Manuals+ — User Manuals Simplified.

NOW MS Teams Calling User Guide

Contents

NOW MS Teams Calling Customer Setup Guide

1. Introduction

NOW's MS Teams calling service combined with Microsoft Direct Routing features allow organisations to register their Office 365 tenancy to NOW's Oracle voice network. Doing this provides external voice capability for their Microsoft Teams environment with the knowledge that NOW NZ will provide them with a reliable and resilient solution and a smooth onboarding experience.

Our solution consists of multiple resilient connections towards the Microsoft Teams cloud and utilises our world class Oracle Voice networking environment to ensure the reliability and resiliency of your business-critical phone connections.

2. Planning

Before you start deployment of MS Teams calling and your Microsoft Phone System it is recommended that you plan the project first. This **article** by Microsoft discusses the various considerations in deploying the Microsoft Phone Systems and NOW's MS Teams Calling service.

Below we provide a clear view of the phases of the implementation and where the responsibilities lie for each phase.

To do this we have broken down the phases and note the responsibilities using the RACI model, for each of these phases. This displays where the customer (or partner implementer) and NOW NZ are responsible for each task.

Each phase is also shown in the solution phases setup flow below.

Due to linear sequencing of many of the steps to set up this service, it is crucial for administrators who are setting up the service follow the steps in this guide in the correct order and not move on to the next step until all prerequisites for that step have been received. To set up the service, customers must complete steps within the **MS Teams O365 Admin** portal or **PowerShell** and then exchange information with NOW at the appropriate time Lo complete the setup.

3. Pre-Requisites for NOW's MS Teams Calling service.

These are the main items that you will need to ensure are in place in order to proceed with Direct Routing setup for MS Teams.

- A Microsoft Teams Office 365 account.
- A domain in Office 365 with **FQDN** (fully qualified domain name) that you own.
- User(s) in Office 365 with at least **Microsoft 365 Business Standard** plus **Microsoft Teams Phone Standard** or E3 (plus **Microsoft Teams Phone Standard**) or E5 license or license that support Direct Routing.
- A Direct Routing partner with MS Teams integration (NOW) to their qualified SBCs.
- An active NOW business account.
- A pair of unique (FQDN) domains assigned from NOW using authenticated certificates for secure voice service.
- Ability to run PowerShell scripts within your own domain.

4. Setup phases flow and phase items summary

To get MS Teams Direct Routing working it is necessary to go through several sequential steps to create, verify and activate two new NOWNZ domains under your own top level O365 domain.

This diagram summarises the main sequential phases of the MS Teams Direct Routing setup, both from the customer and NOW side. Each of these numbered phases is further referenced later in this document.

Customer / IT Administrator

Phase 1 – Evaluation and Agreement
1. Solution discussion with NOW.
2. Contract.
3. Provide details of MS Teams users, DDIs and required call flow
4. Provide details of any existing MS Teams Direct Routing partner to be retained.
5. Any required equipment

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Phase 2 – Config Build
1. Agrees final design with NOW & go-live date.
2. NOW provides unique Domains to create in O365
3. NOW requests TXT DNS records.
4. NOW builds customer instance with required DDI's for user (Room, Group, Auto attendant etc)

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Phase 3 – New Domains Setup
1. Set up correct Microsoft licensing
2. Add new O365 domains under your MS domain
3. Obtain TXT records from domains and send to NOW.

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Phase 4 – Config Build Cont.

1. Domain TXT records received.
2. DNS entries created.
3. Request Domains to be verified and
4. Request temp user to be created under MS Teams auth domain
5. Provide Powershell script commands

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Phase 5 – Domains Verified & Activated. Tenant Configured

1. New Domains verified in O365
2. Temp test users created under domains with correct licensing
3. Use provided powershell scripts and admin portal procedures to configure MS Teams configuration
4. Apply Voice Routing Policy and DDI to users
5. Verify Firewall and Networking requirements met
6. Check for voice dialpad appearance (within 24 hours)
7. Conduct test calls
8. Confirm test call status with NOW.

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Phase 6 – Number porting. Final test and care handover

1. Finalise cutover plans
2. NOW will port required DDIs to NOW network (if applicable)
3. Inbound and outbound call testing.
4. Supplemental training (optional)
5. Deployment complete. Pass to care support.

5. Step by step guide

5.1 Phase 1- Evaluation and Agreement.

You will have the opportunity to have a face to face or MS Teams video call discussion with NOW so that the main requirements and scope are clarified, and the contract details and pricing can be agreed. The following will be discussed, and you will be provided with a collaborative "MS Teams" spreadsheet, that will serve as the main point of reference during the onboarding process.

