**Application Note** 

# Cisco Unified CallManager 4.0-PBX Interoperability: Mitel 3300 ICP Release 3.3 PBX to a Cisco 6608 Gateway using T1 PRI DMS-100 with MGCP

#### Introduction

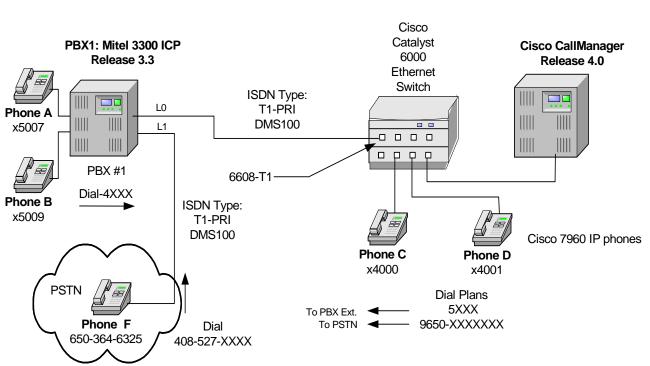
This is an application note for connectivity of the Mitel 3300 ICP with Cisco Unified CallManager Release 4.0 using a Cisco Catalyst 6000 Series Switch with T1 PRI DMS-100.

The network topology diagram (below) shows the test setup for end-to-end interoperability with the Cisco Unified CallManager connected to the PBX via the 6608-T1 PRI as an MGCP gateway.

Connectivity is achieved by using the standard PRI DMS-100 protocol. The Cisco Unified CallManager as well as the Mitel 3300 PBX can be configured as either NETWORK or USER side but the Mitel PRI trunk does not support sending Calling Number when configured as USER side. Therefore, it is recommended that the Mitel PBX be configured as the NETWORK side and the Cisco gateway as the USER side. Basic calls work fine in both directions and feature Calling Name and Calling Number support.

#### **Network Topology**

Figure 1. Network Topology



## Basic Call Setup End-to-End Configuration



### Limitations

When calling from Mitel digital phone to Cisco 7960 IP phone, IP phone displays Calling Name and Number after the call is answered. Mitel phone however displays Trunk Name. It was verified using ISDN protocol analyzer that the CallManager PRI trunk does not support sending Connected Name or Connected Number information in the connect message back to PBX.

When calling from Cisco 7960 IP phone to Mitel digital phone, Mitel phone displays Calling Name and Number after the call is answered. IP phone displays Called Number. It was verified using ISDN protocol analyzer that the Mitel PRI trunk does not support sending Connected Name or Connected Number information in the connect message back to CallManager.

Mitel PRI trunk does not support sending Calling Number when configured as USER side.

#### **System Components**

#### **Hardware Requirements**

Cisco Catalyst 6000 Series Switch with T1 PRI DMS-100 Mitel 3300 ICP Cisco Unified CallManager

#### **Software Requirements**

Cisco Unified CallManager, Release 4.0 PBX Software: 3.3

#### Features

#### **Key Features Supported**

Calling Number Calling Name

#### **Key Features not Supported**

Connected Number Connected Name

#### Configuration

#### **Configuration Sequence and Tasks**

- 1. System Hardware Modules
- 2. System Software Version
- 3. PRI Trunk Configuration
- 4. Link Descriptor Assignment
- 5. MSDN-DPNSS-DASSII Trunk Circuit Descriptor
- 6. Digital Trunk Assignment
- 7. Trunk Service Assignment
- 8. Digit Modification Assignment
- 9. Route Assignment
- 10. ARS Digits Dialing Plan

#### **Configuration Menus and Commands**

#### Configuring the Mitel 3300 ICP Release 3.3 PBX

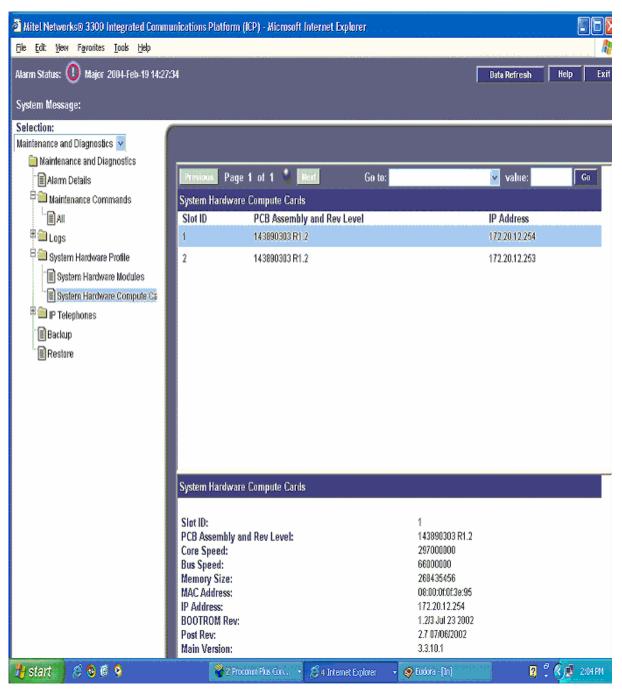


# System Hardware Modules

🗿 Mitel Networks® 3300 Integrated Comm	unications Platform (	(ICP) - Microsoft Internet Explo	irer	
File Edit Yew Favorites Tools Help				
Alarm Status: 🕕 Major 2004-Feb-19 14:27	34			Data Refresh Help Exit
System Message:				
Selection: Maintenance and Diagnostics Maintenance and Diagnostics Maintenance and Diagnostics Maintenance Commands Maintenance Commands Maintenance Commands Maintenance Commands System Hardware Profile System Hardware Modules System Hardware Compute Ca Maintenance Maintenance Communication System Hardware Compute Ca Maintenance Compute Ca Maintenance Compute Ca Maintenance Compute Ca Maintenance Compute Ca	Previous Page System Hardware Slot Number 1 2 3 4 5 6 7 8	1 of 1 Rext Module ID, Driver ID 12, 1 12, 1 22, 1   47, 6	Go to: Variant ID n/a   n/a  n/a 	Value: Co Card Description Dual FIM - Multimode 820nm  Echo Cancellation 64 Channels  SHARC Enhanced DSP - 4 circuit
	System Hardware Slot Number: Module ID, Drive Minimum Reset T Card Description PCB Assembly: PCB Revision Le Processor Type: Processor Speed MAC Address: Country Code:	r ID: Timing: : vel:	1 12, 1 Dual FIM - Mu 56001801 RC n/a 0, 0 00:00:00:00 NA	Illimode 820nm 10:00
打 start 🔰 😂 🕲 🖉 🧕	👸 2 Proc	comm Plus Con 🔹 💋 4 Internet (	Eplorer 🔹 😵 ED	dxra-[in] 🛛 🗿 🖞 🚺 2:03 FM



## System Software Version



1.



