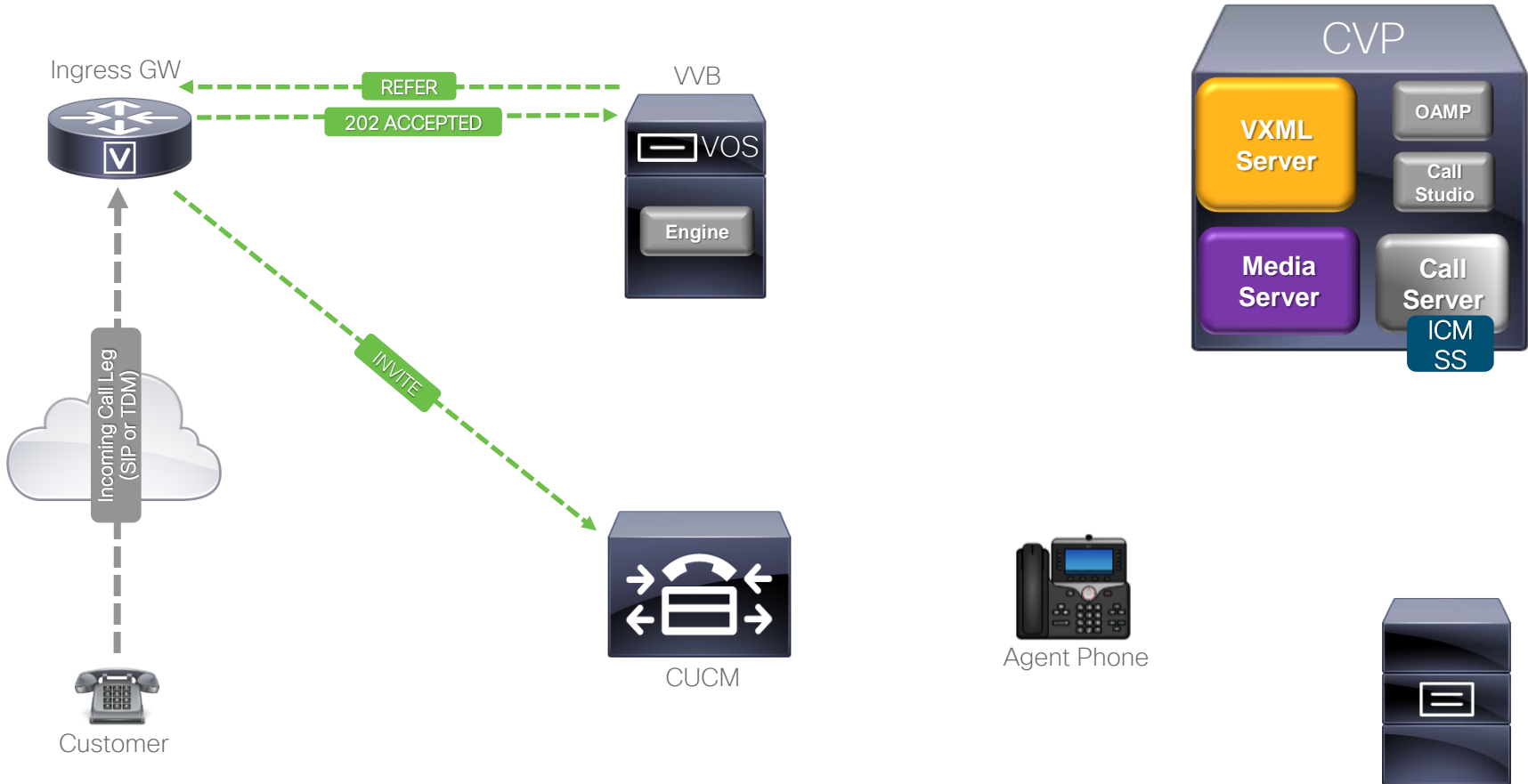
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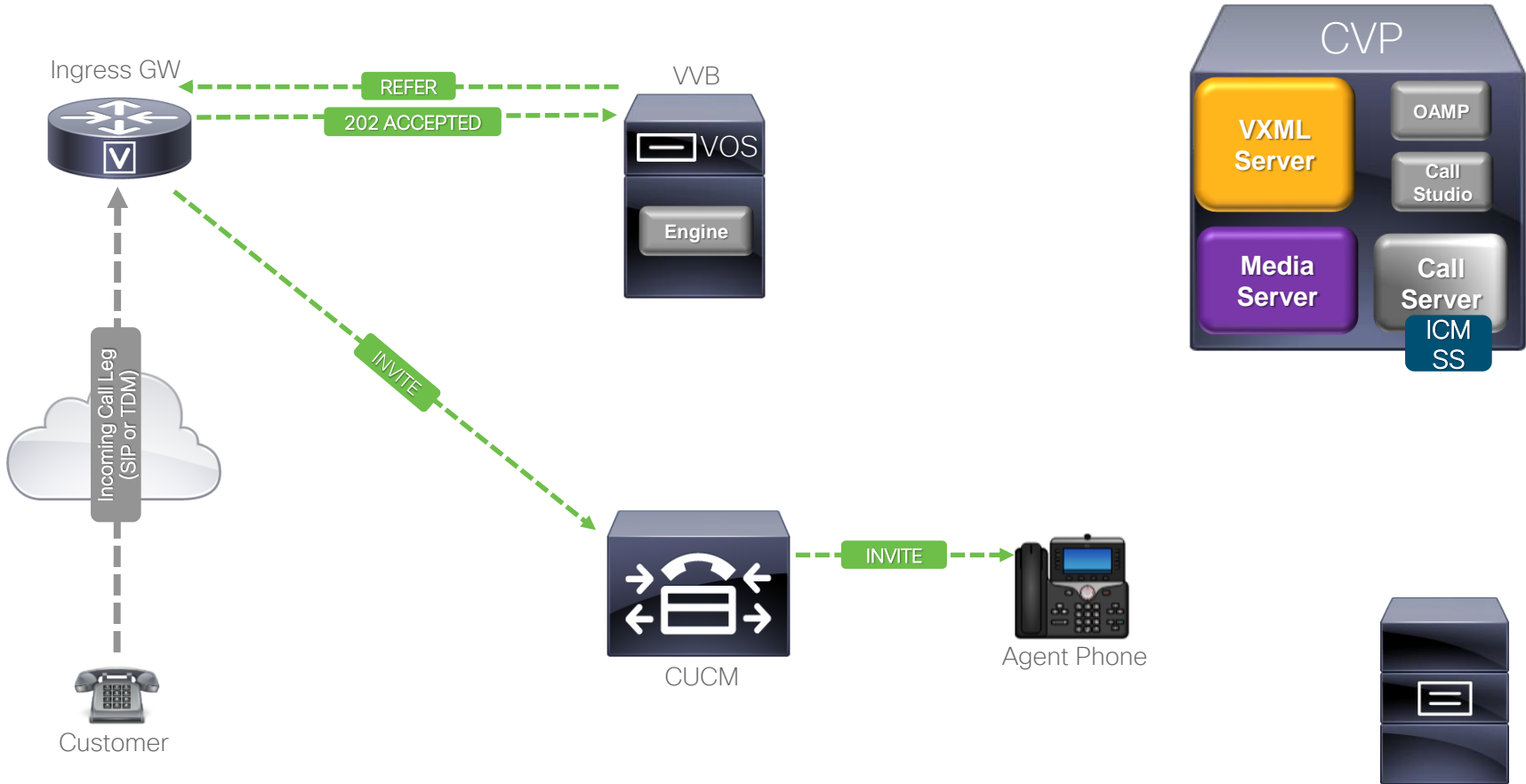
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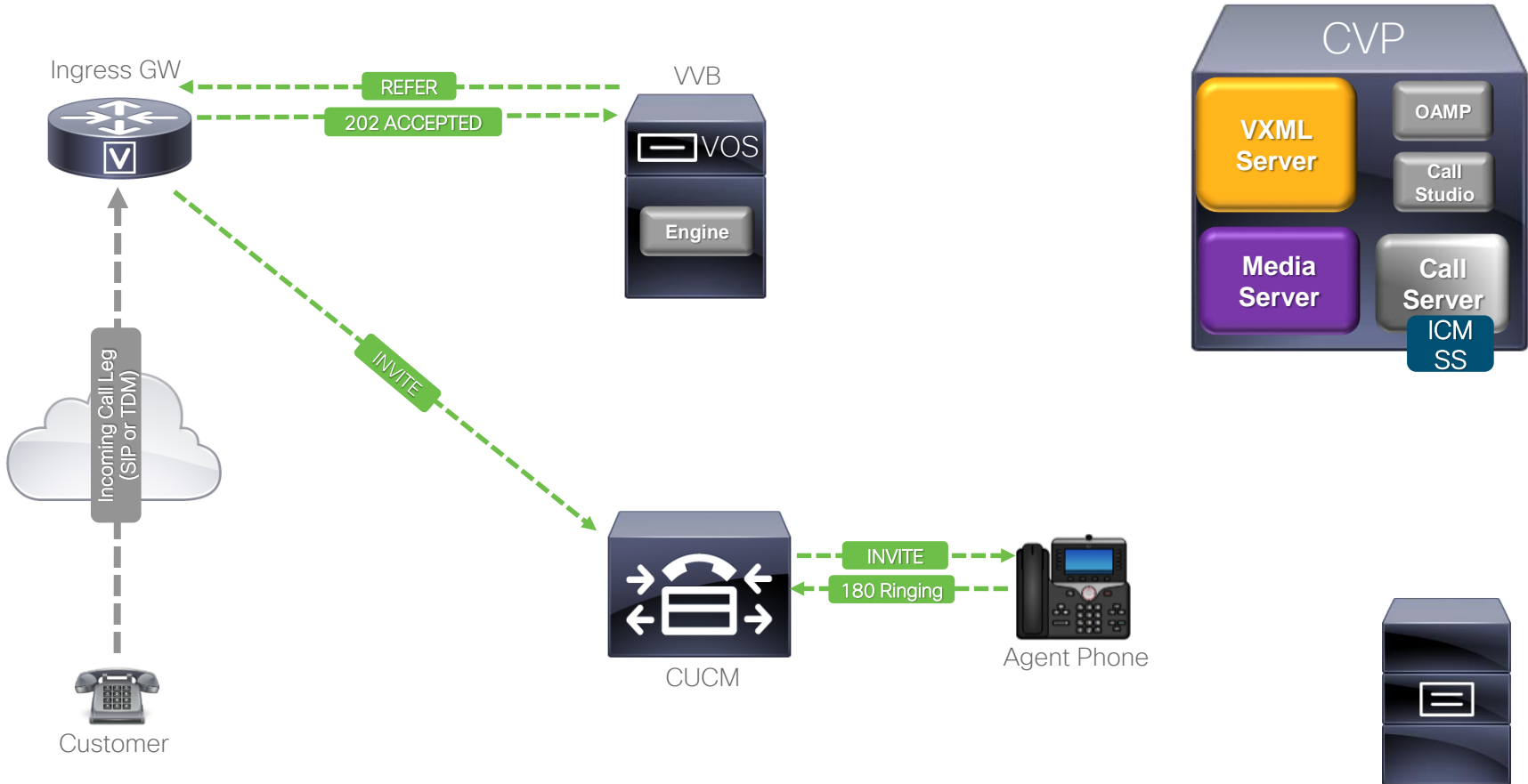
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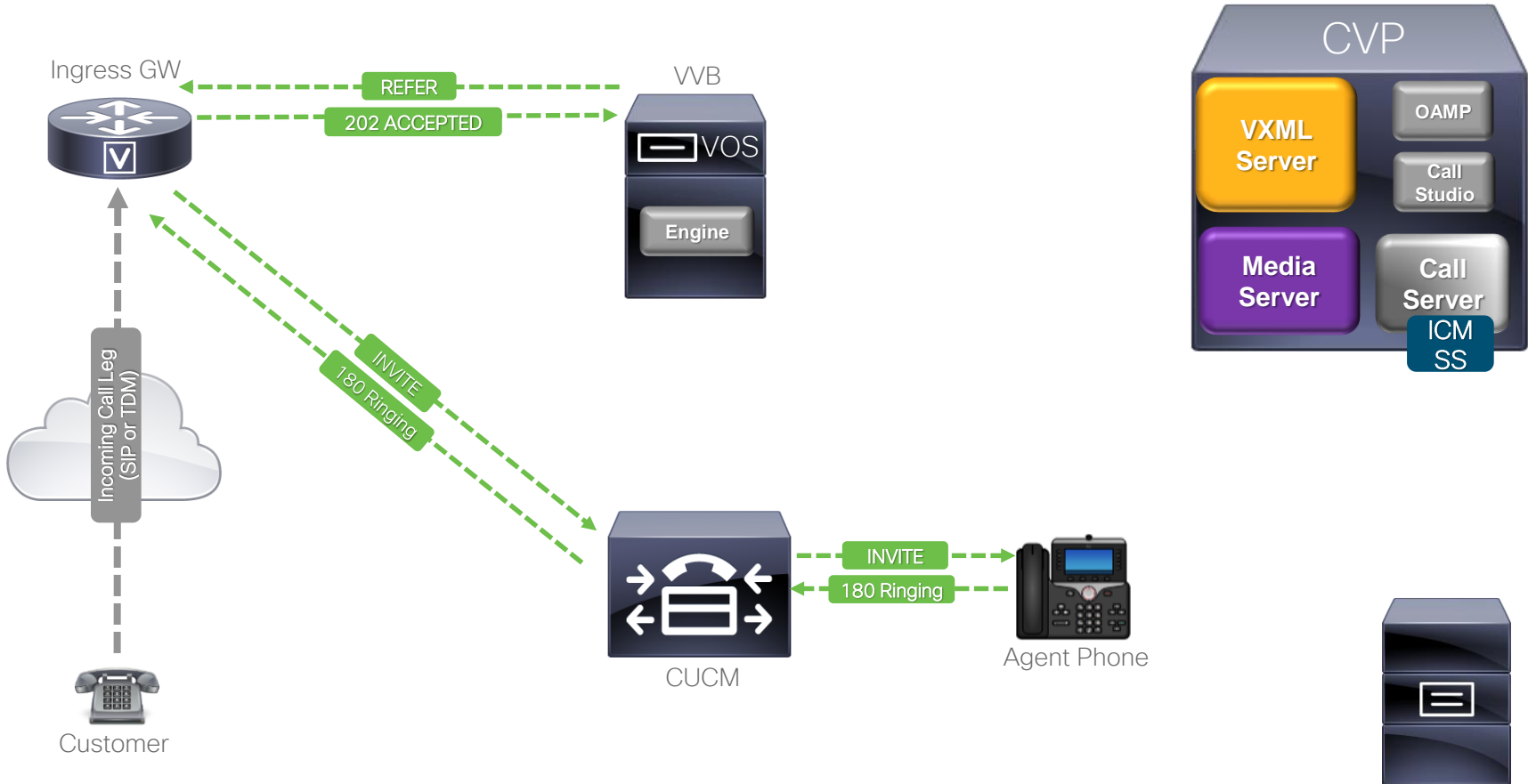
CVP Standalone Call Flow



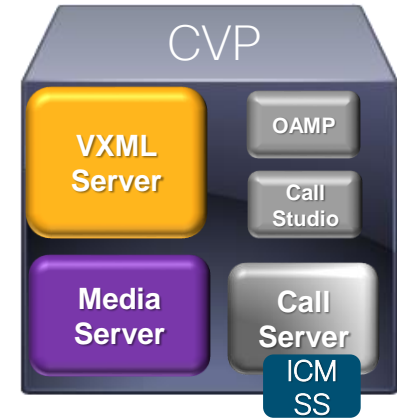
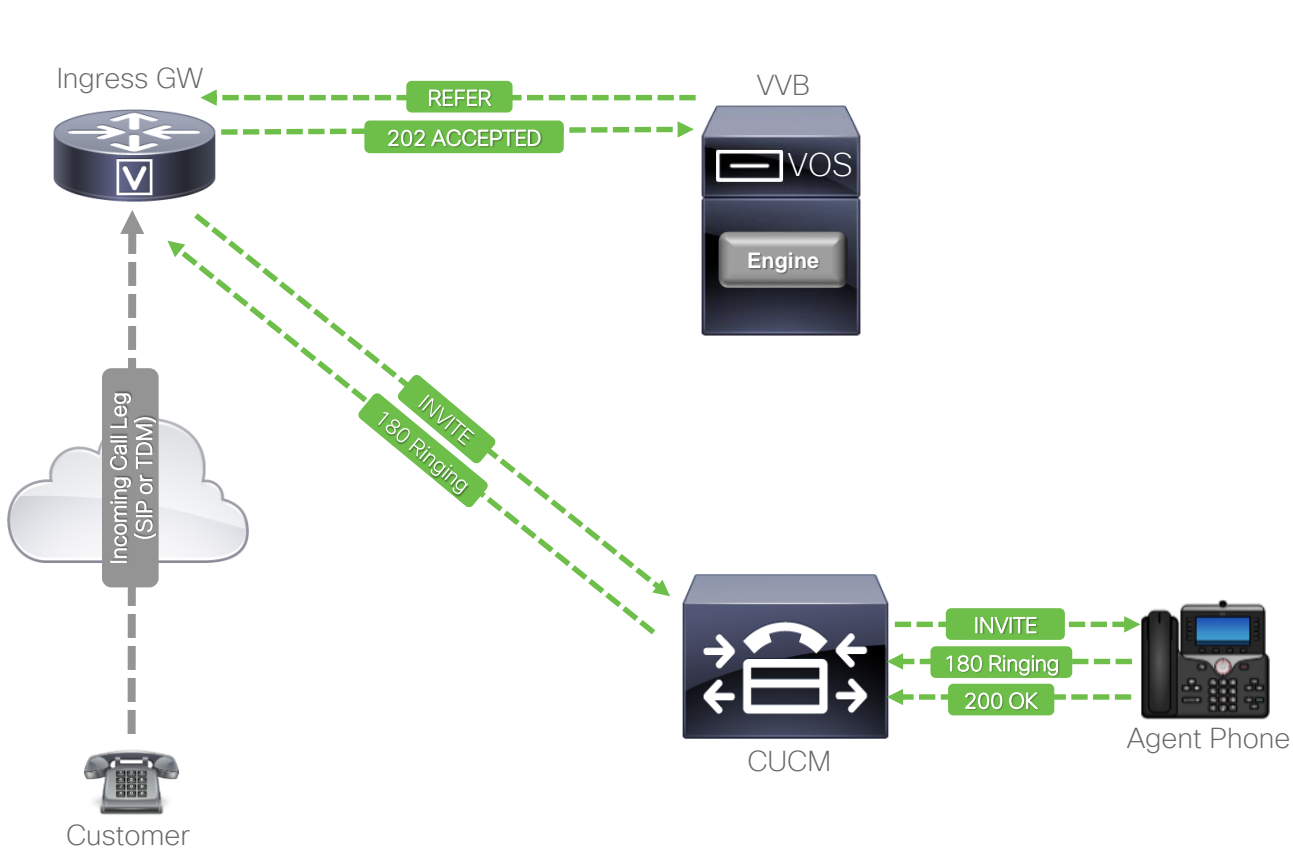
CVP Standalone Call Flow



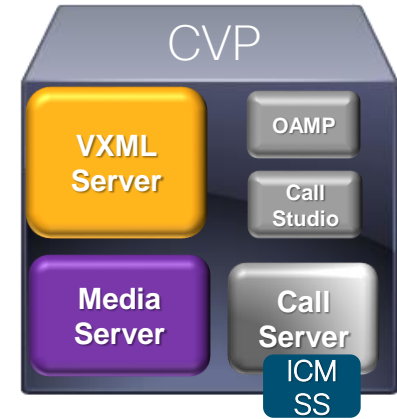
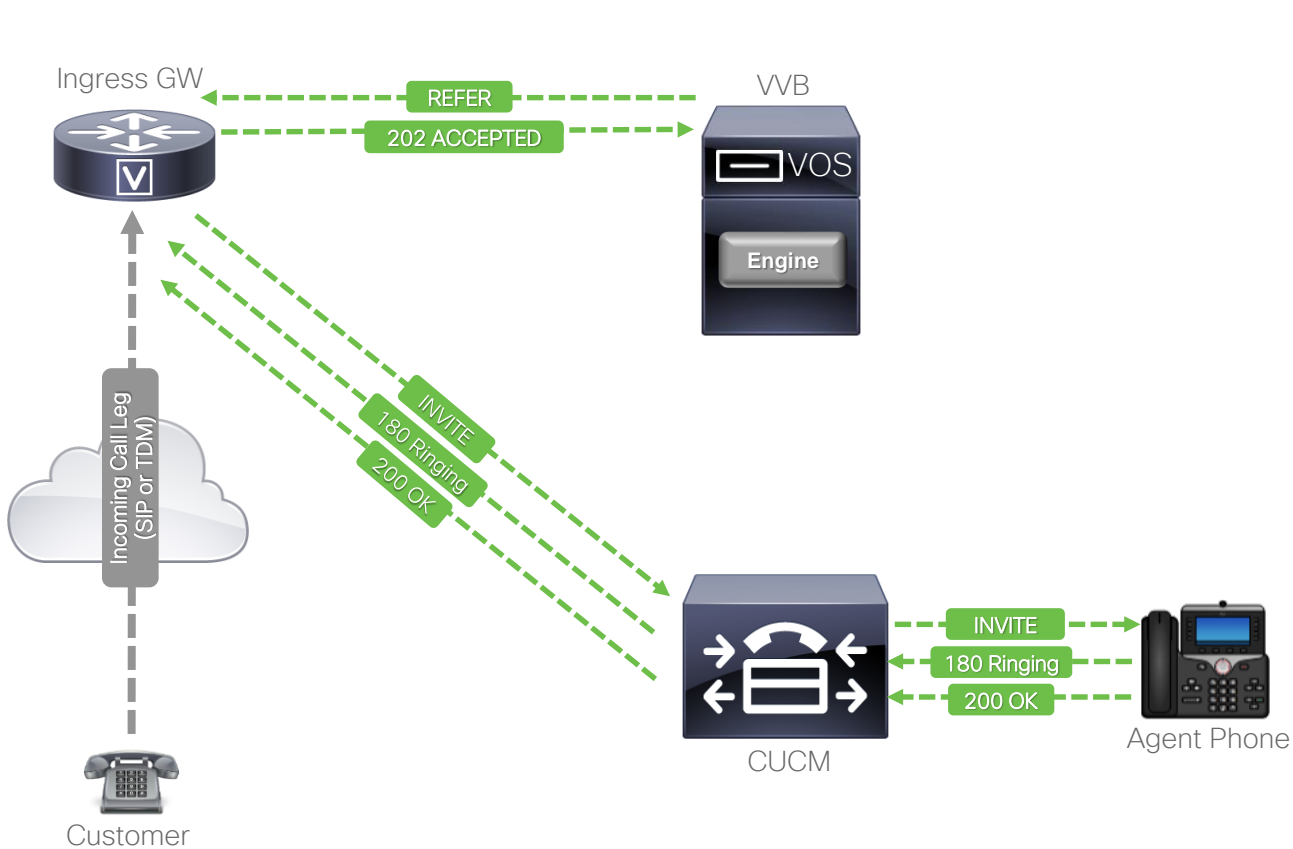
CVP Standalone Call Flow



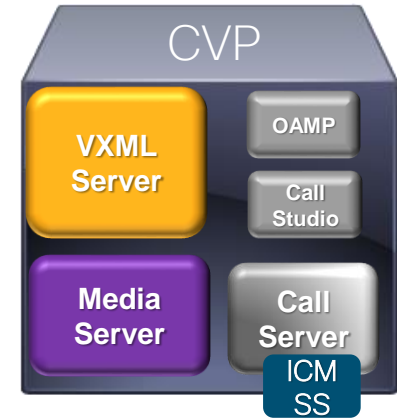
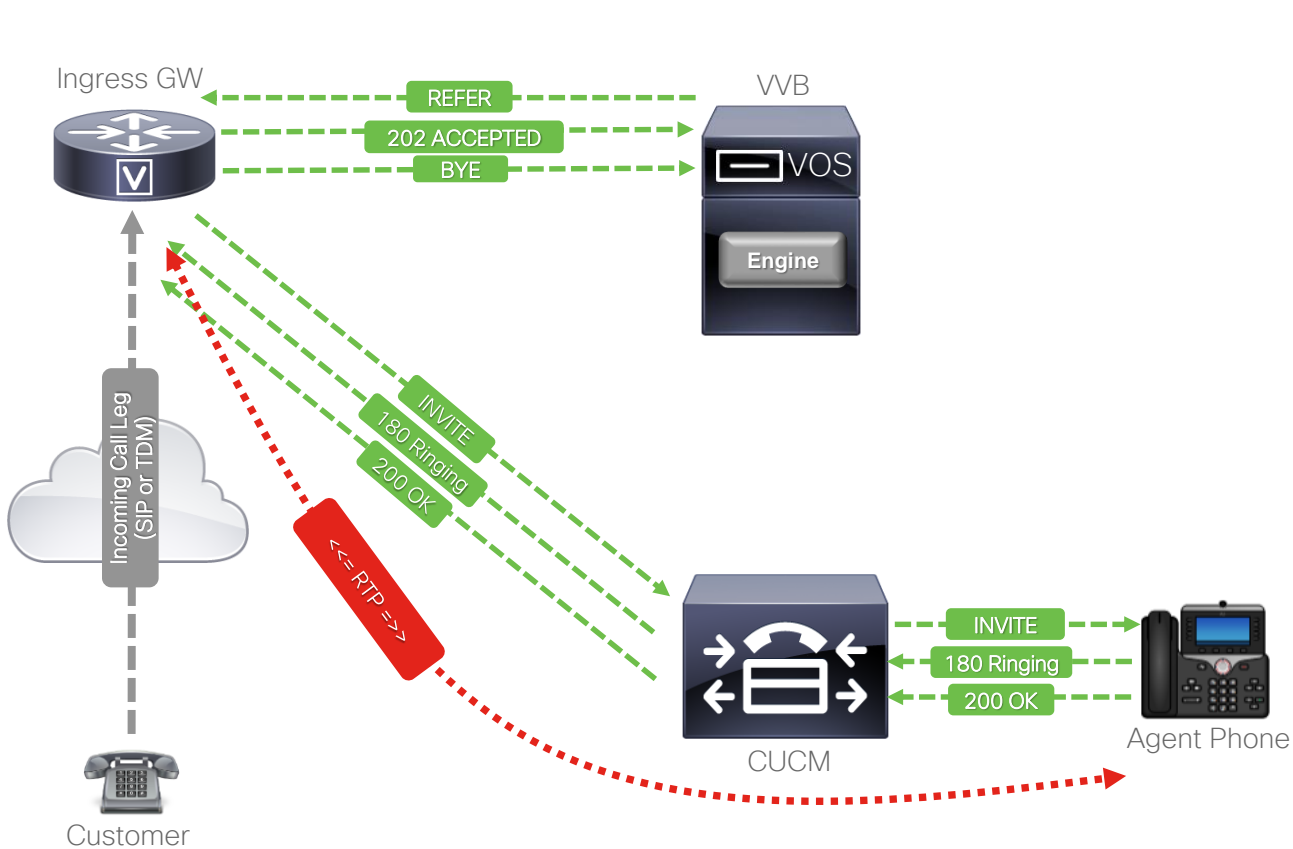
CVP Standalone Call Flow