1. User details including email addresses and DDI requirement (ported or NOW supplied)
2. Customers tenant primary domain.
3. Any Teams Meeting Rooms that will require a DDI
4. Call Flow requirements e.g. any VR or Groups required? Note: these will need to be configured by your MS system administrator but NOW require details for DDI linking purposes.
5. Any existing MS Teams Direct Routing partner that is currently used and plans on their ongoing use (if alongside NOW).
6. Details of any MS Teams related hardware that you wish to purchase from NOW e.g. Yealink SIP phones, headsets, video conference room equipment.
7. Quick overview of existing phone system and whether part of this will be retained and require interworking with MS Teams users or config elements.
8. Following this discussion, the contract will be prepared and sent to you for signing and any hardware required will be ordered at this point.

5.2 Phase 2 – Configuration build

NOW will confirm the final design and then NOW will start to build the Direct Routing configuration in our Voice Network and CRM systems.

NOW will assign DDI's for each given MS Teams user, Meeting Room, Group or IVR. These may end up being the final DDI numbers or temp ones until final numbers are ported over as a final phase.

You will be supplied with two unique domains that will need to be added under your main O365 domain. The next phase details this procedure in O365.

5.3 Phase 3 – New Domains Setup in Office 365 tenant

We require the following steps to be taken to licence the MS Teams components and build the required two domains.

1. Ensuring the correct licensing is in place for all Teams users, rooms, groups and Auto Attendants.

a. MS 365 Business Standard plus MS MS Teams Phone Standard
b. E3 plus MS Teams Phone Standard licence, or;
c. E5 licence (which comes with MS Phone System license)
d. Licences for Teams, Rooms and IVR (if applicable)

2. Add new O365 domains under your own top level MS domain.

a. Log into the Microsoft 365 Admin portal (**admin.microsoft.com**)
b. Navigate to Setup > Domains > Add Domain
In the **Add a domain** section, type the FQDN of the trusted domain:
e.g. **nownz-kiwi-nz.msteams-sbc1.nownz.co.nz** then click "use this domain"

N.B. to get the correct FQDN add your own domain to " **.msteams-sbc1.nownz.co.nz**"

c. Select "**Add a TXT Record to the Domain DNS**" option and continue.

d. Pls records the TXT value into the collaboration spreadsheet, then press **Close**.

e. Repeat steps b. to d. for the other given domain creation (e.g. **nownz-kiwi-nz.msteams-sbc2.nownz.co.nz**)
f. Complete the table of information (TXT records, Users, Emails, DDI's, Target cutover date etc) within the
spreadsheet and then email **servicedelivery@nownz.co.nz** at NOW to let us know this is complete.

Description	Info (e.g.)	Details
Customer O365 Domain	nownz.kiwi.nz	Domain Name
Customer Code	nownz-kiwi-nz	Unique customer code
TXT Record for SBC1	**TBC** (e.g.) MS=ms12345678	Unique TXT value
TXT Record for SBC2	**TBC** (e.g.) MS=ms87654321	Unique TXT value

Commented [MS1]: Can we resolve what this needs to be?

5.3 Phase 4 – Configure build continued

a. NOW engineers will complete the required DNS updates to allow these new Domains to be verified.
b. Specific example PowerShell script examples are available within the supplied collaboration spreadsheet for the customer.
c. Lastly, NOW informs the customer that they can proceed with Domain verification and authentication.

5.4 Phase 5 – Domains Verified & Activated. Tenant configured.
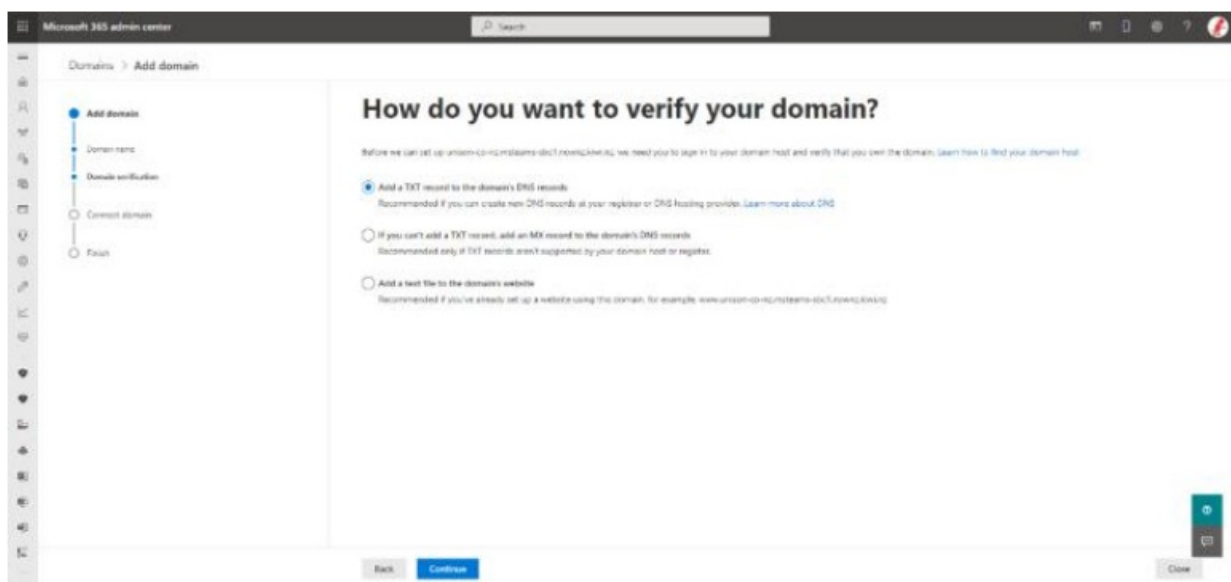
5.4.1 Domain Verification