PRI Trunk	Configur	ation	Site	e Opt	ions						
PLATFOR Options Created Databas	M: :: CL: with : e Vers:	PRI ( IP / C IMAT V ion "	LIR / Da ersion DB08.00.	ata / "7.2 00"	CBC / .0.3"	t DDI	/				
				Li	nk Map	ping					
PBX Link*	MVIP Link	PRI Card	Card Varia	l int	_		PRI link	#	PRI logical #	ŧ	Physical Type
1 2	4 5	1 1	Dual Dual	link link	card card		1 2		1 2		T1/DSX1 T1/DSX1
PRI logical#	Proto Type	ocol	Protocc Variant	PRI : pl	Link C	harac Test 11 Nu	teris mber	tic	Physical	Char	acteristics
1	DMS-1							ork e B	vert D Cha Side Inte Enbloc-or Line Cod: Framing=I uild Out=( Invert Da Comment '	erfac nly: ing=B ESF 0-133 ata=D	e: On Off 8ZS feet isable
-							Netwo		Side Inte Enbloc-or Line Cod: Framing=F	erfac nly: ing=B ESF	e: Off Off

\_\_\_\_\_

Trunk Data

Incoming Call Characteristics

Line Build Out=0-133 feet

Comment ""

Invert Data=Disable



PBX link#	Trunks*	DDI Delivery	CPN Delivery	
1	01	Yes	Yes	
1	02	Yes	Yes	
1	03	Yes	Yes	
1	04	Yes	Yes	
1	05	Yes	Yes	
1	06	Yes	Yes	
1	07	Yes	Yes	
1	08	Yes	Yes	
1	09	Yes	Yes	
1	10	Yes	Yes	
1	11	Yes	Yes	
1	12	Yes	Yes	
1	13	Yes	Yes	
1	14	Yes	Yes	
1	15	Yes	Yes	
1	16	Yes	Yes	
1	17	Yes	Yes	
1	18	Yes	Yes	
1	19	Yes	Yes	
1	20	Yes	Yes	
1 1	21 22	Yes	Yes	
1	22	Yes	Yes	
2	01	Yes Yes	Yes Yes	
2	02	Yes	Yes	
2	03	Yes	Yes	
2	04	Yes	Yes	
2	05	Yes	Yes	
2	06	Yes	Yes	
2	07	Yes	Yes	
2	08	Yes	Yes	
2	09	Yes	Yes	
2	10	Yes	Yes	
2	11	Yes	Yes	
2	12	Yes	Yes	
2	13	Yes	Yes	
2	14	Yes	Yes	
2	15	Yes	Yes	
2	16	Yes	Yes	
2	17	Yes	Yes	
2	18	Yes	Yes	
2	19	Yes	Yes	
2	20	Yes	Yes	
2	21	Yes	Yes	
2	22	Yes	Yes	
2	23	Yes	Yes	
	=======================================			==
	CDM C	1		

CPN Substitutions Setup



#### 

Outgoing Call Characteristics

DDX	outgoing carr characteristics
PBX link#	Trunks*
1	01-23 Fixed Bearer Capability: Voice Speech, Data Null
	Fixed Network Specific Facilities: Default (len=0)
	Network: NI-2
	Fixed CLIR: Voice Allow, Data Allow
	Per Call Network Specific Facilities:
	call by call on per call: No
	Network: NI-2
	0: Unassigned (len=0)
	1: Unassigned (len=0)
	2: Unassigned (len=0)
	3: Unassigned (len=0)
	4: Unassigned (len=0)
	5: Unassigned (len=0)
	6: Unassigned (len=0) 7: Unassigned (len=0)
	8: Unassigned (len=0)
	CPN Value:
	Voice
	Default CPN:
	CPN Substitutions:
	Data
	Default CPN:
	CPN Substitutions:
2	01-23 Fixed Bearer Capability:
	Voice Speech, Data Null
	Fixed Network Specific Facilities: Default (len=0)
	Network: NI-2
	Fixed CLIR: Voice Allow, Data Allow
	Per Call Network Specific Facilities:
	call by call on per call: No Network: NI-2
	0: Unassigned (len=0)
	1: Unassigned (len=0)
	2: Unassigned (len=0)
	3: Unassigned (len=0)
	4: Unassigned (len=0)
	5: Unassigned (len=0)
	6: Unassigned (len=0)
	7: Unassigned (len=0)
	8: Unassigned (len=0)
	CPN Value:
	Voice
	Default CPN:
	CPN Substitutions:
	Data
	Default CPN:



### CPN Substitutions:

#### \_\_\_\_\_

## PBX Trunk Range Assignments Starting Ending TRA Id Link Trunk Link Trunk AssocTRLs TRA Description Protocol

#### \_\_\_\_\_

#### Min/Max Limits Definitions

TRL Id		AssocISLs	Counts	CxC Service	Protocol/
/RejCause	AssocSGLs	/RejCause	Min Max	/Param	Description



