

# Busy Signal after Last Digit Dialed on H323 Incoming Call to Cisco CallManager with Missing Codec Statement

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## Introduction

This problem can be caused by the failure to configure a codec on the dial-peer for a device that places calls over the dial peer. In the example in this document, a device that requires g711ulaw attempts to make a call over a dial peer. The call fails and the caller hears a busy tone.

This first section of this document shows you the Cisco CallManager error message trace for this problem. The second section shows the configuration with a pointer to the missing command. The third section explains how to configure the **voice class codec** command in order to support multiple codecs on the same dial peer.

## Prerequisites

### Requirements

There are no specific requirements for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

### Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

## Cisco CallManager Trace

```
Cisco CallManager|H245Interface(30) - match capabilities failed
Cisco CallManager|AgenaInterface - ERROR
waitForMXCapabilitiesExchanged_MediaExchangeCapabilitiesIncoming -
match capabilities error
```

If you need help setting up traces for the TAC, refer to Setting up CallManager Traces for the TAC.

# Partial Router Configuration

```
!  
dial-peer voice 2000 voip  
  destination-pattern 2...  
  session target ipv4:10.10.10.10  
  dtmf-relay cisco-rtp h245-signal h245-alphanumeric  
  ip precedence 5  
!
```

**Note:** This configuration does not have the **codec g711ulaw** command under the dial-peer. By default, the dial-peer uses g729r8 compression. Any devices that do not use g729r8 compression are not able to complete the call.

In order to fix this, add the **codec g711ulaw** command under the dial-peer.

## Example for Setting up Multiple Codecs

In some cases it is necessary to support multiple codecs on a dial peer. Different regions or devices might use different codecs. For example, WAN connections between routers use g729, while Cisco Unity servers use g711 by default. If we know that a call must traverse regions that use different codecs or need to integrate devices that require different codecs, then we need to make sure the dial-peer supports multiple codecs. This section explains how to configure multiple codecs for one dial-peer.

```
Router#configure terminal  
Router(config)#voice class codec 99  
Router(config-class)#codec preference 1 g711ulaw  
Router(config-class)#codec preference 2 g729br8  
Router(config-class)#codec preference 3 g729r8  
Router(config-class)#end  
  
Router(config)#dial-peer voice 2000 voip  
Router(config-dial-peer)#voice-class codec 99  
Router(config-dial-peer)#^Z
```

When you invoke the parser help when you enter codecs under the voice-class, it shows a list of the codecs supported by your router.

```
AV-3640-1(config-class)#codec preference 3 ?  
clear-channel  Clear Channel 64000 bps  
g711alaw        G.711 A Law 64000 bps  
g711ulaw        G.711 u Law 64000 bps  
g723ar53        G.723.1 ANNEX-A 5300 bps  
g723ar63        G.723.1 ANNEX-A 6300 bps  
g723r53         G.723.1 5300 bps  
g723r63         G.723.1 6300 bps  
g726r16         G.726 16000 bps  
g726r24         G.726 24000 bps  
g726r32         G.726 32000 bps  
g728            G.728 16000 bps  
g729br8         G.729 ANNEX-B 8000 bps  
g729r8          G.729 8000 bps  
gsmeifr         GSMEFR 12200 bps  
gsmfr           GSMFR 13200 bps
```

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## Related Information

- **Unity Installation and Troubleshooting: G.729a Codec**
  - **VoIP – Understanding Codecs: Complexity, Support, MOS, and Negotiation**
  - **Voice Technology Support**
  - **Voice and Unified Communications Product Support**
  - **Recommended Reading: Troubleshooting Cisco IP Telephony**
  - **Technical Support & Documentation – Cisco Systems**
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