a. Once NOW has completed creating the DNS Domain records, you will be asked to complete their domain setup in 0365 by verifying the domain.
b. Select the NOW MS Teams domains that are showing as incomplete setup. E.g.
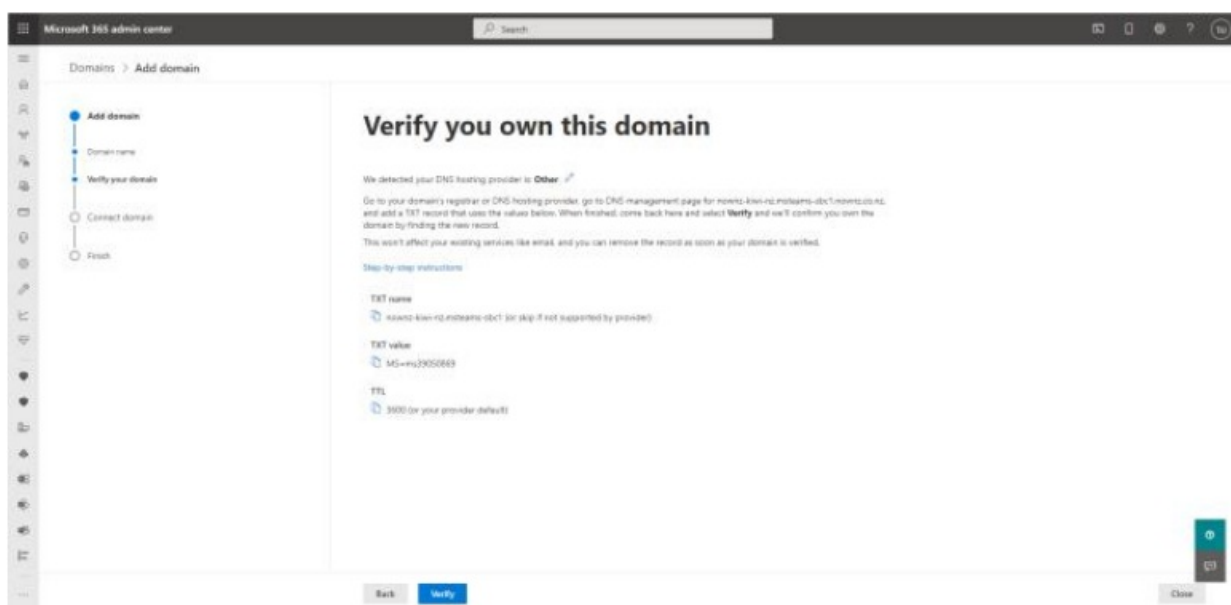

c. For each of these two domains. Select each one.
d. Click on **Start Setup**
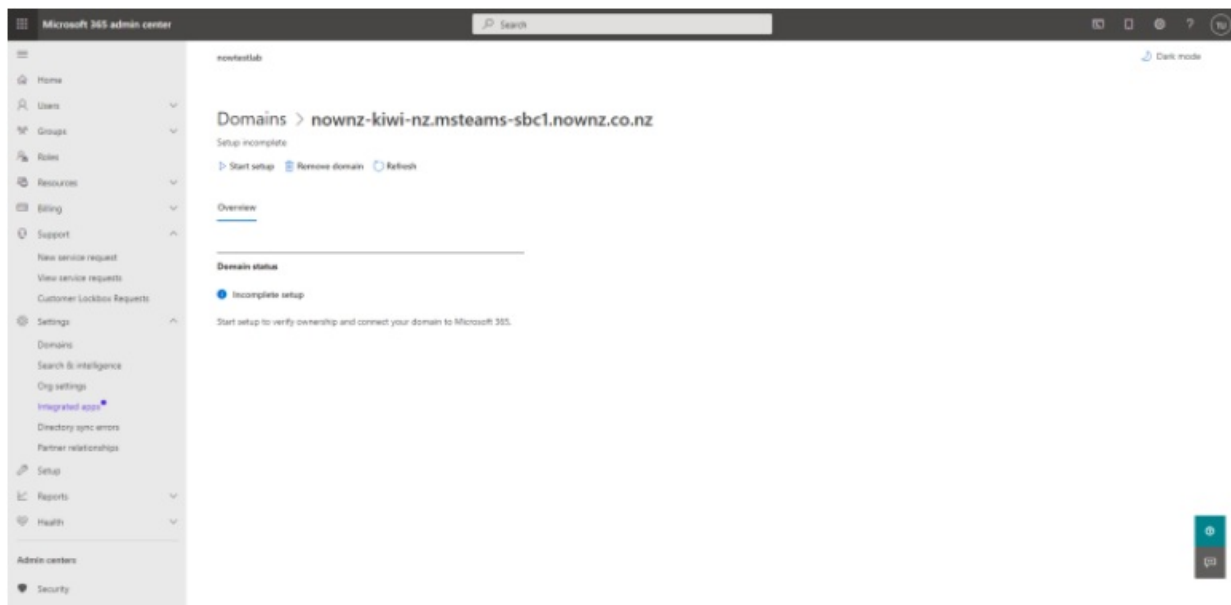
e. Select **Add a TXT Record to the Domain DNS** option and continue.

