HMP IP Interoperability Test Result with Cisco 2611XM, Cisco AS5400, Cisco CallManager 3.3(2) and Cisco CallManager 4.0

Spreadsheet for *Intel® NetStructure™ Host Media Processing Software: Interoperability Test with Cisco 2611XM Router, Cisco AS5400, Cisco CallManager 3.3(2), and Cisco 79xxG IP Phones*

HMP IP Interoperabilty Test Result with Cisco 2611XM, Cisco AS5400, Cisco CallManager 3.3(2) and Cisco CallManager 4.0(2)

3-Feb-05

All the test cases are implemented based on HMP IP Media Server Building Blocks PRD (SYS-PR-195). For the detail of the test descriptions and setups, please reference Intel® NetStructure™ HMP Interoperability Test with Cisco 2611XM Router, Cisco AS5400 Media Gateway, Cisco CallManager 3.3(2), Cisco CallManager 4.0(2) and Cisco 79XXG IP Phones Test Design Specification (TDS).

HMP Version: HMP r1.1 SU#10,
SU#13(for testing SIP blind/supervised transfer)
SU#16(for CCM 4.0 test cases)

Cisco 2611XM IOS Version: 12.3(8)T5
Cisco AS5400 IOS Version: 12.3(8)T5
Cisco CallManager 3.3 Version: 3.3(2)es63
Cisco CallManager 4.0 Version: 4.0(2)a

Legend

	Configuration isn't specified in PRD or suitable for the test scenario or doesn't contain the testing equipment specified in the test case.
P	Test Pass
F	Test Failed or test failed in some setup.
P	Test Pass in the HMP supported features
D	Test defer due to some features are not supported in the HMP
–	Test is invalid or some features are not supported in the 3rd party equipment
	Test is not yet executed

Configurations with WAN (currently do not have resource to setup)

Cisco 7905G H.323 Phones ‹› WAN ‹› **Cisco 2611XM** ‹› LAN ‹› HMP
Cisco 7905G H.323 Phones ‹› WAN ‹› **Cisco 2611XM** ‹› Legacy PBX ‹› **PIMG** ‹› LAN ‹› HMP
Cisco 7960G SIP Phones ↔ WAN ↔ **Cisco 2611XM** ↔ Legacy PBX ↔ **PIMG** ↔ LAN ↔ HMP
HMP ↔ LAN ↔ **Cisco 2611XM** ↔ WAN ↔ Cisco 7905G H.323 Phones
HMP ‹› LAN ‹› PIMG ‹› Legacy PBX ‹› **Cisco 2611XM** ‹› WAN ‹› Cisco 7905G H.323 Phones
HMP ‹› LAN ‹› **Cisco CallManager 4.0(2)** ‹› WAN ‹› Cisco 7960G SCCP IP Phones

Configurations currently can be setup and tested

1. Cisco 79xxG IP Phones ‹› LAN ‹› **Cisco 2611XM** ‹› PSTN ‹› **Cisco 2611XM** ‹› LAN ‹› HMP
2. Cisco 7912G SIP Phones ‹› LAN ‹› **Cisco 2611XM** ‹› LAN ‹› HMP
3. Analog phones ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
4. Analog phones ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ **Cisco CallManager 4.0(2)** ↔ LAN ↔ HMP
5. Analog Phone ‹› PSTN ‹› **Cisco 2611XM** ‹› LAN ‹› HMP MS
6. HMP ‹› LAN ‹› **Cisco 2611XM** ‹› PSTN ‹› **Cisco 2611XM** ‹› Cisco 79xxG IP phones
7. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ LAN ↔ Cisco 7912G SIP Phones
8. HMP ↔ LAN ↔ **CallManager 3.3(2)** ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog phones
9. HMP ‹› LAN ‹› **CallManager 4.0(2)** ‹› LAN ‹› **Cisco 2611XM** ‹› PSTN ‹› Analog phones
10. HMP ‹› LAN ‹› **Cisco 2611XM** ‹› PSTN ‹› Analog Phone
11. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog FAX
12. Analog Phone ↔ Legacy PBX ↔ **Cisco AS5400** ↔ LAN ↔ HMP
13. HMP ‹› LAN ‹› **Cisco AS5400** ‹› Legacy PBX ‹› Analog phone
14. HMP ‹› LAN ‹› **Cisco AS5400** ‹› Legacy PBX ‹› Analog FAX
15. Cisco 7960G SCCP IP Phones ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
16. Cisco 7905G H.323 Phones ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
17. Cisco 7960G SCCP IP Phones ‹› LAN ‹› **Cisco CallManager 4.0(2)** ‹› LAN ‹› HMP
18. Cisco 7960G SIP Phones ‹› LAN ‹› Cisco CallManager 4.0(2) ‹› LAN ‹› HMP
19. **Cisco 2611XM** ↔ LAN ↔ HMP

