



# MS TEAMS

## Self-Deployment Process

*Quick Reference Guide*

**MOMENTUM**

T E L E C O M

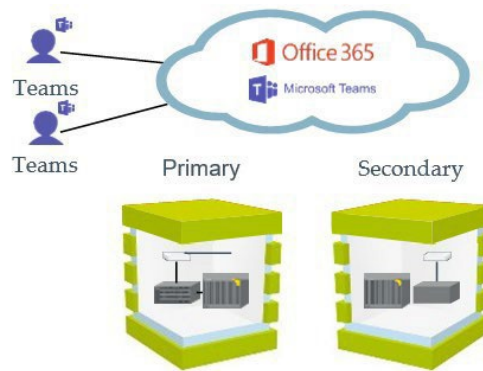
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## Overview

Momentum Telecom offers MS Teams™ / phone system integrations that can be completed quite quickly. This document provides an *overview* of the MS Teams customer or third-party vendor task requirements in preparation for deployment, options for completing the deployment process, and offers useful setup and management task instructions.

### MOMENTUM WITH MICROSOFT TEAMS

Momentum’s unique architecture allows you to take advantage of Microsoft Teams *and* fully integrate into the Momentum voice platform so that your users get the amazing collaborative benefits of Microsoft Teams, plus the UC Enterprise features that just are not available with Microsoft Teams alone. These UCaaS features include Call Center, Auto Attendants, Hunt Groups, Call Recording, and much more, providing a solution that really works for you.

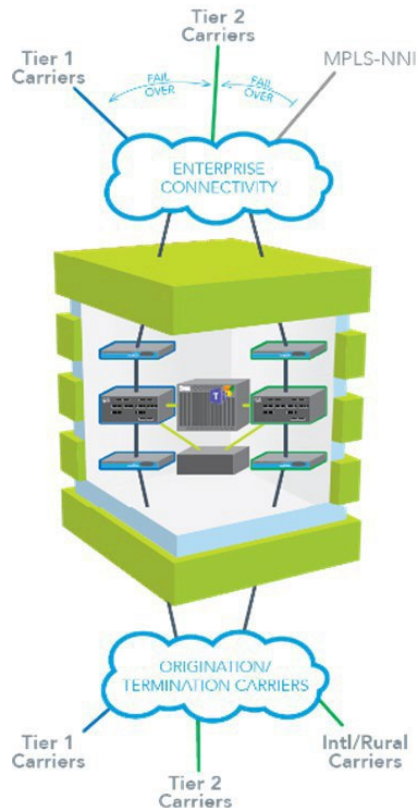


Momentum’s Philadelphia Data Center

Momentum’s Atlanta Data Center

### MOMENTUM'S REDUNDANT NETWORK

Momentum's redundant, high availability, multi-tenant infrastructure offers the secure and flexible solution your business requires... It is next level + reliability.



## Deployment Options

Momentum Telecom offers two \*options for Momentum + \*\*MS Teams deployments:

### Option 1. Integrated Self-Service Deployment

Customers have the option to choose the integrated self-service deployment process where the customer's staff completes all required license procurement, setup, and assignment preparation tasks (reference the [Deployment Steps](#)), provides Momentum Telecom project team with the information needed to turn up the tenant and make back-end preparations to allow the customer's MS Office 365/MS Teams Administrators to perform the remaining setup, scripting, and management tasks for Teams deployment. Project Management, assistance, and task instructions are provided (see below).

### Option 2. Momentum Professional Services Assisted Deployment

With this option, customers may take advantage of Momentum's experts for assistance in completing the final steps to deploy. The customer first completes all required license procurement, setup, and user assignment preparation tasks in their Teams account, and provides the information needed to turn up the tenant along with the Administrator-level credentials for access to their Microsoft Office 365 (and related customer accounts and services) to the Momentum Telecom Professionals who will then ensure work is completed for the remaining deployment tasks. This option is perfect for customers who wish to have Momentum Telecom Professionals perform the PowerShell scripting tasks required to complete the call routing deployment tasks, after which the customer will then resume maintenance and management of their Teams users and services.  
([Additional Fees Apply](#))

\* The tasks and deployment options are subject to change.