f. Click **Verify** to complete verification of Domain.
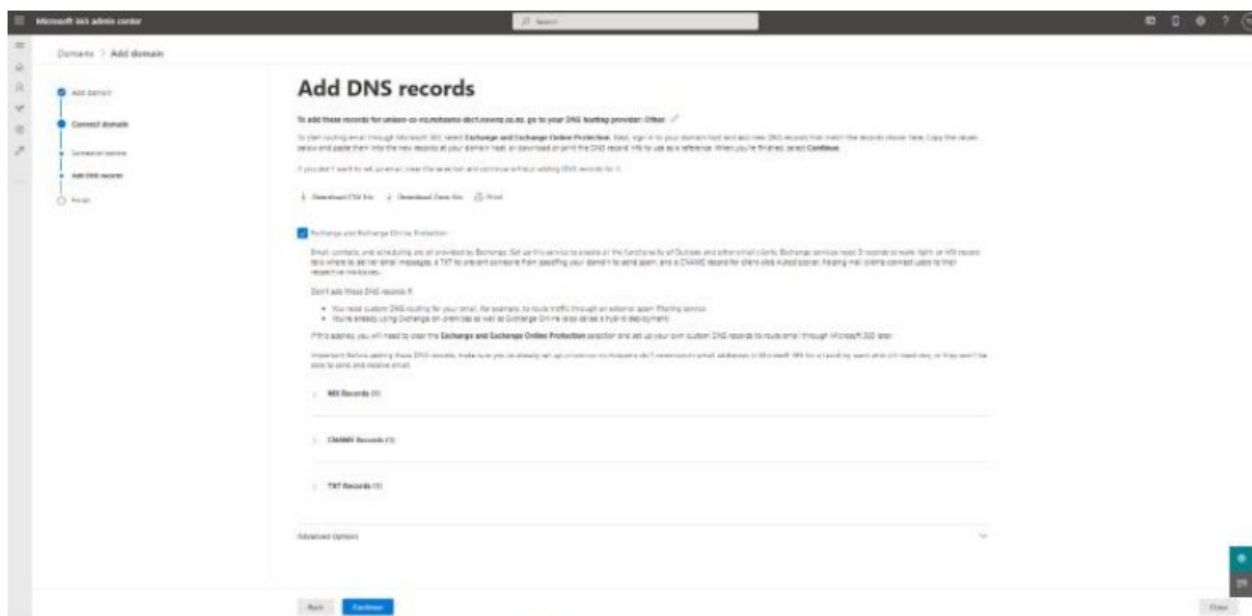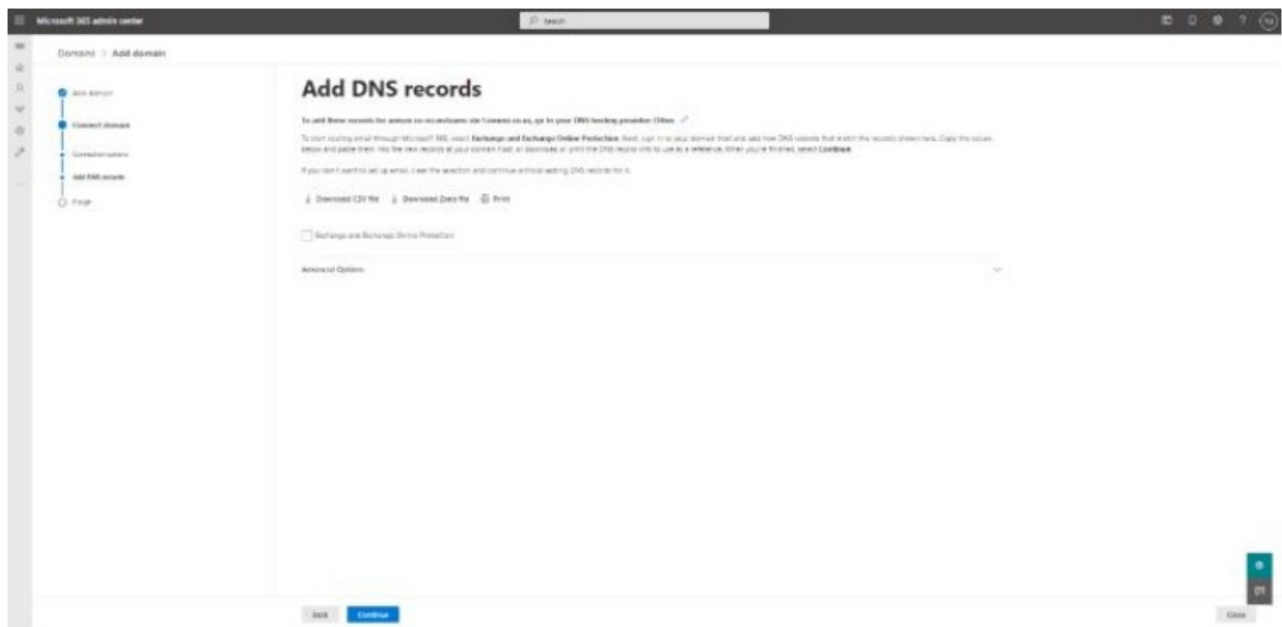
g. If verification is successful, then O365 will show this. Press **Continue**