CVP Standalone Call Flow

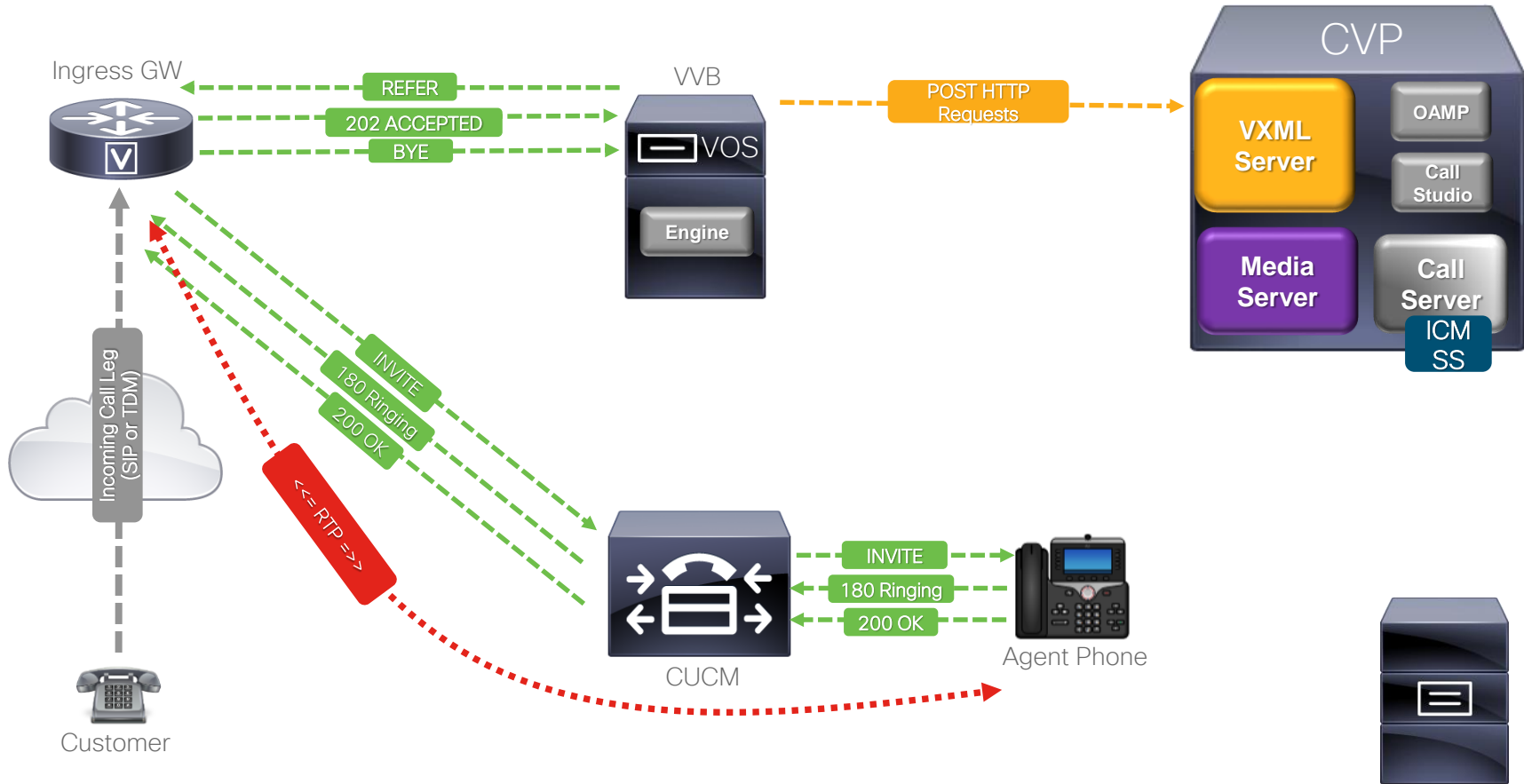


CVP Standalone Call Flow

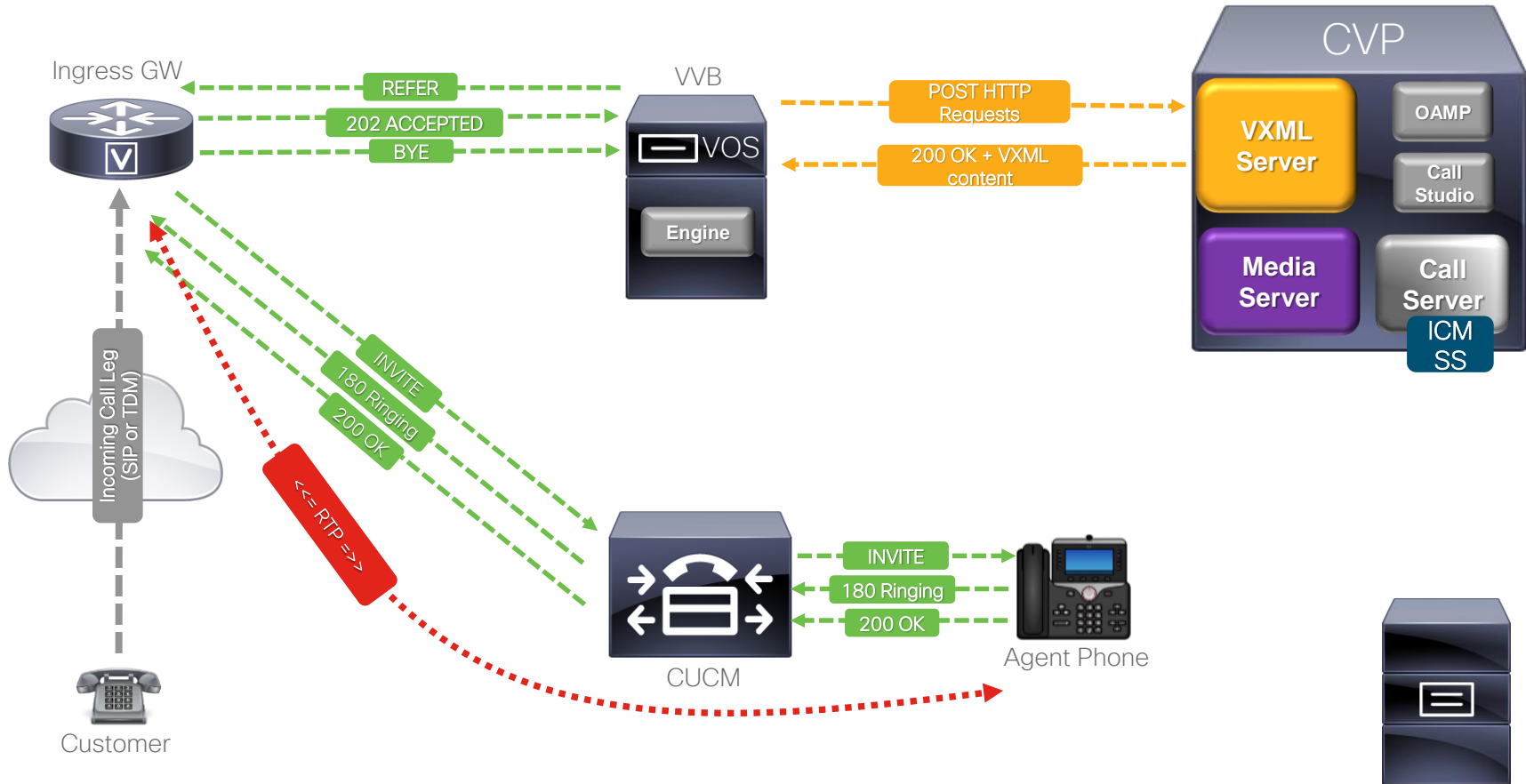


ICM

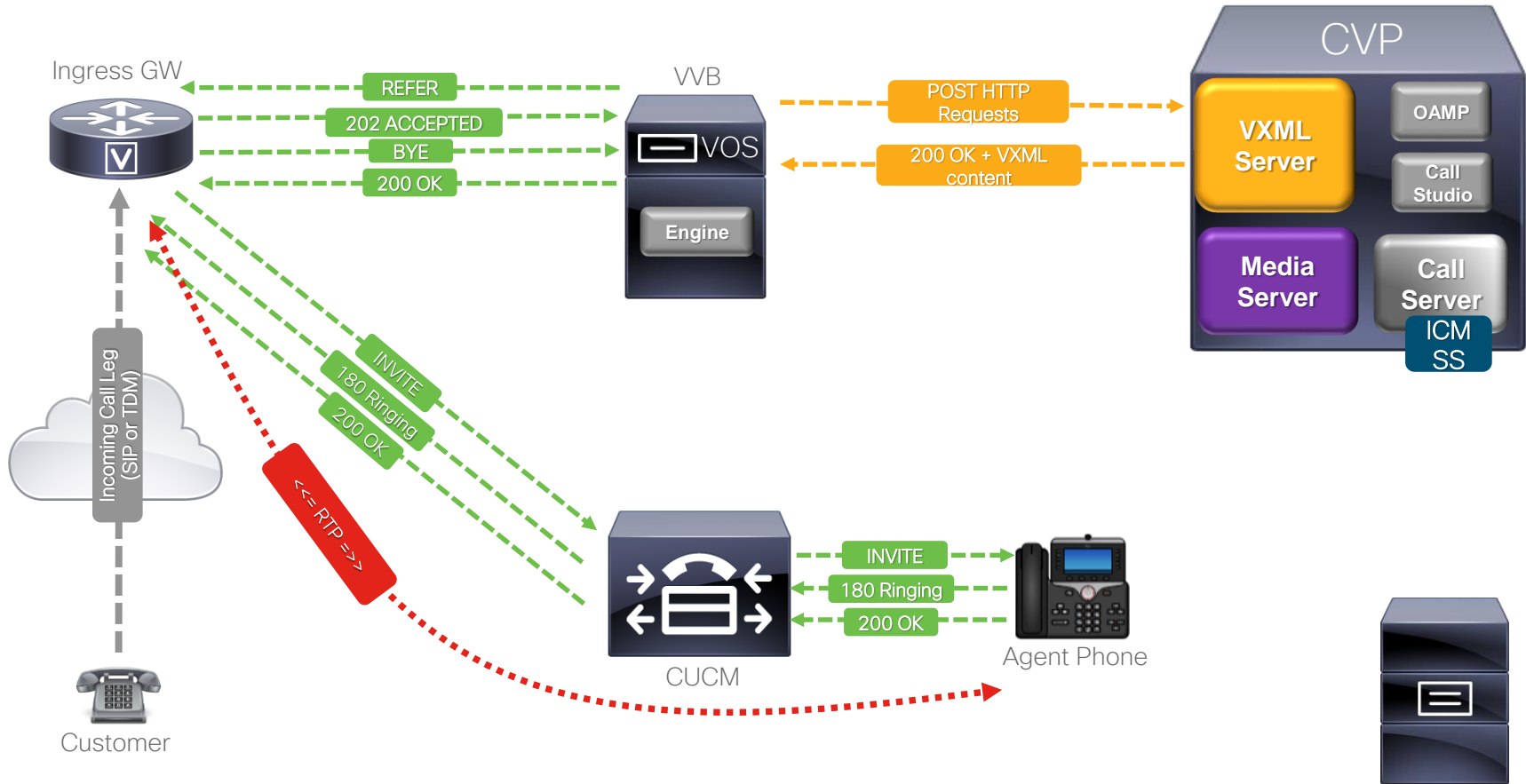
CVP Standalone Call Flow



CVP Standalone Call Flow



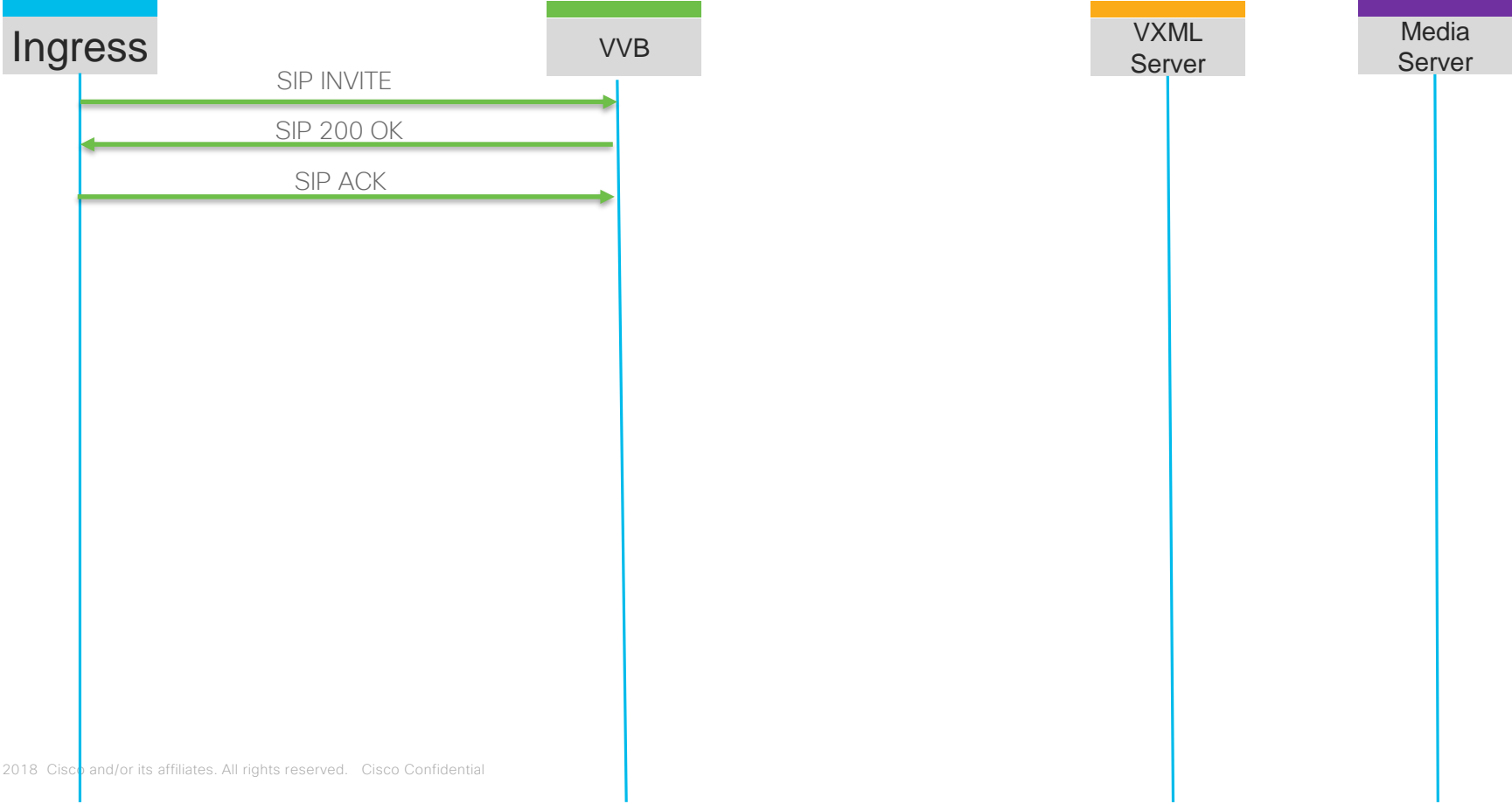
CVP Standalone Call Flow



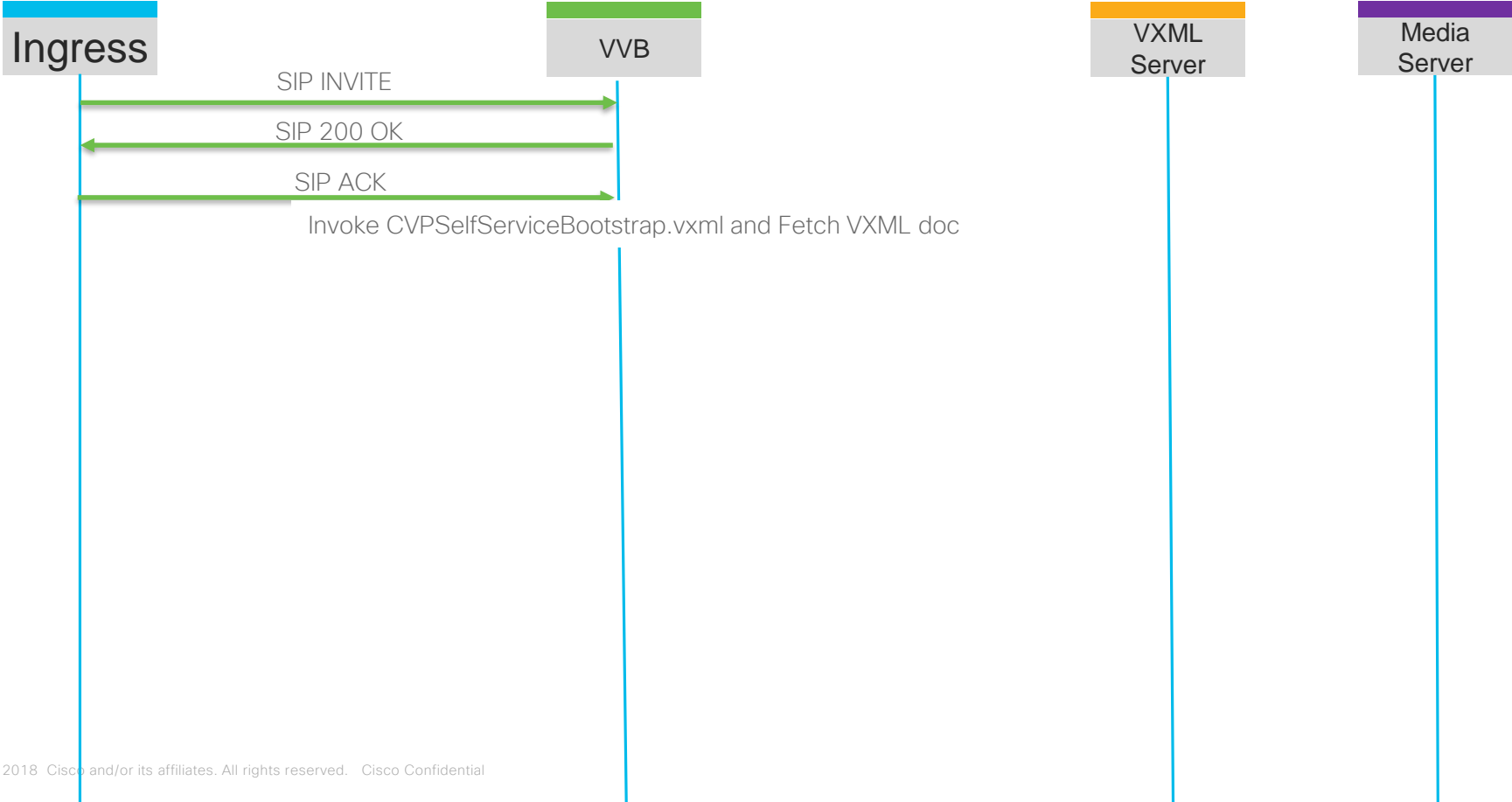
Standalone Model Components

Required components (Without ICM Lookup)	Required components (With ICM Lookup)
<ul style="list-style-type: none">• Ingress voice gateway• VoiceXML gateway or VVB• Cisco Unified Call Studio• Unified CVP Operations Console Server• CVP Media Server• Unified CVP VXML Server (Standalone)	<ul style="list-style-type: none">• Ingress voice gateway• VoiceXML gateway or VVB• Cisco Unified Call Studio• Unified CVP Operations Console Server• CVP Media Server• Unified CVP Call Server (ICM SS)• Unified CVP VXML Server• ICM components

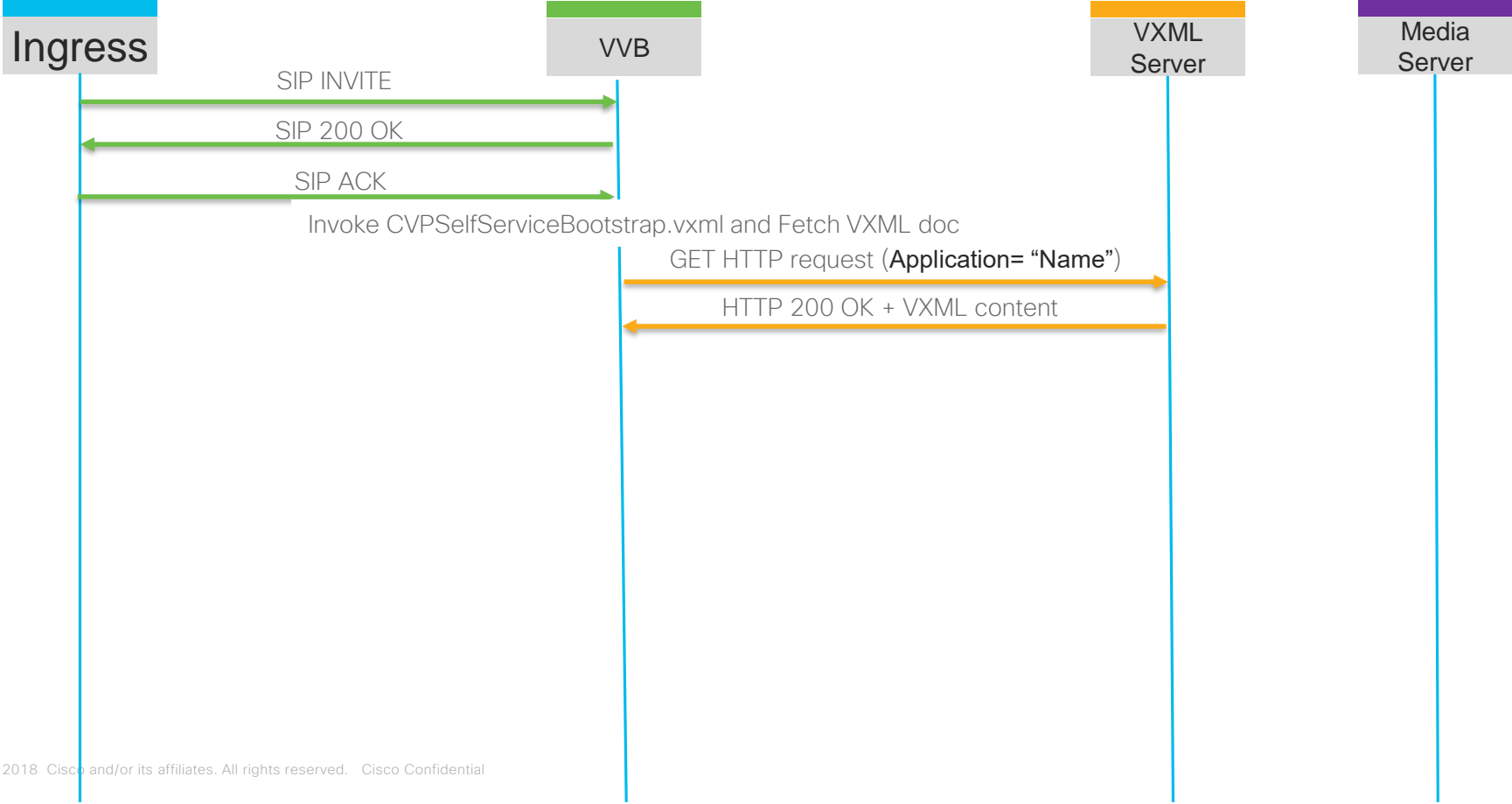
CVP Standalone Call Flow (without ICM lookup)



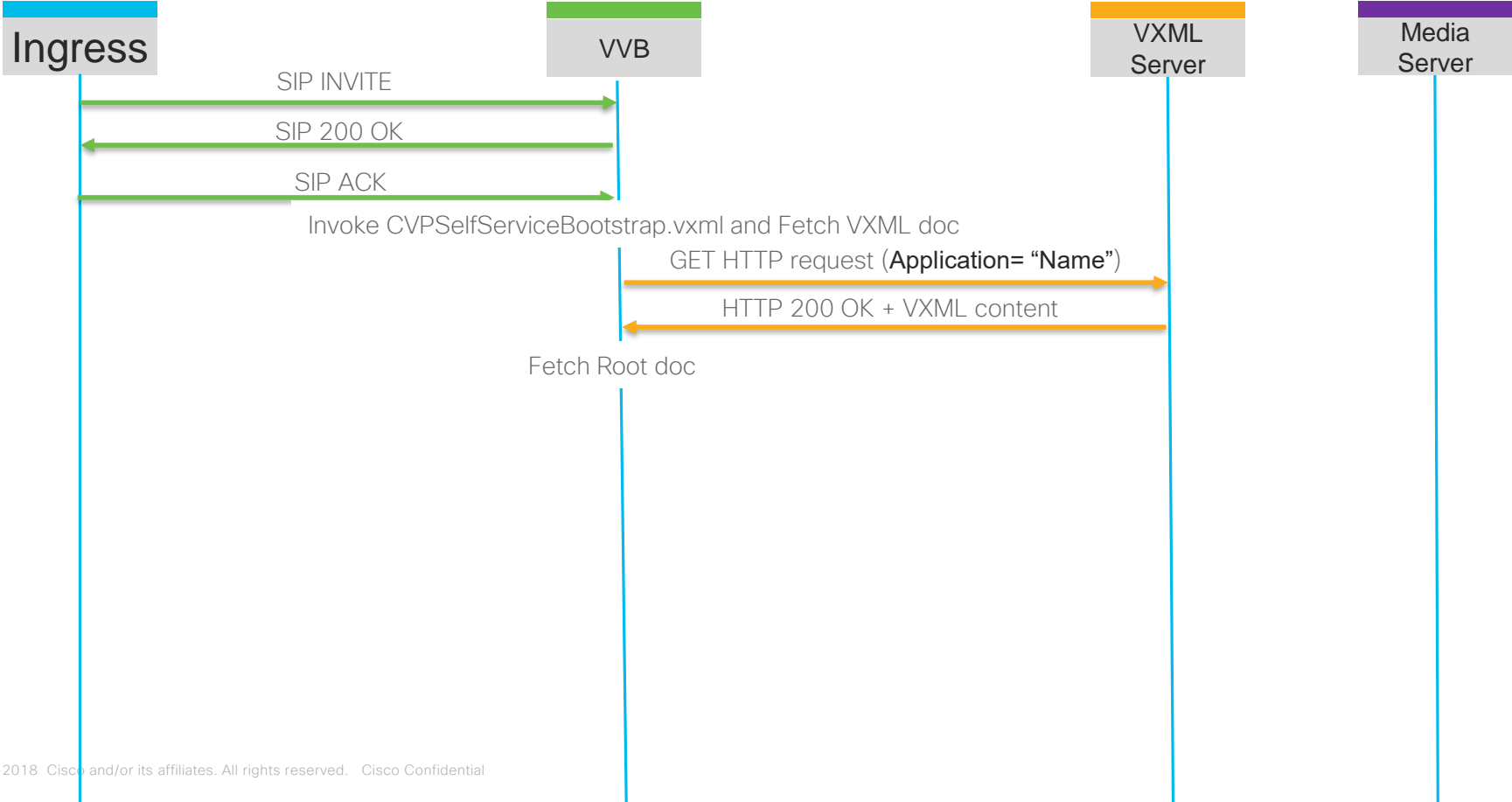
CVP Standalone Call Flow (without ICM lookup)



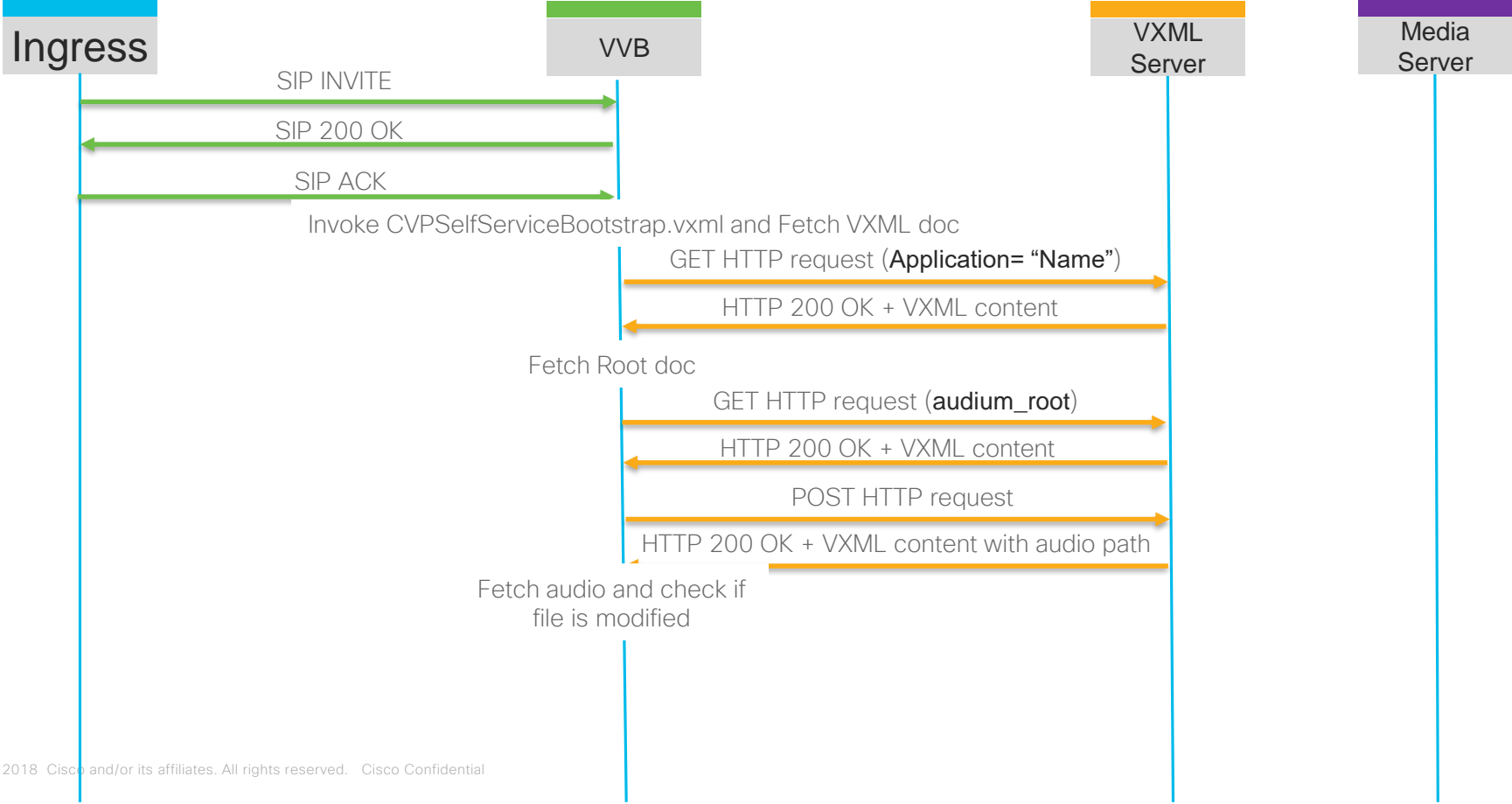
CVP Standalone Call Flow (without ICM lookup)



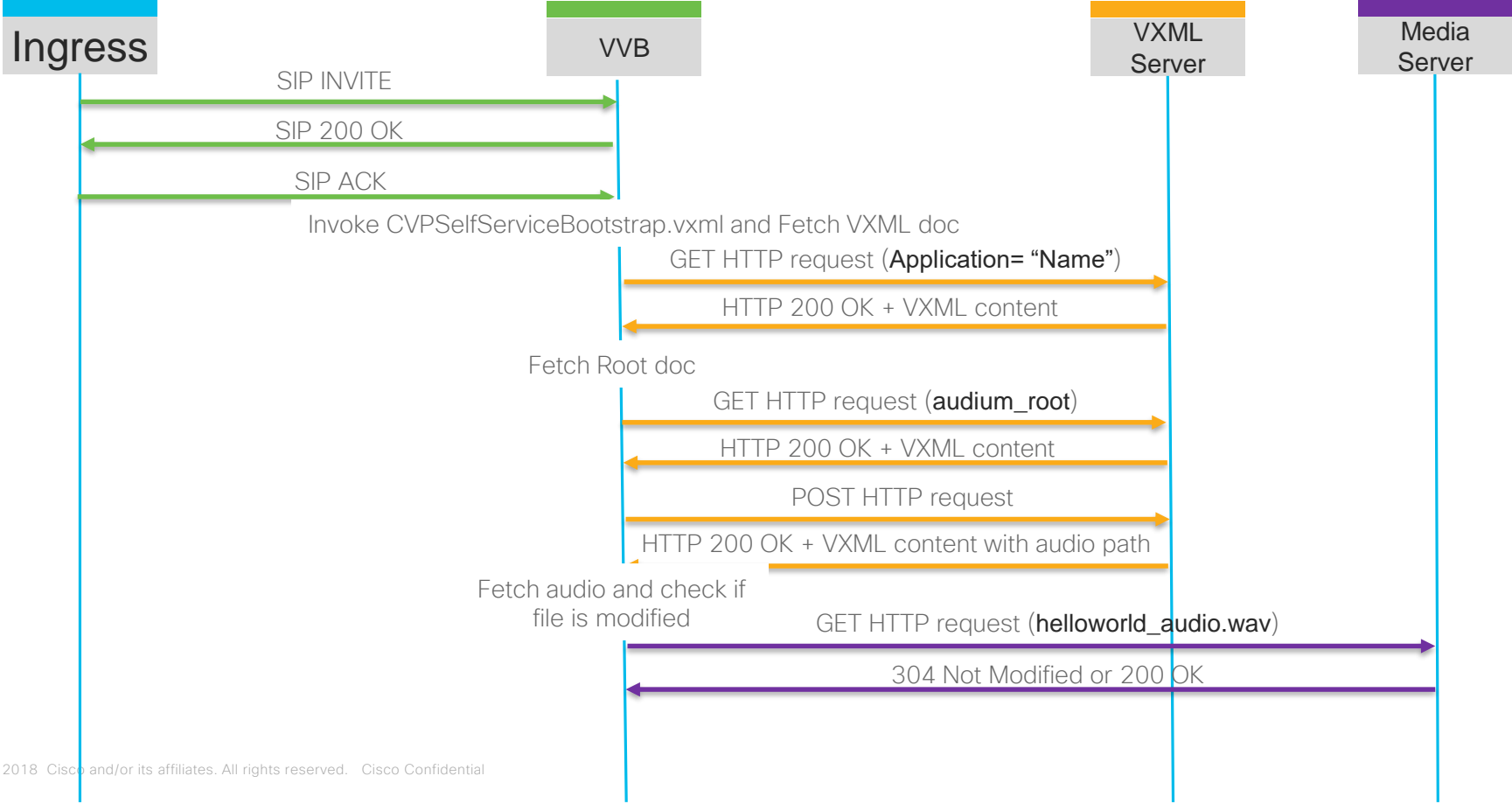
CVP Standalone Call Flow (without ICM lookup)



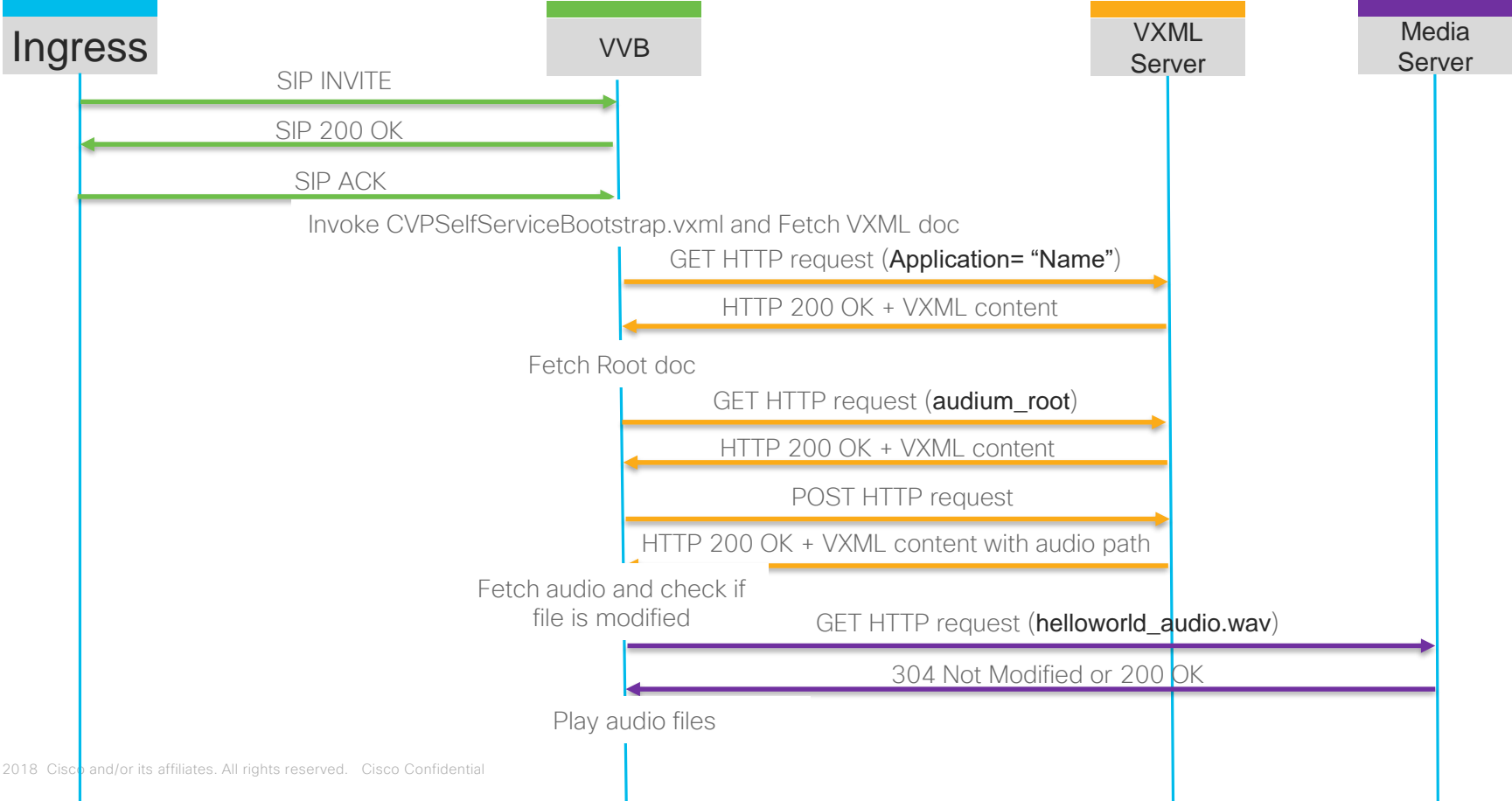
CVP Standalone Call Flow (without ICM lookup)



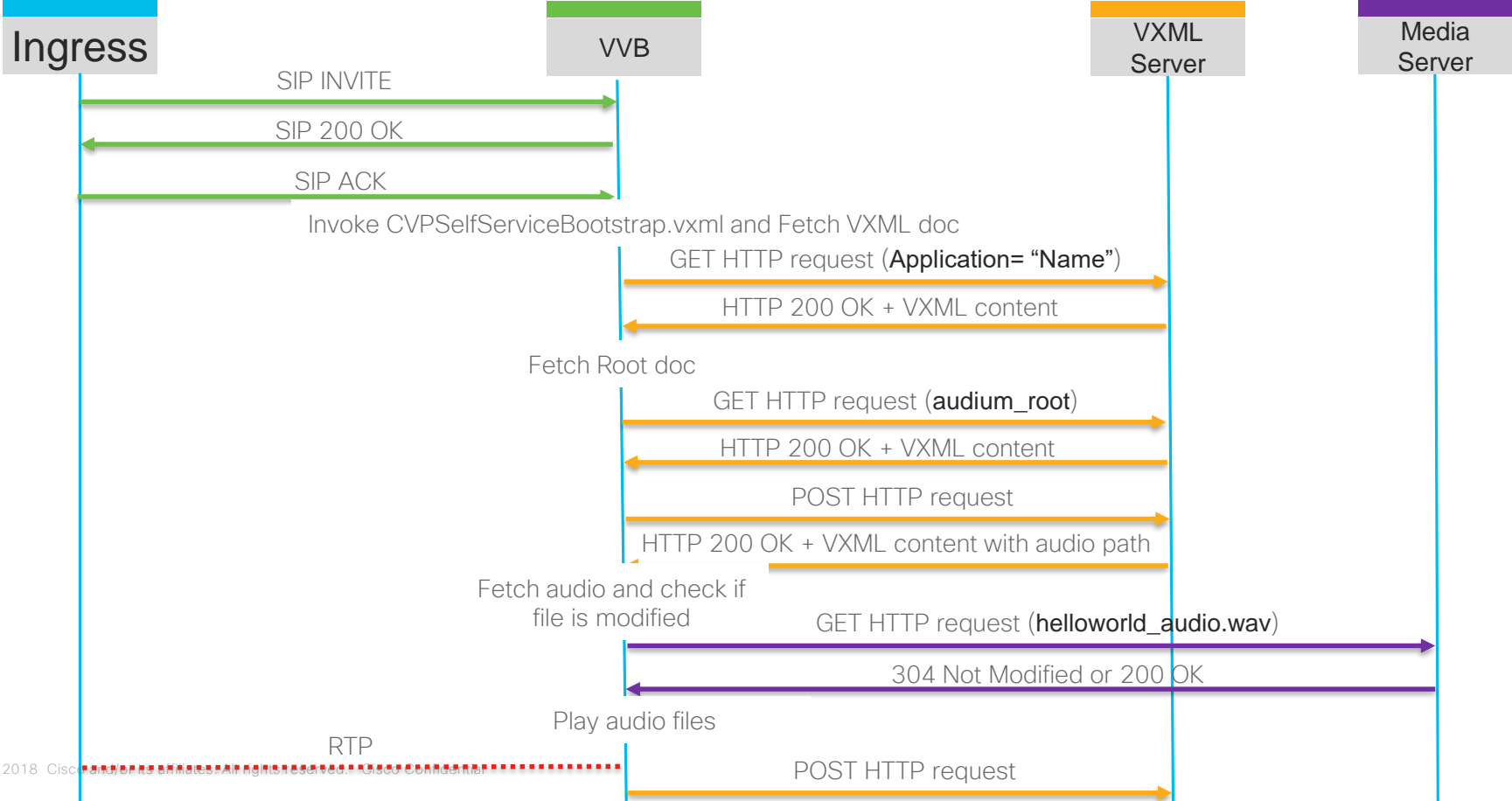
CVP Standalone Call Flow (without ICM lookup)