\*\* Please note that Momentum Telecom is not responsible for the provisioning or setup of Microsoft Teams-based services and features such as MS Teams Hunt Groups, MS Teams Auto Attendants, or MS Teams Calling Queues. [Visit this Helpful Link.](#)

## Deployment Steps

This section covers the basic steps, useful/relevant information, licensing requirement options, and the access required to set up and manage Direct Routing deployment with MS Teams:

Basic Deployment Steps	Customer Tasks	
	Option 1	Option 2
Procure / Assign Teams User Licenses	✓	✓
Setup O365 SBC Domains and Validate domain ownership	✓	✓
Create O365 Temporary Users	✓	✓
Provide Admin-level access credentials to PM for O365 accounts/services		✓
Setup Direct Routing (PowerShell)	✓	M
Enable Direct Routing for Users (PowerShell)	✓	M

### 1. Procure and Assign Proper Office 365 User Licenses

- a. The customer must purchase and assign all needed Office 365 user licenses and update their Momentum Telecom contact when complete. This step is required to be completed prior to enabling Direct Routing.

The customer must have one or more of the following O365 license levels for each user in place to enable Direct Routing.

- ❖ Microsoft 365 Business Basic + Teams Phone Standard
- ❖ Microsoft 365 Business Standard + Teams Phone Standard
- ❖ Microsoft 365 Business Premium + Teams Phone Standard
- ❖ Microsoft Apps for business + Teams Phone Standard
- ❖ Microsoft Apps for enterprise + Teams Phone Standard
- ❖ Microsoft 365 F1 + Teams Phone Standard
- ❖ Office 365 F1 + Teams Phone Standard
- ❖ Microsoft 365 and Office 365 Education A1 or A3 + Teams Phone Standard
- ❖ Microsoft 365 Nonprofit Business Basic + Teams Phone Standard
- ❖ Microsoft 365 Nonprofit Business Standard + Teams Phone Standard

The following licenses may be combined with either Teams Phone Standard or Phone System Licensing:

- ❖ Microsoft 365 and Office 365 Nonprofit E1, E3
- ❖ Office 365 E1
- ❖ Office 365 E3
- ❖ O365 E5 or A5 Licensing is a stand-alone license that is Routing ready.  
(No Teams Phone Standard add-on license needed)

**Note:** All Microsoft licenses must be purchased through a certified Microsoft CSP. Existing Business Voice customers will be able to continue using their Business Voice licenses until the date their subscription expires, and at the time of renewal, can select from the new Teams Phone Standard Add-On or renew their Business Voice subscription for one additional term until June 30, 2022.

For additional licensing resources and further details on the Teams Phone Standard please visit this [Helpful Link](#).

- b. Notify your Momentum contact/PM when all user licenses for Teams have been assigned.



## 2. Set Up Office 365 SBC Domains

Task Time: +/- 60 minutes. Customer to add two (2) domains to their Office 365 Tenant and validate once Momentum notifies the system is ready. Momentum will use these domains as Fully Qualified Domain Names (FQDNs) for the Primary and Secondary SBCs.

- a. Customer must use the O365 **Add New Domain** setup wizard to add the two domains to their Office 365 Tenant.

The following Domain information format should be used:

- Primary SBC domain: [RPX\_ID]-ATL01.completeuc.com
- Secondary SBC domain: [RPX\_ID]-PHL01.completeuc.com

*Example: 308766235-ATL01.completeuc.com*

- b. Gather the TXT Record and TXT DNS Record Value to provide to Momentum.

*Example: TXT Record: 308766235-ATL01*

*TXT DNS Record Value: MS=ms57865131*

- c. Provide Momentum with the created DNS *subdomains* for the primary and secondary SBCs and the TXT DNS records. Momentum will setup the tenant and pair the primary and secondary SBCs to the Tenant and the DNS subdomains. Reference the information at this [Helpful Link](#)
- d. When Momentum provides the update, return to the **Add New Domain** setup wizard and **Validate** domain ownership.

## 3. Create Office 365 Temporary Users

Task Time: +/- 60 minutes. Once the setup for the Domains and Subdomains is completed by the Customer and Momentum provides notification that the Tenant and FQDNs have been created, the customer must create temporary users on each domain utilizing the domain as the host portion of their username:

- a. Create One (1) USER on the Office 365 account with Primary Domain as the host portion of the username and a valid license assignment.

*Example: tempuser1@308766235-ATL01.completeuc.com*

- b. Create One (1) USER on the Office 365 account with Secondary Domain as the host portion of their username and a valid license assignment.

*Example: tempuser1@308766235-PHL01.completeuc.com*

*Note: These temporary licenses can be unassigned or reassigned AFTER both SBCs are set up as gateways for Direct Routing.*

- c. Notify your Momentum Telecom contact/PM when complete.

At this time *Deployment Option 2* customers must also provide the Office 365 Administrator-level account access for *MS Teams (Service Admin)* and *Skype for Business (Admin)* to their Momentum Telecom contact. Note: These credentials are secured.

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### **WAIT 24 HOURS FOR REPLICATION ACROSS THE SYSTEM**

The gateways for Direct routing cannot be created until the temp users have been created and replication has completed.