## Link Descriptor Assignment

Kitel Networks© 3300 Integrated Com	munications P	atform (ICP) - Microsoft	Internet Explorer		
File Edit View Favorites Iools Help					
Alarm Status: 🕕 Major 2004-Feb-19 14:2	27:34				Data Refresh Help E
System Message:					
Selection: System Configuration System Configuration System Capacity Curits/Modules Class of Service Options Assig Class of Service Assignment Class Option Configuration Class Option Configurat	Previous Link Desc Number 1 3 4 10 12 13 14	Page 1 of 1 1 1 riptor Assignment Address for Message Control B B B B B B A	text Go to: BER - Maintenance Limit, 10 <sup>m</sup> -n 4 6 5 6 5 4 5	BER - Service Limit, 10 <sup>kar</sup> -n 3 6 3 6 5 3 4	Add     Change     Dele       value:     Go       Data Call Alternate Digit Inversion       Yes       Yes
Interview of Normalization     Interview of Normalization     Interview of Normalization     Interview of Normalization     Interview of Normalization (AR     Interview of Normalization	Number: Address f BER - Ma BER - Se Data Call Framing Framing Integrate Satellite	riptor Assignment for Message Control: intenance Limit, 10 <sup>e</sup> .n: vice Limit, 10 <sup>e</sup> .n: Alternate Digit Inversio Losses in 24 hrs - Mainte Losses in 24 hrs - Servic d Digital Access: Link Delay: - Maintenance Limit:	nance Limit:		55 100 DN NODE D



## MSDN-DPNSS-DASSII Trunk Circuit Descriptor

🗿 Mitel Networks© 3300 Integrated Comm	unications Pla	atform (ICP) - Mic	rosoft Internet Expl	orer		
File Edit Yew Favorites Icols Help						
Alarm Status: 🕕 Major 2004-Feb-19 14:27:	34				Data Refre	sh Help Exit
System Message:						
Selection:						
System Configuration					Ado	l Change Delete
📄 System Configuration	Previous	Page 1 of 1	•	Go to:	🔽 valu	e: Go
🖲 🗐 System Capacity				00 00.	valu	5. <u>00</u>
🖲 🛄 Units/Modules	MSDN-DPI	ISS-DASSII Trun	k Circuit Descriptor			
Trunks	Number	Card Type	Dual Seizure Priority	Far End Connection	Signalling Protocol	ISDN BRI Mode
Class of Service Options Assig	13	UNIVERSAL E1	Incoming	Main PBX	MSDN-DPNSS	MOUE
🖲 Analog Trunks	25	CEPT	Incoming	Local Office	MSDN-DPNSS	
🖻 🛄 Digital Trunks			-			
	26	UNIVERSAL E1	Incoming	Main PBX	MSDN-DPNSS	
📗 Link Descriptor Assignm	27	UNIVERSAL E1	Incoming	Local Office	MSDN-DPNSS	
Digital Link Assignment	28	UNIVERSAL T1	Incoming	Local Office	MSDN-DPNSS	
MSDN-DPNSS-DASSII Tr	30	UNIVERSAL T1	Incoming	Toll Office	MSDN-DPNSS	
Trunk Service Assignmer						
Digital Trunk Assignment						
Network Synchronization						
B 🗎 E1/CEPT						
<sup>18</sup> 11/04						
IP NetworkingXNET						
🖲 🗐 Direct Trunk Select						
🕀 🗐 Automatic Route Selection (AR						
Devices						
🖲 Music On Hald						
🗄 🛄 Loudspeaker Paging						
🖲 🧰 Telephone Paging						
🖲 🧰 System Output Poris						
10000						
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## Digital Trunk Assignment

Mitel Networks® 3300 Integrated Com	nunications Platf	orm (ICP) - Micr	osoft Intern	et Explorer		[	
File Edit Yew Favorites Tools Help	2.04						
Alarm Status: 🕕 Major 2004-Feb-19 14:2	7.34					Data Refresh Help	Ex
System Message:							
Selection: System Configuration						Change	Clear
System Configuration						Change	CICO
E Dystem Capacity	Previous	age 7 of 11	🐫 Hext		Go to:	value:	Go
🖲 间 Units/Modules	Digital Trunk	Assignment					
🖻 🛄 Trunks	Cabinet	Shelf	Slot	Circuit	Card Type	Trunk Number	
E Class of Service Options Assig	8	1	1	1	UNMERSAL T1	801	
🖲 🗐 Analog Trunks	8	1	1	2	UNMERSAL TI	802	
🖻 🛄 Digital Trunks	8	1	1	3	UNMERSAL TI	803	
E 🗎 DPNSS	8	1	1	4	UNMERSAL T1	804	
🗐 Link Descriptor Assignme	8	1	1	5	UNIVERSAL T1	805	
Digital Link Assignment	8	1	1	6	UNIVERSAL TI	805	
MSDN-DPNSS-DASSII Tr	8	1	1	7	UNIVERSAL TI	807	
E Trunk Service Assignmer	8	1	4	B	UNIVERSAL TI	808	
Network Synchronization	8	1	•	9	UNIVERSAL TI	809	
E 1/CEPT	8		1	3 10	UNIVERSAL TI	810	
E 11/D4	0	1	1	10	UNIVERSAL II	810	
IP NetworkingXNET							
🖲 Direct Trunk Select	Digital Trunk	Assignment					
🗄 🗐 Automatic Route Selection (AR							
🖲 🧰 Devices	Cabinet: Shelf:				8		
🖲 🛅 Music On Hald	Slot:				1		
🖲 间 Loudspeaker Paging	Circuit:				1		
🖲 🧰 Telephone Paging	Card Type:				UNIVERSAL T1		
🖲 🗐 System Output Ports	Trunk Numb Trunk Servio				801 12		
-,	DTS Service				11		
		riptor Number:			28		
	Interconnec	t Number:			1		
🛃 start 💦 🔗 🚱 🕼 🧕		2 Proconin Plus Con	+ <u>(</u> G3	Internet Explorer	🔹 😵 Eudora - [In]	🔤 🕄 🚺 🛛	1:58 PM