h. Now an option to **Add DNS Records** will be shown. Untick the **Exchange and Exchange Online protection**. Then press **Continue**.
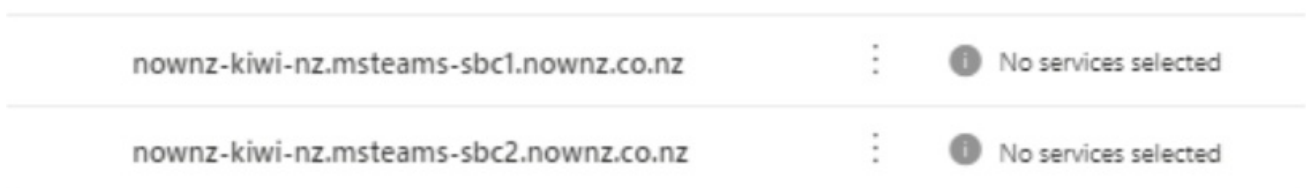
i. Finally, you will see that Domain setup is complete. After pressing **Done** you will see that domain is in the **Not Connected to Services** state. This is correct.

nownz-kiwi-nz.msteams-sbc1.nownz.co.nz ⋮ (i) No services selected
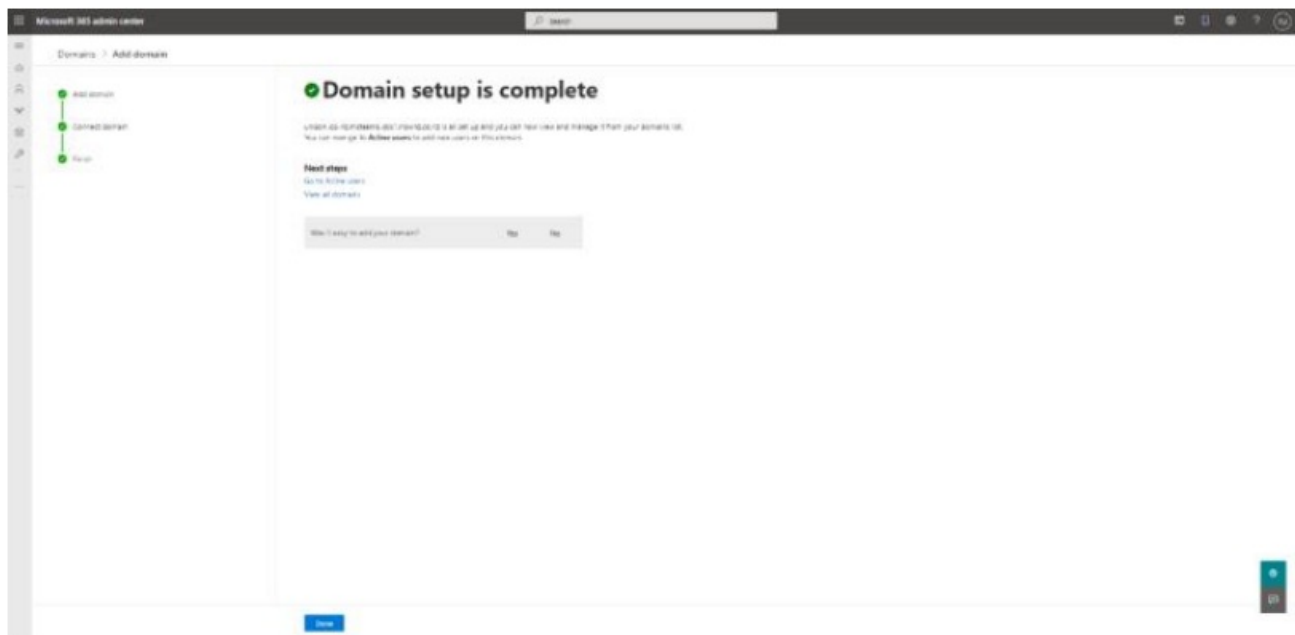
j. Repeat steps b. to i. for the verification of the second domain. Once completed both domains should look like this.

nownz-kiwi-nz.msteams-sbc1.nownz.co.nz ⋮ (i) No services selected

nownz-kiwi-nz.msteams-sbc2.nownz.co.nz ⋮ (i) No services selected

5.4.2 Domain Activation

a. Once the domain verification is complete, then please create a validation user account in <u>each</u> new MS Teams domain to activate it. These users need ta have a min MS 365 Business standard assigned (or E3/ES). License can be revoked from user after the subdomain activation (it can take up to 24 hours). For example.

