# **Configure Time of the Day Routing**

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# Introduction

This document describes the concept and working of Time of the Day routing along with a configuration example.

# Prerequisites

#### Requirements

Cisco recommends that you have knowledge of these topics:

- Basic Call Routing
- Calling Search Space
- Partitions

#### **Components Used**

The information in this document is based on Cisco Unified Communications Manager 11.0.1.21900-11.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## **Background Information**

#### Time of the Day Routing: Working

Time Period: Defines a time frame as 24 hours of a day.

This time period can be repeated:

- Every week from a given day to any other day in the week. For example, Monday Friday.
- Every year from a given day in a month to another day in the same or different month. For example, 1 January 4 February.

Time Schedule: This is a collection of one or more time periods.

Partition: A partition comprises of a logical grouping of Directory Numbers (DNs) and route patterns with similar reachability characteristics. The time schedule comprises of one or more time periods assigned to a partition. It defines a time frame when the partition is logically active.

Test Case Scenario:

There is a hotline number 1-800-111-123. Calls to this number between 0800 hours till 1600 hours are to be answered by agents. Beyond these timings the calls are to be sent to Voicemail. The trick here is to have two numbers that are the same, but in different partitions.

1. 1-800-111-123 (hunt pilot number) in partition On-Shift.

2. 1-800-111-123 (simple DN with CFA to voicemail option checked) in partition Off-Shift.

Even though they are the same numbers, they exist in two different partitions of which only one partition is logically active at any given time. This is decided by the time schedule assigned to these partitions.

When the hotline number is called between 0800 hours till 1600 hours, the partition On-Shift is active and thus 1-800-111-123 is a hunt pilot number. For any calls placed outside these timings, the partition Off-Shift is active, and therefore calls can be forwarded to a Voicemail.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## Configure

# Step 1. Create a Time Period for the Time Frame 0800 Hours till 0400 Hours Call On\_Shift

1. On the Unified CM Administration section of the web page, navigate to **Call Routing > Class of Control > Time Period**, as shown in this image.

cisco	C F	Cisco Un	nified CM A	d m ons	inistration Solutions
System -	Cal	Routing +	Media Resources -	A	dvanced Features 👻 Device 👻 Application 👻 User Management 👻 Bulk Administration 👻 Help 👻
la constanti d		AAR Group			
		Dial Rules		•	
👩 Th		Route Filter			an insufficient number of licenses. Configure additional licenses in your Cisco Prime License
🥌 pre		Route/Hunt			
🔔 w/		SIP Route F	Pattern		is configured. This is required to recover your system in case of failure.
_		Class of Co	ontrol	•	Access List
		Intercom		•	Time Period
Cisc		Client Matte	er Codes		Time Schedule
		Forced Auth	horization Codes		Partition
System		Emergency	Location	•	Calling Search Space
VMwan		Translation	Pattern		pn(K) CPU E7- 2870 @ 2.40GHz, disk 1: 110Gbytes, 6144Mbytes RAM, Partitions aligned
		Call Park			
		Directed Ca	ill Park		
User admin		Call Pickup	Group		April 24, 2016 6:57:28 PM IST, to node 10.106.106.200, from 10.65.51.182 using HTTPS
Convright @		Directory No	umber		
All rights res		Meet-Me Nu	umber/Pattern		
This product		Conference	Now		pject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply
encryption.		Dial Plan In	staller		s are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulation
		Route Plan	Report		
A summary		Transformat	tion	•	products may be found at our Export Compliance Product Report web site.
For informat		Mobility		•	anager please visit our Unified Communications System Documentation web site.
For Cisco Te		Logical Part	tition Policy Configurat	ion	support web site.
		External Ca	Il Control Profile		
		HTTP Profil	le		
		Call Control	I Discovery	•	
		Global Dial	Plan Replication	•	
https://10.10	06.1	06.200/ccm	admin/timeperiodFin	dList	do

2. Click **Add New**, and enter the time range for that time period. In this case we select 0800 - 1600 hours, Monday to Friday of each week and choose **Save** as shown in this image.

