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# Ribbon Core SBC Migration From Non-Media Bypass To Media Bypass For MS Teams

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## Document Overview

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This document provides a configuration guide for Ribbon SBC Core (5000/7000/SWe) series for migrating the Teams' users from Non-Media Bypass to Media Pass.

- For additional information on Microsoft Teams, refer to <https://docs.microsoft.com/en-in/MicrosoftTeams/Microsoft-Teams>
- For additional information on Ribbon SBC, refer to <https://ribboncommunications.com/>

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## Introduction

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This document is intended for customers planning to migrate from a Non-Media Bypass to a Media Bypass on MS Teams. This document provides configuration steps required on both MS Teams and Ribbon SBC.

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## Configuration Required On MS Teams

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### Create a new PSTN gateway on MS Teams

Create a gateway with a different FQDN and SBC listening port number.

**Figure 1:** Gateway Creation

```

PS C:\Windows\system32> Get-CsOnlinePSTNGateway -Identity Ribbon1.interopdomain.com

Identity           : ribbon1.interopdomain.com
Fqdn               : ribbon1.interopdomain.com
SipSignallingPort  : 5065
FailoverTimeSeconds : 10
ForwardCallHistory : True
ForwardPai        : True
SendSipOptions    : True
MaxConcurrentSessions : 500
Enabled           : True
MediaBypass       : True
GatewaySiteId     :
GatewaySiteLbrEnabled : False
FailoverResponseCodes : 408,503,504

```

## Create DNS Record

Create a DNS record and point the new gateway to the same public IP address of the old gateway.

Figure 2: DNS Record

A	ribbon	115.110.225.90
A	ribbon1	115.110.225.90

## Create a new PSTN Usage

Figure 3: PSTN Usage

```

PS C:\>
PS C:\> Set-CsOnlinePstnUsage -Identity Global -Usage @{Add="MediaBypass_Test"}
PS C:\>
PS C:\>

```

## Create a new Voice Route

Figure 4: Voice Routing

```

PS C:\Users>
PS C:\Users> New-CsOnlineVoiceRoute -Identity "Ribbon1-MediaBypass" -NumberPattern "\+1(965211)(\d{4})$"
-OnlinePstnUsage "MediaBypass_Test" -OnlinePstnGatewayList "Ribbon1.interopdomain.com" -Priority 1

```

Figure 5: Online Voice Route

```

Identity           : Ribbon1-Mediabypass
Priority           : 1
Description       :
NumberPattern     : ^\+91(965211)(\d{4})$
OnlinePstnUsages  : {MediaBypass_Test}
OnlinePstnGatewayList : {Ribbon1.interopdomain.com}
Name              : Ribbon1-Mediabypass

```

## Create a new Voice Routing Policy

Create a new voice routing policy and associate the new PSTN Usage to it.

**Figure 6:** New Voice Route Policy

```
PS C:\> New-CsOnlineVoiceRoutingPolicy "Ribbon-MediaBypass-Policy" -OnlinePstnUsages MediaBypass_Test

Identity      : Tag:Ribbon-MediaBypass-Policy
OnlinePstnUsages : {MediaBypass_Test}
Description   :
RouteType    : BYOT
```

## Grant the Voice Routing Policy to the user

Associate the new voice routing policy to the migrating user.

**Figure 7:** Grant Voice Routing Policy to User

```
PS C:\>
PS C:\> Grant-CsOnlineVoiceRoutingPolicy -PolicyName "Ribbon-MediaBypass-Policy" -Identity testuser2@interopdomain.com
PS C:\>
PS C:\> Get-CsOnlineUser "Test user2" | select onlineVoiceRoutingPolicy

OnlineVoiceRoutingPolicy
-----
Ribbon-MediaBypass-Policy
```

## Configuration Required on Ribbon Core SBC

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### Create a New Zone and SIP Signaling Port

The new zone can have the same IP address as the previous zone, but not the same port number. If required, change the port number.