Account Type	Account Name (example)	Name	Role
Activation Account1	msteams-activation@nownz-kiwi-nz.msteams-sbc1.nowcloud.nownz.co.nz	activation account 1	User
Activation Account2	msteams-activation@nownz-kiwi-nz.msteams-sbc2.nowcloud.nownz.co.nz	activation account 2	User

b. On your Microsoft 365 admin centre, you should select users from the left-hand menu and click on active users. After that, you should add a user and enter the required details, making sure you select the correct domain from the drop-down window. E.g. **nownz-kiwi-nz.msteams-sbc1.nowcloud.nownz.co.nz**

c. If you are ready to setup all users at this time you can repeat this step for all users (step X to Y). You should ensure that a product license is assigned to this user.

5.4.3 Customer Routing and User Setup

a. NOW will provide PowerShell script detail within the spreadsheet for easy setup of the MS Teams routing and users configuration. This will allow each end user to get the required permissions to enable the voice dialpad functionality in MS Teams and to make and receive calls from PSTN.

NOTE: Currently there is no way to setup MS Teams direct routing without the use of PowerShell scripts as not all configuration is available with the Teams admin portal, however most of the routing and user configuration can be setup with the Teams Admin portal, if required.

5.5 Routing and user configuration

5.5.1a PowerShell only customer setup method (preferred)

Note: The method to setup and access MS Teams Powershell is included in the Appendix. You will need to use an

account which has administration privileges to login to PowerShell on the relevant domain that users will reside in.

The PowerShell commands will be provided in the supplied collaboration spreadsheet from NOW. They will consist of the following actions.

- Create PSTN Usage
- Create Voice Route(s)
- Create Routing Policy
- Setup DDI and enable Direct Routing and voice mail (optional) for each user
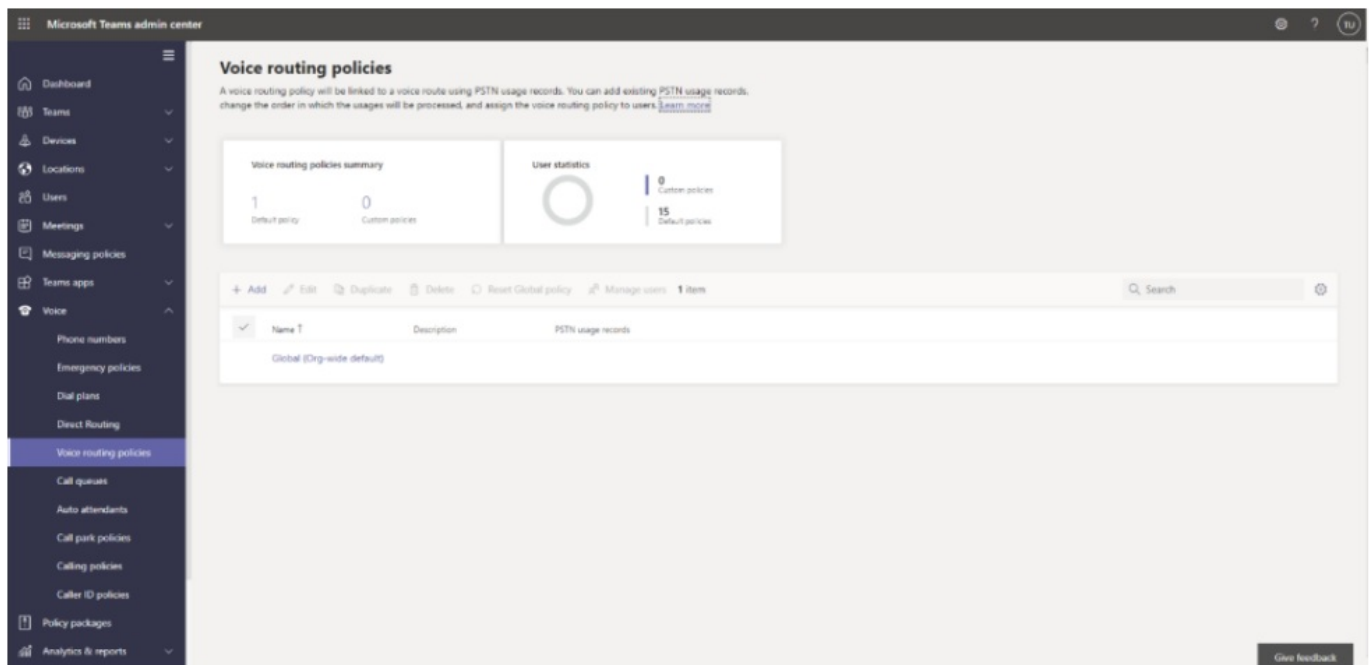- Grant access to Voice Routing Policy for each user
- Set user hosted voicemail to true or false