cisco	Cisco For Cisc	o Unific	fied CM Ad	ministration						
System - C	all Routin	g 👻 N	Media Resources 👻	Advanced Features 👻	Device +	Application $\bullet$	User Management 👻	Bulk Administration 👻	Help 👻	
Time Period	d Config	uration	n							
Save										
Status										 
1 Status:	Ready									
Time Period	d Inforn	nation -								
Name*		On_Shi	ft							
Description		On shift	t Time Period							
Time Of Day	Start*	08:00								
Time of Day	End	16:00			0					
Repeat Even	y 😦 We	ek from	None			o through	Fri			
	un	til	None			0	None		0	
	Clear	Repeat								
Save	icates rec	quired it	em.							

### Step 2. Create the Two Off-Shift Time Periods

One from 0000 hours till 0800 hours. The other from 1600 hours till 2400 hours.

1. On the Unified CM Administration section of the web page, navigate to **Call Routing > Class of Control > Time Period** as shown in this image.

cisco	Cisco For Cisco	Unified CM Ad	mi s Se	nistration <sub>olutions</sub>
System -	Call Routing	✓ Media Resources ✓	Adv	anced Features 👻 Device 👻 Application 👻 User Management 👻 Bulk Administration 👻 Help 👻
la constanti d	AAR Gr	oup	٦	
	Dial Ru	les	۰ľ	
👩 Th	Route F	liter	a	in insufficient number of licenses. Configure additional licenses in your Cisco Prime License
- pre	Route/H	lunt	•	
🔔 w/	SIP Ro	ute Pattern	- je	s configured. This is required to recover your system in case of failure.
_	Class o	f Control	•	Access List
	Intercor	n	۰I	Time Period
Cisc	Client N	fatter Codes		Time Schedule
Sustem	Forced	Authorization Codes		Partition
System	Emerge	ncy Location	•	Calling Search Space
VMwan	Transla	tion Pattern	P	n(R) CPU E7- 2870 @ 2.40GHz, disk 1: 110Gbytes, 6144Mbytes RAM, Partitions aligned
	Call Par	rk		
	Directer	d Call Park	1	
User admin	Call Pic	kup Group	1	pril 24, 2016 6:57:28 PM IST, to node 10.106.106.200, from 10.65.51.182 using HTTPS
Copyright ©	Director	ry Number		
All rights res	Meet-M	e Number/Pattern		
This product	Confere	ince Now	- pt	ect to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply
encryption. 1 product imm	Dial Pla	n Installer	ľ	are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulation
A summary	Route F	Plan Report	1	products may be found at our Export Compliance Product Report web site.
	Transfo	rmation	۱	
For informat	Mobility		•  °	nager please visit our <u>Unified Communications System Documentation</u> web site.
For Cisco Te	Logical	Partition Policy Configuration	1	<u>ipport</u> web site.
	Externa	I Call Control Profile		
	HTTP P	Profile		
	Call Co	ntrol Discovery	<b>۱</b>	
l	Global	Dial Plan Replication	•	
https://10.10	06.106.200/	ccmadmin/timeperiodFindLi	ist.d	0

2. Click Add New, and enter the time range for Off Shift Time Period period. In this case, you select 0000
- 0800 hours, Monday to Friday of each week, and choose Save as shown in this image.

cisco	Cisc For Cis	o Unified	ied CM Ad	ministration						
System +	Call Routi	ng 👻 Me	dia Resources 👻	Advanced Features 👻	Device 👻	Application $\bullet$	User Management 👻	Bulk Administration 👻	Help 👻	
Time Peri	iod Config	guration								
Save										
C1-1-1-										
Status-	us: Ready									
Time Per	riod Infor	mation —								
Name*		Off_Shift	_1							
Descriptio	on	Off Shift	Time Period 1							
Time Of D	Day Start*	00:00			0					
Time of D	ay End*	08:00			0					
Repeat Ev	very 💿 W	eek from	Mon			ᅌ through	Fri		٥	
	Ye	ear on	None			0	None		0	
	u	ntil	None			0	None		0	
	Clea	r Repeat								
Save										
(i) *- ir	ndicates re	quired iter	m.							
<u> </u>										