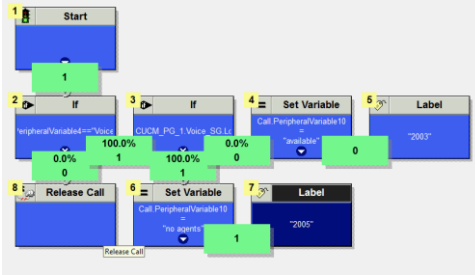
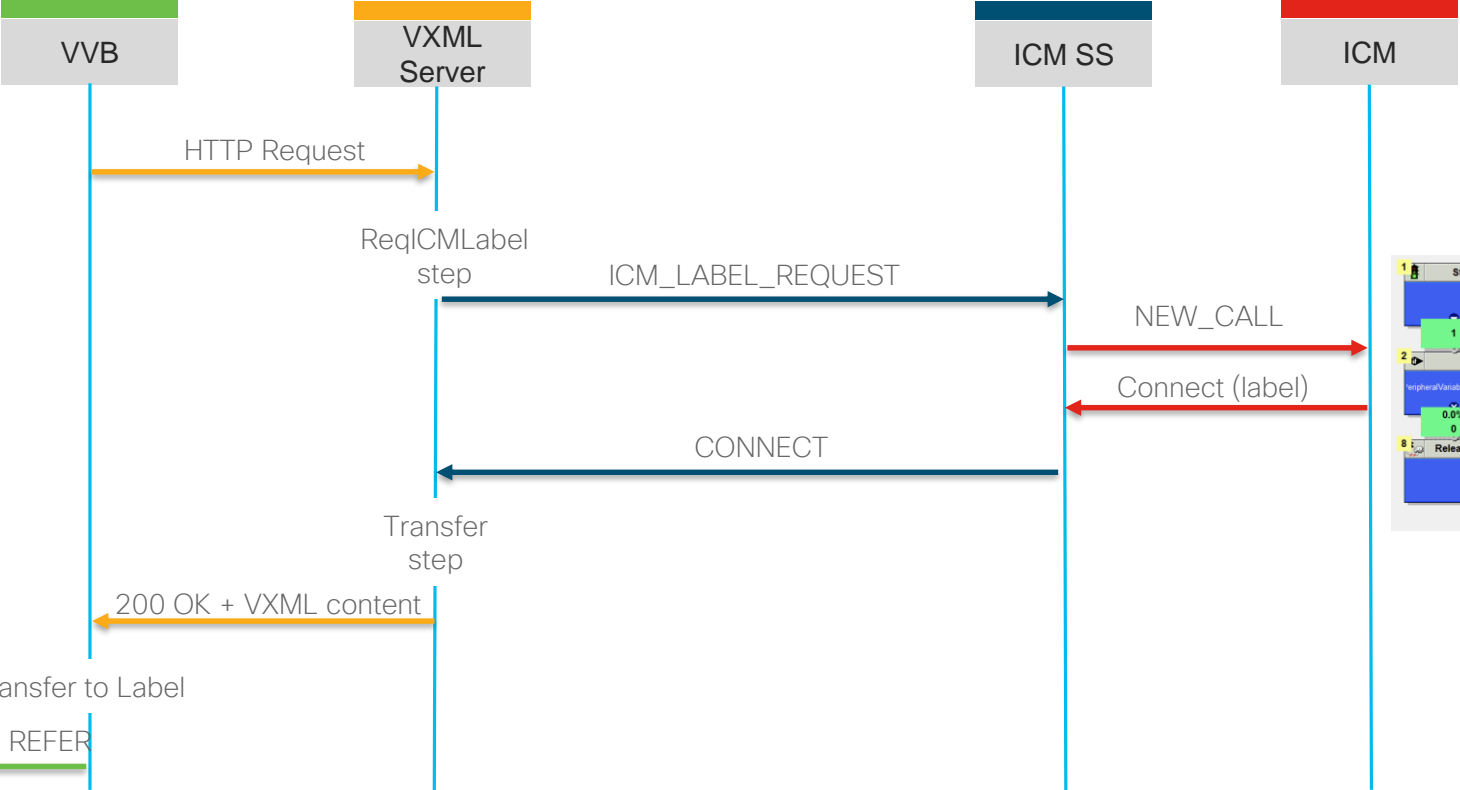
CVP Standalone Call Flow (without ICM lookup)



CVP Standalone Call Flow (without ICM lookup)



CVP Standalone Call Flow (with ICM lookup)



CVP Standalone Call Flow (without ICM lookup)

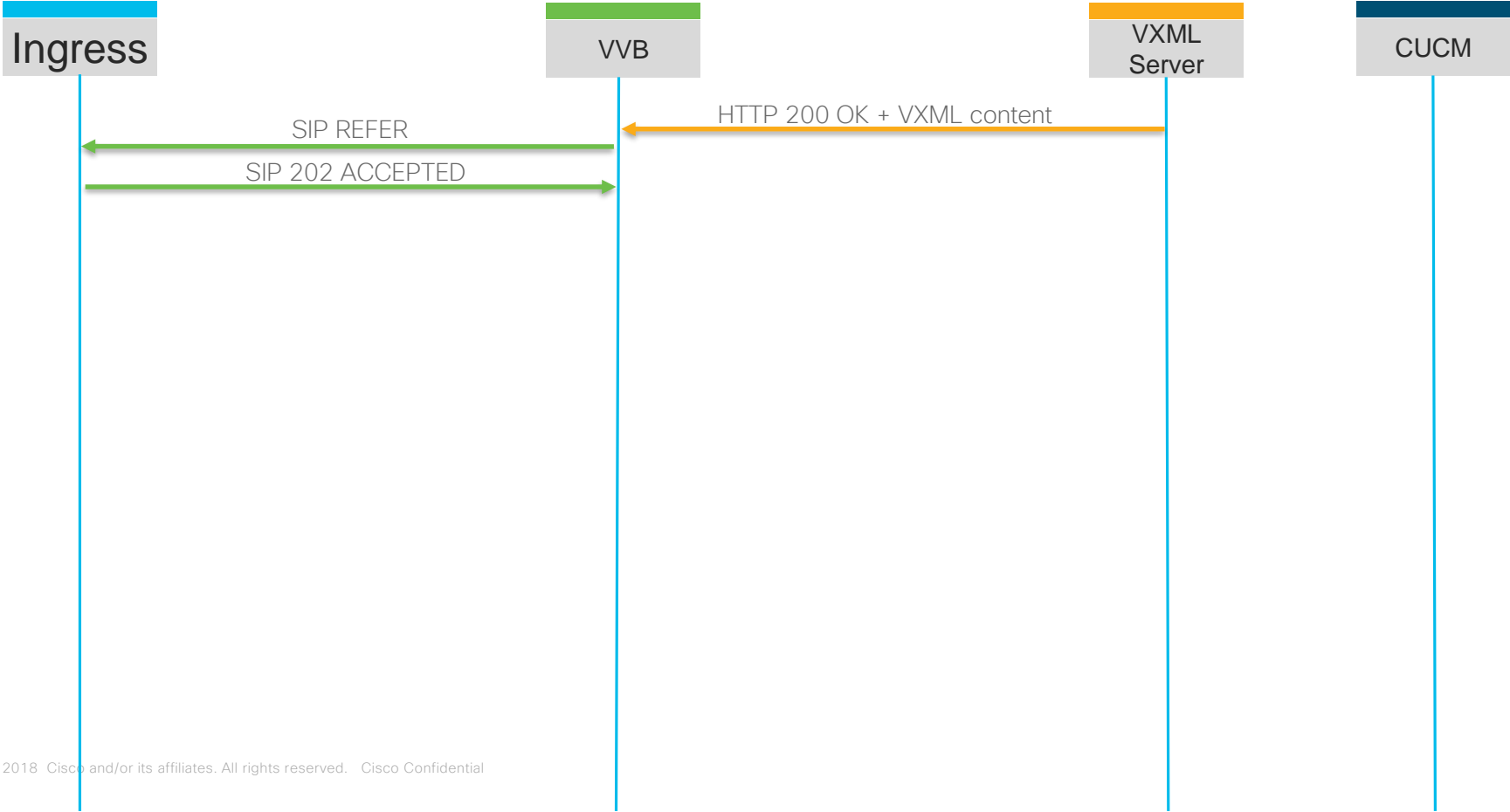
Ingress

VVB

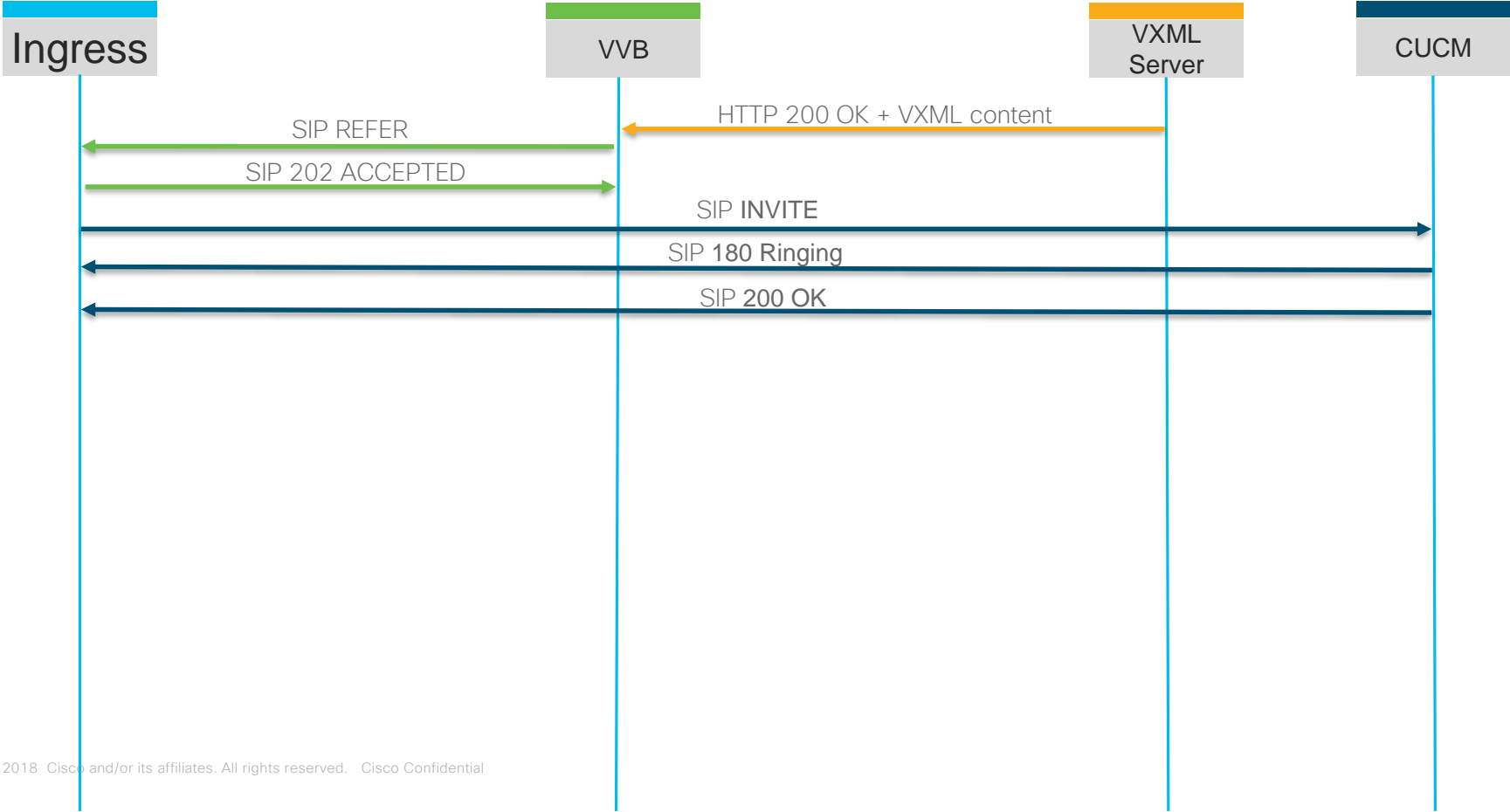
VXML
Server

CUCM

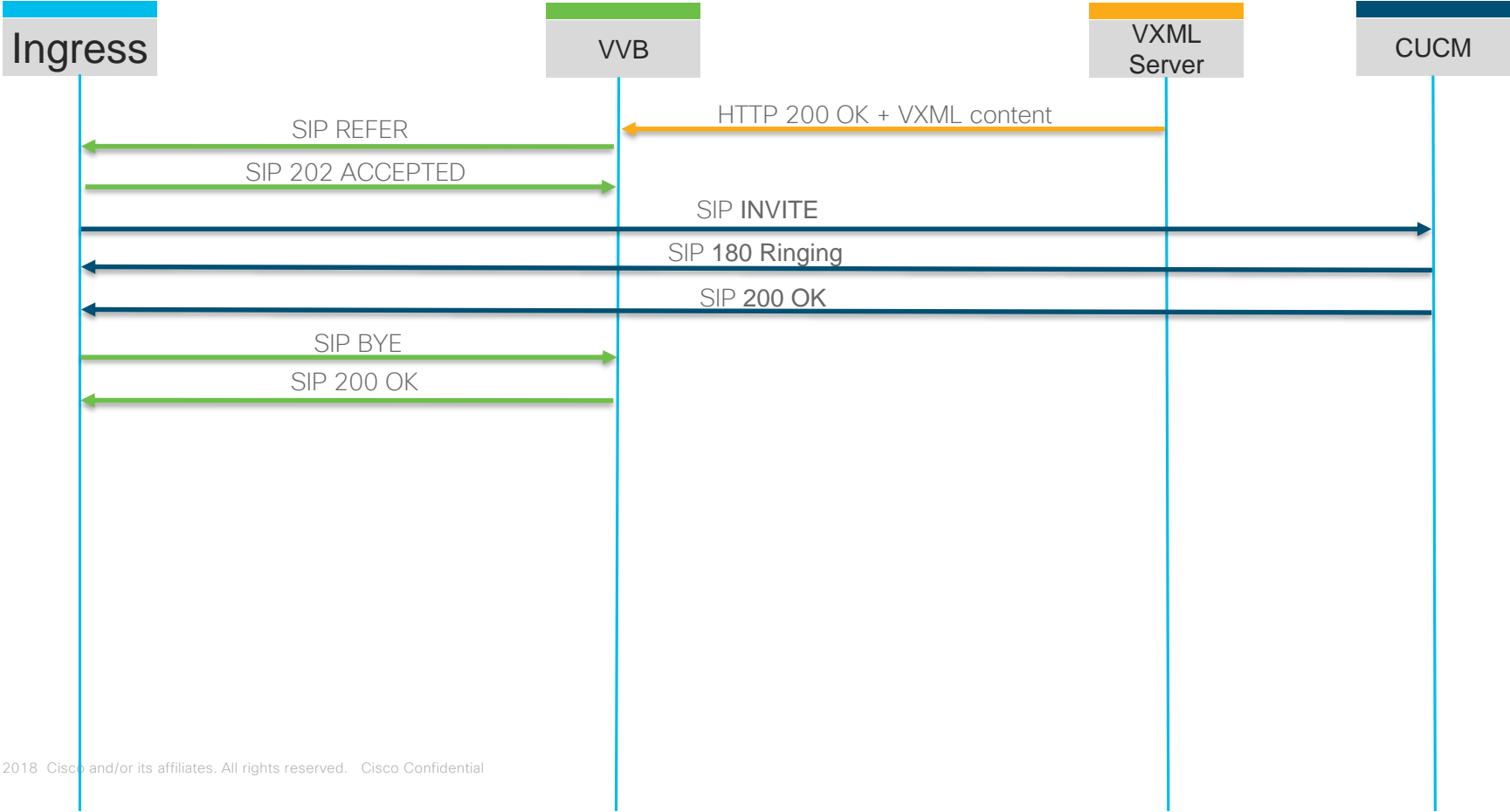
CVP Standalone Call Flow (without ICM lookup)



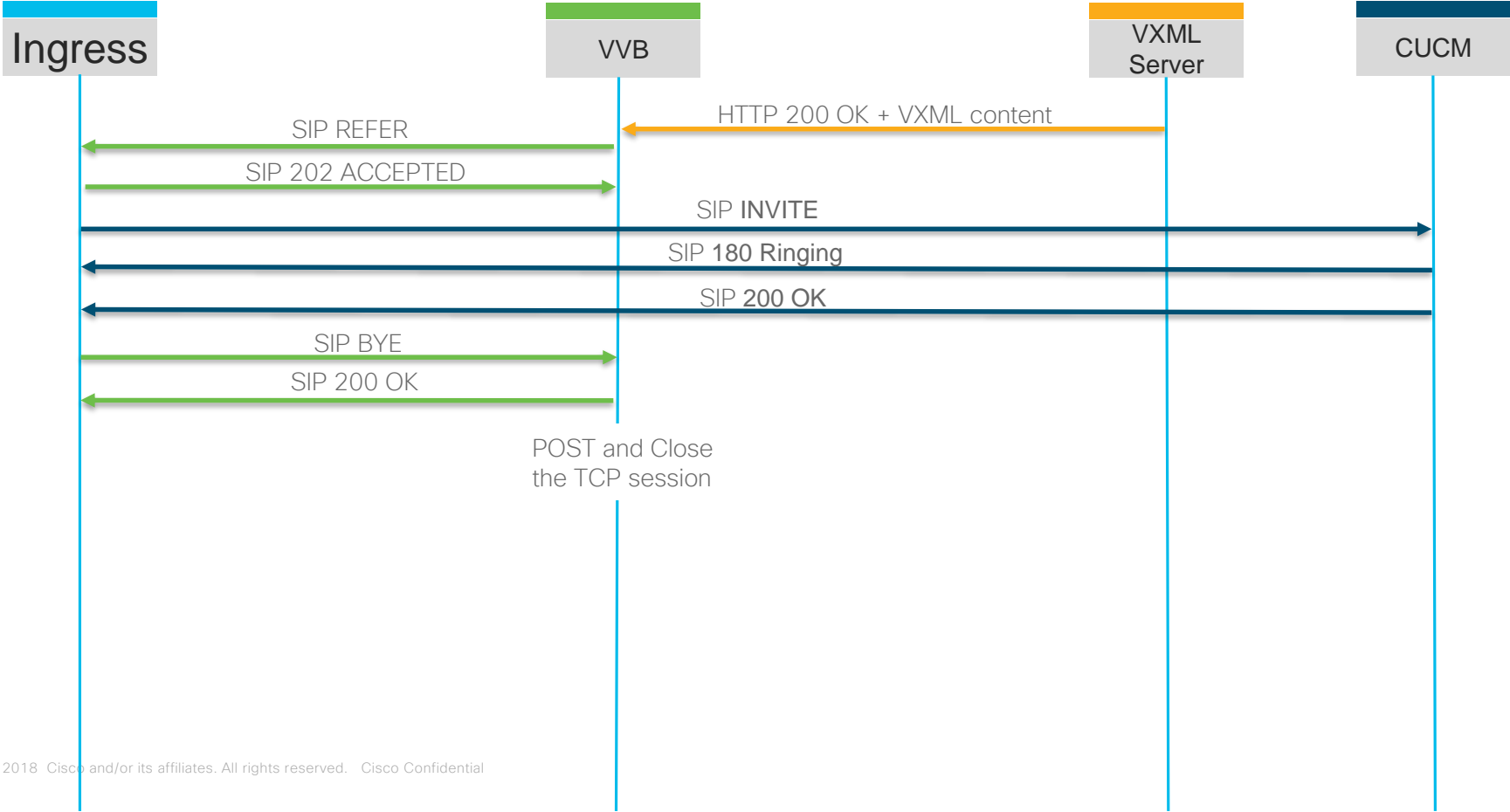
CVP Standalone Call Flow (without ICM lookup)



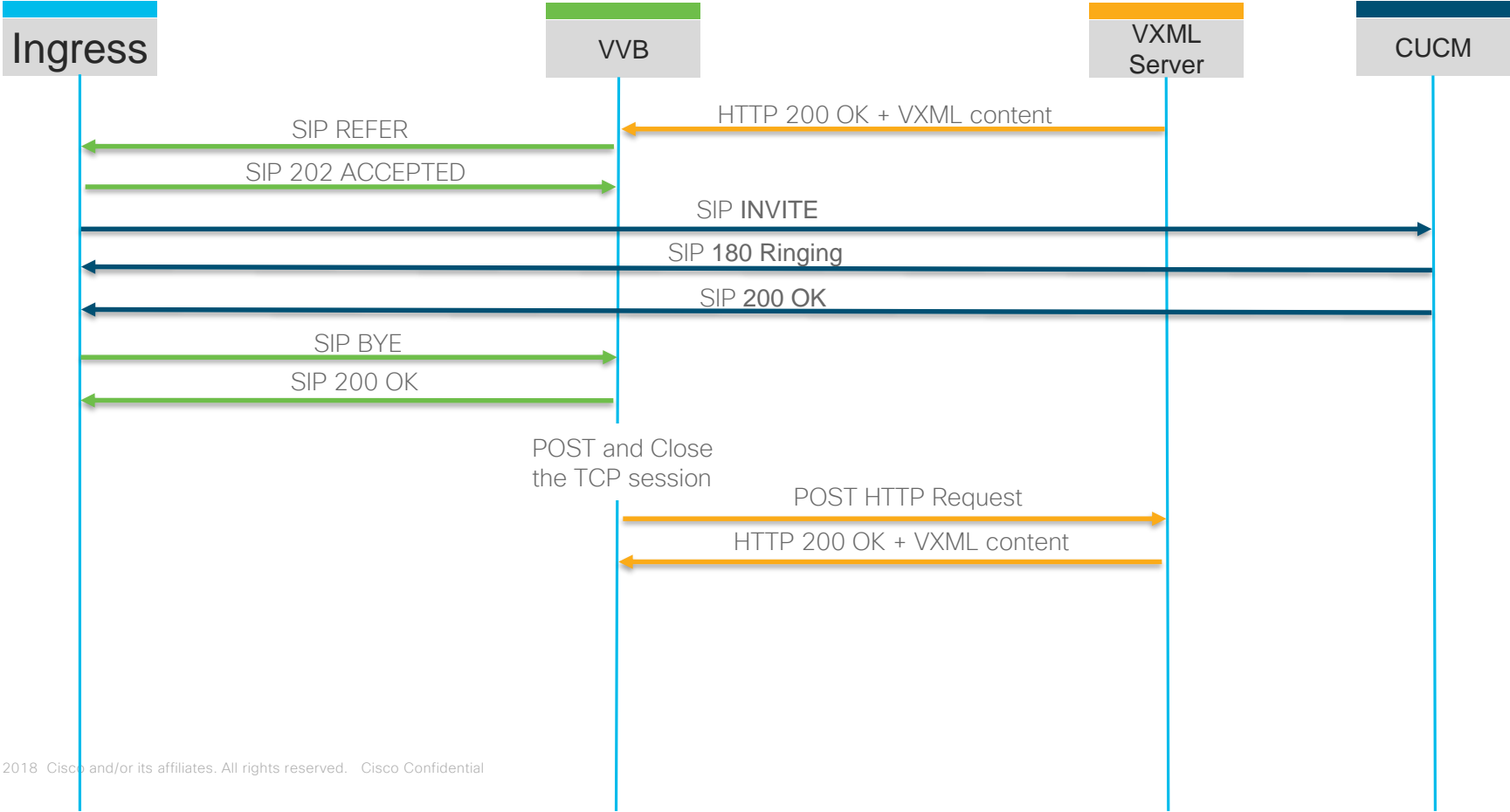
CVP Standalone Call Flow (without ICM lookup)



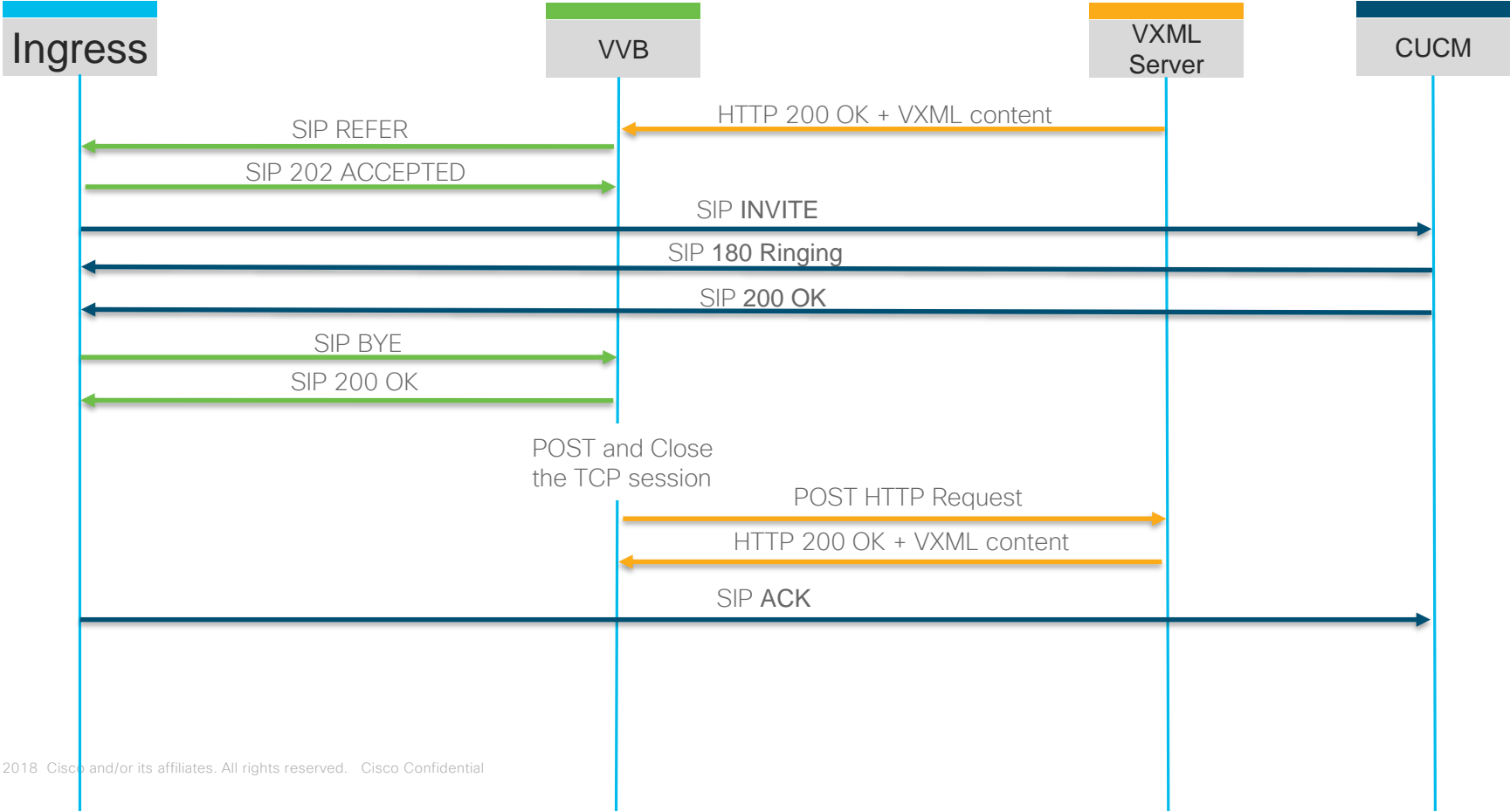
CVP Standalone Call Flow (without ICM lookup)



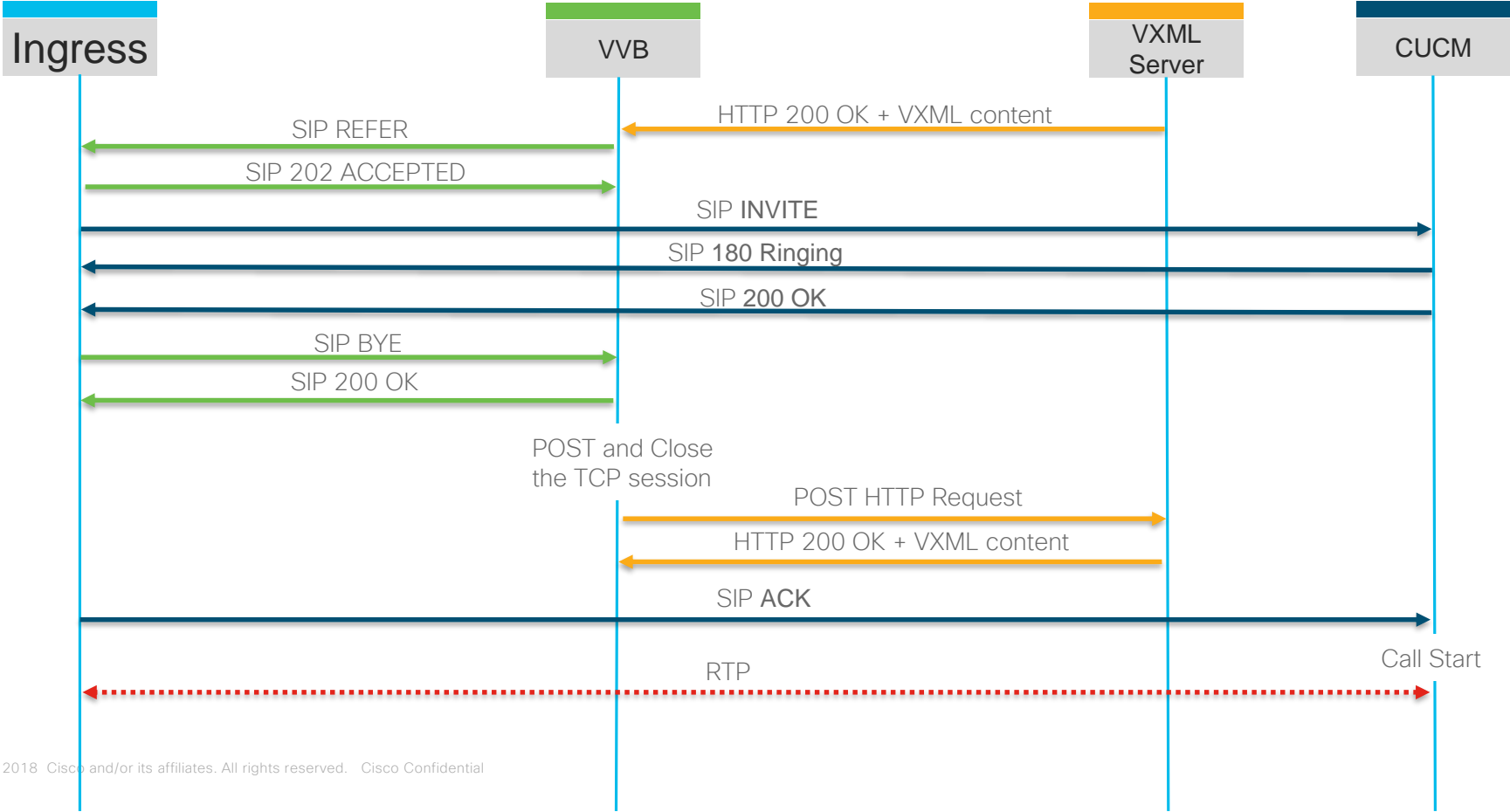
CVP Standalone Call Flow (without ICM lookup)



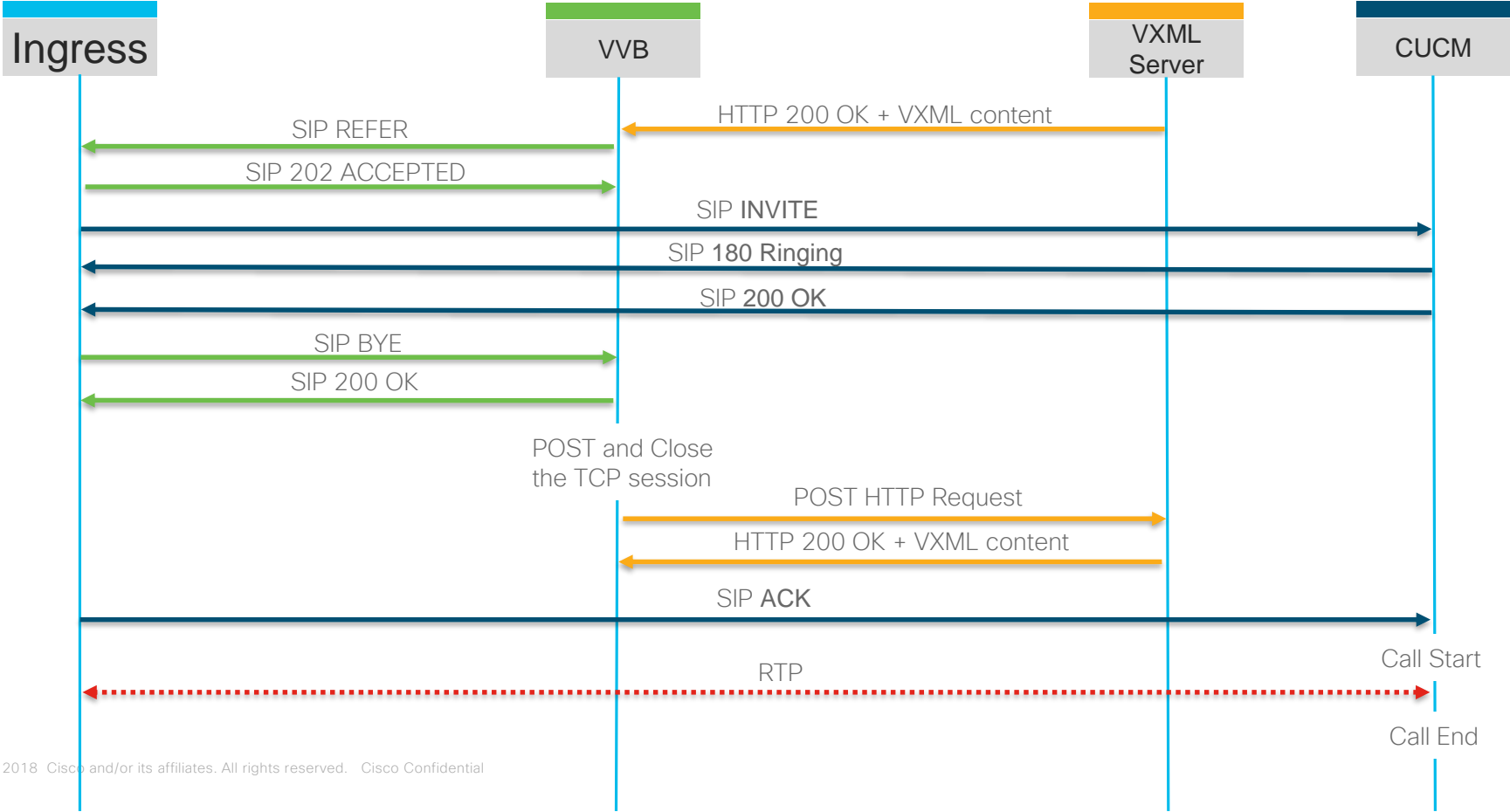
CVP Standalone Call Flow (without ICM lookup)



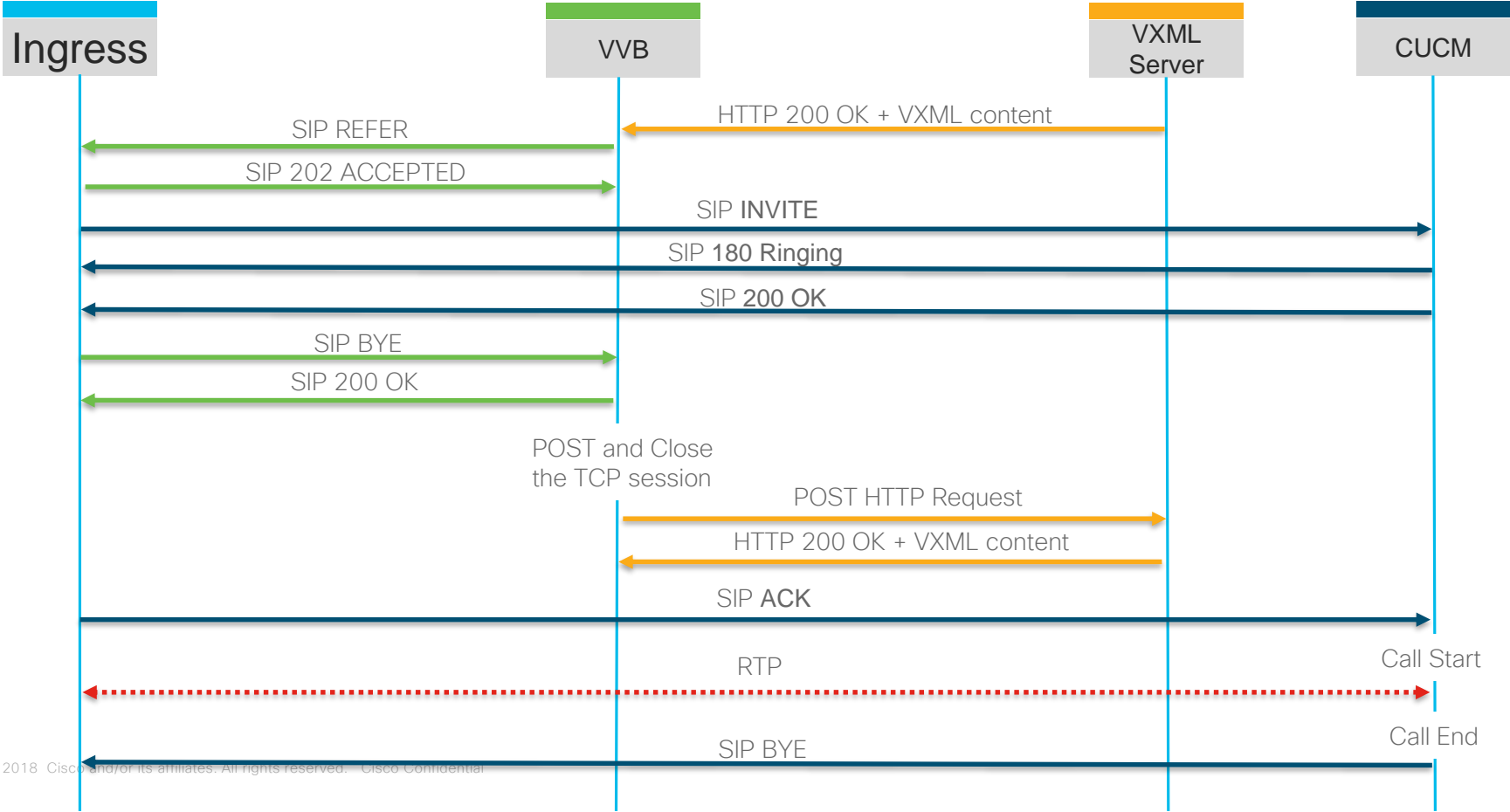
CVP Standalone Call Flow (without ICM lookup)