H.323 on Cisco 2611XM, Cisco AS5400, Cisco CallManager 3.3(2) and Cisco CallManager 4.0(2)

Use Case Category	Scenarios	Test Case ID	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Initialization/ Shutdown	Perform Gatekeeper discovery on Cisco 2611XM IOS Gatekeeper	TC1	P																		
	Perform registration with Cisco 2611XM IOS Gatekeeper using E.164 prefix	TC2	P																		
	Change registration information with Cisco 2611XM IOS Gatekeeper	TC3	P																		
	Cancel Registration with Cisco 2611XM IOS Gatekeeper	TC4	P																		
Handle incoming call from Cisco 79xxG IP Phones	Connect multiple simultaneous incoming H.323 calls from Cisco 79xxG IP Phones using symmetric coders.	TC5																			P
	Connect multiple simultaneous incoming H.323 call from Cisco 79xxG IP Phones using asymmetric coders	TC6																			F
	Connect multiple simultaneous incoming H.323 call from Cisco 79xxG IP Phones using slow start procedure, H.245 tunneling disabled.	TC7																			P
	Connect multiple simultaneous incoming H.323 call from Cisco 79xxG IP Phones using slow start procedure, H.245 tunneling enabled.	TC8																			P
	Connect multiple simultaneous incoming H.323 call from Cisco 79xxG IP Phones using fast connect procedure, H.245 tunneling disabled.	TC9																			P
	Connect multiple simultaneous incoming H.323 call from Cisco 79xxG IP Phones using fast connect procedure, H.245 tunneling enabled.	TC10																			P
	Connect multiple simultaneous incoming calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using symmetric coders using symmetric coders.	TC63				P															
	Connect multiple simultaneous incoming calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using symmetric coders using asymmetric coders.	TC64				F															
	Place multiple, simultaneous calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using slow start procedure, H.245 tunneling disabled.	TC65				P															
	Connect multiple simultaneous incoming calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using slow start procedure, H.245 tunneling enabled.	TC66				–															
	Connect multiple simultaneous incoming calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using fast connect procedure, H.245 tunneling disabled.	TC67				–															
	Connect multiple simultaneous incoming calls from Cisco 7960G SCCP IP Phones via Cisco CallManager x.x(x) session controller using fast connect procedure, H.245 tunneling enabled.	TC68				–															
	Connect multiple simultaneous incoming calls from Cisco 7905G H.323 Phones via Cisco CallManager 3.3(2) session controller	TC69				P															
	Retrieve the call party information from the SETUP message for an incoming call arriving from a Cisco 7960G SCCP IP Phone and Cisco 7905G H.323 Phone via a Cisco Call Manager x.x(x) session controller.	TC70				P	P														
Handle incoming call from analog phone connected to Cisco 2611XM.	Connect multiple simultaneous incoming calls from analog phone connected to Cisco 2611XM.	TC11														P		P			
Process DTMF input	Perform In-band DTMF detection	TC12							P							P		P		P	
	Perform H.245 UII DTMF detection	TC13							P							P		P		P	
	Perform RFC2833 DTMF detection	TC58														P		P		F	
	Perform In-band DTMF detection with Cisco CallManager x.x(x)	TC71				P	P	P													
	Perform H.245 UII DTMF detection with Cisco CallManager x.x(x)	TC72				P	P	P													
	Perform RFC2833 DTMF detection with Cisco CallManager x.x(x)	TC73				P	P	P													
Make an outgoing call to an Cisco 29xxG IP Phones	Place multiple simultaneous H.323 calls to Cisco 79xxG IP Phones using symmetric coders.	TC14													P						
	Place multiple simultaneous H.323 calls to Cisco 79xxG IP Phones using asymmetric coders	TC15													F						
	Place multiple, simultaneous H.323 calls to Cisco 79xxG IP Phones using slow start procedure, H.245 tunneling disabled.	TC16													P						
	Place multiple, simultaneous H.323 calls to Cisco 79xxG IP Phones using slow start procedure, H.245 tunneling enabled.	TC17													P						
	Place multiple, simultaneous H.323 calls to Cisco 79xxG IP Phones using fast start procedure, H.245 tunneling disabled.	TC18													P						
	Place multiple, simultaneous H.323 calls to Cisco 79xxG IP Phones using fast start procedure, H.245 tunneling enabled.	TC19													P						
	Process call failure: called party does not answer.	TC21										P		P	–						
	Process call failure: called party is busy.	TC22										F		P	–						
	Process call failure: capability not supported by Cisco 79xxG IP Phone	TC23													–						
Make an outgoing call to an analog Phone connected to Cisco 2611XM and perform call progress analysis.	Place a H.323 calls to an analog phone connected to Cisco 2611XM.	TC20										P		P							
Make an outgoing call to an analog Phone connected to Cisco AS5400	Place a H.323 call to an analog phone connected to Cisco AS5400 via a Legacy PBX.	TC56								P											
Handle incoming call from an analog phone connected to Cisco AS5400	Connect multiple simultaneous incoming H.323 calls from analog phone connected to Cisco AS5400 via a Legacy PBX.	TC54								P											
Send/Receive T.38 fax over IP using H.323 to setup the call.	Send T.38 fax in an established voice call.	TC29							P		P										
	Receive T.38 fax in an established audio session.	TC30							P		P										
	Receive T.38 fax without an established audio session.	TC31							F		F										
	Send T.38 fax without an established voice call.	TC32							F		F										
Hold/Retrieve	Verify a connected H.323 call between HMP-based IP Media Server and a Cisco 79xxG IP phones can be put on hold and retrieved using Cisco 79xxG IP phones' Hold/Retrieve keys.	TC24																			D
Bridge calls	Bridge two H.323 calls that use different coders	TC33																			–
Transfer	Perform a blind transfer to another H.323 phone via a gatekeeper-model or direct-called model. HMP is the transferring endpoint.	TC25																			P
	Perform a supervised transfer to another H.323 phone via a gatekeeper-model or direct-called model. HMP is the transferring endpoint.	TC26																			F
	Participate a blind transfer to another H.323 phone via a gatekeeper-model or direct-called model. HMP is the transferred endpoint.	TC27																			–
	Participate a supervised transfer to another H.323 phone via a gatekeeper-model or direct-called model. HMP is the transferred endpoint.	TC28																			–
	Perform a blind transfer to another analog phone. HMP is the transferring endpoint via Cisco AS5400.	TC59								P											
	Perform a supervised transfer to another analog phone. HMP is the transferring endpoint via Cisco AS5400.	TC60								F											