3. Similarly, create another time period from 1600 hours till 2400 hours. This time period is called Off\_Shift\_2 as shown in this image.

cisco	Cisco For Cisco	Unified	ied CM Ad	ministration							
System -	Call Routing	; <del>v</del> Me	dia Resources 👻	Advanced Features 👻	Device - A	Application +	User Management 👻	Bulk Administration	Help ▼		ļ
Time Perio	d Configu	ration									
Save											l
Status i Status	s: Ready										
Time Perio	od Inform	ation —									
Name*	0	Off_Shift	_2								
Description	1	Off Shift	Time Period 2								
Time Of Da	ay Start*	16:00									
Repeat Eve	iy End	24:00	Man		<u> </u>	through	54				
Repeat Eve	sry 😏 we 🗌 Yea	ek irom	None			o unough	None		0		
	unt	il i	None			0	None		0		
	Clear	Repeat									
Save	dicates req	uired iter	m.								

### Step 3. Add the Time Periods to the Time Schedules

1. On the Unified CM Administration section of the web page, navigate to **Call Routing > Class of Control > Time Schedule** as shown in this image.

cisco	Cisco Unified CM Adm For Cisco Unified Communications	inistration Solutions		
System +	Call Routing 👻 Media Resources 👻 Ad	vanced Features - Device - Application -	User Management 👻 Bulk Administration 👻 Help 👻	
Find and I	AAR Group			
👍 Add N	Dial Rules >	Delete Selected		
-	Route/Hunt			
-Status -	SIP Route Pattern			
1 rec	Class of Control	Access List		
	Intercom •	Time Period		
Time Sc	Client Matter Codes	Time Schedule		
Find Time	Forced Authorization Codes	Partition	d Clear Filter 🜵 👄	
	Emergency Location (ELIN) Groups	Calling Search Space		Description
	Translation Pattern		Applies to all days and times	
	Call Park			
Add Nev	Directed Call Park	cted		
	Call Pickup Group			
	Directory Number			
	Meet-Me Number/Pattern			
	Conference Now			
	Dial Plan Installer			
	Route Plan Report			
	Transformation •			
	Mobility •			
	Logical Partition Policy Configuration			
	External Call Control Profile			
	HTTP Profile			
	Call Control Discovery			
	Global Dial Plan Replication			

2. Click Add New, and create a new Time Schedule On-Shift as shown in this image.

cisco	Cisco Unified CM Administration For Cisco Unified Communications Solutions	
System +	Call Routing • Media Resources • Advanced Features • Device	v Application v User Management v Bulk Administration v Help v
Time Schee	dule Configuration	
Save	🗙 Delete 🗋 Copy 🕂 Add New	
- Status		
(i) Add si	uccessful	
Time Sche	edule Information	
Name*	On Shift	
Description	On Shift Time Schedule	
- Time Peris	od Information	
Available T	Time Periods All the time Off_Shift_1 Off_Shift_2 On_Shift	
	**	
Selected Ti	ime Periods	_ <b>X</b>
[ .	Delate Come Add New	
(i) *- ind	dicates required item.	

3. The time period On\_Shift is added to the time schedule as shown in this image.

cisco	Cisco For Cisco	Unified CM Ad	dministration ons Solutions							
System +	Call Routing	Media Resources +	Advanced Features +	Device +	Application +	User Management •	Bulk Administration			
Time Sche	edule Config	uration								
Save	X Delete	Copy 🔂 Add	New							
Status -								 	 	
Add :	successful									
Time Sch	edule Inform	nation								
Name*	On Shift									
Descriptio	n On Shift Ti	me Schedule								
Time Per	iod Informa	tion								
Available	Time Periods	All the time Off_Shift_1 Off_Shift_2		÷						
		**								
Selected 1	Time Periods	On_Shift		* *	×					
Save	Delete	Add New								
() *- in	dicates requi	red item.								