5.5.1b Teams Admin Portal and PowerShell setup method

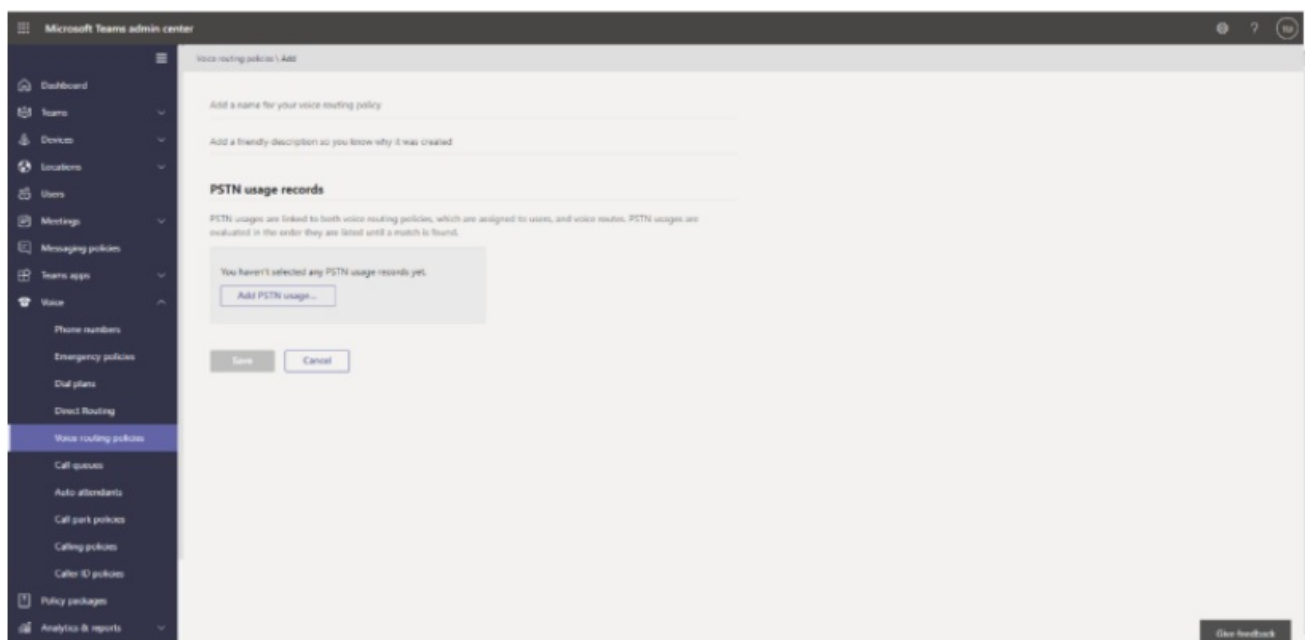Note: Global or Teams administrator access to customer MS Teams admin portal is required.

a. Connect to Microsoft Teams Admin Centre – **https://admin.teams.microscft.com/**
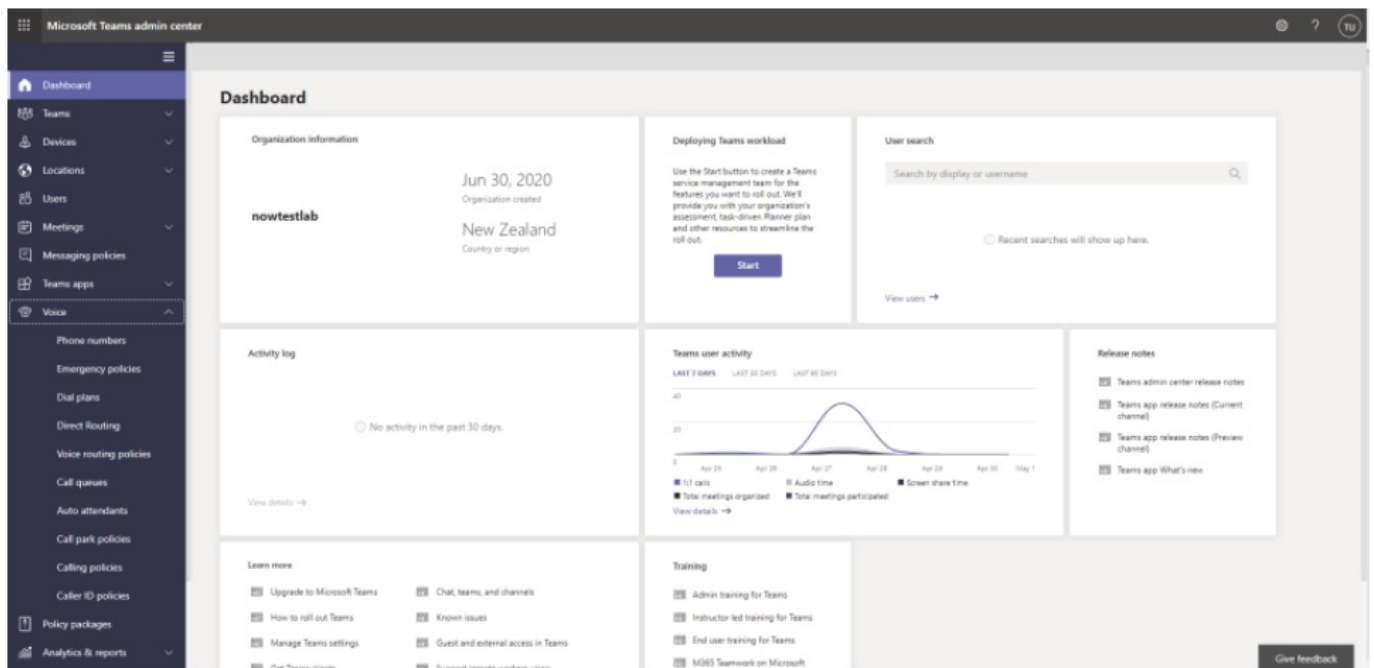
b. Create PSTN Usage