## Trunk Service Assignment

Hitel Networks© 3300 Integrated Com	munications Platfo	rm (ICP) - Microsoft In	ternet Explore	<b>r</b>			
File Edit View Favorites Iools Help							
Alarm Status: 🕕 Major 2004-Feb-19 14:2	27:34				ļ	Data Refresh	Help E
System Message:							
Selection:							
System Administration							Change Clea
📄 System Administration 📃 🙆						<u> </u>	
User Authorization Profiles	Previous P	age 1 of 15 👋 🖪	ext	Go to:		🔽 value:	Go
🗄 🚞 System Options	Trunk Service	Assignment					
<sup>8</sup> 🗐 Automatic Route Selection (AR	Trunk Service		Class of	Class of	Baud	Intercept	Trunk
Trunk Service Assignment	Number	Trunk	Service	Restriction	Rate	Number	Label
🗐 Trunk Group Assignment	1	NO	11	1	300	1	
🗐 Class of Restriction Group /	2	ND	12	1	300	1	
🗐 System Account Cade Defin	3	ND	13	1	300	1	
🗐 Independent Account Code	4	ND	1	1	300	1	
🗐 Default Account Code Dafini	5	ND	1	12	300	1	
🗐 Call Progress Tone Detectic	6	ND	1	1	300	1	
Digit Modification Assignme	7	ND	1	1	300	1	
Maximum Dialed Digits	,	ND					
Route Assignment	8		1	1	300	1	
🗐 Route List Assignment (Opt	9	ND	1	1	300	1	
🗐 Day and Time Zone Assignr	10	ND	1	1	300	1	
🗐 Route Plan Assignment (Op							
ARS Digits Dialed Assignme	Trunk Service	Assignment					
E ARS Leading Digits Assignr							
Interconnect Restriction	Trunk Service Release Link					1 NO	
🗐 Node Idenöty Assignment	Class of Servi					11	
🖹 🧰 Automatic Call Distribution (AC	Class of Restr	iction:				1 300	
🖹 🧰 Call Handling	Baud Rate: Intercept Nun	nber:				300 1	
📲 🕮 Telephone Management	Non-dial In Ti	runks Answer Point - C				500	
🖹 🧰 Telephone Directory Managerr		runks Answer Point - 1 runks Answer Point - 1				500 500	
Property Management System	Dial In Trunks	s Incoming Digit Modi	fication - Abso	rb:		500	
🖌 start 🔰 🤗 🗞 🎯			🥰 3 Internet Exp		a - fini	2	🦿 🔿 🚺 1:52 F



Mitel Networks© 3300 Integrated Comm File Edit View Favorites Tools Help	unications Platforn	n (ICP) - Microsoft In	ternet Explore	<b>I</b>			80
llarm Status: 🕕 Major 2004-Feb-20 12:03	2:30				Ī	Data Refresh	Help E
System Message:							
Selection:							
System Administration 🛛 🔽 🔤							Change Clear
📄 System Administration 🤷							
User Authorization Profiles	Previous Pat	je 2 of 14 🌷 🖪	ext	Go to:		🔽 value:	Go
🖲 🗐 System Options	Trunk Service #	lssignment					
🖹 🧰 Automatic Route Selection (AF	Trunk Service	Release Link	Class of	Class of	Baud	Intercept	Trunk
Trunk Service Assignment	Number	Trunk	Service	Restriction	Rate	Number	Label
🗐 Trunk Group Assignment	11	ND	1	1	300	1	
Class of Restriction Group #	12	NO	1	1	300	1	
🗐 System Account Cade Defin	13	NO	1	1	300	1	
🗐 Independent Account Cade	14	ND	1	1	300	1	
Default Account Code Dafini	15	ND	1	1	300	1	
🗐 Call Progress Tone Detectic	16	ND	1	1	300	1	
Digit Modification Assignme	17	ND		1	300	1	
🗐 Maximum Dialed Digits							
Route Assignment	18	ND	1	1	300	1	
🗐 Route List Assignment (Opt	19	ND	1	1	300	1	
🗐 Day and Time Zone Assignr	20	ND	1	1	300	1	
🗐 Route Plan Assignment (Op							
ARS Digits Dialed Assignm	Trunk Service #	kssignment					
ARS Leading Digits Assign							
Interconnect Restriction	Trunk Service					12 NO	
🗐 Node Identity Assignment	Release Link T Class of Servic					NU 1	
🖗 🗐 Automatic Call Distribution (AC	Class of Restric					1	
🖲 🗐 Call Handling	Baud Rate:					300	
📲 🗐 Telephone Management	Intercept Numb Non-dial In Tru	er: nks Answer Point - I	Dav:			I	
🖲 🗐 Telephone Directory Managerr	Non-dial In Tru	nks Answer Point - I	light 1:				
🗄 🗎 Property Management System		nks Answer Point - I ncoming Digit Modi		rb:		0	
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## **Digit Modification Assignment**

# Mitel Networks0 3300 Integrated Com	nunications Platforn	n (ICP) - Microsoft Interne	et Explorer		
<u>File Edit View Favorites Iools H</u> elp					
Alarm Status: 🕕 Major 2004-Feb-19 14:2	27:34			Data Refre	esh Help Exit
System Message:					
Selection:					
System Administration					Change Clear
📄 System Administration 🔷	Previous Par	je 1 of 3 🐫 Mext	Go to:	🔽 valu	le: Go
User Authorization Profiles			00 00.	Vala	le. 00
📲 🛄 System Options	Digit Modificati				
🗎 🧰 Automatic Route Selection (AR	Digit Modificati Number	on Number of I Absorb	)igits to Digits to be Inserted	e Final Tone Pla Marker	n/Information
Trunk Service Assignment	1	Ausona 1	Inserteu	Marker	
🗑 Trunk Group Assignment					
Class of Restriction Group #	2	2			
🗐 System Account Cade Defin	3	0			
🗐 Independent Account Cade	4	3			
🗐 Default Account Code Dafini	5	0			
Call Progress Tone Detection	6	0			
Digit Modification Assignme		ů			
🗐 Maximum Dialed Digits		0			
Route Assignment	8	0			
Route List Assignment (Opt	9	0			
Day and Time Zone Assignr	10	0			
Route Plan Assignment (Op	11	0			
ARS Digits Dialed Assignment	12	0			
ARS Leading Digits Assignr		0			
Interconnect Restriction	13	U			
Node Identity Assignment	14	0			
Automatic Call Distribution (AC	15	0			
Call Handling	16	0			
	17	0			
🖲 🗍 Telephone Management	18	0			
🖲 🛅 Telephone Directory Managerr		-			
🖲 🕮 Property Management System	19	0			
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## Route Assignment