Cisco TAC supprot #	Issue description	Status	Comments
600773920	Cisco 2611XM was unable to accept asymmetric codec setup.	Closed	Cisco 2611XM, AS5400, CM3.3 do not support asymmetric codc based on the Cisco TAC answer
600761051	Cisco AS5400 & 2611XM was unable to send/receive T.38 fax without an established voice session.	Closed	Cisco 2611XM, AS5400 do not support send/receive T.38 without an established voice session based on the Cisco TAC answer
600773920	Cisco 2611XM and AS5400 is unable to use g.729a/ab. When attempting to establish a call using g.729a, these products select g.729 as the codec match instead	Closed	Cisco 2611XM and AS5400 does follow the G.729 standard and the standard allows G.729a/ab talks to G.729. The issue has been taking a look in HMP.

PTR #	Issue description	Status	Comments

HMP IP Interoperabilty Test Result with Cisco 2611XM, Cisco AS5400, Cisco CallManager 3.3(2) and Cisco CallManager 4.0(2)

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HMP Version: HMP r1.1 SU#10
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SU#16(for CCM 4.0 test cases)

Cisco 2611XM IOS Version: 12.3(8)T5
Cisco AS5400 IOS Version: 12.3(8)T5
Cisco CallManager 3.3 Version: 3.3(2)es63
Cisco CallManager 4.0 Version: 4.0(2)a

Legend

	Configuration isn't specified in PRD or suitable for the test scenario or doesn't contain the testing equipment specified in the test case.
P	Test Pass
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Configurations with WAN (currently do not have resource to setup)

Cisco 7905G H.323 Phones ↔ WAN ↔ **Cisco 2611XM** ↔ LAN ↔ HMP
Cisco 7905G H.323 Phones ↔ WAN ↔ **Cisco 2611XM** ↔ Legacy PBX ↔ **PIMG** ↔ LAN ↔ HMP
Cisco 7960G SIP Phones ↔ WAN ↔ **Cisco 2611XM** ↔ Legacy PBX ↔ **PIMG** ↔ LAN ↔ HMP
HMP ↔ LAN ↔ **Cisco 2611XM** ↔ WAN ↔ Cisco 7905G H.323 Phones
HMP ↔ LAN ↔ PIMG ↔ Legacy PBX ↔ **Cisco 2611XM** ↔ WAN ↔ Cisco 7905G H.323 Phones
HMP ↔ LAN ↔ **Cisco CallManager 4.0(2)** ↔ WAN ↔ Cisco 7960G SCCP IP Phones