Perform one of the following actions:

- If using a wildcard certificate, attach the previous TLS profile to the SIP Signaling Port.
- Generate a new certificate and attach it to the SIP Signaling Port.

**Figure 8:** New sipSigPort

```
admin@IOTFY06% show addressContext default zone TEAMS_ZONE_MediaBypass sipSigPort
sipSigPort 5 {
  ipInterfaceGroupName    LIF2;
  ipAddressV4             115.110.225.90;
  portNumber              5064;
  mode                    inService;
  state                   enabled;
  tlsProfileName          TLS_PROF;
  transportProtocolsAllowed sip-udp, sip-tcp, sip-tls-tcp;
}
```

### Create a new Packet Service Profile (PSP)

Enable RTCP Mux for the PSP. This flag is required for the Media bypass.

```

set profiles media packetServiceProfile TEAMS_PSP_MediaBypass
set profiles media packetServiceProfile TEAMS_PSP_MediaBypass codec codecEntry1 G711-default
set profiles media packetServiceProfile TEAMS_PSP_MediaBypass rtcpOptions rtcp enable
set profiles media packetServiceProfile TEAMS_PSP_MediaBypass preferredRtpPayloadTypeForDtmfRelay
101
set profiles media packetServiceProfile TEAMS_PSP_MediaBypass silenceInsertionDescriptor
g711SidRtpPayloadType 13 heartbeat enable
set profiles media packetServiceProfile TEAMS_PSP_MediaBypass rtcpOptions rtcpMux enable
commit

```

## Create a new Trunk group

Configure fields for ICE-Lite. This is required for the Media Bypass.

```

set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON media
mediaIpInterfaceGroupName LIF2
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON signaling
honorMaddrParam enabled
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON policy
media packetServiceProfile TEAMS_PSP_MediaBypass
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON policy
signaling ipSignalingProfile TEAMS_IPSP
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON
downstreamForkingSupport enabled
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON services
natTraversal iceSupport iceWebrtc
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON signaling
rell00Support enabled
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON services
dnsSupportType a-only
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON
ingressIpPrefix 52.114.0.0 16
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON signaling
relayNonInviteRequest enabled
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON signaling
methods notify allow
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON policy
media toneAndAnnouncementProfile LRBT_PROF
set addressContext default zone TEAMS_ZONE_MediaBypass sipTrunkGroup TEAMS_MEDIABYPASS_ON mode
inService state enabled
commit

```

## Create an IP-Peer for Media Bypass Zone

Enter a globally unique name for the IP Peer.

```

set addressContext default zone TEAMS_ZONE_MediaBypass ipPeer TEAMS_MEDIABYPASS_IPP policy sip fqdn
sip.pstnhub.microsoft.com fqdnPort 5060

```

## Creating a Routing Label Route

```
set global callRouting routingLabel MEDIABYPASS_RL routingLabelRoute 1 trunkGroup
TEAMS_MEDIABYPASS_ON ipPeer TEAMS_MEDIABYPASS_IPP inService inService
commit
```

## Creating Route

Create a number base routing on SBC towards MS Teams.

```
set global callRouting route none Sonus_NULL Sonus_NULL standard 2413331000 1 all all ALL none
Sonus_NULL routingLabel MEDIABYPASS_RL

set global callRouting route trunkGroup TEAMS_MEDIABYPASS_ON PTFY06 username Sonus_NULL 1 all all
ALL none SIP.PSTNHUB.MICROSOFT.COM routingLabel MEDIABYPASS_RL

set global callRouting route trunkGroup TEAMS_MEDIABYPASS_ON PTFY06 standard Sonus_NULL 1 all all
ALL none Ribbon1.interopdomain.com routingLabel PSTN_RL
```

## Conclusion

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These Application Notes describe the configuration steps required for Ribbon SBC Core Series to successfully migrate from Non-Media Bypass to Media Bypass. All feature and serviceability test cases were completed.