🗿 Mitel Networks© 3300 Integrated Comm	nunications	Platform (ICP)	Microsoft In	ternet Explorer				80
File Edit. View Favorites Iools Help								
Alarm Status: 🕕 Major 2004-Feb-19 14:2:	7:34						lata Refresh	Help Ex
System Message:								
Selection:								<b>_</b>
System Administration								Change Clear
System Administration	Previou	Page 1 of	8 🕴 Nei	d Ga	) to:	6	value:	Go
User Authorization Profiles			• • L	· .	,		Yulac.	
B 🗐 System Options	Route A	ssignment				VNET		
Automatic Route Selection (AR	Route	Trunk	COR	Digit	Digits Before	XNET Trunk	Route	
Trunk Service Assignment	Number	Group Number	Group Number	Modification Number	Outpulsing	Group	Туре	Compression
Trunk Group Assignment						Number		~ ~
Class of Restriction Group /	1	1	1	1				Off
System Account Code Defin	2	2	1	5				Off
Independent Account Code	3	3	1	3				Off
Default Account Code Dafini	4		1	1				Off
Call Progress Tone Detection	5		1	1				Off
Digit Medification Assignme	6		1	1				Off
Maximum Dialed Digits	7			4				
Route Assignment			1	1				Off
Route List Assignment (Opt	8		1	1				Off
Day and Time Zone Assignr	9		1	1				Off
Route Plan Assignment (Op	10		1	1				Off
ARS Digits Dialed Assignme	11		1	1				Off
ARS Leading Digits Assign	12	12	1	5				Off
Interconnect Restriction	13	13	1	4				Off
Node Identity Assignment			-					
attention (AC	14	14	1	2				Off
🖲 🖆 Call Handling	15		1	1				Off
🖲 🗀 Telephone Management	16		1	1				Off
🔊 🧰 Telephone Directory Managerr	17		1	1				Off
Property Management System	18		1	1				Off
撌 start 🔰 🔗 🗞 🧕		👸 2 Procomm P	us Con 🔹	🗳 3 Internet Explorer	🔹 📀 Eudora - [	In]	2	I 🖞 🔇 💆 LISLAM



## ARS Digits Dialing Plan

🗿 Mitel Networks© 3300 Integrated Comm	unications Platfor	m (ICP) - Microsoft Internet Explorer		
File Edit. View Favorites Iools Help				
Alarm Status: 🕕 Major 2004-Feb-20 12:02	2:30			Data Refresh Help Exit
System Message: New record successful	lly added.			
Selection: System Administration				Add Change Delete
System Administration				
User Authorization Profiles	Previous Pa	ge 1 of 1 🍕 🔣	Ga to:	📝 value: 🛛 🖌 Go
B 🗐 System Options	ARS Digits Dia	led Assignment		
🗄 🗐 Automatic Route Selection (AR	Digits Dialed	Number of Digits to Follow	Termination Type	Termination Number
Trunk Service Assignment	100	1	Route	13
🗐 Trunk Group Assignment	40	2	Route	2
Class of Restriction Group #	49	2	Route	12
🗐 System Account Cade Defin	666	4	Route	13
🗐 Independent Account Code	7	Unknown	Route	1
Default Account Code Defini	80	Unknown	Route	2
Call Progress Tone Detectic	90	Unknown	Route	3
Digit Modification Assignme	91	Unknown	Route	13
Maximum Dialed Digits				
Route Assignment	950484	4	Route	3
Route List Assignment (Opt	650364	4	Route	12
Day and Time Zone Assignr	527	4	Route	2
ARS Digits Dialed Assignme				
ARS Leading Digits Assignment				
Interconnect Restriction				
Node Identity Assignment				
B Automatic Call Distribution (AC				
🖹 🗐 Call Handling				
🖲 🗐 Telephone Management				
🖲 🛅 Telephone Directory Managerr				
🗄 🗎 Property Management System				
🖞 start 🛛 🔗 🗞 🍳	<b>E</b> 4	Internet Explorer 🛛 🗕 C:\380080	Procorum Plus Telhet	🛐 🖞 📢 🕄 11:53 AM



## Configuring Cisco Unified CallManager

## 6608-T1 Gateway Configuration

🚰 Cisco CallManager 4.0 Administr	ration - Gateway Configuration - Microsoft Inte	ernet Explorer				
Eile Edit View Favorites Iools Help						
⇔Back • → • 🙆 👔 🚮 🔞 Search 👔 Favorites 🛞 Media 🍪 🖏 • 🎒						
Address 🗃 http://cm-klingon/CCMAdmin/gatewayconfig.asp?pkid={DF71136E-4975-482C-BDE6-C24A840B4ABC}&Status=US&Action= 🗹 🄗 Go 🛛 Links 🌺						
System Route Plan Service Feature Device User Application Help						
Cisco CallManager Administration						
Gateway Con	figuration	<u>Back to Find/I</u> Depend	<u>ency Records</u>			
	Product : Cisco Catalyst 6000 T1 V	/oIP Gateway				
	Gateway : S0/DS1-0@SDA0001C9					
	Device Protocol: Digital Access PR Registration: Registered with Cisc		54			
	IP Address: <u>172.20.32.112</u>					
	Status: Update completed.					
	Update Delete Reset Gatewa	У				
	Device Information	-	_			
	MAC Address*	0001C9D93A98				
	Description	SDA0001C9D93A98				
	Device Pool*	Default	•			
	Network Locale	United States	•			
	Media Resource Group List	<none></none>	-			
	Location	<none></none>	•			
	AAR Group	<none></none>	•			
	Load Information					
	Multilevel Precendence and Preen	nption (MLPP) Information				
	MLPP Domain (e.g., "0000FF")					
	MLPP Indication	Off	•			
	MLPP Preemption	Disabled	•			
	Interface Information		_			
	PRI Protocol Type*	-				
	Protocol Side*		-			
	Channel Selection Order*	Top Down				
	Channel IE Type*	Timeslot Number	•			
		ि जिल				
E Reset succeeded.			ocal intranet //			