Configurations currently can be setup and tested

1. Cisco 79xxG IP Phones ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ HMP
2. Cisco 7912G SIP Phones ↔ LAN ↔ **Cisco 2611XM** ↔ LAN ↔ HMP
3. Analog phones ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
4. Analog phones ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ **Cisco CallManager 4.0(2)** ↔ LAN ↔ HMP
5. Analog Phone ↔ PSTN ↔ **Cisco 2611XM** ↔ LAN ↔ HMP MS
6. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ **Cisco 2611XM** ↔ Cisco 79xxG IP phones
7. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ LAN ↔ Cisco 7912G SIP Phones
8. HMP ↔ LAN ↔ **CallManager 3.3(2)** ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog phones
9. HMP ↔ LAN ↔ **CallManager 4.0(2)** ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog phones
10. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog Phone
11. HMP ↔ LAN ↔ **Cisco 2611XM** ↔ PSTN ↔ Analog FAX
12. Analog Phone ↔ Legacy PBX ↔ **Cisco AS5400** ↔ LAN ↔ HMP
13. HMP ↔ LAN ↔ **Cisco AS5400** ↔ Legacy PBX ↔ Analog phone
14. HMP ↔ LAN ↔ **Cisco AS5400** ↔ Legacy PBX ↔ Analog FAX
15. Cisco 7960G SCCP IP Phones ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
16. Cisco 7905G H.323 Phones ↔ LAN ↔ **Cisco CallManager 3.3(2)** ↔ LAN ↔ HMP
17. Cisco 7960G SCCP IP Phones ↔ LAN ↔ **Cisco CallManager 4.0(2)** ↔ LAN ↔ HMP
18. Cisco 7960G SIP Phones ↔ LAN ↔ Cisco CallManager 4.0(2) ↔ LAN ↔ HMP
19. **Cisco 2611XM** ↔ LAN ↔ HMP

SIP on Cisco 2611XM, Cisco AS5400 and Cisco CallManager 4.0(2)

Use Case Category	Scenarios	Test Case ID	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Handle incoming call from Cisco 79xxG SIP Phone	Connect multiple simultaneous incoming calls from Cisco 79xxG IP Phones using SIP.	TC34		P																P	P
	Switch coders using re-INVITE after call connected with Cisco 79xxG IP Phone.	TC35		D																D	D
Handle incoming SIP call from analog Phone connected to Cisco 2611XM	Connect multiple incoming calls from analog phones using SIP.	TC36															P	P			
	Switch coders using re-INVITE after call connected with analog phone.	TC37															D	D			
Handle incoming SIP call from analog phone connected to Cisco AS5400	Connect multiple incoming SIP calls from analog phones connected to Cisco AS5400.	TC55								P											
Make an outgoing call to an Cisco 79xxG SIP Phone	Place a SIP call to Cisco 79xxG IP Phone connected to Cisco 2611XM	TC38													D	P					
	Handle unsuccessful call to Cisco 79xxG IP Phones.	TC40													D	–					
Make an outgoing call to an Cisco 79xxG SIP Phone and perform call progress analysis	Place a call to Cisco 79xxG IP phone and perform call progress analysis on the in-band tones.	TC44													D	D					
Make an outgoing SIP call to an analog phone connected to Cisco 2611XM	Place a call to an analog phone connected to Cisco 2611XM	TC39											P	P							
Place a SIP call to an analog phone connected and perform call progress analysis	Place a call to an analog phone and perform call progress analysis on the in-band tones.	TC45											D	D							
Make an outgoing SIP call to an analog phone connected to Cisco AS5400	Place a SIP call to a analog phone connected to Cisco AS5400	TC57							F												
Process DTMF input	Perform In-band DTMF detection during SIP call	TC51		P																P	P
MWI	Activate message waiting indicator light of an Cisco 79xxG SIP Phone	TC42		–																D	
	Deactivate message waiting indicator light of an Cisco 79xxG SIP Phone	TC43		–																D	
Hold/Retrieve	Verify a connected SIP call between HMP-based IP Media Server and a Cisco 79xxG SIP Phone can be put on hold and retrieved using Cisco 79xxG Hold/Retrieve keys.	TC41		D																D	D
Bridge calls	Bridge and outgoing call with an incoming call using different coders (IP drop-and-insert)	TC50		–																–	–
Send/Receive T.38 fax over IP using SIP to setup the call.	Send T.38 fax with an established voice session	TC74					P				P										
	Receive T.38 fax with an established voice session	TC75					P				P										
	Send T.38 fax without an established voice session	TC52					F				F										
	Receive T.38 fax without an established voice session	TC53					F				F										
Transfer	Perform a REFER-based SIP blind transfer to another Cisco SIP phone	TC46		–																P	P
	Perform a REFER-based SIP supervised transfer to another Cisco SIP phone.	TC47		–																P	P
	Participate in a REFER-based SIP blind transfer as a transferred endpoint.	TC48		–																–	–
	Participate in a REFER-based SIP supervised transfer as a transferred endpoint.	TC49		–																–	–
	Perform a REFER-based SIP blind transfer to another analog phone via Cisco AS5400	TC61								P											
	Perform a REFER-based SIP supervised transfer to another phone via Cisco AS5400	TC62								P											

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