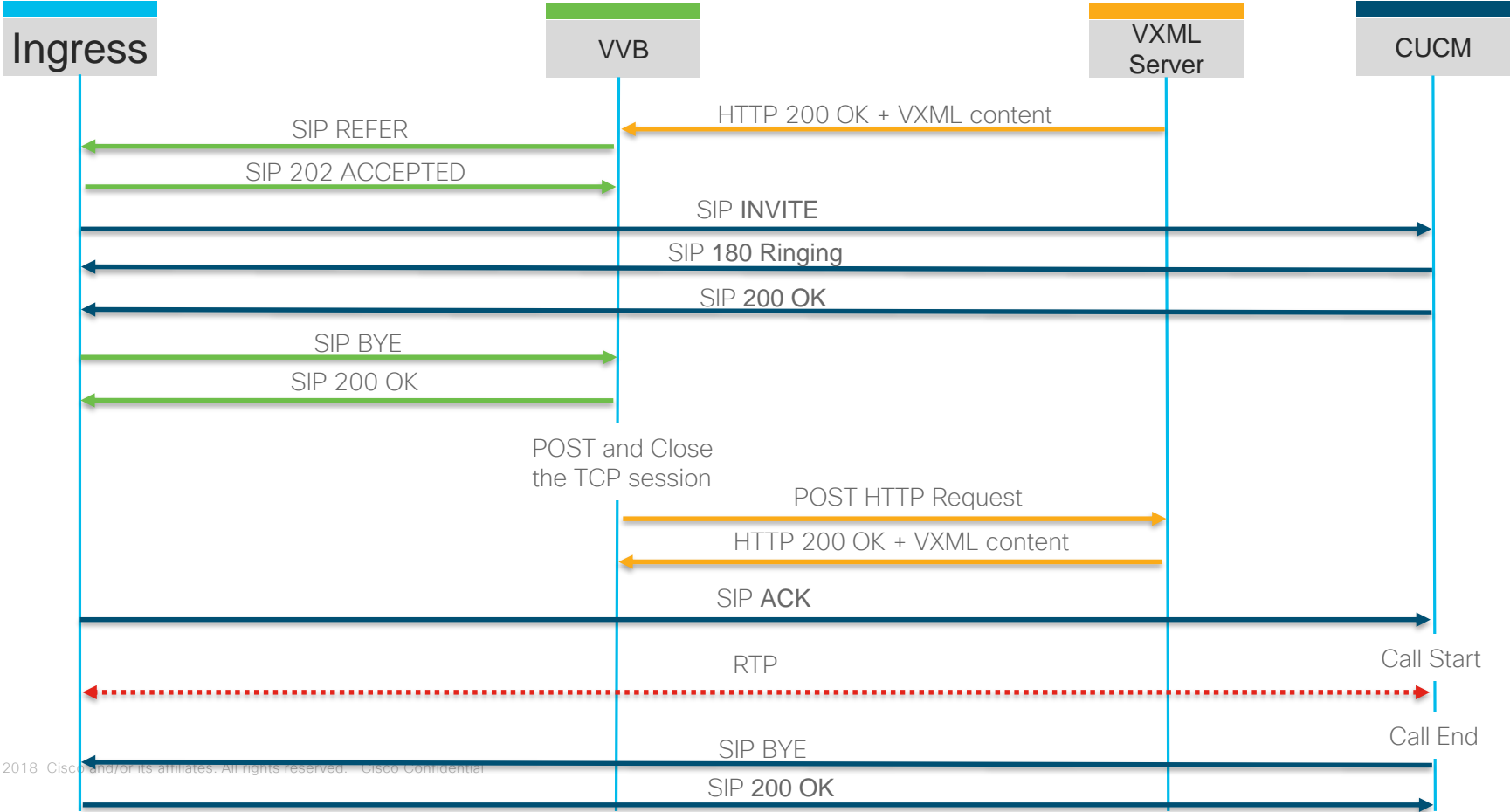
CVP Standalone Call Flow (without ICM lookup)



CVP Standalone Call Flow (without ICM lookup)



CVP Standalone Call Flow (without ICM lookup)



Configuration

Ingress Gateway / vCUBE configuration

Outbound dial-peer to VVB:

```
dial-peer voice 205 voip
description * CVP Standalone Model to VVB *
destination-pattern 402.
session protocol sipv2
session target ipv4:10.48.54.128
dtmf-relay rtp-nte
codec g711ulaw
no vad
```

Outbound dial-peer to CUCM:

```
dial-peer voice 209 voip
description * Agent's Phones to CUCM *
destination-pattern 2...$
session protocol sipv2
session target ipv4:10.48.54.87
dtmf-relay rtp-nte
codec g711ulaw
no vad
```

VVB Configuration – Application Management
















Application Management

 Add New  Refresh All

Status

 3 records found

Application List

Name 	Sessions 	Enabled 	Delete	Copy	Refresh
 Comprehensive	600	Yes			
 Ringtone	600	Yes			
 Error	600	Yes			

VVB Configuration (cont), StandAlone script

Cisco Script Application

Update Delete Cancel Back to Application List

Status

Status : Ready

[SIP Trigger : 4020](#)
[Add new trigger](#)

Name	StandAlone
Maximum Number of Sessions*	600
Script*	SSSCRIPT[SelfService.aef]
<input checked="" type="checkbox"/> ApplicationName	"Standalone_Transfer"
<input type="checkbox"/> Port	"7000"
<input checked="" type="checkbox"/> PrimaryVXMLServer	"10.48.54.105"
<input type="checkbox"/> BackupVXMLServer	""
<input type="checkbox"/> Secured	false
Description	
Enabled	<input checked="" type="radio"/> Yes <input type="radio"/> No

Update Delete Cancel Back to Application List

VXML GW Configuration

Incoming dial-peer for Self Service:

```
dial-peer voice 201 voip
description * Self Service SIP Calls from IP *
service StandAlone
codec g711ulaw
incoming called-number 4020
dtmf-relay rtp-nte
no vad
```

The application's settings:

```
application
service StandAlone flash:CVPSelfService.tcl
paramspace english language en
paramspace english index 0
param CVPSelfService-port 7000
param CVPSelfService-app Standalone_Transfer
param CVPPrimaryVXMLServer 10.48.54.105
paramspace english location flash
paramspace english prefix en
!
service CVPSelfService
flash:CVPSelfServiceBootstrap.vxml
!
```

CVP Configuration – Deploying VXML Server

- Connecting to OAMP webpage
- Deploying a Unified CVP VXML Server(standalone)

The screenshot displays the Cisco OAMP web interface. At the top, there are two dropdown menus: 'Device Management' and 'User Management'. The 'Device Management' menu is expanded, showing a list of server types: Unified CVP Call Server, Unified CVP Reporting Server, Unified CVP VXML Server, Unified CVP VXML Server (standalone) (highlighted), Gateway, Virtualized Voice Browser, Speech Server, Media Server, and Unified CM. Below this, the 'Edit Unified CVP VXML Server (standalone) Configuration' page is visible. The page has a toolbar with icons for Save, Save & Deploy, Statistics, File Transfer, and Help. The 'General' tab is selected, showing the following configuration fields:

IP Address: *	10.48.54.105
Hostname: *	cc-cvp-st
Description:	CVP Standalone
Enable secure communication with the Ops console: ¹	<input type="checkbox"/>
Device Version:	CVP 12.0(1) Build=1

* Required.
¹ Change in value requires machine reboot.

CVP Configuration – Application with Transfer

Example of a simple application:

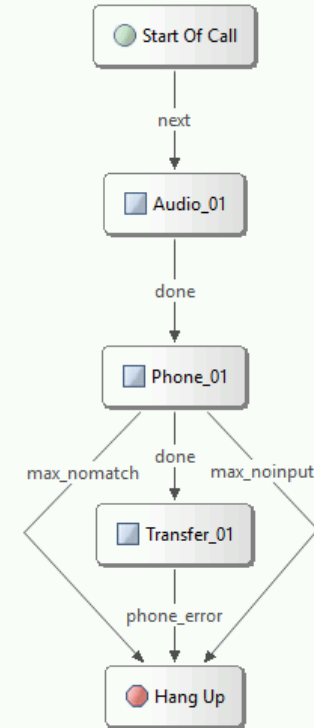
- Create a custom application on CVP Call Studio.
- Deploying this Application on VXML Server.

```
C:\Windows\system32\cmd.exe
Copyright (C) 1999 - 2019 Cisco Systems, Inc. All rights reserved.

Cisco Unified Customer Voice Portal VXML Server v12.0(1)
Customer Voice Portal is a trademark of Cisco Systems, Inc.

Total Concurrent Callers: 0
License Ports:           30
Available Ports:        30

Application Name      Status      Active Callers  Sessions Ending
-----
Standalone Transfer  Running    0               0
RecordAgentGreeting  Running    0               0
HelloWorld           Running    0               0
MicroApp             Running    0               0
Press any key to continue . . .
```



CVP Configuration – Application with with ICM Lookup

Unified CVP Call Server Configuration

Next Help

General

IP Address: *

Hostname: *

Description:

Enable secure communication with the Ops console: ¹

Turn on Services

ICM:

IVR:

SIP:

Unified CVP VXML Server Configuration

Save Save & Deploy Help

General Configuration Device Pool Infrastructure

IP Address: *

Hostname: *

Description:

Enable secure communication with the Ops console: ¹

Unified CVP Call Server(s)

Primary Unified CVP Call Server: * ²

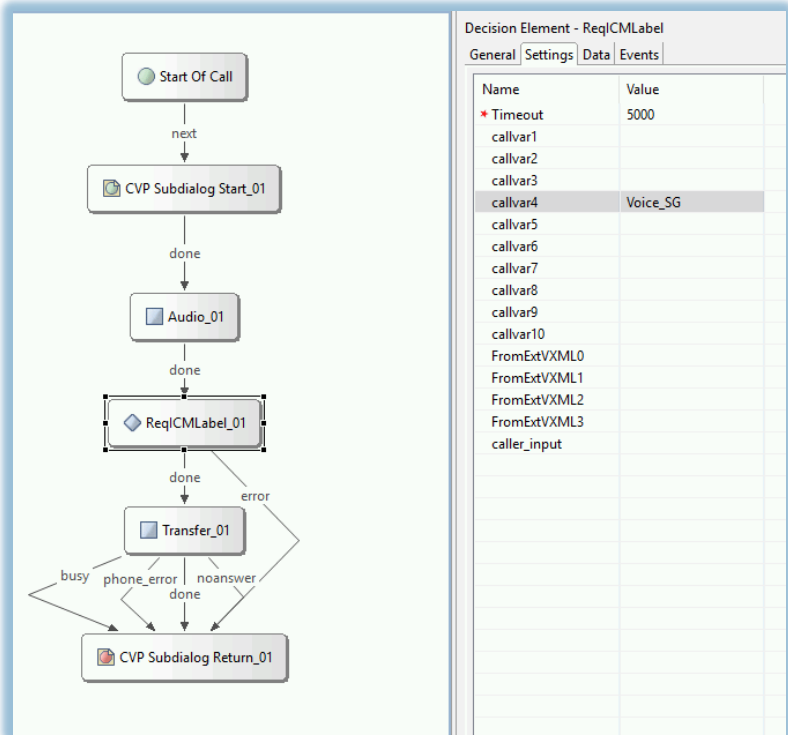
Backup Unified CVP Call Server: ²

* Required.

¹ Change in value requires machine reboot.

² Change in value requires restart of Unified CVP Call Server(s) and Unified CVP VXML Server.

CVP Configuration – Application with with ICM Lookup



CVP traces & UCCE traces

CVP traces

CVP Trace :

Call Server SIP Tracing :

Step 1)

Please go to the diag page of CallServer

<http://<Ip Address of CallServer>:8000/cvp/diag>

Click on the DEBUG/41 link on the left side of the page to turn up ICM, IVR and SIP to DEBUG Mask 41

Step 2)

Under Serv Mgr select com.dynamicsoft.DsLibs.DsUALibs from the drop down list

Under Level select DEBUG Then click Set

This logs can be gathered from the following location :

C:\Cisco\CVP\logs\



Cisco Unified IP-IVR Deployment models

What is IP-IVR?

The Unified IP IVR (Interactive Voice Response) is a Unified CCX product package that provides IP call queuing and IP intelligent voice response functionality for a contact center.

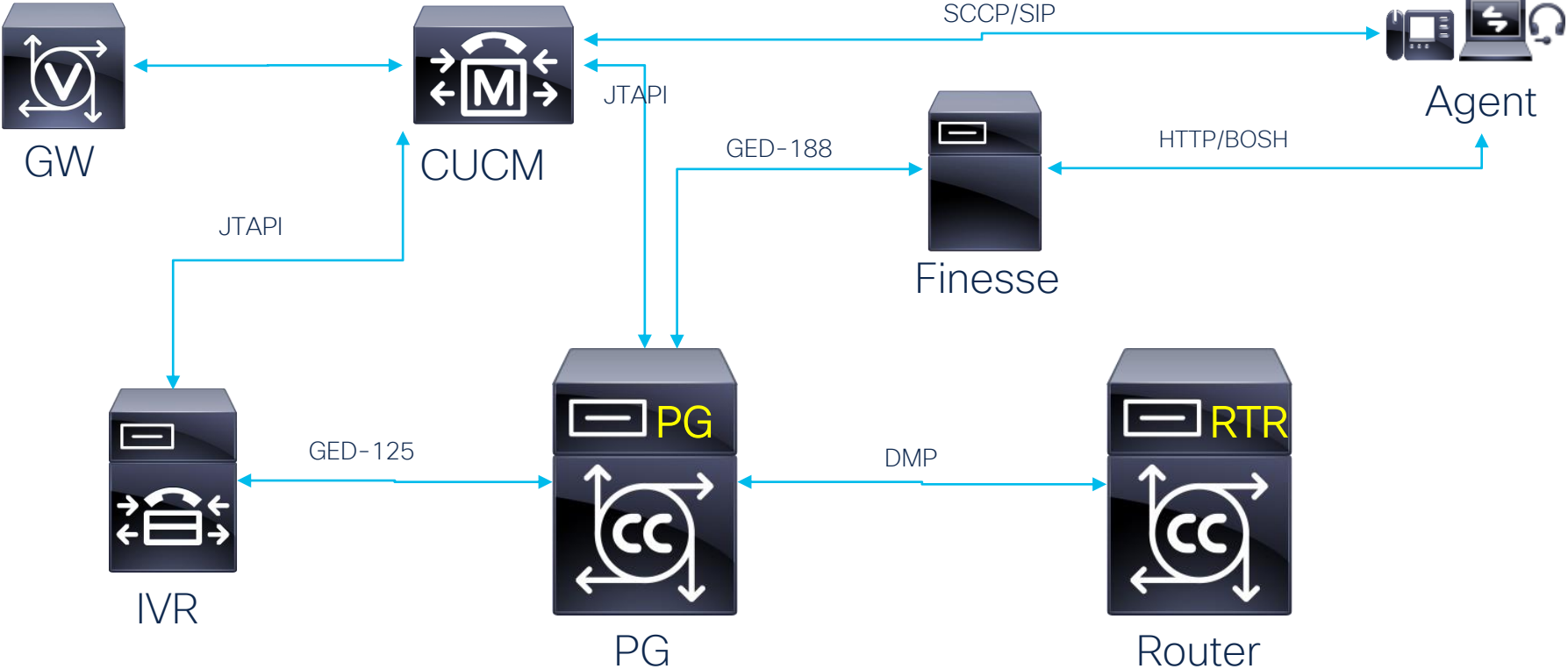
The Unified IP IVR uses the script editor, and it can be configured to play static or dynamic prompts, to offer menus to callers, queue a call, play music, and so on.

Features

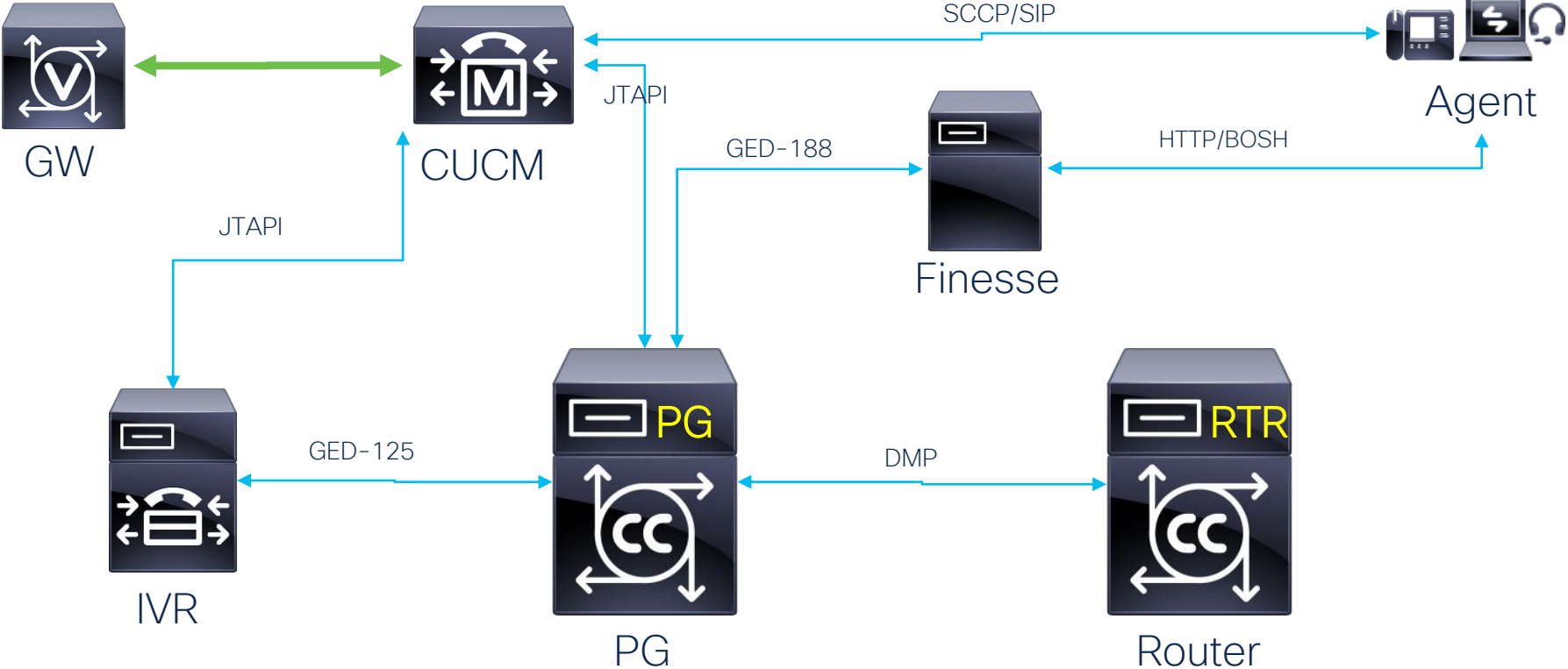
- VoiceXML Browser
- MRCP ASR/TTS
- Email
- Database
- HTTP Request

UCCE Deployment Model

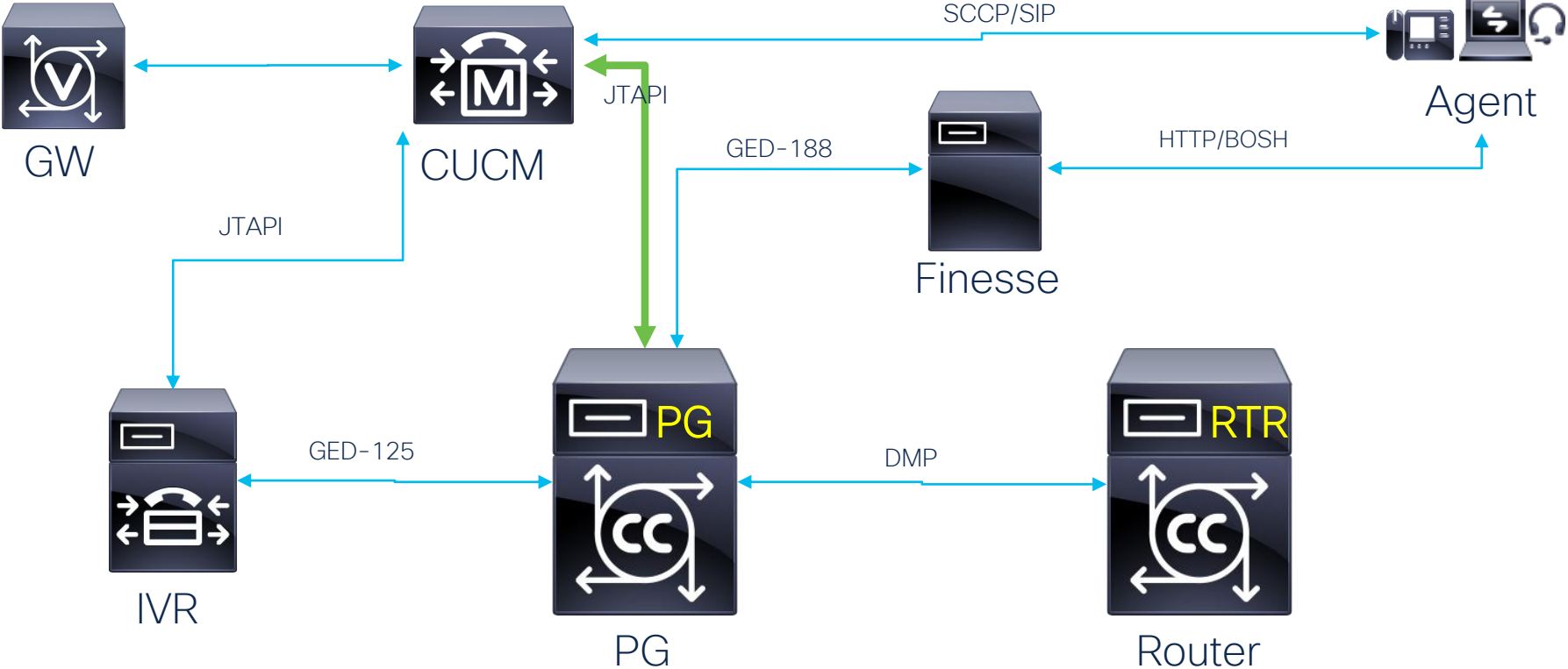
Unified Deployment Model within Unified CCE



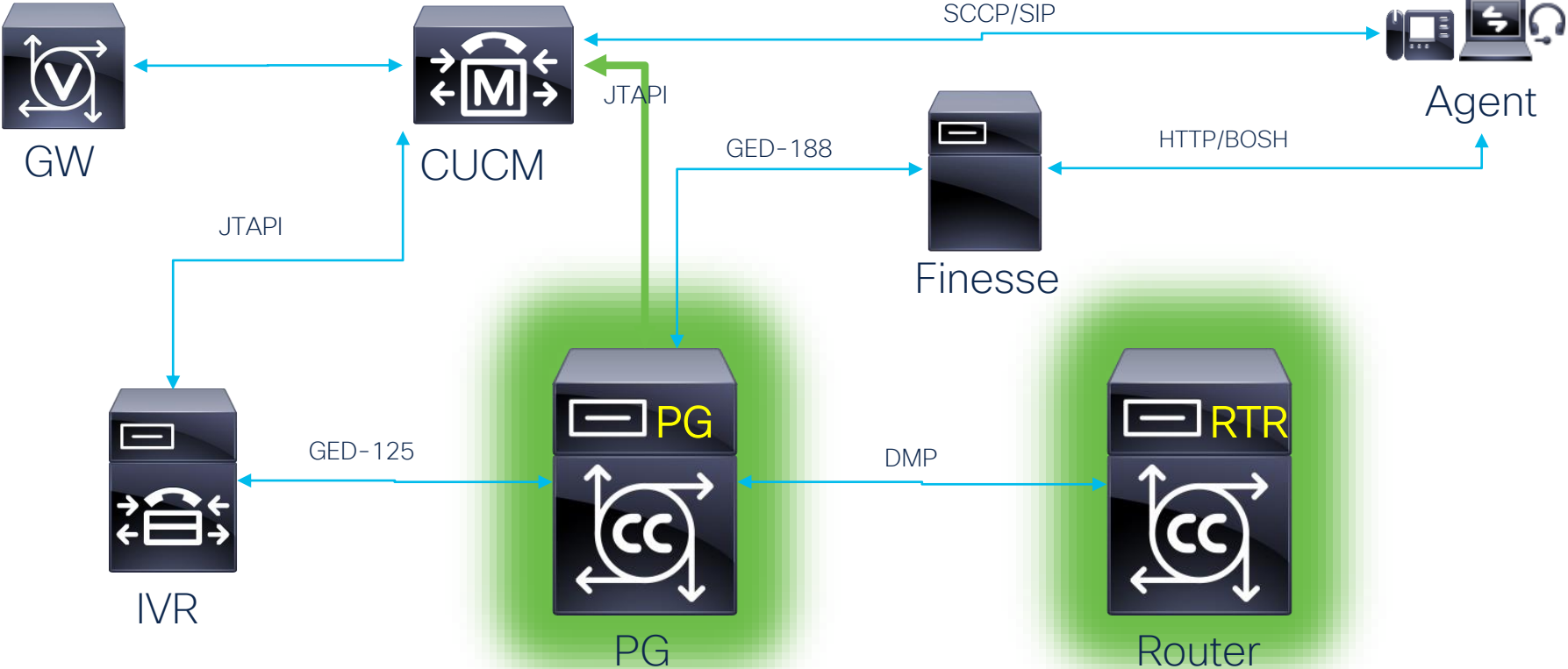
Unified Deployment Model within Unified CCE



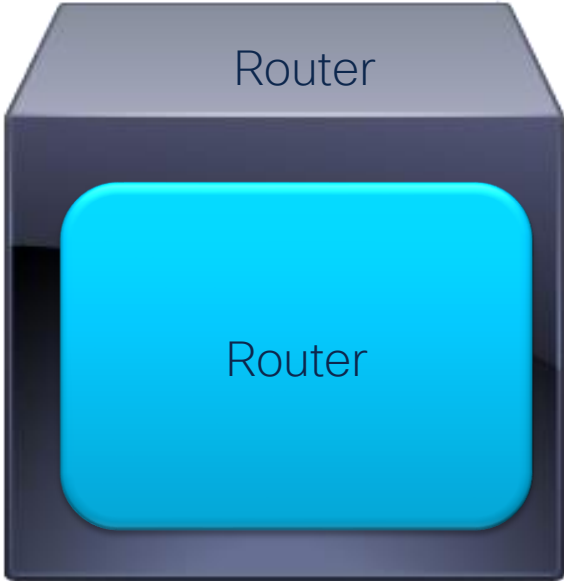
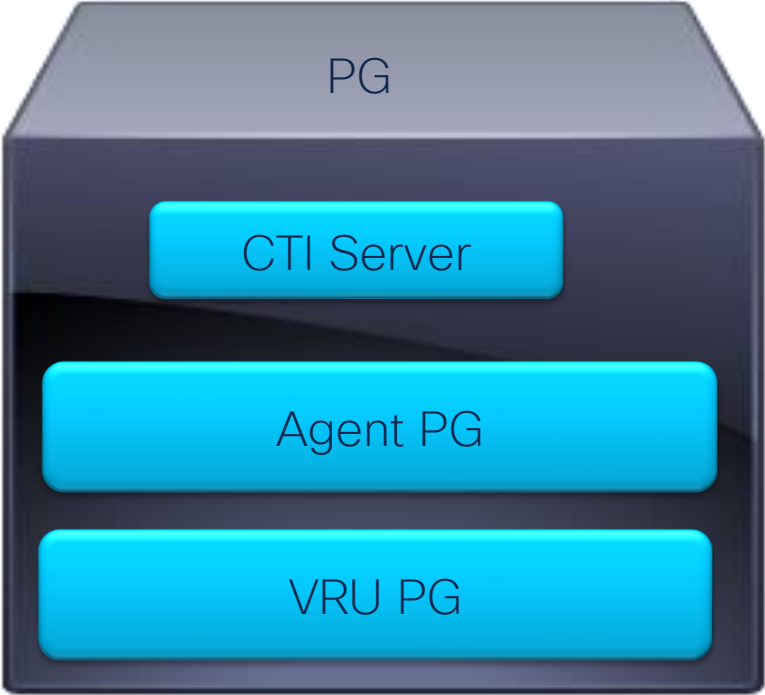
Unified Deployment Model within Unified CCE



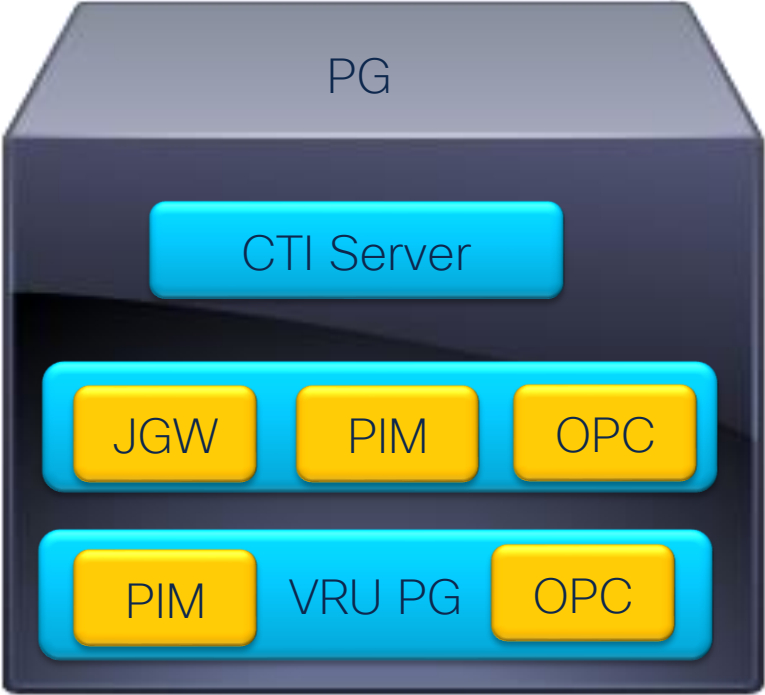
Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



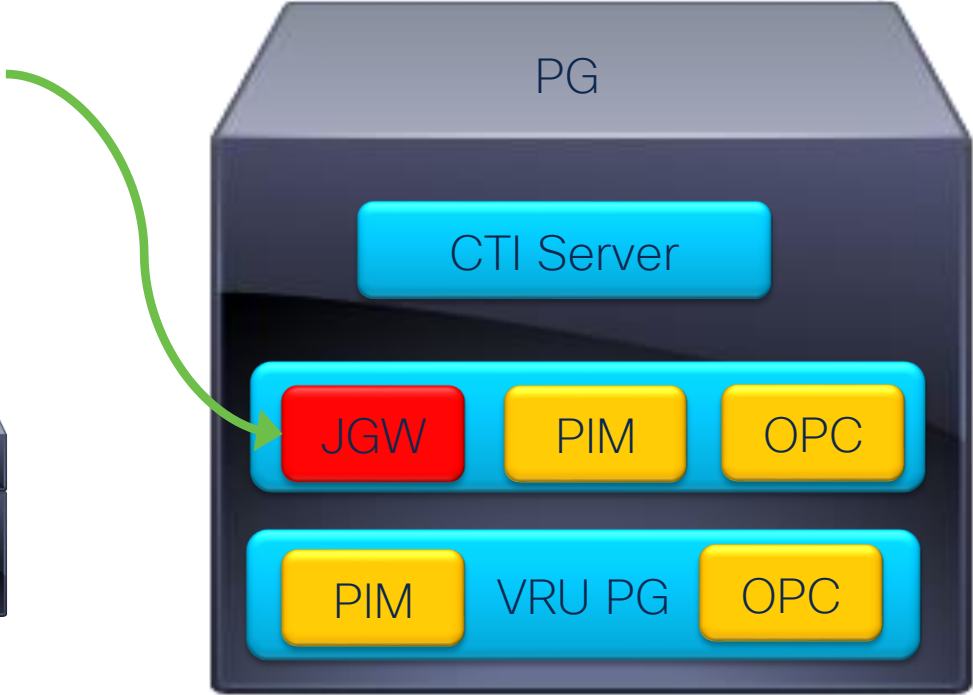
Unified Deployment Model within Unified CCE



CUCM



IVR



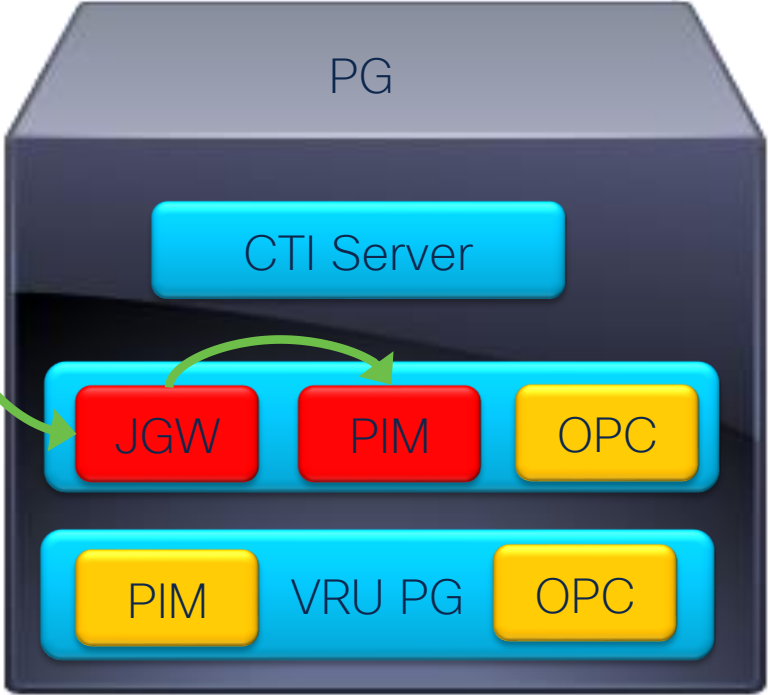
Unified Deployment Model within Unified CCE