4. Similarly, create another Time Schedule Off\_Shift and add the two time periods Off\_Shift\_1 and Off\_shift\_2 as shown in this image.

cisco	Cisco For Cisco	Unified CM A	dministration							
System +	Call Routing	Media Resources	Advanced Features +	Device -	Application +	User Management 👻	Bulk Administration •	Help +		
Time Scho	edule Config	uration								
Save	X Delete	Copy 🔂 Adi	d New							
Status -										
(i) Upda	te successful									
Time Sch	edule Infor	mation							 	 
Name*	Off Shift									
Descriptio	off Shift Ti	me Schedule								
Time Per	iod Informa	tion								
Available	Time Periods	All the time On_Shift		Å						
		**								
Selected	Time Periods	Off_Shift_1 Off_Shift_2		÷	X					
Save	Delete	Add New								
(j) •.,	ndicates requi	red item.								

### Step 4. Assign the Time Schedules to the Respective Partitions

1. Assign the On-Shift Time Schedule to the partition On\_Shift\_Partition as shown in this image.

cisco	Cisco Unified CM Administration For Cisco Unified Communications Solutions	
System +	Call Routing • Media Resources • Advanced Features • Device •	Application + User Management + Bulk Administration + Help +
Partition C	onfiguration	
Save	🗙 Delete   🍟 Reset 🛛 🖉 Apply Config 👍 Add New	
Status -	:: Ready	
Partition I	information	
Name*	On_Shift_Partition	
Description	On_Shift_Partition	]
Time Scheo	dule On Shift	
Time Zone	Originating Device     Specific Time Zone (GMT) Etc/GMT	<b>*</b>
Save	Delete Reset Apply Config Add New	
(i) *- ind	licates required item.	

2. Assign the Off-Shift Time Schedule to the partition Off\_Shift\_Partition as shown in this image.

cisco F	Cisco Unified CM Administration	
System - Cal	Routing • Media Resources • Advanced Features • Device •	Application • User Management • Bulk Administration • Help •
Partition Con	figuration	
📊 Save 🎽	🕻 Delete 🏠 Reset 🧷 Apply Config 🚽 Add New	
Status Update s	uccessful	
Partition Infe	ormation	
Name*	Off_Shift_Partition	
Description	Off_Shift_Partition	
Time Schedule	e Off Shift	
Time Zone	Originating Device	
	Specific Time Zone (GMT) Etc/GMT	
Save Del	lete Reset Apply Config Add New	

Step 5. Create 2 Similar Directory Numbers and Assign One to the Partition On\_Shift\_ Partition and the Other to the Partition Off\_Shift\_Partition

CISCO For Cisco	Unified CM Ac	dministration						app
System - Call Routing	✓ Media Resources ✓	Advanced Features 👻	Device -	Application -	User Management 👻	Bulk Administration 👻	Help 👻	
Directory Number C	onfiguration							
Save								
Status								
(i) Status: Ready								
- Directory Number I	nformation							
Directory Number*	1234			to				Urgent P
Route Partition	Off_Shift_Partition	n		0				
Description	DN active from 0	800hrs to 1600hrs						
Alerting Name								
ASCII Alerting Name								
External Call Control	Profile < None >			0				
Active								
L								

Cisco Un For Cisco Unif	ified CM Administration						app
System - Call Routing -	Media Resources - Advanced Features -	Device - Ap	plication 👻	User Management 👻	Bulk Administration $$	Help 👻	
Directory Number Configuration							
Save							
- Status							
Status: Ready							
Directory Number Inform	nation						
Directory Number*	1234		to				Urgent
Route Partition	On_Shift_Partition	0					
Description	DN active from 0800hrs to 1600hrs						
Alerting Name							
ASCII Alerting Name							
External Call Control Profile	< None >	0					
🗹 Active							
L							

# Verify

During 0800 -1600 hours, the Call can hit the DN 1234 in the On\_Shift\_Partition, that can be the DN of a Phone. At other times, the call can hit the DN 1234 in the Off\_Shift\_Partition, which can either point to Voice Mail, or a Translation Pattern to point the Call to a Front Desk agent number.

## Troubleshoot

There is currently no specific troubleshooting information available for this configuration.