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For Option 1 Integrated Self-Service Deployments, the customer will perform steps 4 - 7.

## 4. Set Up Direct Routing

Task Time: +/- 60 minutes. Use the following instructions and script examples to perform necessary tasks for Direct Routing deployment. Note: Items highlighted in red within the example scripts identify variables that (in most cases) will be replaced by customer-specific details. Should an error occur, please communicate with your Momentum contact and every effort will be made to assist.

- a. For customer that are new to Microsoft Teams, please download and Install the Teams PowerShell module from: <https://docs.microsoft.com/en-us/microsoftteams/teams-powershell-install>

For customers migrating from Skype for Business Online Connector to the Teams PowerShell module please download and install using this link: <https://docs.microsoft.com/en-us/microsoftteams/teams-powershell-move-from-sfbo>

- b. Connect to Skype for Business Online using PowerShell.

### Regular Deployment:

```
Import-Module MicrosoftTeams
$credential = Get-Credential
$Connect-MicrosoftTeams -Credential $credential -OverrideAdminDomain "customerDomain.onmicrosoft.com" Import-
PSession $sfbSession -AllowClobber
```

### Using Two-Factor Authentication:

```
Import-Module MicrosoftTeams
$sfbSession = Connect-MicrosoftTeams
Connect-MicrosoftTeams -Credential $credential
```

### For Hybrid Deployment:

Please use the **-OverrideAdminDomain** parameter with the default domain that was included with your Office 365 subscription.

```
Import-Module MicrosoftTeams
$credential = Get-Credential
$sfbSession = Connect-MicrosoftTeams -Credential $credential -OverrideAdminDomain
"customerDomain.onmicrosoft.com" Import-PSession $sfbSession -AllowClobber
```

- c. Pair Primary and Secondary SBCs to the Tenant.

```
New-CsOnlinePSTNGateway -Fqdn 308766235-ATL01.completeuc.com -SIPSignalingPort 5061 -MaxConcurrentSessions 1000
-ForwardCallHistory $true -Enabled $true
New-CsOnlinePSTNGateway -Fqdn 308766235-PHL01.completeuc.com -SIPSignalingPort 5061 -MaxConcurrentSessions 1000
-ForwardCallHistory $true -Enabled $true
```

- d. Create PSTN Usage.

```
Set-CsOnlinePstnUsage -Identity Global -Usage @{Add="Momentum-All"}
```

- e. Create Primary route to SBC in ATL and assign it to 'Momentum-All' PSTN Usage.

```
New-CsOnlineVoiceRoute -Identity "ATL-All" -NumberPattern "." -OnlinePstnGatewayList 308766235-
ATL01.completeuc.com -Priority 1 -OnlinePstnUsages "Momentum-All"
```

- f. Create Secondary route to SBC in PHL and assign it to 'Momentum-All' PSTN Usage.

```
New-CsOnlineVoiceRoute -Identity "PHL-All" -NumberPattern "." -OnlinePstnGatewayList 308766235-PHL01.completeuc.com
-Priority 2 -OnlinePstnUsages "Momentum-All"
```

- g. Create voice routing policy and assign it to 'OnlinePstnUsages'.

```
New-CsOnlineVoiceRoutingPolicy "Momentum-ALL" -OnlinePstnUsages "Momentum-All"
```

**Note:** Please replace the RPX ID (**1234567890**) in the following script examples with the actual RPX ID

## 5. Enable Direct Routing for Users

- Use PowerShell to connect to Skype for Business Online.
- Configure user's phone number and enable enterprise voice and voicemail.

```
Set-CsPhoneNumberAssignment -Identity adamfowler@contoso.com -PhoneNumber +61987654321 -PhoneNumberType DirectRouting
```

- Assign the voice routing policy to the user.

```
Grant-CsOnlineVoiceRoutingPolicy "username" -PolicyName "Momentum-All"
```

## 6. Enable International Dialing for Users

Complete the following steps to set up International dialing rules for users:

- Use PowerShell to connect to Skype for Business Online.
- Create the international dialing translation rule:

```
New-CsTeamsTranslationRule -Identity 'Momentum_International' -Pattern '^+\((?!1)[0-9]\d*$' -Translation '011$1'
```

- Assign the rule to the Momentum gateways:

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -OutboundPSTNNumberTranslationRules 'Momentum_International', 'StripPlus1'
```

```
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -OutboundPSTNNumberTranslationRules 'Momentum_International', 'StripPlus1'
```

- Run a quick check on the gateway configurations to ensure the rules are assigned correctly to "OutboundPSTNNumberTranslationRules" for both:  
These changes may take up to 48 hours to propagate.