CUCM



IVR



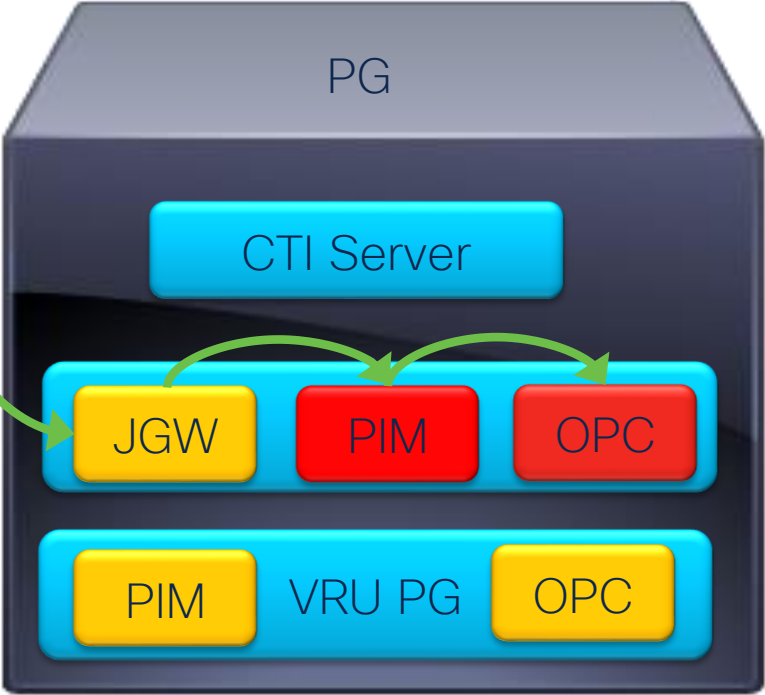
Unified Deployment Model within Unified CCE



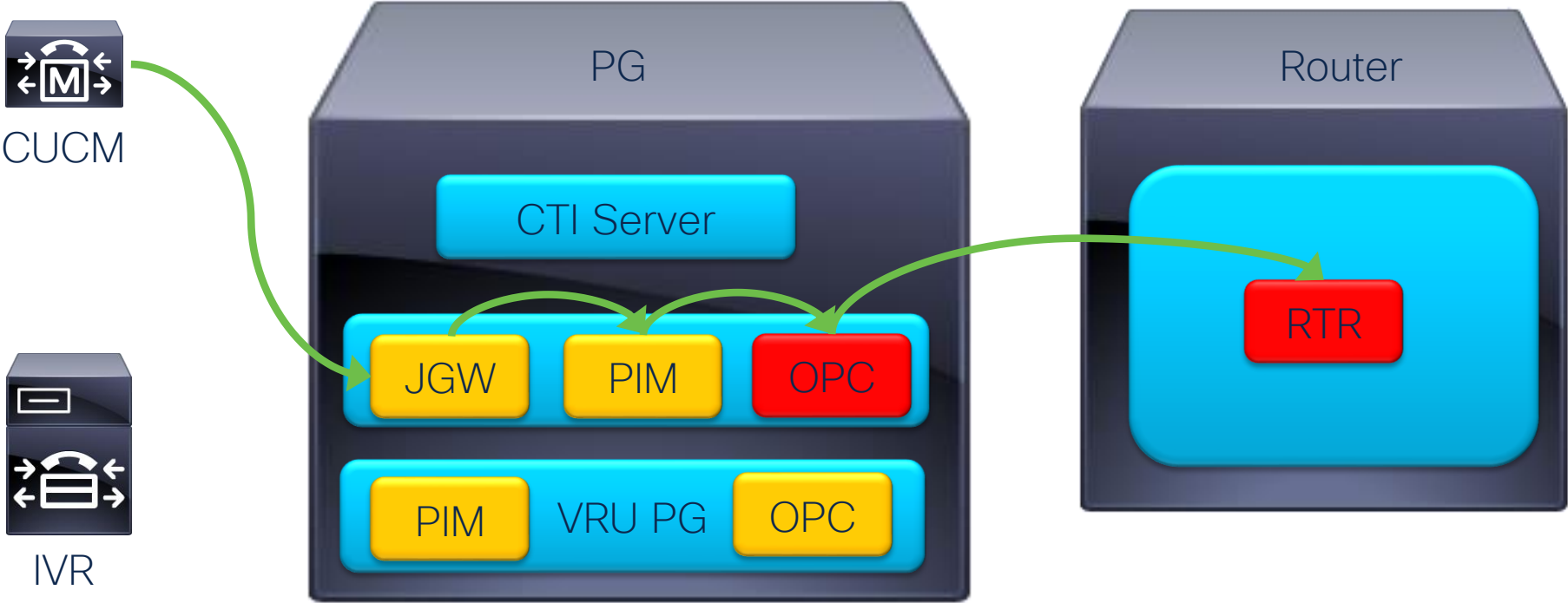
CUCM



IVR



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



CUCM



IVR

Dialed Number / Script Selector List

Select filter data

Routing client: <All>

Customer: <All>

Optional Filter: Dialed number string, Condition: Contains, Value (Case Sensitive): 222

Save Retrieve Cancel filter changes

Dialed Number / Script Selector

Name
<input checked="" type="checkbox"/> CUCM_RC.22200

Attributes: Dialed Number Mapping, Dialed Number Label

Routing client: * CUCM_RC

Media routing domain: * Cisco_Voice

Dialed number string / Script selector: * 22200

Name: * CUCM_RC.22200

Customer: <None>

Default label: <None>

Description:

Permit application routing:

Reserved by IVR:

Unified Deployment Model within Unified CCE



CUCM



IVR

Dialed Number / Script Selector List

Select filter data

Routing client: <All>

Customer: <All>

Optional Filter: Dialed number string, Condition: Contains, Value (Case Sensitive): 222

Save Retrieve Cancel filter changes

Dialed Number / Script Selector

Name

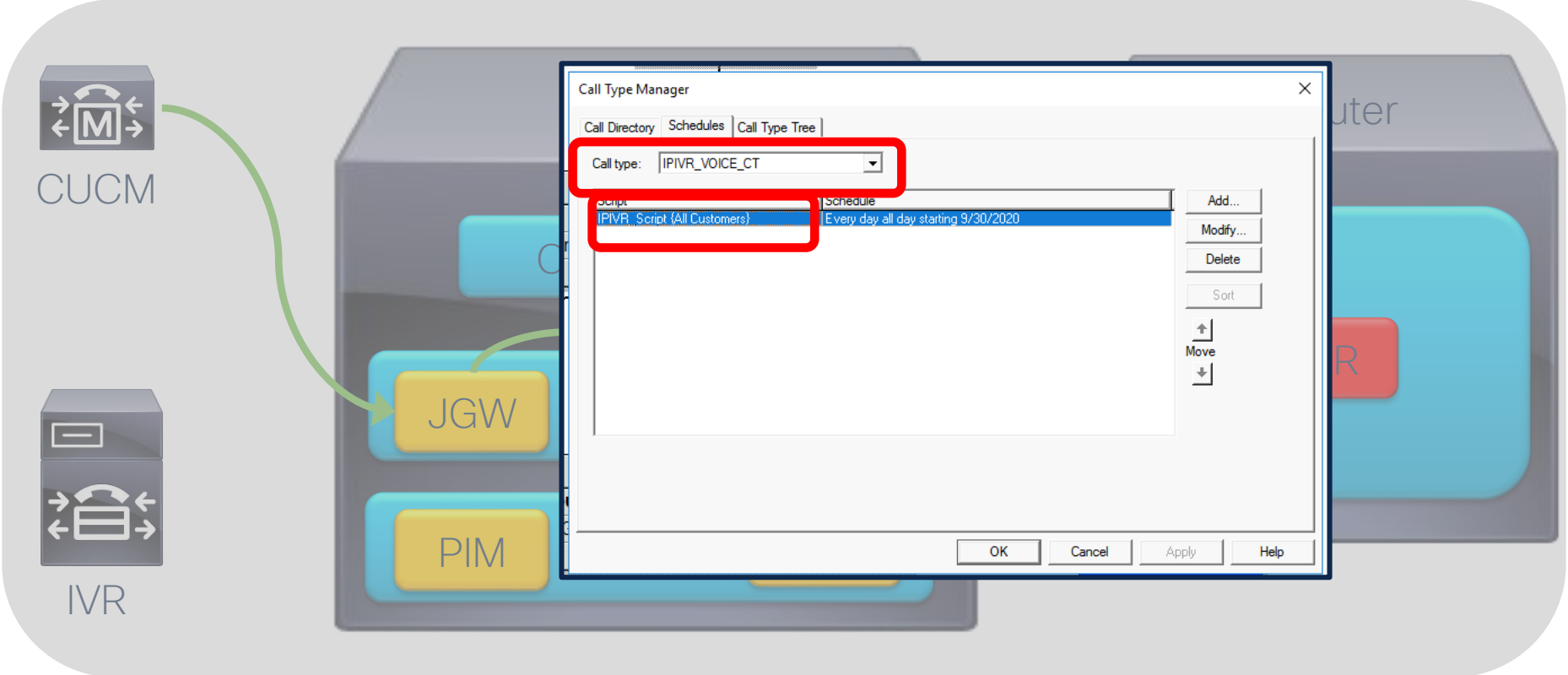
- CUCM_RC.22200

Attributes: Dialed Number Mapping, Dialed Number Label

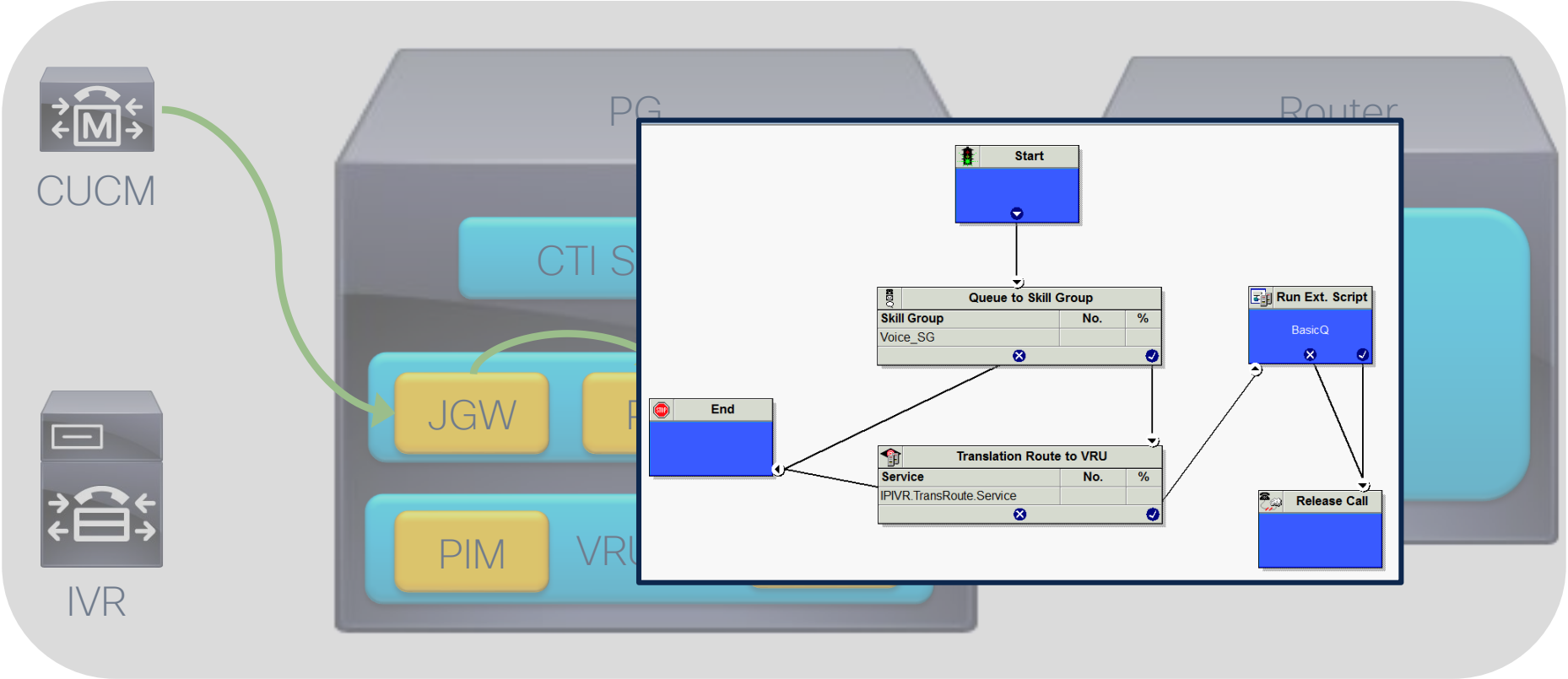
CDR / App String 1	CDR / App String 2	Call Type
All	All	IPIVR_VOICE_CT

Add ... Edit ... Remove Up Down

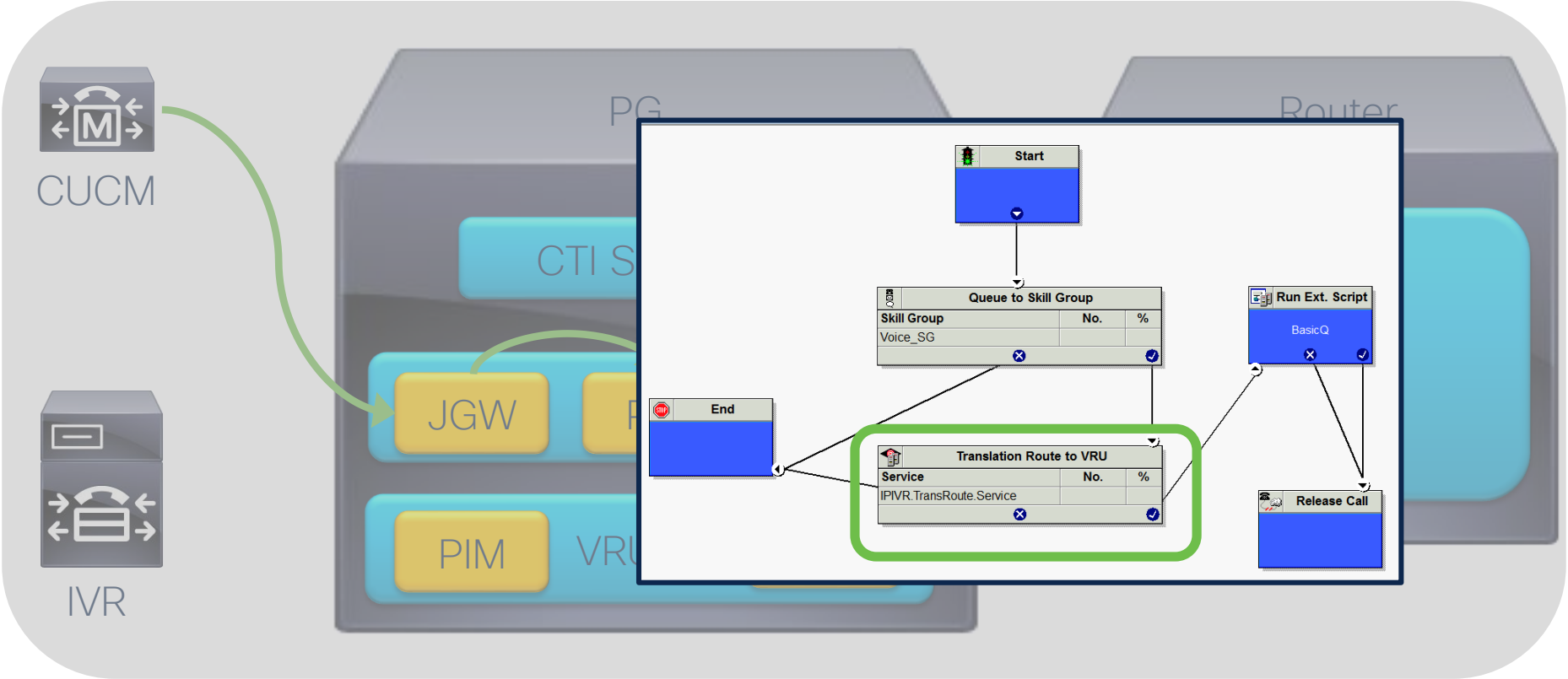
Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE

Translation Route Explorer

Select filter data
PG: VRU

Optional Filter: None
Condition: []
Value (Case Sensitive): []

Save Retrieve Cancel filter changes

Hide legend

- (1) Translation route
 - (2) Route
 - (3) Peripheral target
 - (4) Label

Click on an item to edit or view its contents.
Use the Add buttons to create new items.

Tree View:

- IPIVR.Transroute
 - IPIVR.Transroute.RT
 - DNIS:22100; NTG: IPIVR_NTG
 - 22100.CUCM_RC
 - DNIS:22101; NTG: IPIVR_NTG
 - 22101.CUCM_RC
 - UNASSIGNED

Cisco ICM Translation-Routing

Update Delete Cancel Back to Application List

Status: Ready

[Unified CM Telephony Trigger: 22100](#)
[Unified CM Telephony Trigger: 22101](#)
[Add new trigger](#)

Name	UCCE TransRoute
ID*	0
Maximum Number of Sessions*	10

Unified Deployment Model within Unified CCE

Translation Route Explorer

Select filter data
PG: VRU

Optional Filter: None
Condition: []
Value (Case Sensitive): []

Save Retrieve Cancel filter changes

Hide legend

- (1) Translation route
 - (2) Route
 - (3) Peripheral target
 - (4) Label

Click on an item to edit or view its contents.
Use the Add buttons to create new items.

IPIVR.Transroute.RT
DNIS:22100; NTG: IPIVR_NTG
22100.CUCM_RC
DNIS:22101; NTG: IPIVR_NTG
22101.CUCM_RC

UNASSIGNED

Translation Route

Name: * IPIVR.Transroute
Description: []
Type: * DNIS

Route

Name: * IPIVR.Transroute.RT
Description: []
Service name: IPIVR.TransRoute.Service

Peripheral Target

DNIS: * 22101
Description: []
Network trunk group: * IPIVR_NTG

Label

Routing client: * CUCM_RC
Label: * 22101
Label type: * Normal
Customer: NONE
Description: []

Cisco ICM Translation-Routing

Update Delete Cancel Back to Application List

Status
Status : Ready

[Unified CM Telephony Trigger: 22100](#)
[Unified CM Telephony Trigger: 22101](#)
[Add new trigger](#)

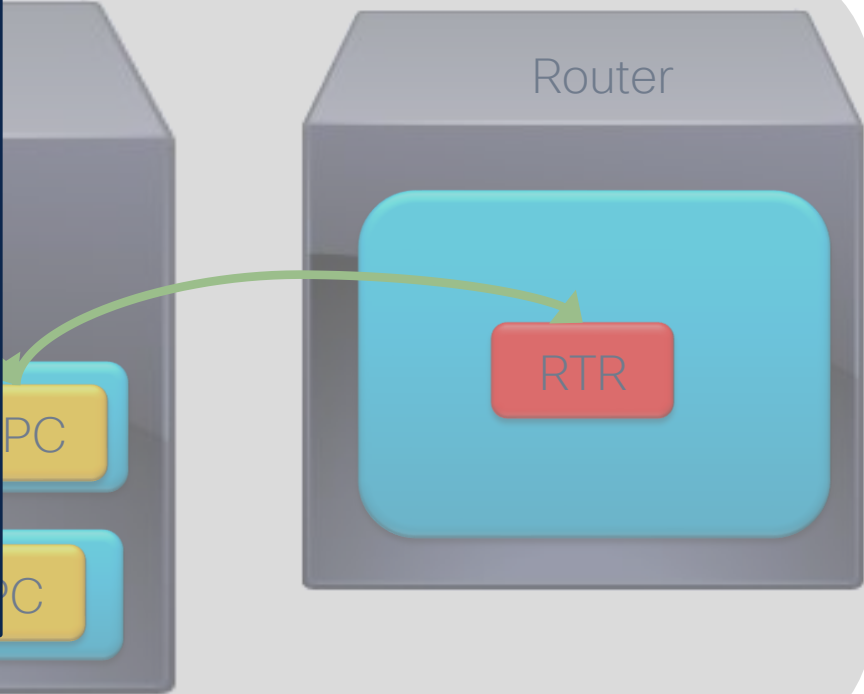
Name	UCCE TransRoute
ID*	0
Maximum Number of Sessions*	10

Unified Deployment Model within Unified CCE

The screenshot shows the 'Translation Route Explorer' window with the following configuration details:

- Select filter data:** PG: VRU
- Optional Filter:** None
- Translation Route:** Name: * IPIVR.Transroute, Type: * DNIS
- Route:** Name: * IPIVR.Transroute.RT, Service name: IPIVR.TransRoute.Service
- Peripheral Target:** DNIS: * 22101, Network trunk group: * IPIVR_NTG
- Label:** Routing client: * CUCM_RC, Label: * 22101, Label type: * Normal, Customer: NONE

The interface also includes a legend and a tree view showing the hierarchy of the translation route configuration.



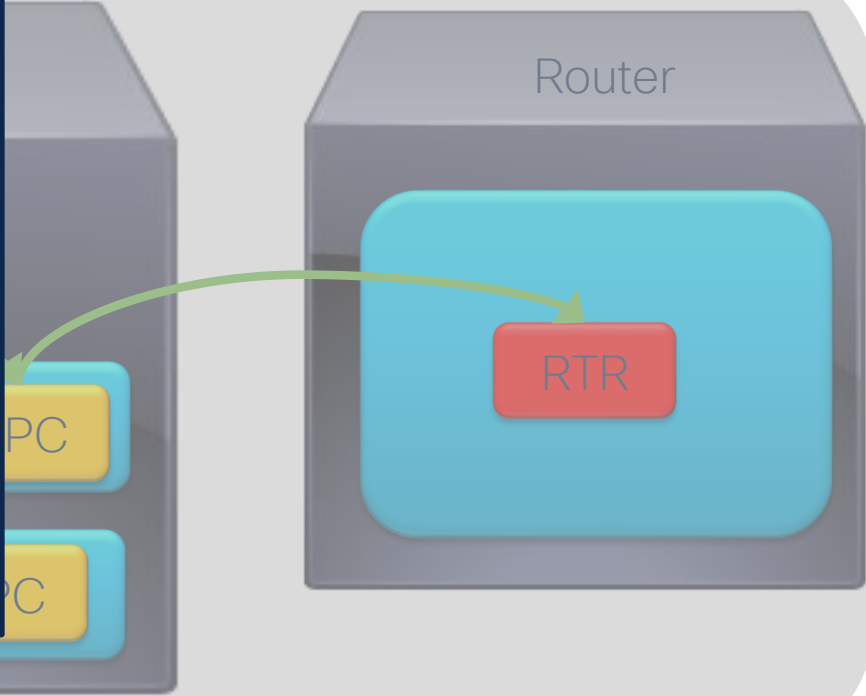
Unified Deployment Model within Unified CCE

The screenshot shows the 'Translation Route Explorer' window with the following configuration details:

- Select filter data:** PG: VRU
- Optional Filter:** None
- Translation Route:** Name: * IPIVR.Transroute, Type: * DNIS
- Route:** Name: * IPIVR.Transroute.RT, Service name: IPIVR.TransRoute.Service
- Peripheral Target:** DNIS: * 22101, Network trunk group: * IPIVR_NTG (highlighted with a green box)
- Label:** Routing client: * CUCM_RC, Label: * 22101, Label type: * Normal, Customer: NONE

The interface also includes a legend and a tree view showing the hierarchy of objects: IPIVR.Transroute, IPIVR.Transroute.RT, and UNASSIGNED. The tree view shows the following structure:

- IPIVR.Transroute
 - IPIVR.Transroute.RT
 - DNIS:22100; NTG: IPIVR_NTG
 - 22100.CUCM_RC
 - DNIS:22101; NTG: IPIVR_NTG
 - 22101.CUCM_RC
 - UNASSIGNED



Unified Deployment Model within Unified CCE

The image displays two overlapping windows from the Unified CCE interface. The left window is the 'Translation Route Explorer' and the right window is the 'Network Trunk Group Explorer'. Both windows have a 'Select filter data' section with 'VRU' selected in the PG dropdown. The Translation Route Explorer shows a tree view with 'IPIVR.Transroute' expanded, containing 'IPIVR.Transroute.RT' and 'UNASSIGNED'. The Network Trunk Group Explorer shows a tree view with 'IPIVR_NTG' expanded, containing 'IPIVR.IPIVR_TG' and 'NTG1'. A green box highlights the 'IPIVR_NTG' entry in the right window's tree view. Below the tree views, there are detailed configuration fields for the selected item. In the Translation Route Explorer, the 'Translation Route' details show Name: * IPIVR.Transroute, Description: (empty), Type: * DNIS, and the 'Route' details show Name: * IPIVR.Transroute.RT, Description: (empty), Service name: IPIVR.TransRoute.Service, and the 'Peripheral Target' details show DNIS: * 22101, Description: (empty), and Network trunk group: * IPIVR_NTG. In the Network Trunk Group Explorer, the 'Network trunk group' details show Name: * IPIVR_NTG, Description: (empty), and the 'Trunk group' details show Peripheral: * IPIVR, Peripheral number: * 2, Peripheral name: * IPIVR_TG, Name: * IPIVR.IPIVR_TG, Extension: (empty), Trunk count: Use Trunk Data, Configuration parameters: (empty), and Description: (empty).

Translation Route Explorer

Select filter data
PG: VRU

Optional Filter: None
Condition: (empty)
Value (Case Sensitive): (empty)

Save Retrieve Cancel filter changes

Hide legend

- (1) Translation route
- (2) Route
- (3) Peripheral target
- (4) Label

Click on an item to edit or view its contents.
Use the Add buttons to create new items.

IPIVR.Transroute

- IPIVR.Transroute.RT
 - DNIS:22100; NTG: IPIVR_NTG
 - 22100.CUCM_RC
 - DNIS:22101; NTG: IPIVR_NTG
 - 22101.CUCM_RC
- UNASSIGNED

Network Trunk Group Explorer

Select filter data
PG: VRU

Optional Filter: None
Condition: (empty)
Value (Case Sensitive): (empty)

Save Retrieve Cancel filter changes

Hide legend

- (1) Network trunk group
- (2) Trunk group
- (3) Trunk

Click on an item to edit or view its contents.
Use the Add buttons to create new items.

IPIVR_NTG

- IPIVR.IPIVR_TG
- NTG1

Translation Route Details

Translation Route

Name: * IPIVR.Transroute
Description: (empty)
Type: * DNIS

Route

Name: * IPIVR.Transroute.RT
Description: (empty)
Service name: IPIVR.TransRoute.Service

Peripheral Target

DNIS: * 22101
Description: (empty)
Network trunk group: * IPIVR_NTG

Label

Routing client: * CUCM_RC
Label: * 22101
Label type: * Normal
Customer: NONE
Description: (empty)

Network Trunk Group Details

Network trunk group

Name: * IPIVR_NTG
Description: (empty)

Trunk group

Peripheral: * IPIVR
Peripheral number: * 2
Peripheral name: * IPIVR_TG
Name: * IPIVR.IPIVR_TG
Extension: (empty)
Trunk count: Use Trunk Data
Configuration parameters: (empty)
Description: (empty)

Unified Deployment Model within Unified CCE

The image displays two overlapping windows from the Unified CCE interface. The left window is the 'Translation Route Explorer' and the right is the 'Network Trunk Group Explorer'. Both windows have a 'Select filter data' section with a 'PG' dropdown set to 'VRU' and 'Optional Filter' set to 'None'. The 'Translation Route Explorer' shows a tree view with four items: (1) Translation route, (2) Route, (3) Peripheral target, and (4) Label. The selected item is 'IPIVR.Transroute', which is expanded to show 'IPIVR.Transroute.RT' with details: DNIS: 22100; NTG: IPIVR_NTG; 22100.CUCM_RC. Below this, 'UNASSIGNED' is also shown with details: DNIS: 22101; NTG: IPIVR_NTG; 22101.CUCM_RC. The 'Network Trunk Group Explorer' shows a tree view with three items: (1) Network trunk group, (2) Trunk group, and (3) Trunk. The selected item is 'IPIVR.IPIVR_TG', which is expanded to show 'IPIVR.IPIVR_TG' with details: Peripheral number: 2 (highlighted with a green box), Peripheral name: IPIVR_TG, Name: IPIVR.IPIVR_TG, Extension: (empty), Trunk count: Use Trunk Data, and Configuration parameters: (empty). Below the tree view, the 'Network trunk group' details are shown: Name: IPIVR_NTG, Description: (empty), and Trunk group details: Peripheral number: 2, Peripheral name: IPIVR_TG, Name: IPIVR.IPIVR_TG, Extension: (empty), Trunk count: Use Trunk Data, Configuration parameters: (empty), and Description: (empty).

IVR

Unified Deployment Model within Unified CCE

The image displays two overlapping software windows from a Cisco Unified CCE environment. The primary window in the foreground is titled "Cisco Unified CM Telephony Call Control Group Configuration". It features a top toolbar with "Update", "Delete", and "Cancel" buttons. Below this, the "Status" is indicated as "Ready". The main configuration area is divided into two sections: "Group Information" and "Directory Number Information".

In the "Group Information" section, the "Group ID*" field is highlighted with a green box and contains the value "2". Other fields include "Description" (Call Control Group 1), "Number Of CTI Ports*" (10), "Media Termination Support*" (Yes), and "Group Type*" (Inbound).

The "Directory Number Information" section includes fields for "Device Name Prefix*" (ipivr), "Starting Directory Number*" (22000), and a "List of CTI Ports" containing a range of numbers from ipivr_22000 to ipivr_22009. Other dropdown menus include "Device Pool" (Default), "DN Calling Search Space" (None), "Location" (Hub_None), and "Partition" (None). A "Show More..." button is located at the bottom right of this section.

The second window, titled "Network Trunk Group Explorer", is partially visible behind the first. It shows configuration for a "Network trunk group" with "Name" (IPIVR_NTG) and "Description". Below that, the "Trunk group" section has "Peripheral number:" highlighted with a green box, containing the value "2". Other fields include "Peripheral name:" (IPIVR_TG), "Name:" (IPIVR.IPIVR_TG), "Extension:", "Trunk count:" (Use Trunk Data), "Configuration parameters:", and "Description:".

Unified Deployment Model within Unified CCE

The image displays two overlapping windows from the Unified CCE interface. The background window is the 'Translation Route Explorer', and the foreground window is the 'Service Explorer'. Both windows show configuration details and hierarchical diagrams for network elements.

Translation Route Explorer (Background Window):

- Select filter data:** PG (Peripheral Group), VRU (Virtual Route Unit).
- Optional Filter:** None.
- Condition:** (Empty).
- Value (Case Sensitive):** (Empty).
- Buttons:** Save, Retrieve, Cancel filter changes.
- Hide legend:** (1) Translation route, (2) Route, (3) Peripheral target, (4) Label.
- Tree View:** IPIVR.Transroute (expanded) -> IPIVR.Transroute.RT -> DNIS:22100; NTG: IPIVR_NTG 22100.CUCM_RC -> DNIS:22101; NTG: IPIVR_NTG 22101.CUCM_RC -> UNASSIGNED.
- Form Fields:** Name: * IPIVR.Transroute, Description: (Empty), Type: * DNIS, Service name: * IPIVR.Transroute, Peripheral Target DNIS: * 22101, Network trunk group: * IPIVR_NTG, Label Routing client: * CUCM_RC, Label: * 22101, Label type: * Normal, Customer: * NONE, Description: (Empty).

Service Explorer (Foreground Window):

- Select filter data:** Peripheral (Peripheral Group), IPIVR (Virtual Route Unit).
- Optional Filter:** None.
- Condition:** (Empty).
- Value (Case Sensitive):** (Empty).
- Buttons:** Save, Retrieve, Cancel filter changes.
- Hide legend:** (1) Service, (2) Route, (3) Peripheral target, (4) Label.
- Tree View:** IPIVR.TransRoute.Service (expanded) -> IPIVR.TransRoute.Service.RT -> UNASSIGNED.
- Form Fields:** Media routing domain: All, Peripheral number: * 0, Peripheral name: * TransRoute.Service, Name: * IPIVR.TransRoute.Service, Service level type: * Default, Service level threshold: * 0, Name: * IPIVR.TransRoute.Service.RT, Description: (Empty).

Router (Background): A large grey shape representing a network router with the word 'Router' written on it.

IVR (Bottom Left): The letters 'IVR' in a large, light blue font.