🚰 Cisco CallManager 4.0 Administ	ration - Gateway Configuration - Microsoft Inte	ernet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ool			<b>10</b>
	🕽 Search 📓 Favorites 🎯 Media 🧭 🛃 🕇 🚑		
Address ) Address Address Address Address	min/gatewayconfig.asp?pkid={DF71136E-4975-4B2C-B	DE6-C24A840B4ABC}&Status=US&Action=	
	PCM Type*	µ-law  ▼	<b>_</b>
	Delay for first restart (1/8 sec ticks)	32	
	Delay between restarts (1/8 sec ticks)	4	
	Inhibit restarts at PRI initialization	n	
	🗹 Enable status poll		
	Call Routing Information		
	Inbound Calls		
	Significant Digits*	All	
	Calling Search Space	Incoming Trunk	
	AAR Calling Search Space	< None >	
	Prefix DN		
	Outbound Calls		
	Calling Line ID Presentation*	Default 🔽	
	Calling Party Selection*	Originator 🔹	
	Called party IE number type unknown*	National	
	Calling party IE number type unknown*	National	
	Called Numbering Plan*	ISDN 🔽	
	Calling Numbering Plan*	ISDN 🔽	
	Number of digits to strip*	0	
	Caller ID DN		
	SMDI Base Port*	0	
	PRI Protocol Type Specific Informa	tion	
	🗹 Display IE Delivery		
	🗵 Redirecting Number IE Delivery -	Outbound	
	🗖 Redirecting Number IE Delivery -	Inbound	
	🗹 Send Extra Leading Character In	DisplayIE***	
	🗖 Setup non-ISDN Progress Indicat	or IE Enable****	
<u>ا</u>			
🙆 Reset succeeded.		Local ir	ntranet //



🎒 Cisco CallManager 4.0 Administr	ation - Gateway Configuration - Microsoft Inte	ernet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools	: <u>H</u> elp		1
	ŞSearch 💽 Favorites 🧐 Media 🧭 🛃 + 🚑		
Address ) http://cm-klingon/CCMAdm	iin/gatewayconfig.asp?pkid={DF71136E-4975-4B2C-E	BDE6-C24A840B4ABC}&Status=U5&Action=	∂Go Links »
	MCDN Channel Number Extension	Bit Set to Zero**	<b>_</b>
	🗹 Send Calling Name In Facility IE		
	Interface Identifier Present**		
	Interface Identifier Value**	0	
	Connected Line ID Presentation (QSIG Inbound Call)*	Default	
	Connected PBX Model	None	
	Product Specific Configuration		i
	Clock Reference*	Network	
	TX-Level CSU*	0dB 💌	
	FDL Channel*	ATT 54016 🔹	
	Framing*	ESF	
	Audio Signal Adjustment into IP Network*	NoDbPadding	
	Audio Signal Adjustment from IP Network*	NoDbPadding	
	Yellow Alarm*	Bit2	
	Zero Suppression*	B8ZS 💌	
	Digit On Duration(50-500ms)*	100	
	Interdigit Duration(50-500msec)*	100	
	SNMP Community String	public	
	Disable SNMP Set operations*		
	Debug Port Enable*		
	Hold Tone Silence Duration*	0	
	Port Used for Voice Calls*		
	Port Used for Modem Calls*		
	Port Used for Fax Calls*		
	Fax and Modem Parameters	_	
	Fax Relay Enable*		
	Fax Error Correction Mode Override*		
<u>ا</u>	Maximum Fax Rate*	14400bps ▼	
🙆 Reset succeeded.		Local in	tranet //.



🔮 Cisco CallManager 4.0 Administr	ation - Gateway Configuration - Microsoft Inte	ernet Explorer	<u> </u>				
<u>File Edit View Favorites Tools</u>			<b>11</b>				
← Back • → · ③ ③ ④ ④ ◎ Search ⓐ Favorites ③ Media ④ ▷ • ④							
Address E http://cm-klingon/CCMAdm	iin/gatewayconfig.asp?pkid={DF71136E-4975-4B2C-B	DE6-C24A840B4ABC}&Status=US&Action=	Links »				
	Maximum Fax Rate*	14400bps	<b>_</b>				
	Fax Payload Size*	20					
	Non Standard Facilities Country Code*	65535					
	Non Standard Facilities Vendor Code*	65535					
	Fax/Modem Packet Redundancy*						
	NSE Type*	Non-IOS Gateways					
	Playout Delay Parameters						
	Initial Playout Delay*	40					
	Minimum Playout Delay*	20					
	Maximum Playout Delay*	150					
	Echo Canceller Configuration						
	Echo TailLength (ms)*	32 ms					
	Minimum ERL (db)*	6 db					
	* indicates required item ** applicable to DMS-100 protocol only *** applicable to DMS-100 protocol and DM **** may be required to force ringback fro						
		Back to Find/List Gatewa	iys				
•							
🙆 Reset succeeded.		Local intranet	1.				