```
Get-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com'
```

```
Get-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com'
```

- To speed up propagation, one can disable and then enable gateways in the Teams Admin Center or via PowerShell using the following commands:

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -Enabled $false
```

```
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -Enabled $false
```

**Note:** As a precaution consider running these 'disable' commands after hours. Live calls will not drop but new calls will be prevented from using the gateway while it is disabled.

Wait a few minutes and then send the following to enable the gateways.

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -Enabled $true
```

```
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -Enabled $true
```

**Note:** Should an error occur, please communicate with your Momentum PM and every effort will be made to assist.

## 7. Enable Extension Dialing for Users

Complete the following steps to set up extension dialing rules for users:

a. Use PowerShell to connect to Skype for Business Online.

b. Create the international dialing translation rule:

*Note: Please replace the RPX ID in the following example scripts (1234567890) with the actual RPX ID.*

```
New-CsTeamsTranslationRule -Identity 'StripPlus1' -Pattern '^+1(\d{10})$' -Translation '$1'
```

c. Assign the rule to the Momentum gateways:

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -OutboundPSTNNumberTranslationRules 'Momentum_International', 'StripPlus1'

Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -OutboundPSTNNumberTranslationRules 'Momentum_International', 'StripPlus1'
```

d. Run a quick check on the gateway configurations to ensure the rules are assigned correctly to "OutboundPSTNNumberTranslationRules" for both:  
These changes may take up to 48 hours to propagate.

```
Get-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com'
Get-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com'
```

e. To speed up propagation, one can disable and then enable gateways in the Teams Admin Center or via PowerShell using the following commands:

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -Enabled $false
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -Enabled $false
```

*Note: As a precaution consider running these 'disable' commands after hours. Live calls will not drop but new calls will be prevented from using the gateway while it is disabled.*

Wait a few minutes and then send the following to enable the gateways.

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -Enabled $true
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -Enabled $true
```



## Additional User Management Tasks

### To Disable Direct Routing for a User

1. Use PowerShell to connect to Skype for Business Online.
2. Disable Enterprise Voice and Voicemail and remove phone number from a user.

```
Set-CsUser -Identity "username" -EnterpriseVoiceEnabled $False -HostedVoiceMail $False -OnPremLineURI $null
```

3. Remove routing policy from the user.

```
Grant-CsOnlineVoiceRoutingPolicy -Identity "username" -PolicyName $null
```

### To Modify a Phone Number for a User

1. Use PowerShell to connect to Skype for Business Online.
2. Configure user's phone number and enable enterprise voice and voicemail.

```
Set-CsUser -Identity "username" -OnPremLineURI tel:+1234567890
```

### To Remove Dialing Rules From the Gateways for a User

1. Use PowerShell to connect to Skype for Business Online.
2. Set the Gateways to stop using translation rules for International dialing and/or Extension dialing:

```
Set-CsOnlinePSTNGateway -Identity '1234567890-ATL01.completeuc.com' -OutboundPSTNNumberTranslationRules $null
```

```
Set-CsOnlinePSTNGateway -Identity '1234567890-PHL01.completeuc.com' -OutboundPSTNNumberTranslationRules $null
```

## Related Resources

The following information sources may be useful to Voice Engineers and/or Office 365 (O365) Admins:

### Direct Routing Setup

<https://docs.microsoft.com/en-us/microsoftteams/direct-routing-configure>

### Cloud Voice in Microsoft Teams

<https://docs.microsoft.com/en-us/microsoftteams/cloud-voice-landing-page>

### Media Quality and Network Connectivity Performance

<https://docs.microsoft.com/en-us/SkypeForBusiness/optimizing-your-network/media-quality-and-network-connectivity-performance>

### Monitoring and Troubleshooting Direct Routing

<https://docs.microsoft.com/en-us/microsoftteams/direct-routing-monitor-and-troubleshoot>

### Office 365 Network Connectivity Principles

<https://docs.microsoft.com/en-us/office365/enterprise/office-365-network-connectivity-principles>

### Implement QoS and Monitor Call Quality in Microsoft Teams

<https://docs.microsoft.com/en-us/MicrosoftTeams/monitor-call-quality-qos>

### MS Teams Call Analytics and Call Quality Dashboard

<https://docs.microsoft.com/en-us/MicrosoftTeams/difference-between-call-analytics-and-call-quality-dashboard>

### MS Teams Auto-Attendant and Call Queue Set Up

<https://docs.microsoft.com/en-us/microsoftteams/create-a-phone-system-auto-attendant>

### MS Teams PowerShell Move from SFBO

<https://docs.microsoft.com/en-us/microsoftteams/teams-powershell-move-from-sfbo>