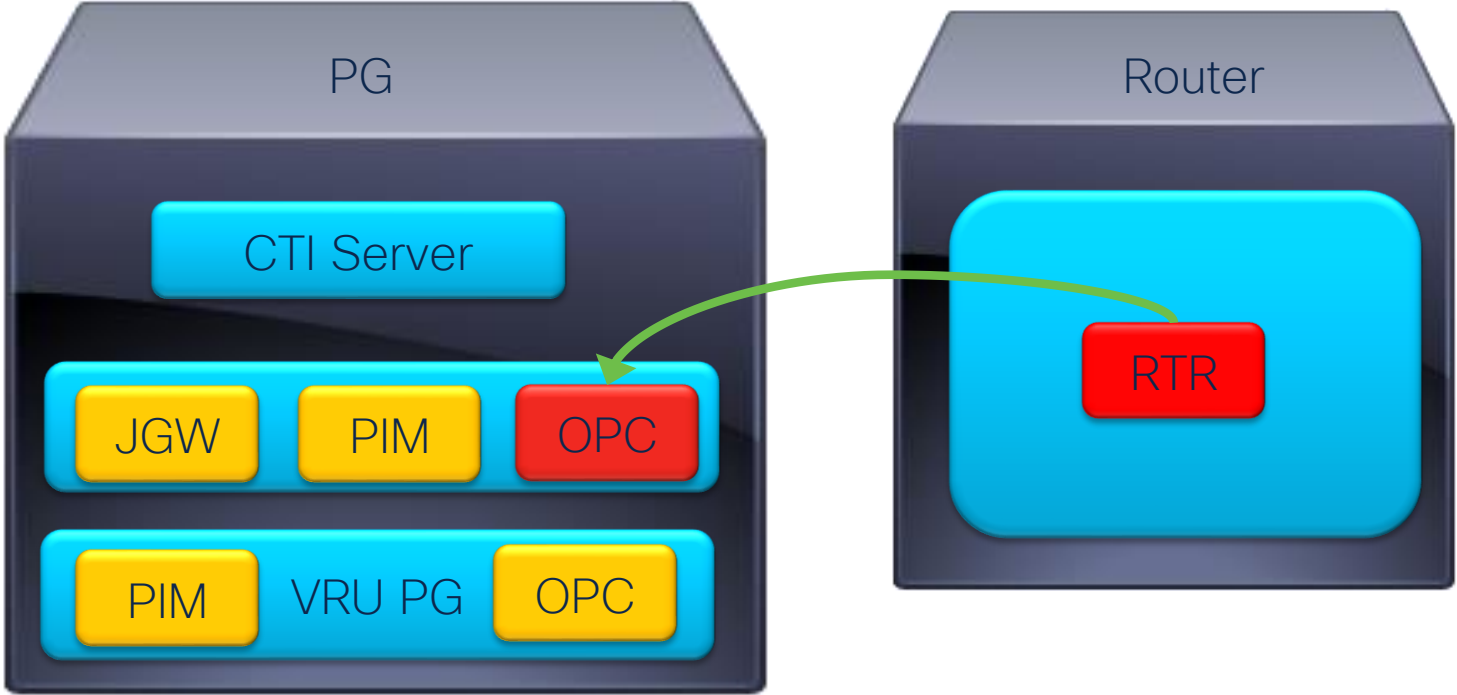
Unified Deployment Model within Unified CCE



CUCM



IVR



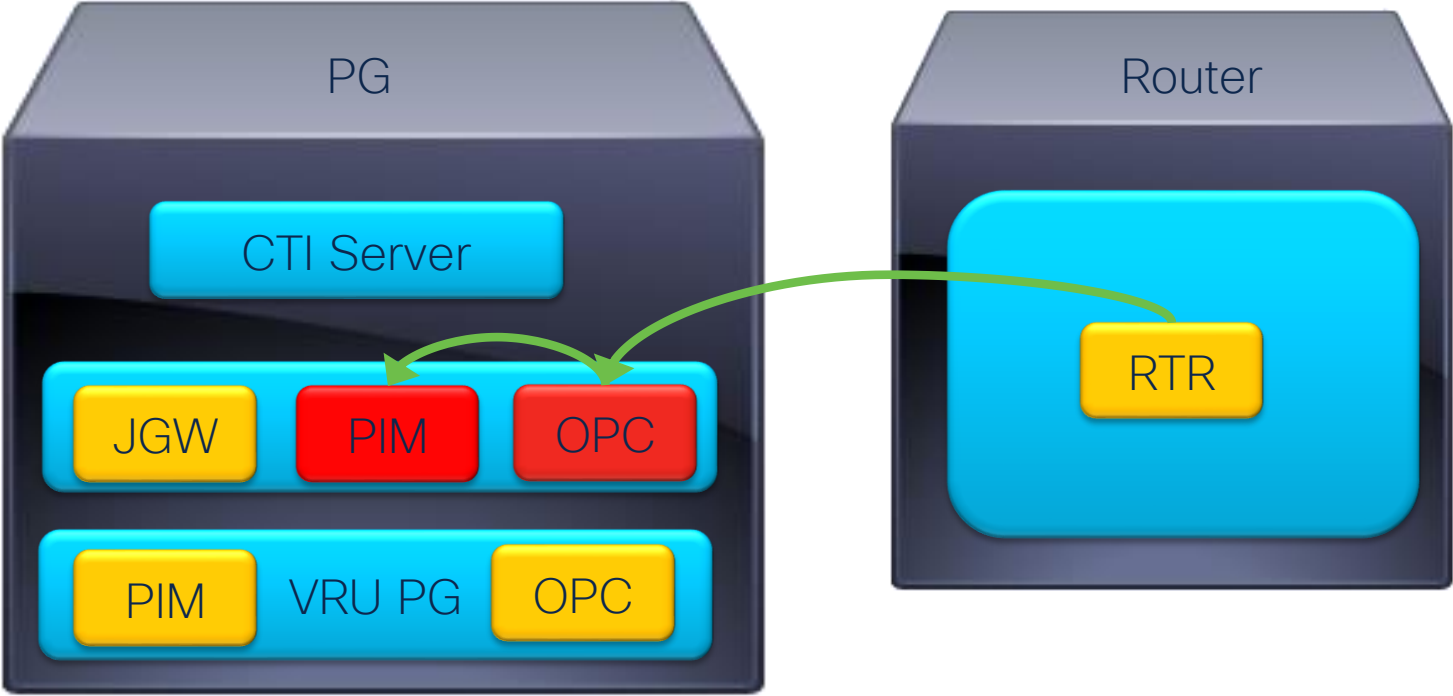
Unified Deployment Model within Unified CCE



CUCM



IVR



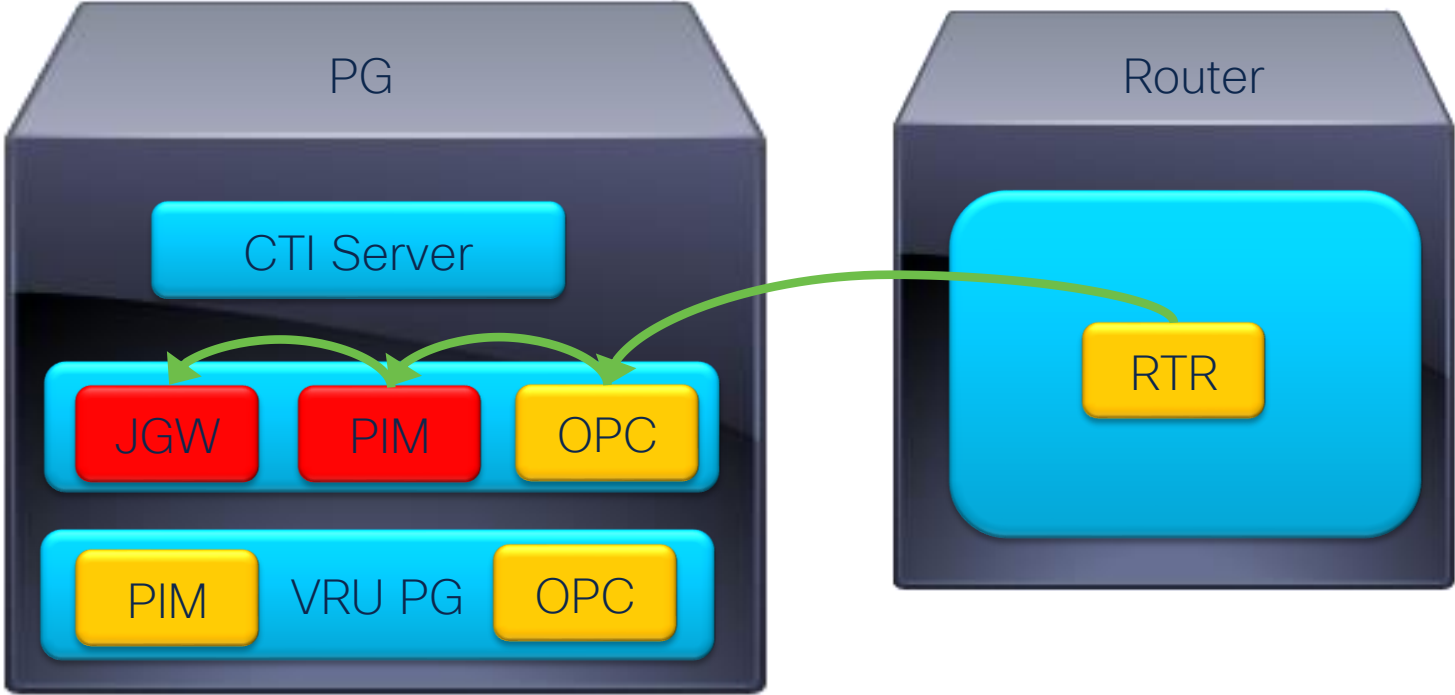
Unified Deployment Model within Unified CCE



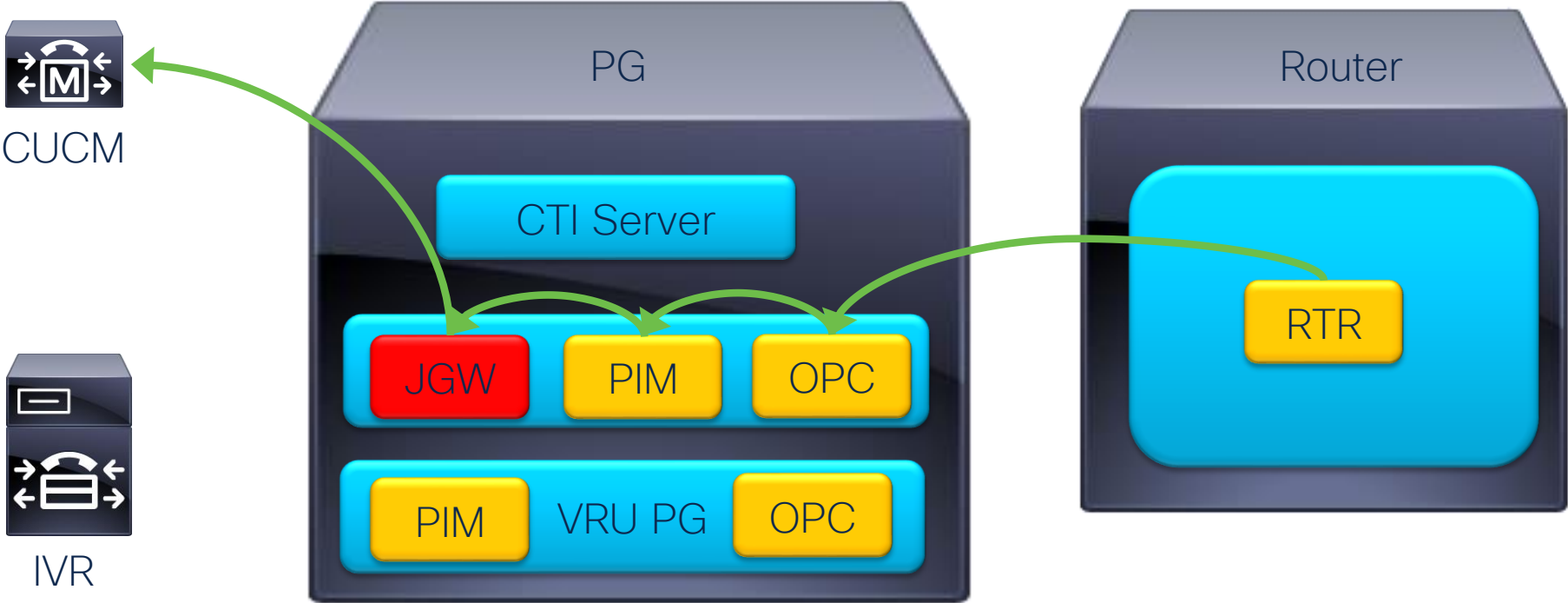
CUCM



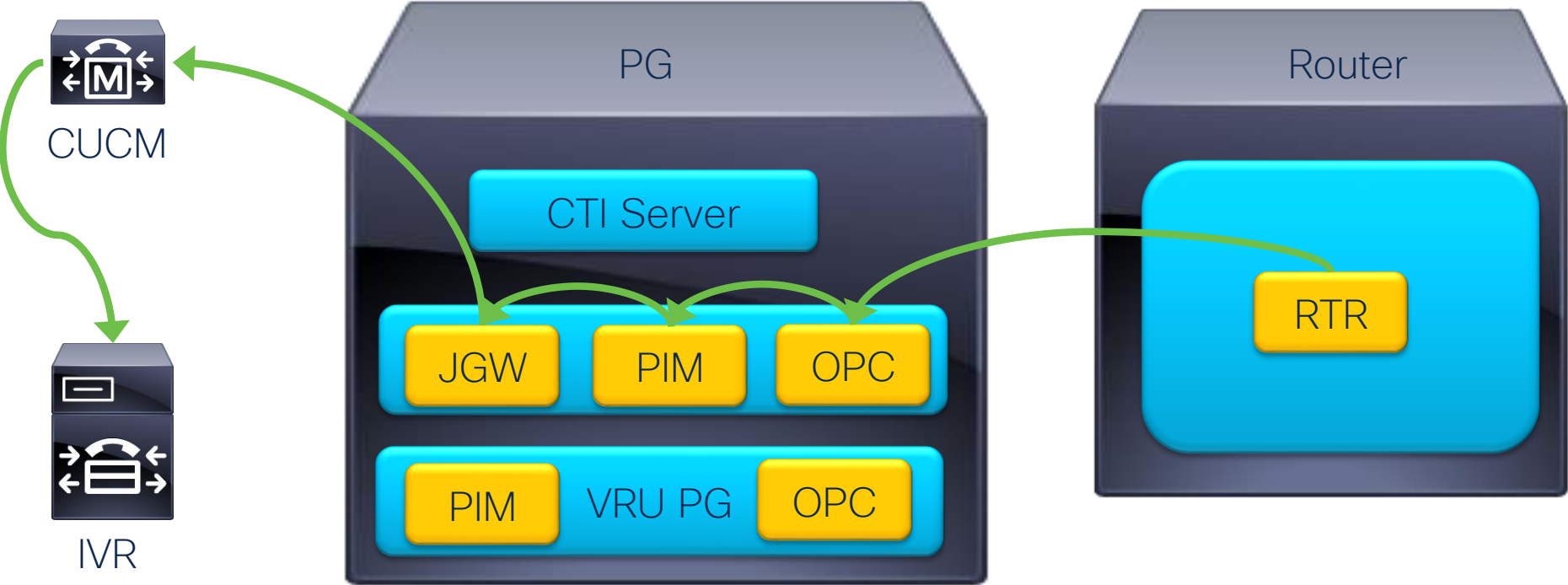
IVR



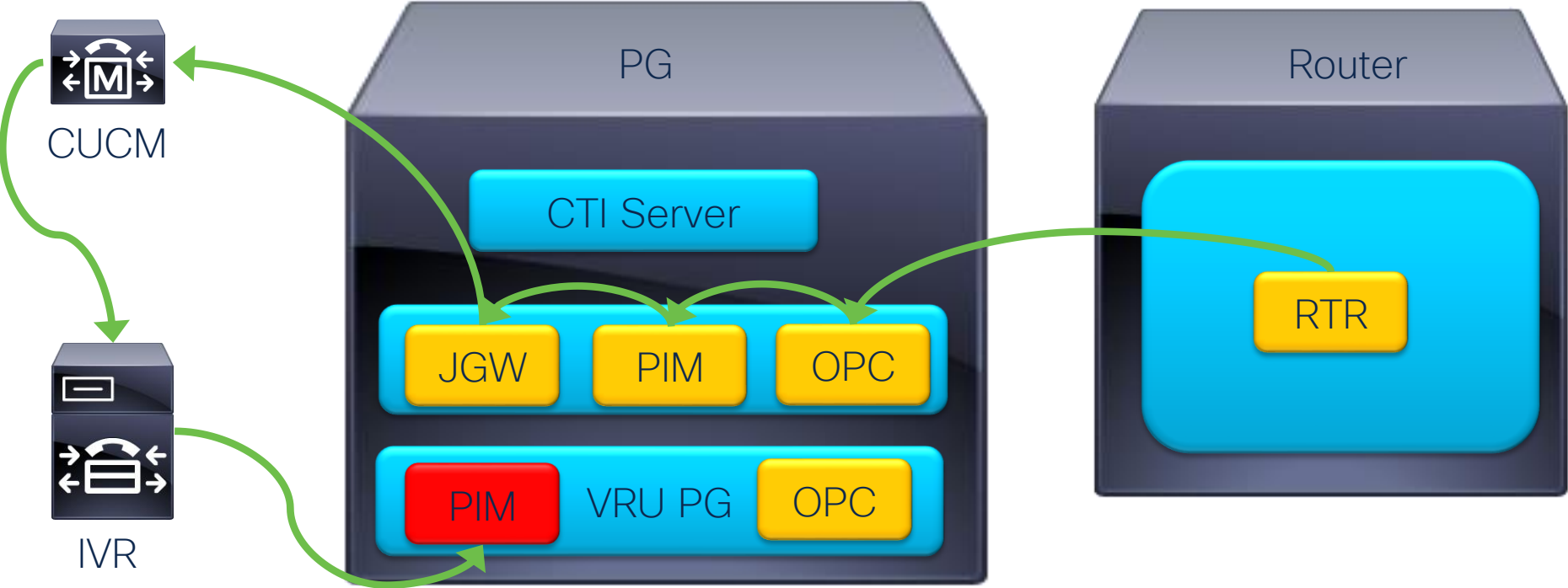
Unified Deployment Model within Unified CCE



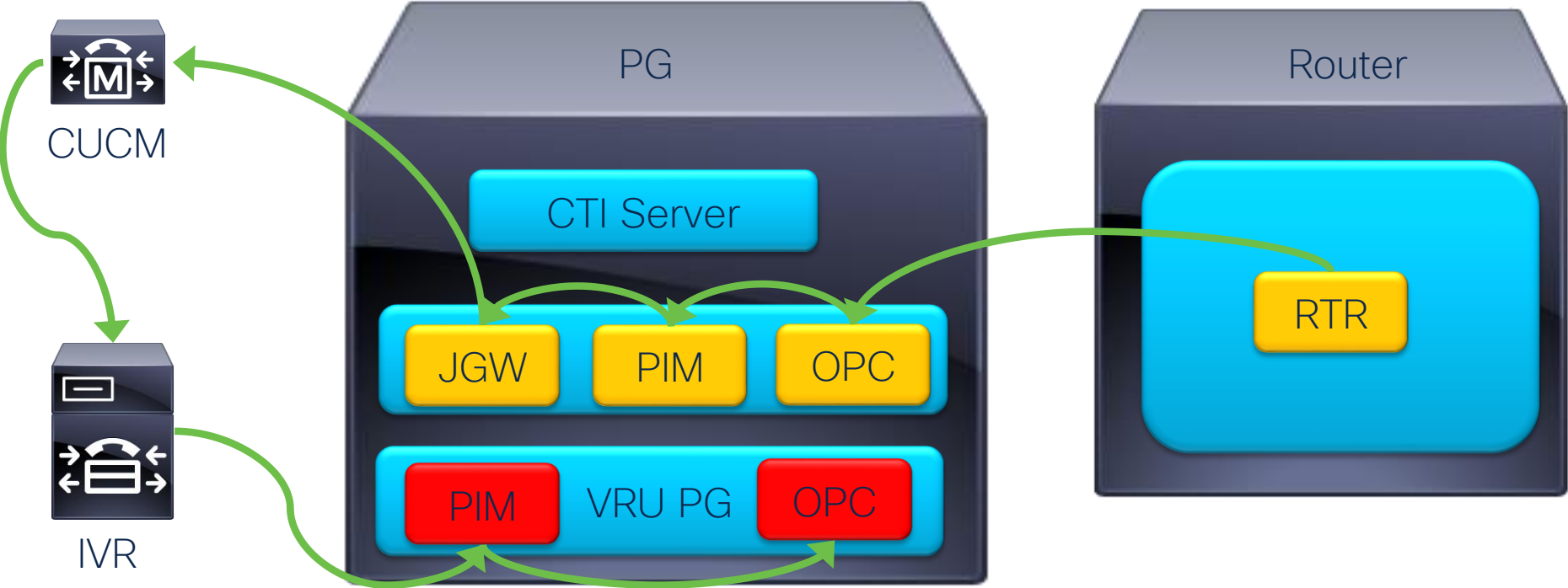
Unified Deployment Model within Unified CCE



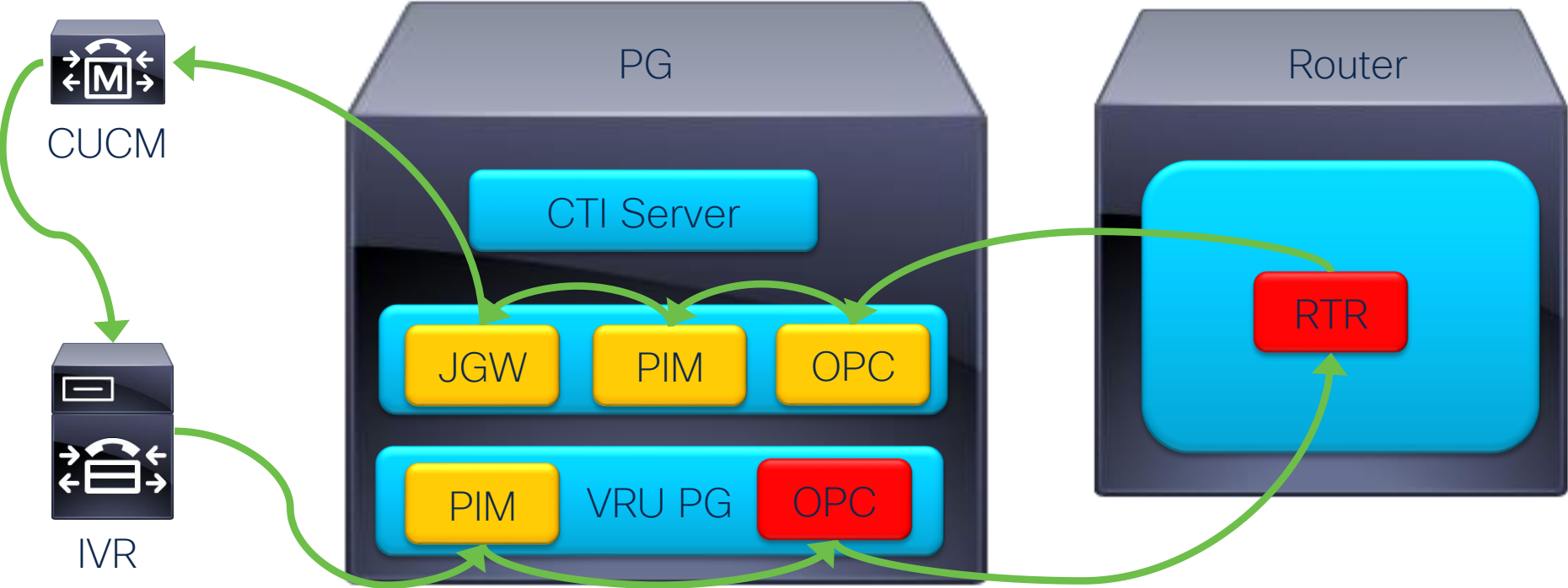
Unified Deployment Model within Unified CCE



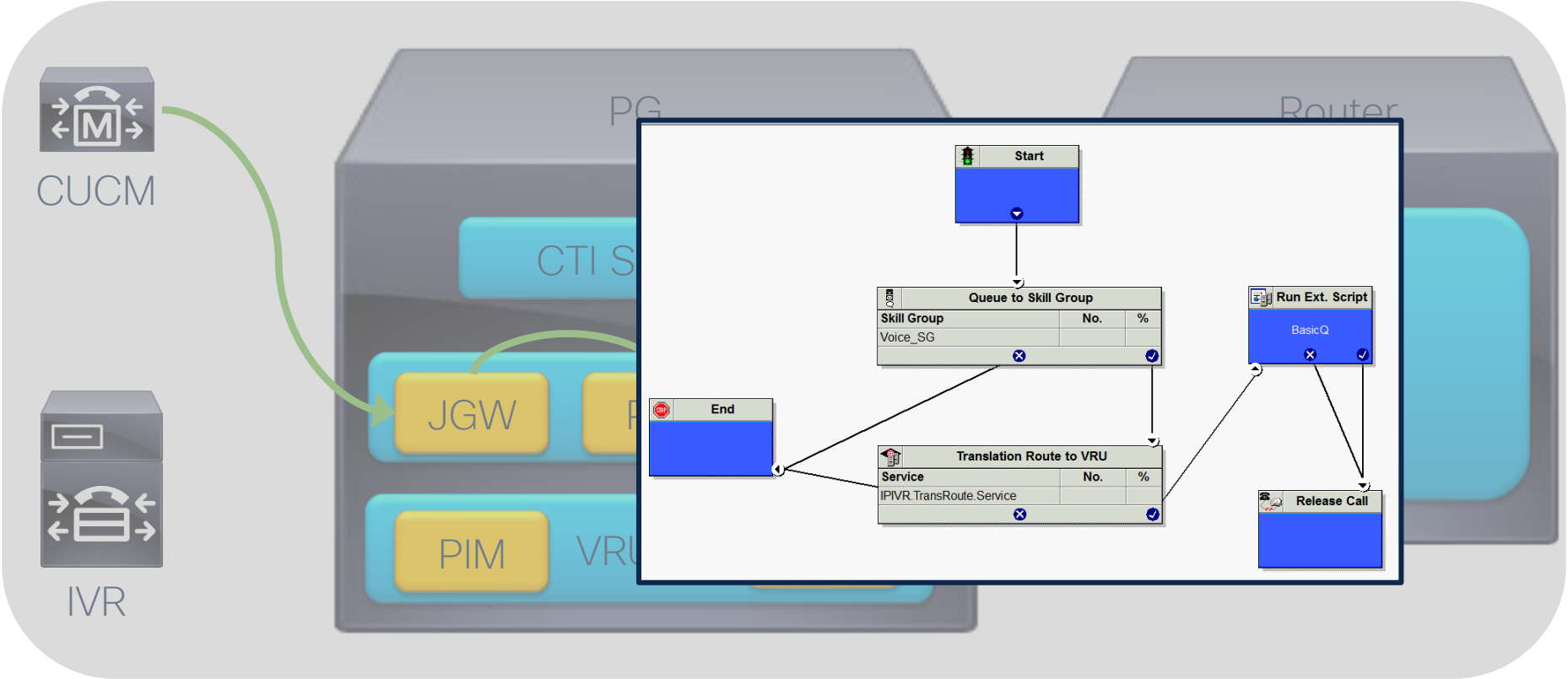
Unified Deployment Model within Unified CCE



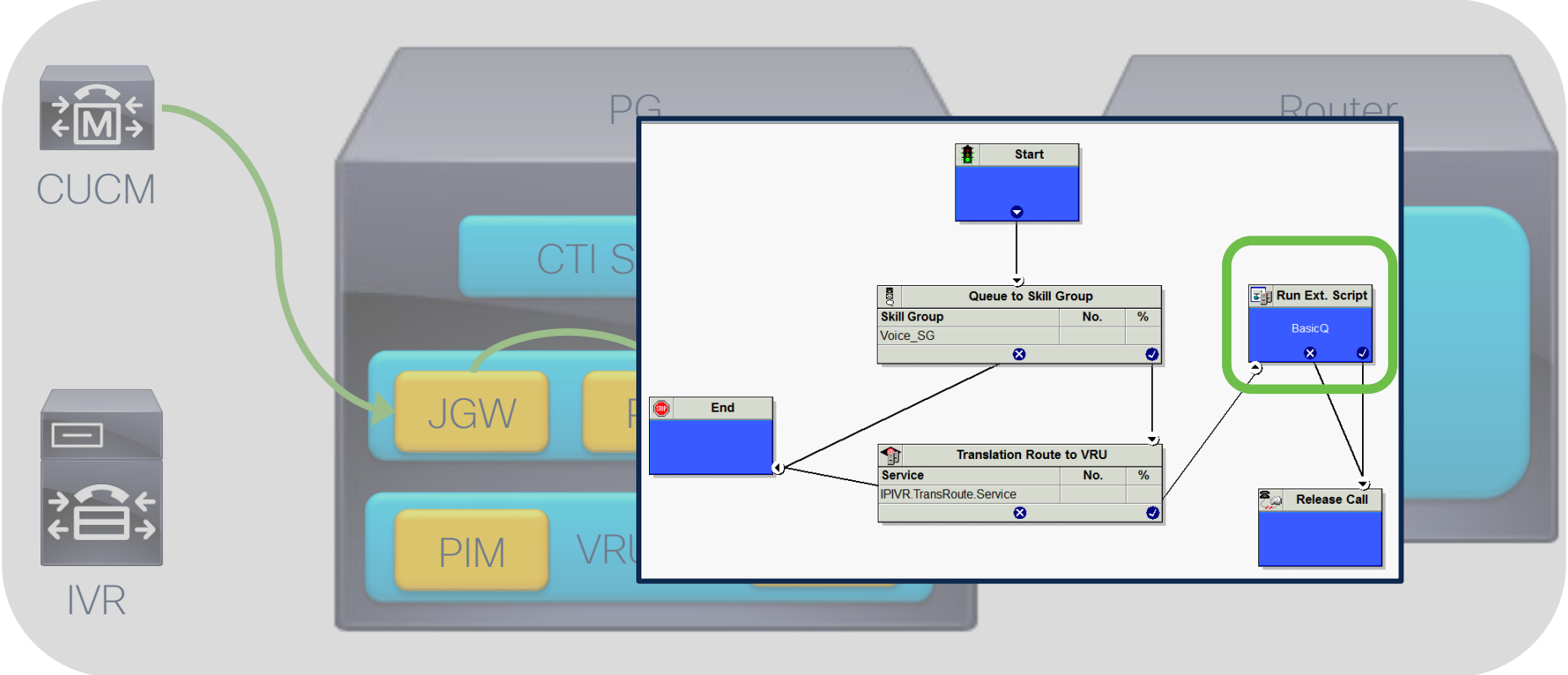
Unified Deployment Model within Unified CCE



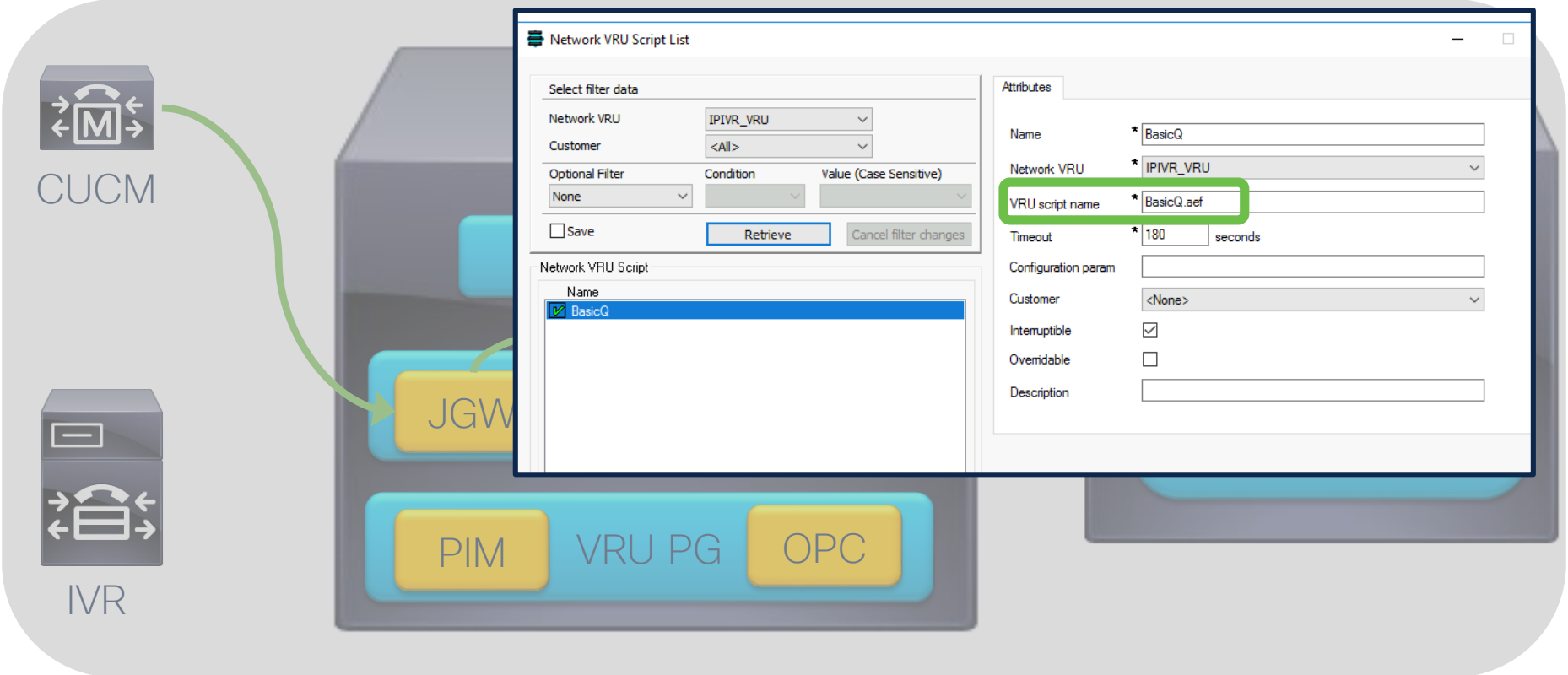
Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE

The screenshot displays the Unified CCE interface for configuring VRU scripts. A modal window titled "ICM VRU Scripts" is open, showing the following details:

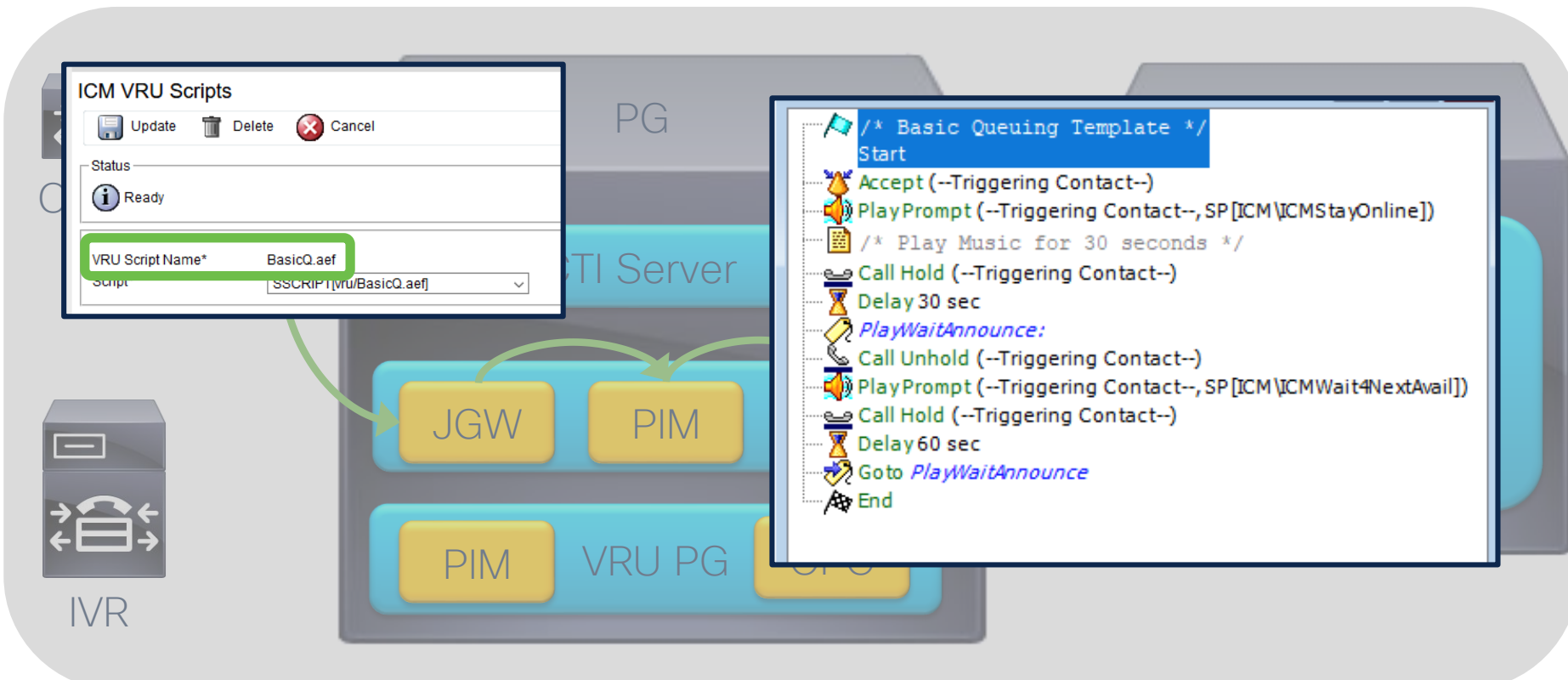
- Actions:** Update, Delete, Cancel
- Status:** Ready
- VRU Script Name*:** BasicQ.aef
- Script*:** SSCRIPT[vru/BasicQ.aef]

The background interface includes the "Network VRU Script List" and "Attributes" panels. The "Attributes" panel shows the following configuration:

- Name:** BasicQ
- Network VRU:** IPIVR_VRU
- VRU script name:** BasicQ.aef
- Timeout:** 180 seconds
- Configuration param:** (empty)
- Customer:** <None>
- Interruptible:**
- Overridable:**
- Description:** (empty)

At the bottom of the interface, there are navigation buttons for PIM, VRU PG, and OPC, and an IVR icon.