## Enbloc Route Pattern Configuration

🚰 Cisco CallManager 4.0 Administration -	Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		
🖙 Back 🔹 🤿 🚽 🙆 Back 🔹	📾 Favorites 🛛 🖓 Media 🍏 🔂 🗸 🎒	
Address i http://cm-klingon/CCMAdmin/route	patternconfig.asp?pkid={89F5482D-22A8-4FEE-A402-C2E89728F18D}	Links »
Route Pattern/Hunt Pilot: 5X	xx	
Status: Ready Note: Any update to this Route Patter	n or Hunt Pilot automatically resets the associated gateway or Route/Hunt List	
Copy Update Delete		
Pattern Definition		
Route Pattern/Hunt Pilot*	5xxx	
Partition	< None >	
Description		
Numbering Plan*	North American Numbering Plan	
Route Filter	< None >	
MLPP Precedence	Default	
Gateway or Route/Hunt List*	S0/DS1-0@SDA0001C9D93A98	
Route Option	• Route this pattern	
	C Block this pattern - Not Selected -	
☑ Provide Outside Dial Tone	🗖 Allow Overlap Sending 🔲 Urgent Priority	
<b>Calling Party Transformations</b>	i de la companya de l	
🔲 Use Calling Party's Externa	l Phone Number Mask	
Calling Party Transform Mask		
Prefix Digits (Outgoing Calls)		
Calling Line ID Presentation	Default	
Calling Name Presentation	Default	
Connected Party Transformat	ions	
Connected Line ID Presentation	Default	
Connected Name Presentation	Default	
<b>Called Party Transformations</b>		
Discard Digits	< None >	
Called Party Transform Mask		
Prefix Digits (Outgoing Calls)		
ISDN Network-Specific Faciliti	es Information Element	
Carrier Identification Code		
Network Service Protocol	- Not Selected -	
Network Service	Service Parameter Name Service Parameter Value	
- Not Selected -	▼ <notexist></notexist>	
S Done	Local intranet	



## Translation Pattern for Incoming PSTN Calls

🖉 Cisco CallManager 4.0 Administration - 1	Translation Pattern Configuration - Microsoft Internet Explorer	
<u>File E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools <u>H</u> elp		1
⇔ Back → → ✓ 🙆 🛃 🔞 Search		
Address Address Address Address Address Address	ationconfig.asp?pkid={A3066907-2F1B-4A87-B787-F4C7FB5B1D61}	Links »
Translation Patte	ern Configuration	<b>_</b>
	Add a New Translation Patt	
Translation Pattern: 527.XXX	Back to Find/List Translation Patte	rns
Status: Ready	A	
Copy Update Delete		
Pattern Definition		
Translation Pattern	527.XXXX	
Partition	Incoming Trunk	
Description		
Numbering Plan*	North American Numbering Plan	
Route Filter	None >	
Calling Search Space	Phones	
MLPP Precedence	Default	
Route Option	© Route this pattern	
	C Block this pattern - Not Selected -	
Provide Outside Dial Tone		
Calling Party Transformations		
🗖 Use Calling Party's External	Phone Number Mask	
Calling Party Transform Mask		
Prefix Digits (Outgoing Calls)		
Calling Line ID Presentation	Default	
Calling Name Presentation	Default	
Connected Party Transformat	ions	
Connected Line ID Presentation	Default	
Connected Name Presentation	Default 💌	
<b>Called Party Transformations</b>		
Discard Digits	PreDot 💌	
Called Party Transform Mask		
Prefix Digits (Outgoing Calls)		
* indicates required item.		
		_ <b>_</b>
Done Done	🛛 🗍 🗮 Local intranet	



# PSTN Route Pattern Configuration

Cisco CallManager 4.0 Administration -	Route Pattern/Hunt Pilot Configuration - Microsoft Internet Explorer
Eile Edit View Favorites Tools Help	
🗢 Back 🔹 🤿 🗸 🙆 🖓 Search	📾 Favorites 🚳 Media 🧭 🖏 - 🎒
Address 🚳 http://cm-klingon/CCMAdmin/route	patternconfig.asp?pkid={D711DDCC-3043-4089-8FC9-9B9B101B6FC0}
Route Pattern/Hunt Pilot: 9.6	550XXXXXXX
Status: Ready Note: Any update to this Route Patter	m or Hunt Pilot automatically resets the associated gateway or Route/Hunt List
Copy Update Delete	
Pattern Definition	
Route Pattern/Hunt Pilot*	9.650
Partition	< None >
Description	
Numbering Plan*	North American Numbering Plan
Route Filter	< None >
MLPP Precedence	Default
Gateway or Route/Hunt List*	S0/DS1-0@SDA0001C9D93A98 🔽 (Edit)
Route Option	Route this pattern
	C Block this pattern Not Selected —
Provide Outside Dial Tone	🗖 Allow Overlap Sending 🔲 Urgent Priority
Calling Party Transformations	
🔲 🔲 Use Calling Party's Externa	Phone Number Mask
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	527
Calling Line ID Presentation	Default
Calling Name Presentation	Default
Connected Party Transformat	ions
Connected Line ID Presentation	Default 💌
Connected Name Presentation	Default
Called Party Transformations	
Discard Digits	PreDot
Called Party Transform Mask	
Prefix Digits (Outgoing Calls)	
ISDN Network-Specific Faciliti	ies Information Element
Carrier Identification Code	
Network Service Protocol	- Not Selected -
Network Service	Service Parameter Name Service Parameter Value
Not Selected —	Not Exist >
E Done	Cocal intranet