Unified Deployment Model within Unified CCE



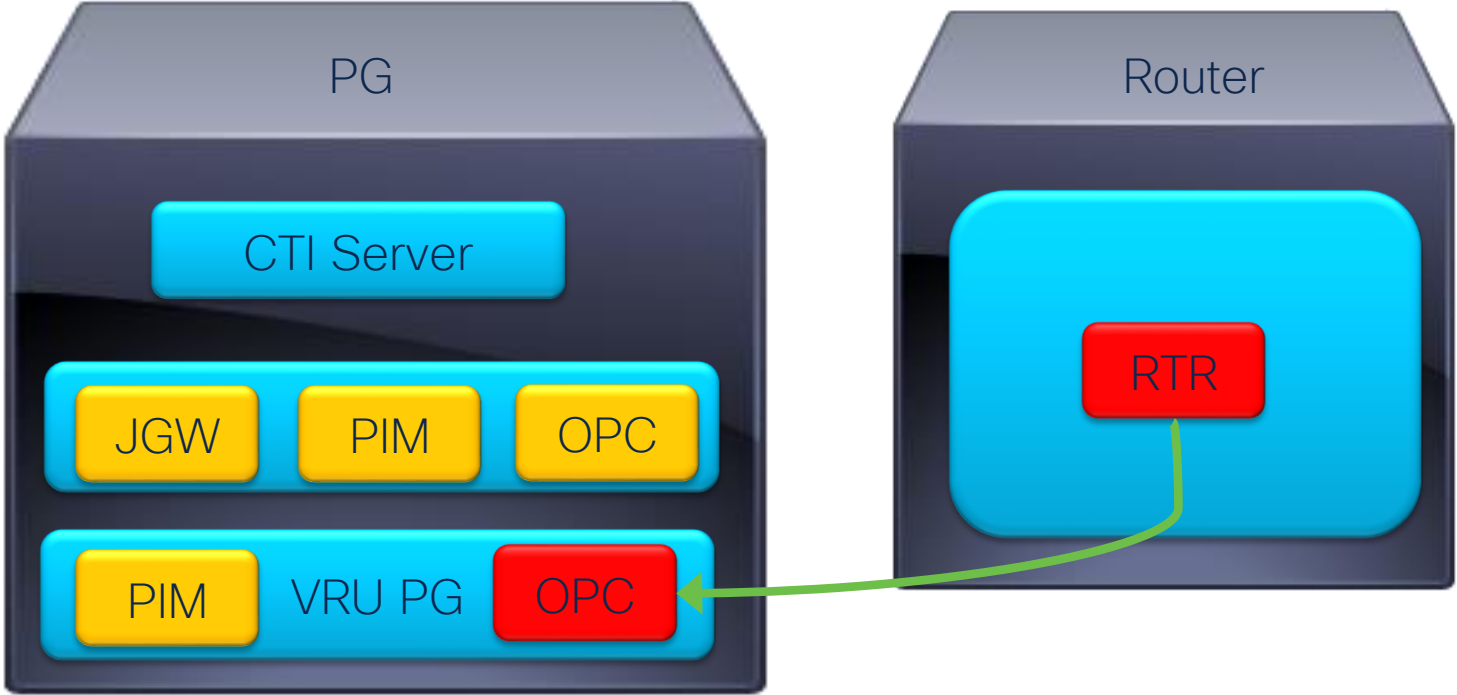
Unified Deployment Model within Unified CCE



CUCM



IVR



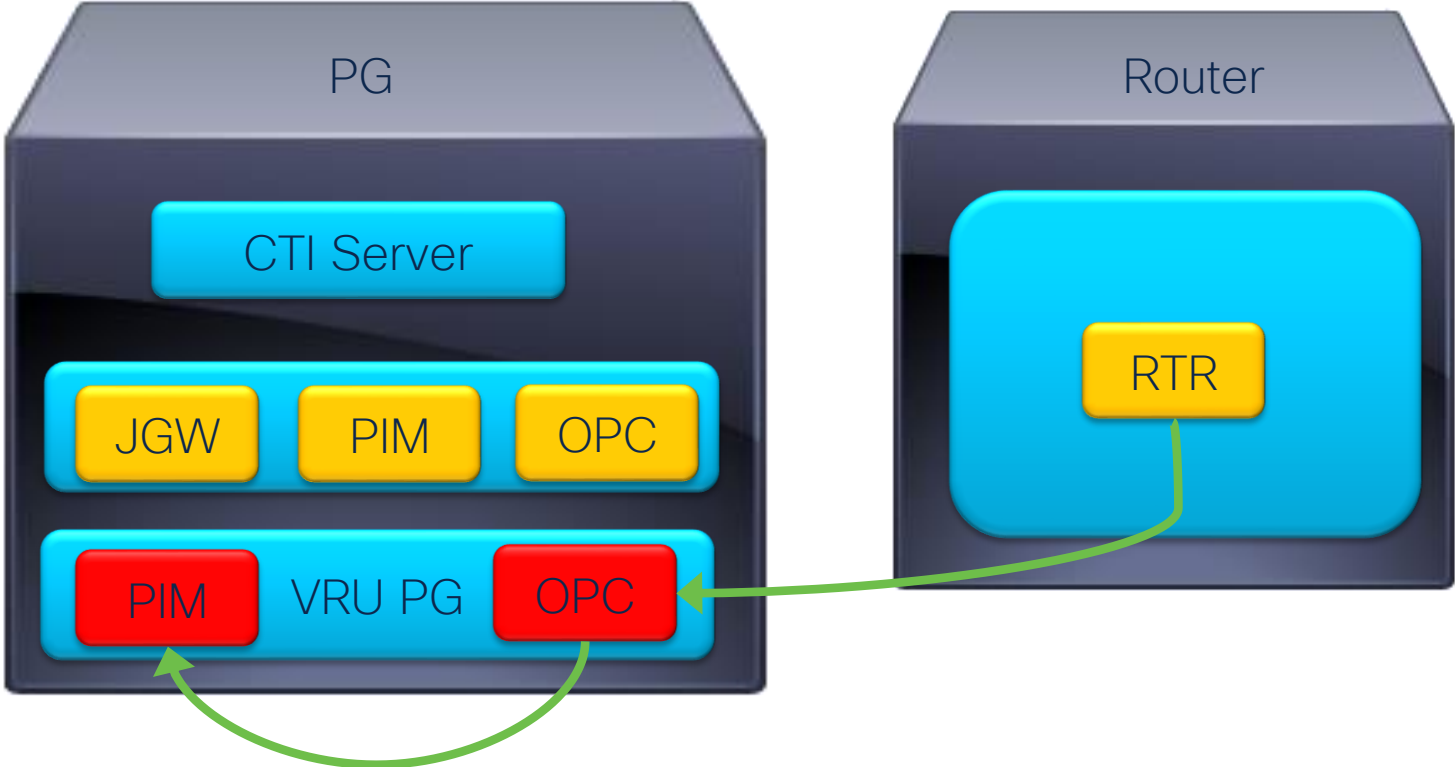
Unified Deployment Model within Unified CCE



CUCM



IVR



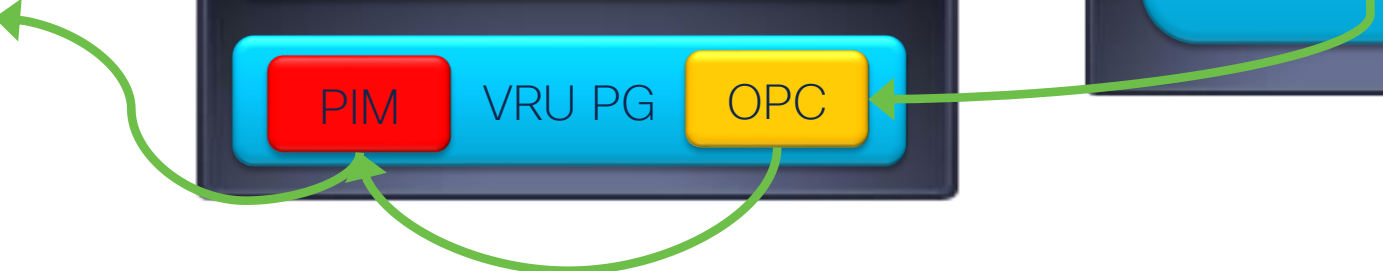
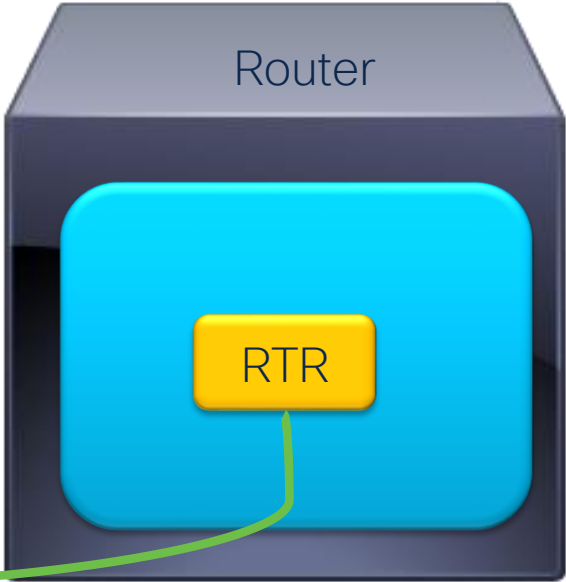
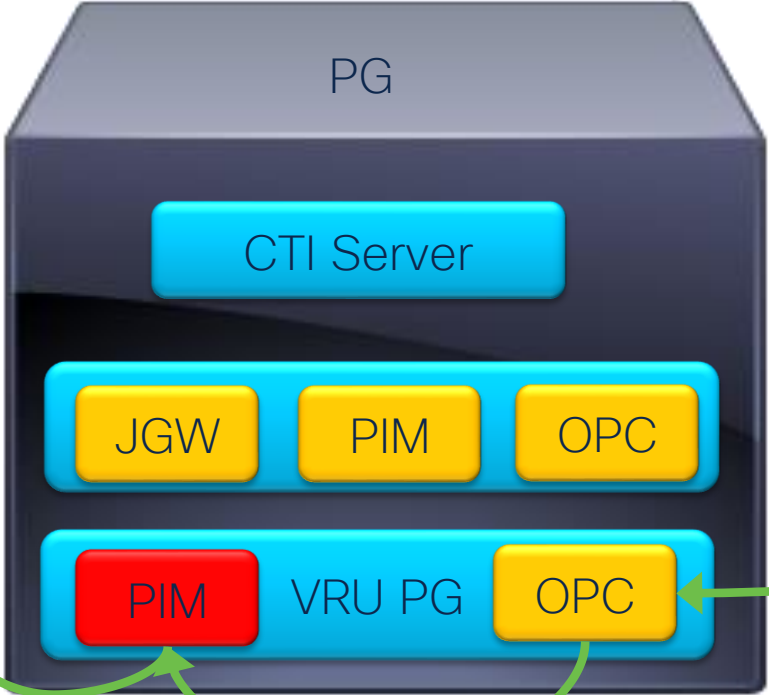
Unified Deployment Model within Unified CCE



CUCM



IVR



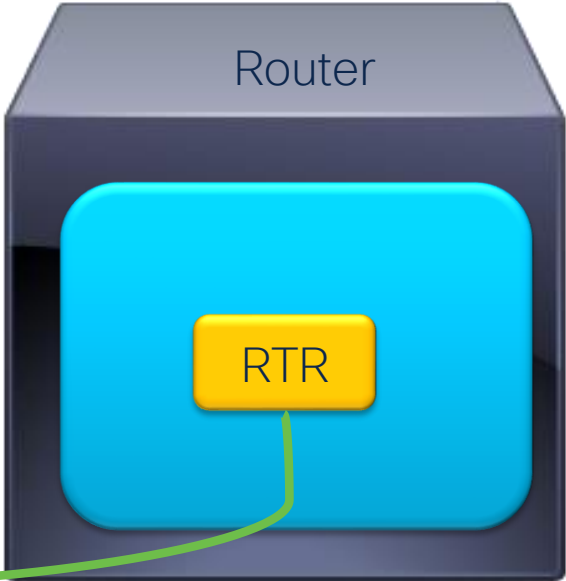
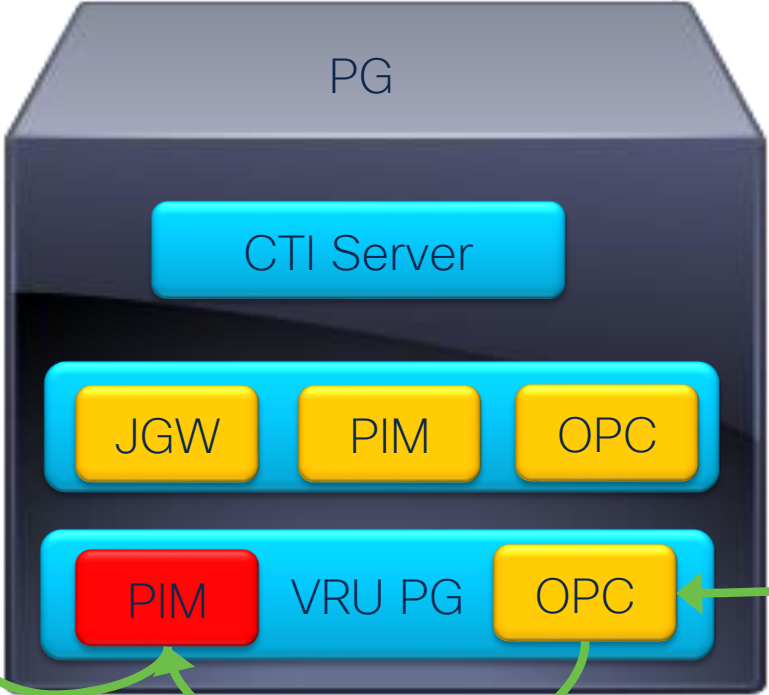
Unified Deployment Model within Unified CCE



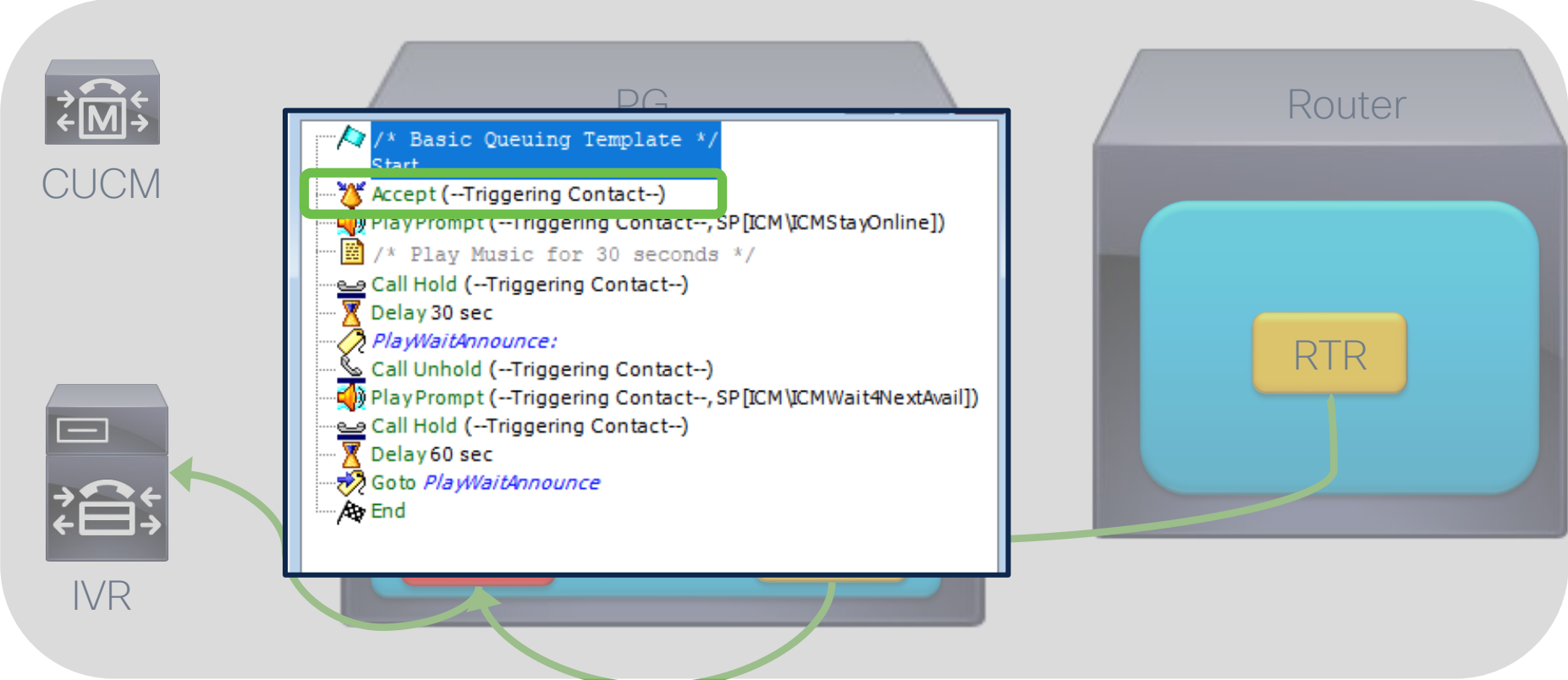
CUCM



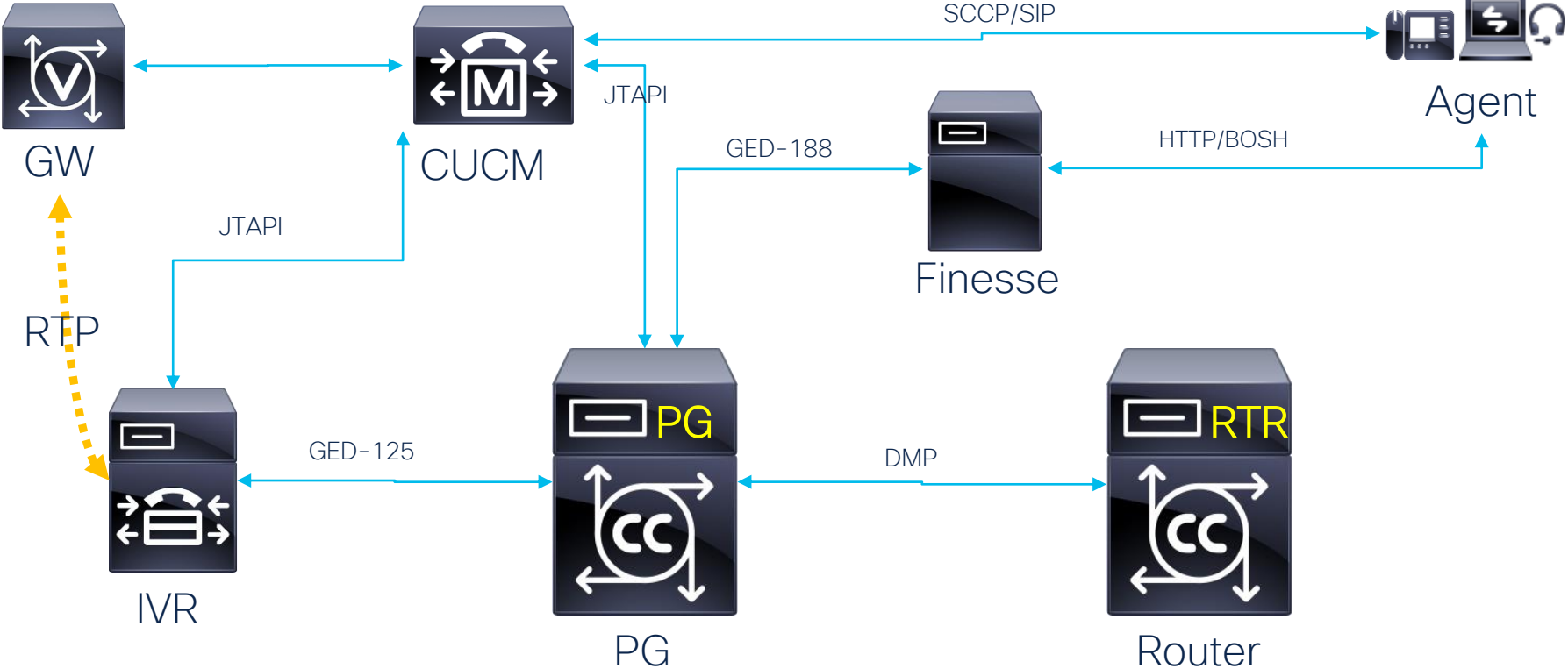
IVR



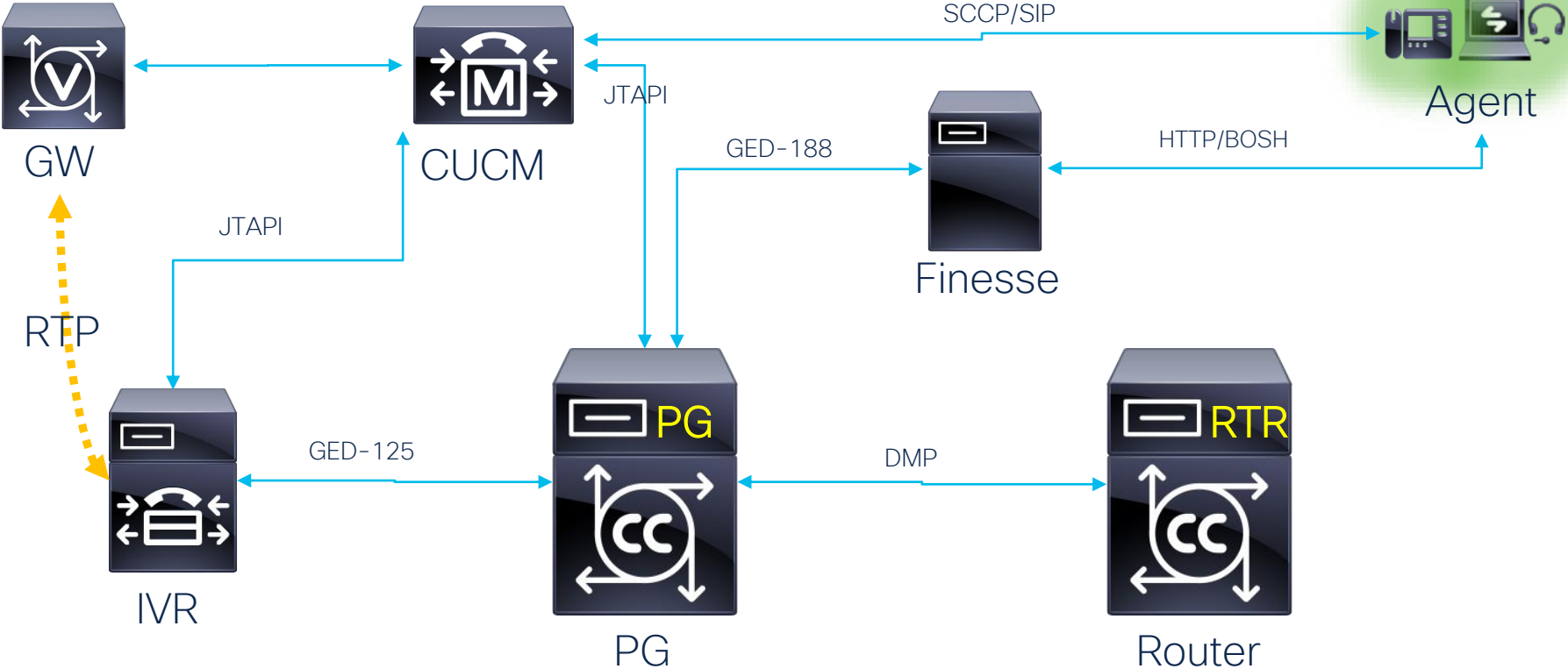
Unified Deployment Model within Unified CCE



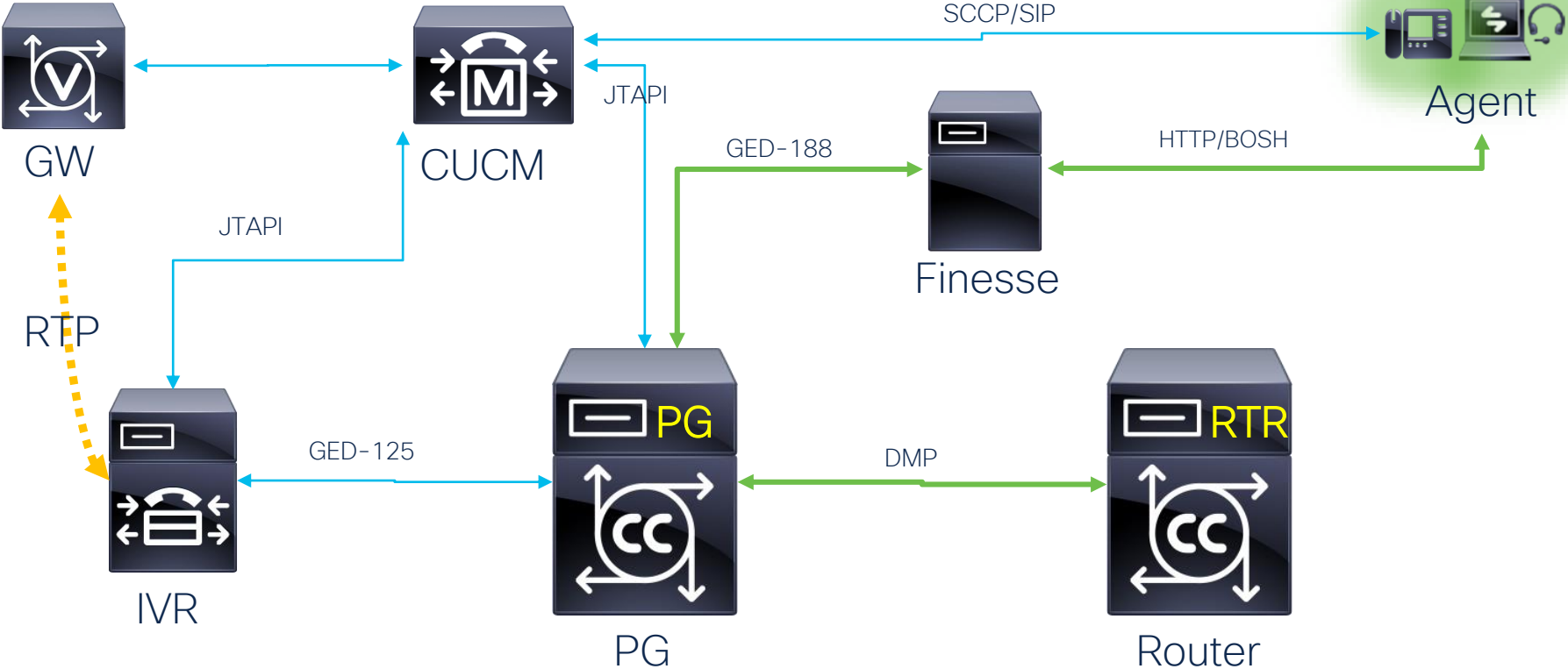
Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



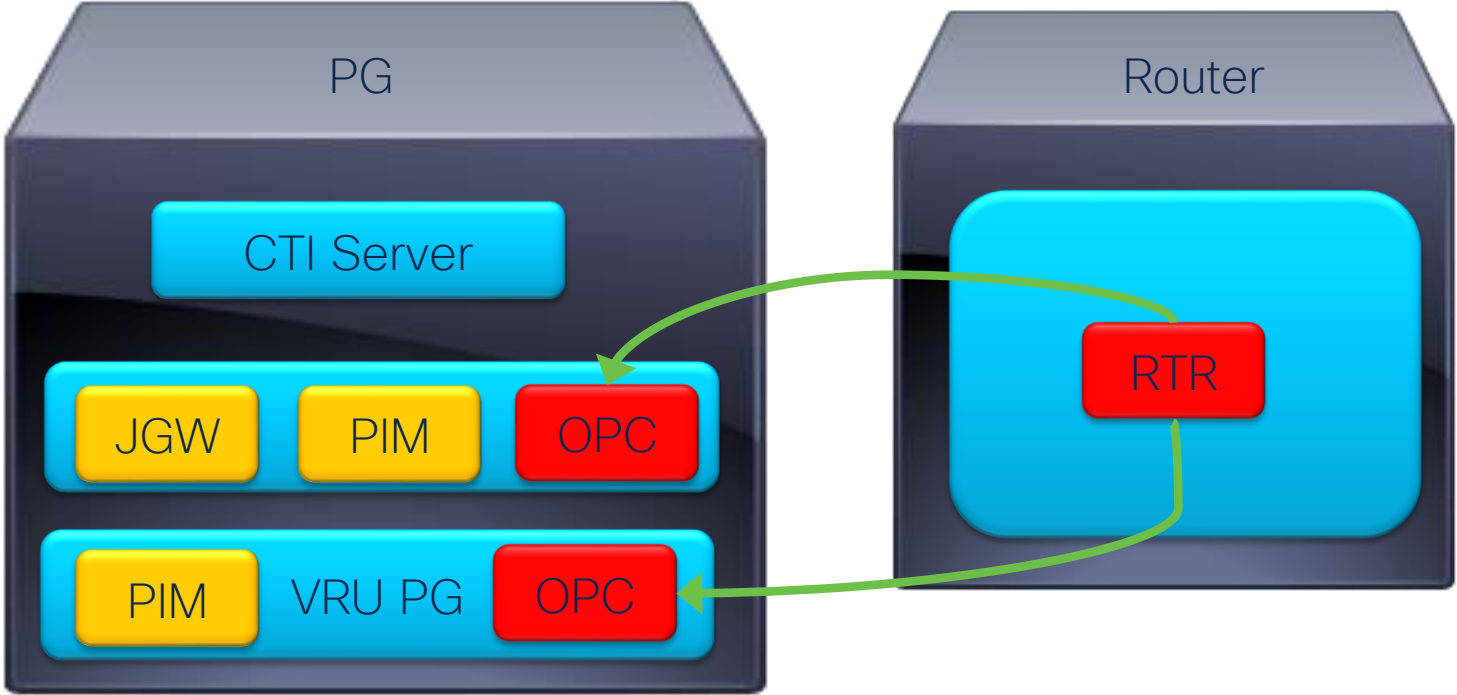
Unified Deployment Model within Unified CCE



CUCM



IVR



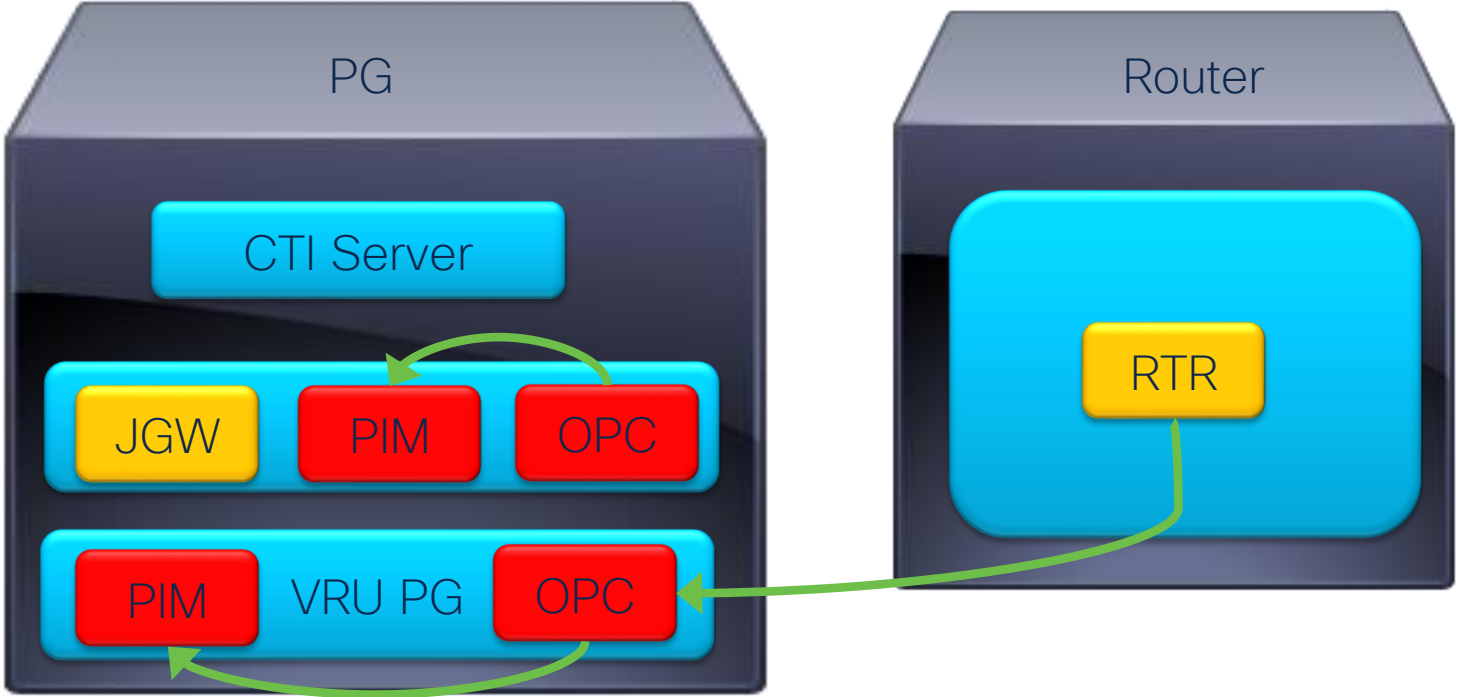
Unified Deployment Model within Unified CCE



CUCM



IVR



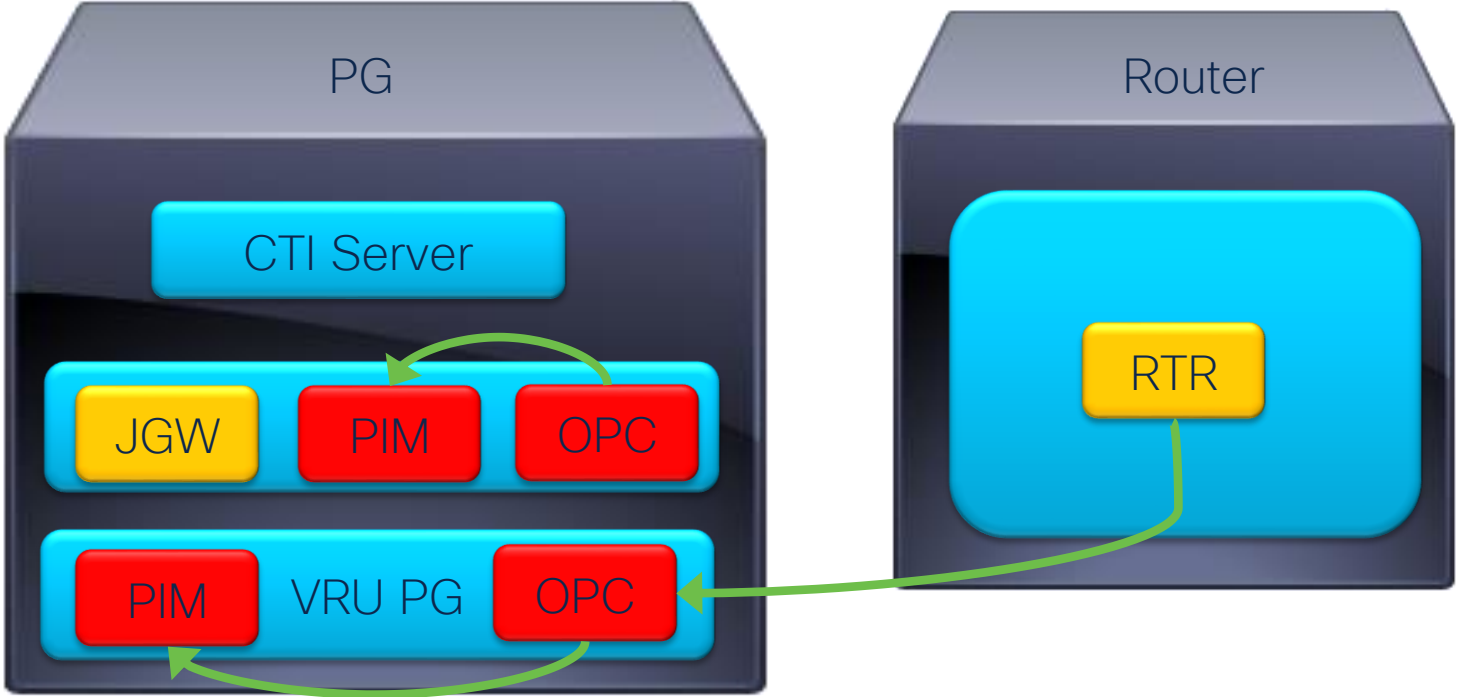
Unified Deployment Model within Unified CCE



CUCM



IVR



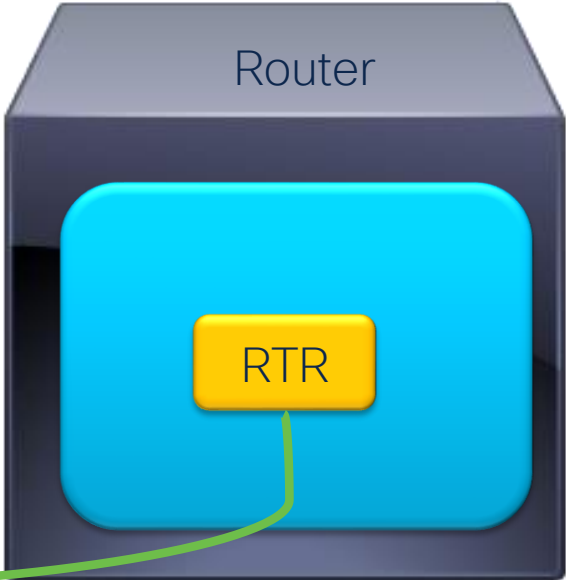
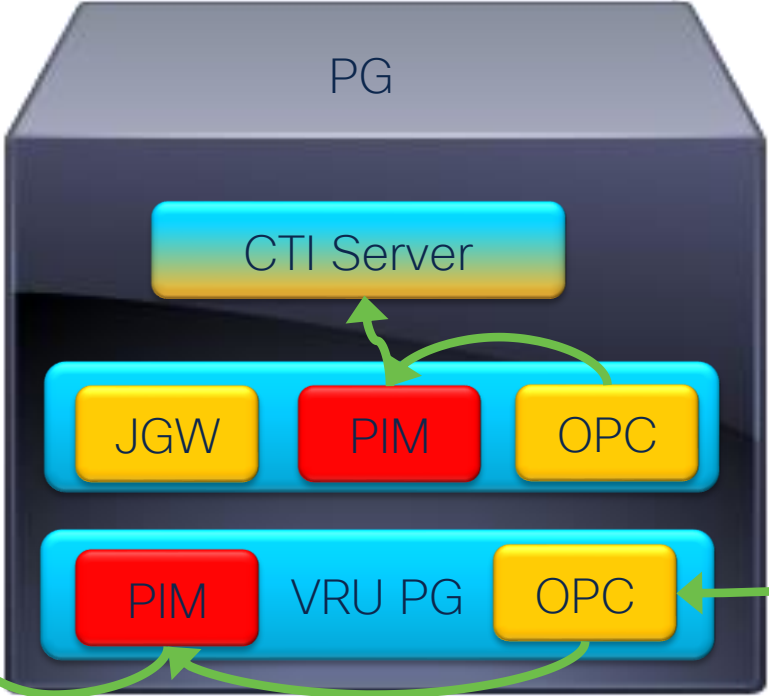
Unified Deployment Model within Unified CCE



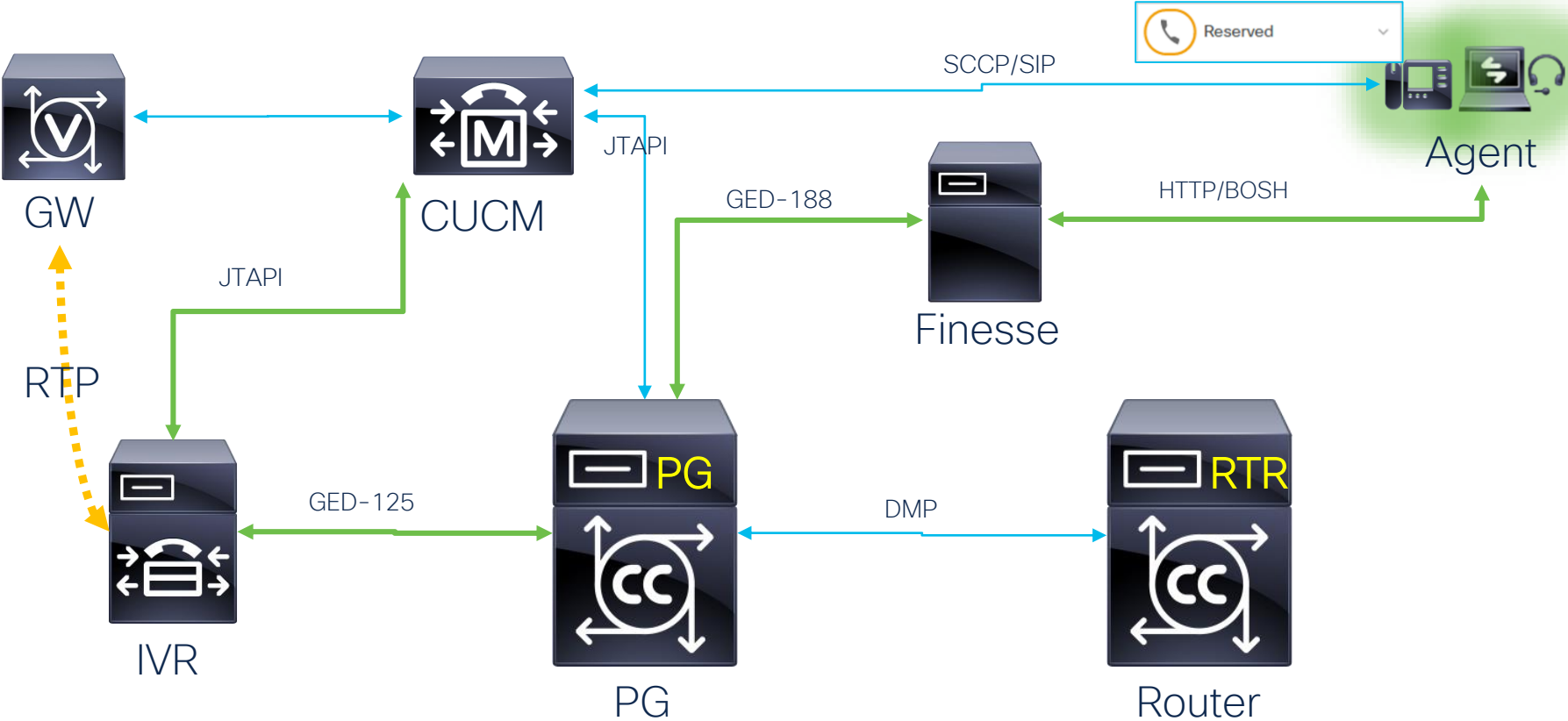
CUCM



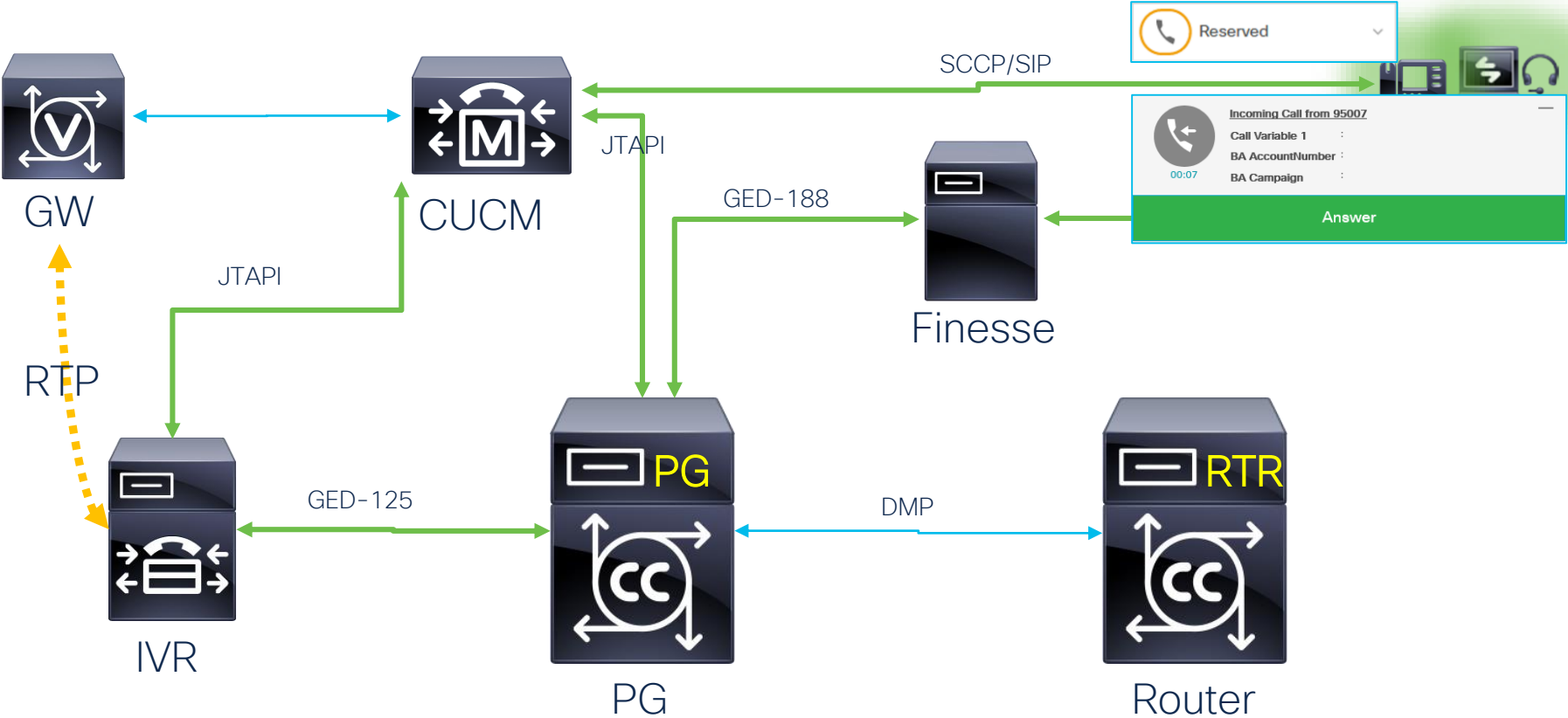
IVR



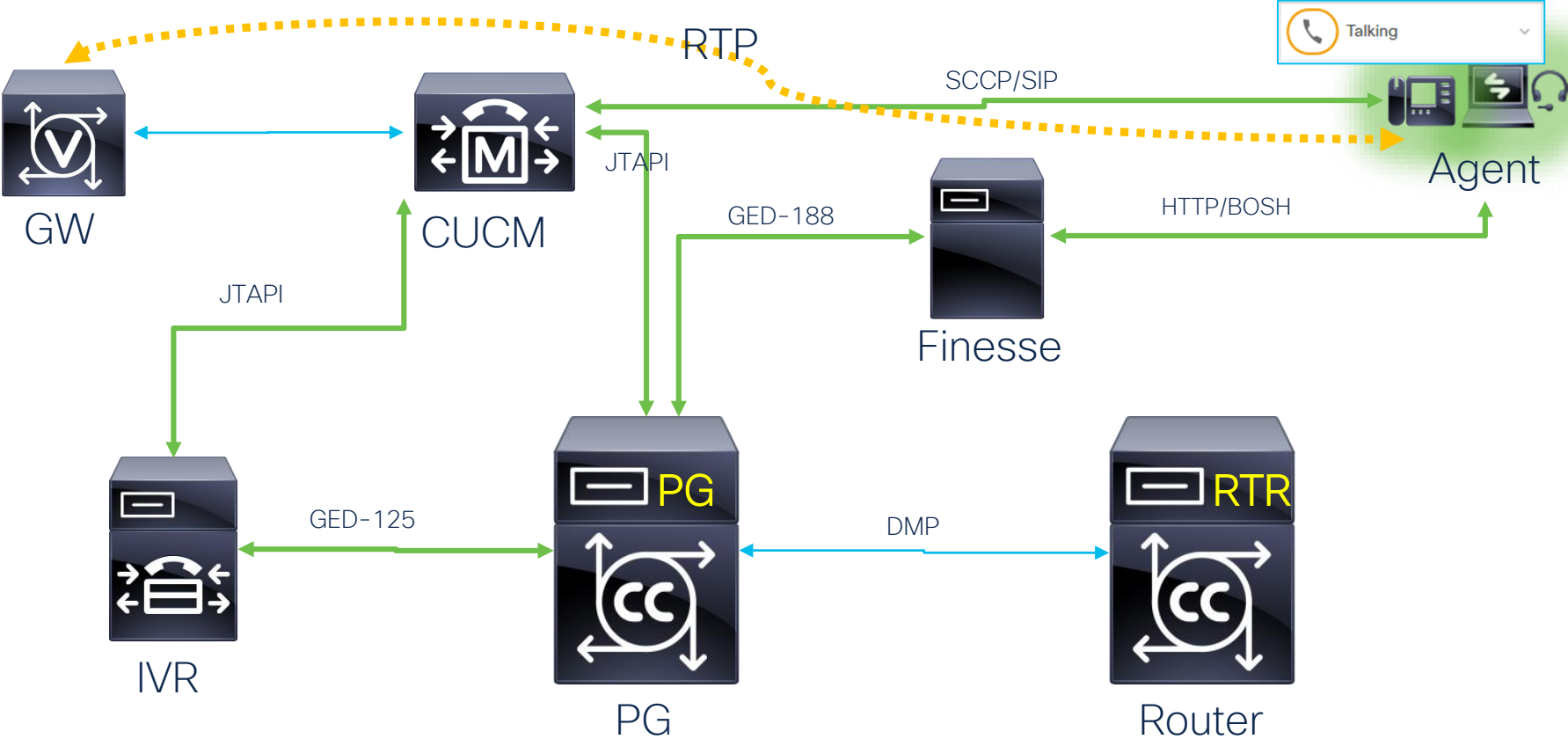
Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Unified Deployment Model within Unified CCE



Polling Question 3

How ICM knows, which Routing Script to run?

- A. Call hits specific DN that is associated with Routing Script
- B. Call hits DN, that is associated with Call Type and Call Type is associated with the Routing Script
- C. There is only one Routing Script in the system to run
- D. Random select of the Routing Scripts

Standalone Deployment Model

System requirements



Gateway/CUBE



Unified CM Server



Unified IP-IVR

Call flow

The caller dials the desired phone number



Call flow



Call flow



CM Server

Unified IP-IVR receives the contact signal at the phone number trigger point.



Trigger	
Unified CM Telephony	
Trigger: 22105	
Add new trigger	

Basic Configuration	
Name	StandaloneAA
ID*	<input type="text" value="1"/>
Maximum Number of Sessions*	<input type="text" value="10"/>
Script*	<input type="text" value="SSCRIPT[aa.aef]"/> <input type="button" value="Edit"/>
<input type="checkbox"/> welcomePrompt	<input type="text" value="AAAAWelcor"/> <input type="button" value="Select Prompt"/>
<input type="checkbox"/> MaxRetry	<input type="text" value="3"/>
<input type="checkbox"/> operExtn	<input type="text" value=""/>
Description	<input type="text" value="StandaloneAA"/>
Enabled	<input checked="" type="radio"/> Yes <input type="radio"/> No
Default Script	<input type="text" value="- System Default -"/> <input type="button" value="Edit"/>



IP-IVR

Call flow

Unified IP-IVR receives the contact signal at the phone number trigger point.



CM Server

Trigger	
Unified CM Telephony	
Trigger: 22105	
Add new trigger	

Basic Configuration	
Name	StandaloneAA
ID*	1
Maximum Number of Sessions*	10
Script*	SSCRIPT[aa.aef] Edit
<input type="checkbox"/> welcomePrompt	AAAAWelcor Select Prompt
<input type="checkbox"/> MaxRetry	3
<input type="checkbox"/> operExtn	
Description	StandaloneAA
Enabled	<input checked="" type="radio"/> Yes <input type="radio"/> No
Default Script	- System Default - Edit

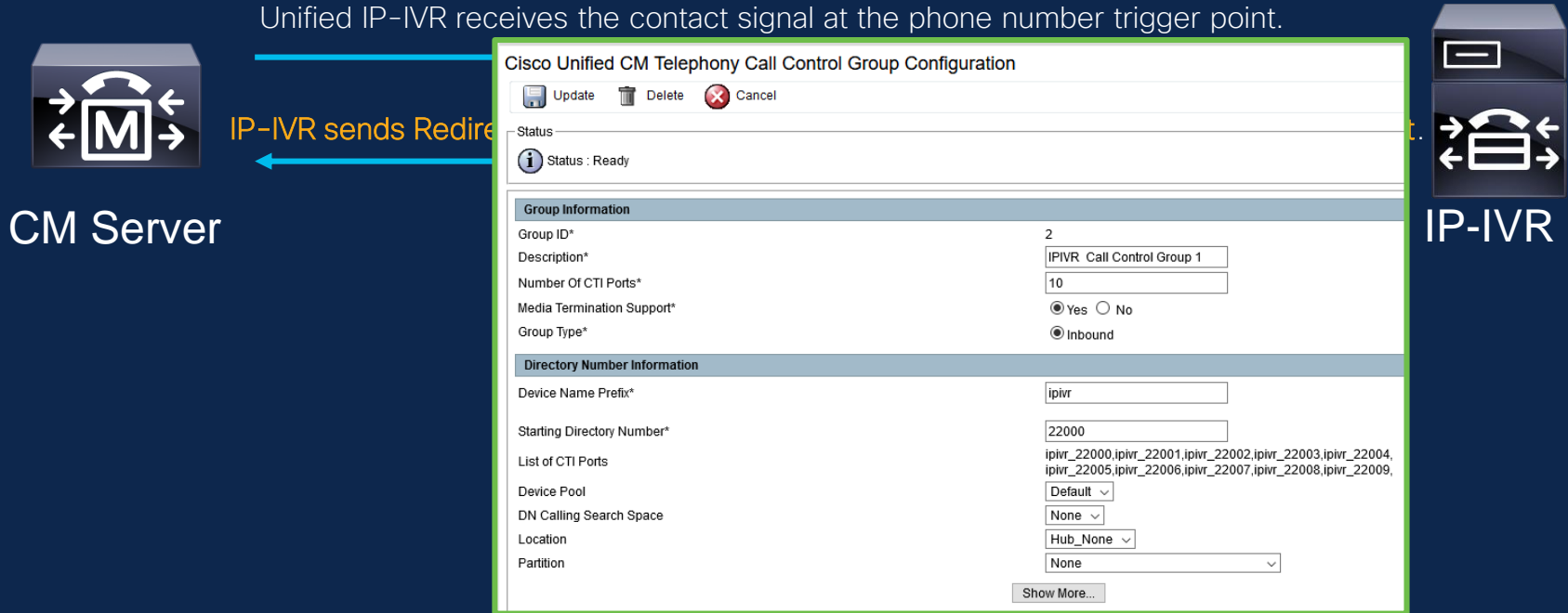


IP-IVR

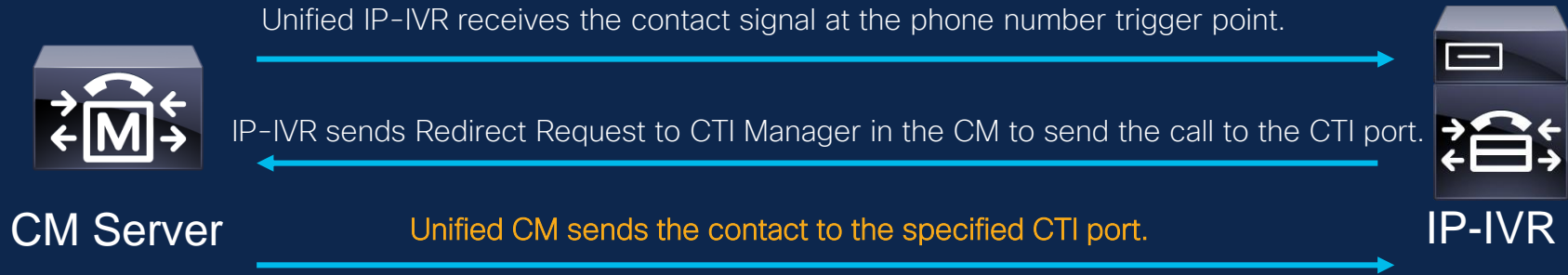
Call flow



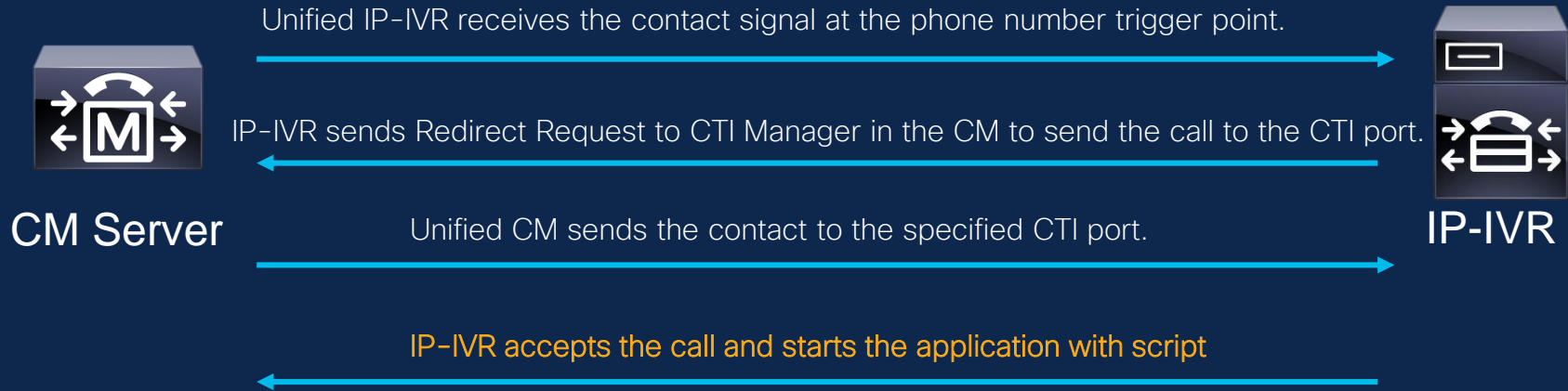
Call flow



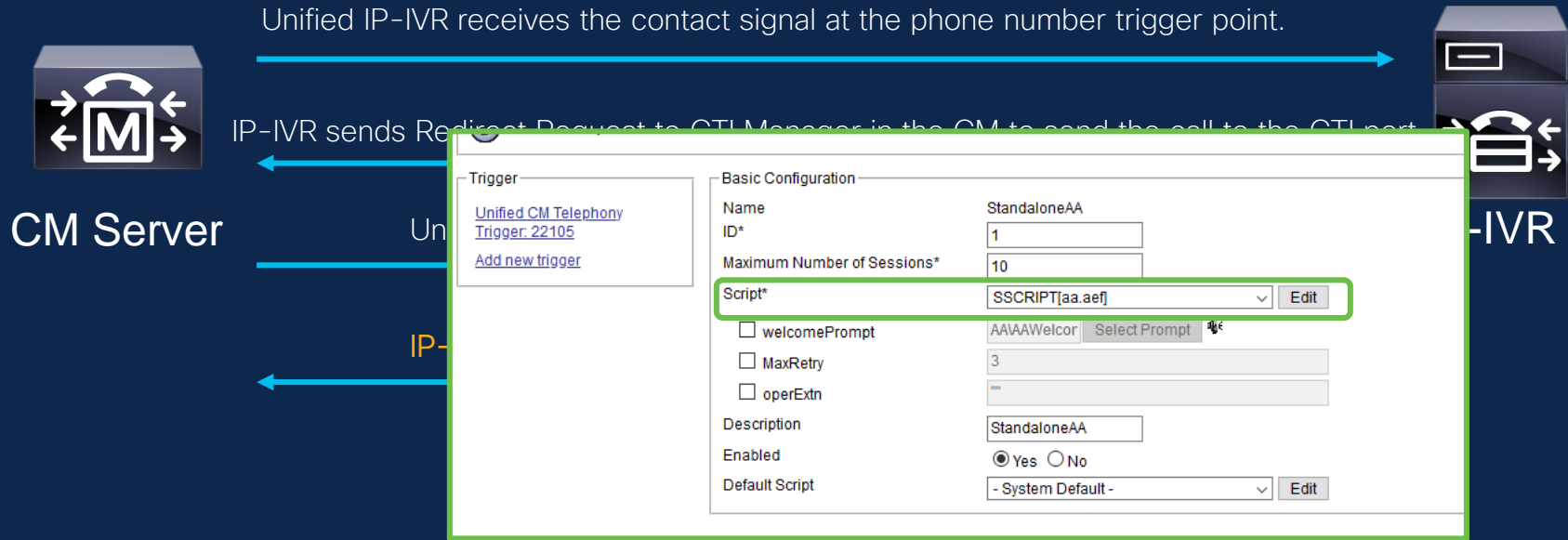
Call flow



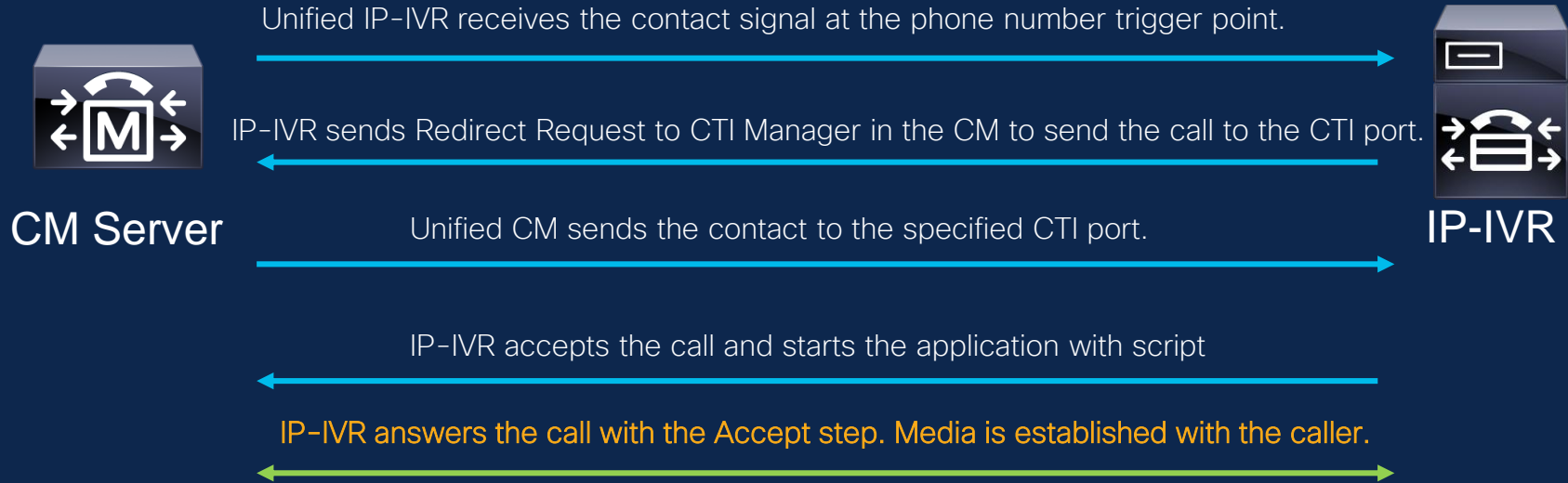
Call flow



Call flow



Call flow



```
Start
Accept (--Triggering Contact--)
Play Prompt (--Triggering Contact--, SP [ICM\ICMstayOnline])
```

IP-IVR Configuration Checklist

1. Configure the JTAPI subsystem on IP-IVR.
2. Provision a JTAPI Call Control Group.
3. Check to make sure the JTAPI information in Unified IP-IVR and Unified CM is synchronized. If it is not synchronized, resynchronize it.
4. Provision the Cisco Media Termination Subsystem.

IP-IVR Configuration Checklist (continued)

5. Provision and configure any other IP-IVR subsystems that you will use:

- MRCP Automated Speech Recognition (ASR)
- MRCP Text-to-Speech (TTS)
- HTTP subsystem.
- Database subsystem
- Email subsystem.
- ICM Subsystem

6. Install and configure the IP-IVR applications

IP-IVR Engine Traces

Trace	Level	Purpose
LIB_ICM	Debugging	These traces show the GED-125 messages being sent from/to the UCCE VRU PG. <i>These traces are extremely important.</i>
ENG	Debugging + XDebugging1	These traces show the script (workflow) step execution.
SS_CM	Debugging	These traces show the logic of the Contact Manager component of the RMCM subsystem.
SS_TEL	Debugging	These traces show the logic of the Unified CM Telephony Subsystem (JTAPI subsystem). They show the Provider 1 (P1) JTAPI messages the engine receives from the UCCX JTAPI client. It is important to reiterate that these traces only report call events on CTI Route Points and Ports.

IP-IVR Engine Traces



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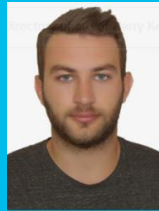
EMEAR IPCC TEAM



Frederic
Deckor



Alex
Doukas



Harry
Keramidas



George
Kovanis



German
Manvelyan



Mohamed
Mohasseb



Lazar
Obradovic



Nada
Sabil



Konstantin
Vaksin

*Talent wins games, but
teamwork...wins championships*

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Questions Now!



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questions, our expert will respond

Ask Me Anything following the event

Now through Friday October 30, 2020



With
German & Konstantin

<https://bit.ly/AMAE-22oct20>



German Manvelyan
Technical Consulting Engineer



Konstantin Vaksin
Technical Consulting Engineer

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App

- Cisco Technical Support



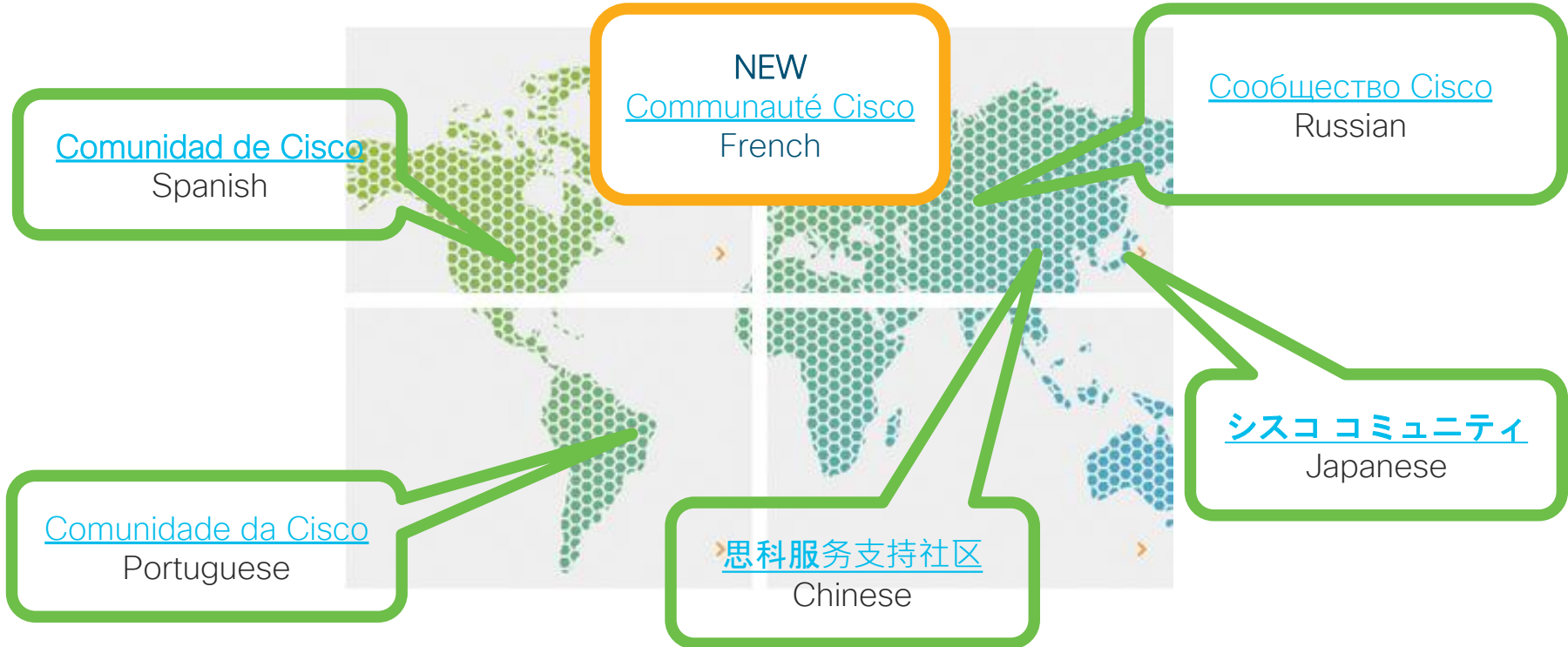
LinkedIn

- Cisco Community
- <http://bit.ly/csc-linked-in>



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Thank you for Your
Time!

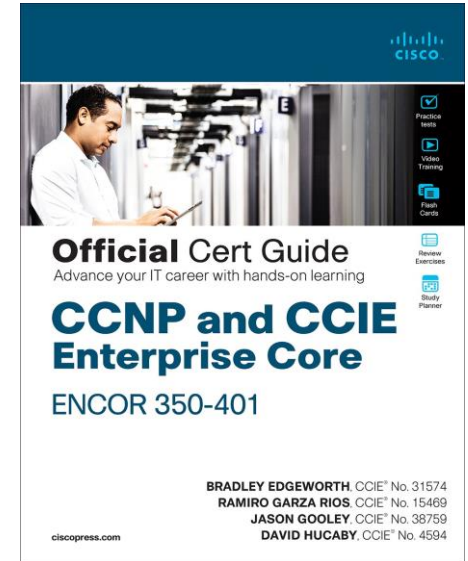
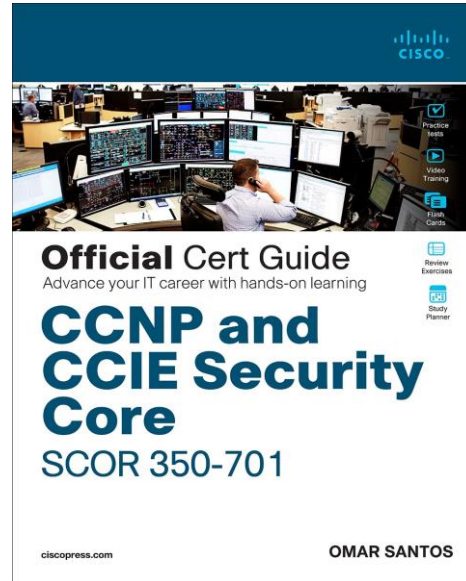
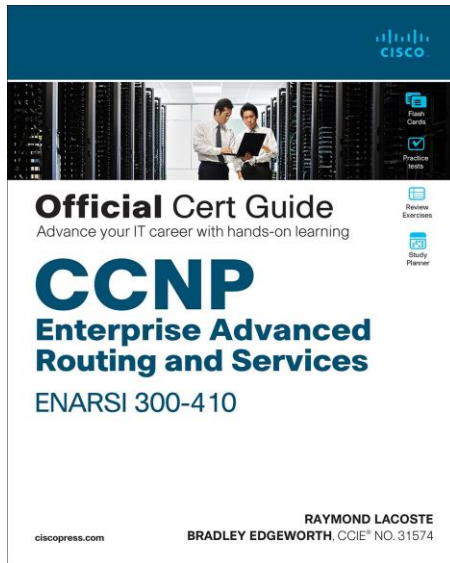
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Redeem your 35% discount offer by entering code: CSC when checking out.

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