## 7960 IP Phone Configuration

ss 🙆 http://cm-klingon/CCM	Admin/phoneconfig.asp?pkid={23EE0A3	5-0B85-42D6-8B13-18D674D3F	=2CE} €Go   L
A LA P			
			<u>Add a new phon</u> Add/Update Speed Dial
hone Confi	guration		Subscribe/Unsubscribe Service
			<u>Dependency Record</u> Back to Find/List Phone
)irectory Numbers	Phone: SEP000B5FD22FE		
ase Phone	Registration: Registered IP Address: 172.20.32.10		ger 172.20.32.254
7712 Line 1 - 4000 in Phones	Status: Ready	_	
The 2 - Add new DN	Copy Update Delete	Reset Phone	
	Phone Configuration (Mod	lel = Cisco 7960)	
	Device Information		_
	MAC Address*	000B5FD22FE8	
	Description	Auto 4000	
	Owner User ID		(Select User ID)
	Device Pool*	Default	🔽 ( <u>View details</u> )
	Calling Search Space	< None >	
	AAR Calling Search Space	< None >	•
	Media Resource Group List	< None >	•
	User Hold Audio Source	< None >	
	Network Hold Audio Source	< None >	
	Location	< None >	•
	User Locale	< None >	•
	Network Locale	< None >	•
	Device Security Mode	Use System Default	¥
	Built In Bridge	Default	•
	Privacy	Default	•
	Phone Button Template I	nformation	
	Phone Button Template*	Standard 7960	( <u>View button list</u> )
	Softkey Template Inform	ation	
	Softkey Template	< None >	•
	Expansion Module Inform	ation	
	Module 1	< None >	
	Module 2	< None >	

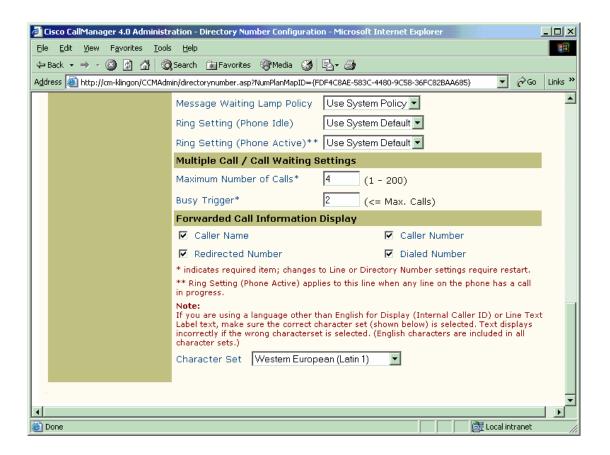


Cisco CallManage	r 4.0 Admin	istration - Phone Configuration - Mic	rosoft Internet Explorer		
<u>File E</u> dit <u>V</u> iew F	F <u>a</u> vorites <u>T</u> e	ools <u>H</u> elp			
🕀 Back 🔹 🔿 👻 🙆	) 🖸 🖄 🛛	🖓 Search 🛛 🙀 Favorites 🎯 Media 🕬	3 B- 4		
Address 🙆 http://cm	i-klingon/CCM/	Admin/phoneconfig.asp?pkid={23EE0A35-	DB85-42D6-8B13-18D674D3F2	CE} 💽	∂Go Links »
		Firmware Load Information	n (leave blank to use	e default)	
		Phone Load Name			
		Module 1 Load Name	(Mo	odule 1 selection requir	ed)
		Module 2 Load Name	(Mo	odule 2 selection requir	ed)
		Cisco IP Phone - External I	)ata Locations (leav	e blank to use default	:)
		Information			
		Directory			
		Messages			
		Services			
		Authentication Server			
		Proxy Server			
		Idle			
		Idle Timer (seconds)			
		Extension Mobility (Device	Profile) Information	1	
		Enable Extension Mobility	Feature		
		Log Out Profile	- Not Selected -	•	
		Log In User ID	< None >		
		Log In Time	< None >		
		Log Out Time Multilevel Precendence and	< None > d Procomption (MLPP)	) Information	
		MLPP Domain		-	
			e.g., "0000	IFF")	
		MLPP Indication	Default		
		MLPP Preemption	Default	<b>•</b>	
		Product Specific Configurat	tion		
		Disable Speakerphone			
		Disable Speakerphone and He	adset 🗖		
		Forwarding Delay*	Disabled		
		PC Port*	Enabled	•	
		Settings Access*	Enabled	•	
		Gratuitous ARP*	Enabled		
•		PC Voice VLAN Access*	Enabled		
					ranet /
				) ) jega osodnike	111



🚰 Cisco CallManager 4.0 Administi	ation - Directo	ry Number Configurati	on - Microsoft Inte	ernet Explorer		
<u>File Edit View Favorites Tools</u>						
		vorites 🎯 Media 🏼 🏵				
Address E http://cm-klingon/CCMAdn	nin/directorynumb	er.asp?NumPlanMapID={{	DF4C8AE-583C-448	D-9C58-36FC82BAA6	i85} <u>▼</u> ∂Go	Links »
Directory Nu	mher (	Configurat	tion <sup>c</sup>	onfigure Device	e (SEP000B5FD22	
Directory Hu		onngara			Dependency Rec	ords
Associated With	Directory (	Number: 4000 (P	hones)			
SEP000B5FD22FE8 7960 (Line 1)	Status: Read Note: Any up	ly date to this Directory	Number automati	cally resets the a:	ssociated devices	
	Update	Remove from D	evice A	eset Devices	1	
	Directory (	Number				
	Directory N	umber*	4000			
	Partition		Phones	•		
	Directory (	Number Settings				
	Voice Mail F	Profile	< None >		e 115	
	Calling Sea	ch Space	(Choose <	None> to use di	efault)	
		on space	<pre>None &gt; •</pre>	1		
	AAR Group	udio Source	< None > •	1		
		Id Audio Source	< None > •	1		
	Auto Answe		Auto Answe	J vr Off	•	
		rd and Pickup Set				
	Guiltonna	•	l Destination	Calling Sear	ch Space	
	Forward All			< None >	•	
	Forward Bu	sy 🗖		< None >	•	
	Forward No	Answer 🗖		< None >	•	
	No Answer	Ring Duration	(seco	onds)		
	Call Pickup	Group	< None > -	<i>,</i>		
	MLPP Alter	nate Party Settin	gs			
	Target (De:	stination)				
	Calling Sea	rch Space	< None >	•		
	No Answer	Ring Duration	(seco	onds)		
	Line Settir	igs for this Device	)			
	Display (Int	ernal Caller ID)	JOHN DOE			
	Line Text L	abel				
	External Ph	one Number Mask				-
E Done					🔠 Local intranet	11.





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