c. Click on **Voice**
d. Click on **Voice Routing Policies**

e. Click on **Add PSTN Usage**

f. Enter **PSTN usage name NOWNZ.ALL.PU**

g. Click on **Save & Apply**

5.5.2 Create Routing Policy

(Please read the Direct Routing Overview if unfamiliar with this feature)

a. Whilst still within the **Voice Routing Policies**, enter a name for the voice routing policy i.e. **NOWNZ.ALL.RP**

b. Then select the **Add PSTN Usage** section and select the tick box on the created PSTN Usage called **NOWNZ.ALL.PU** and select **Apply**
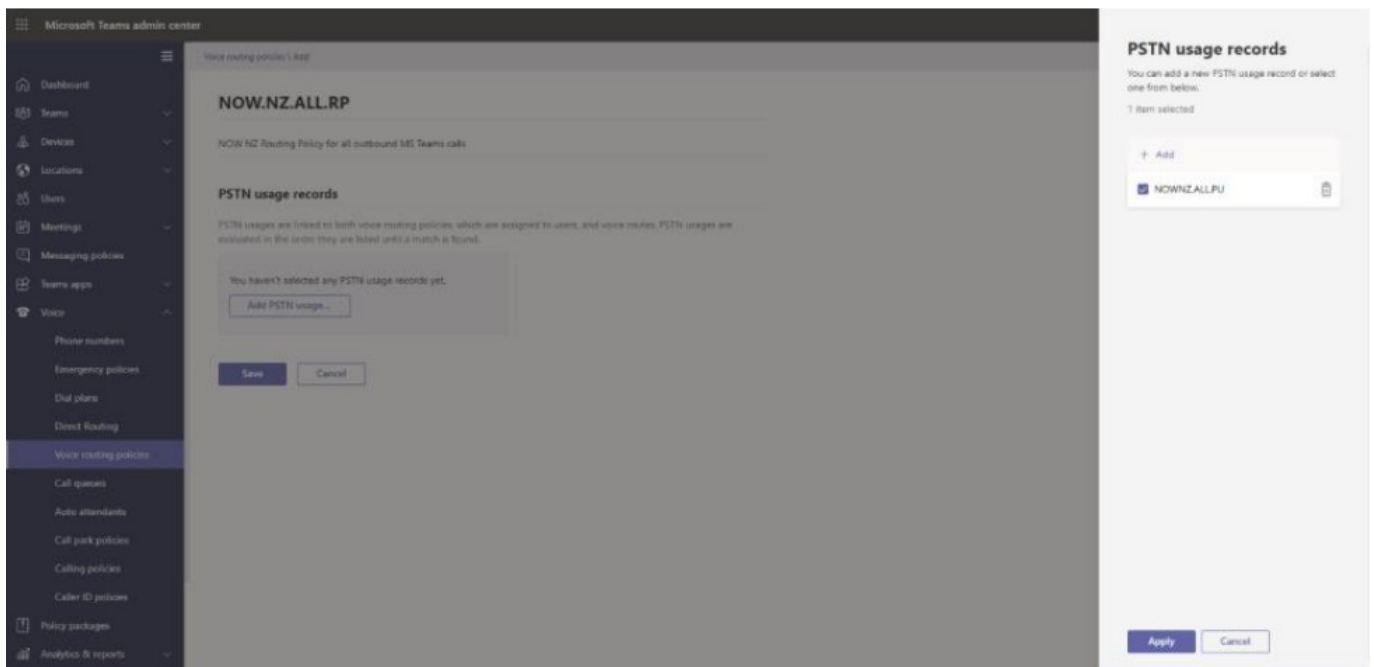
c. You will then see the Routing Policy created with the assigned PSTN Usage as below.
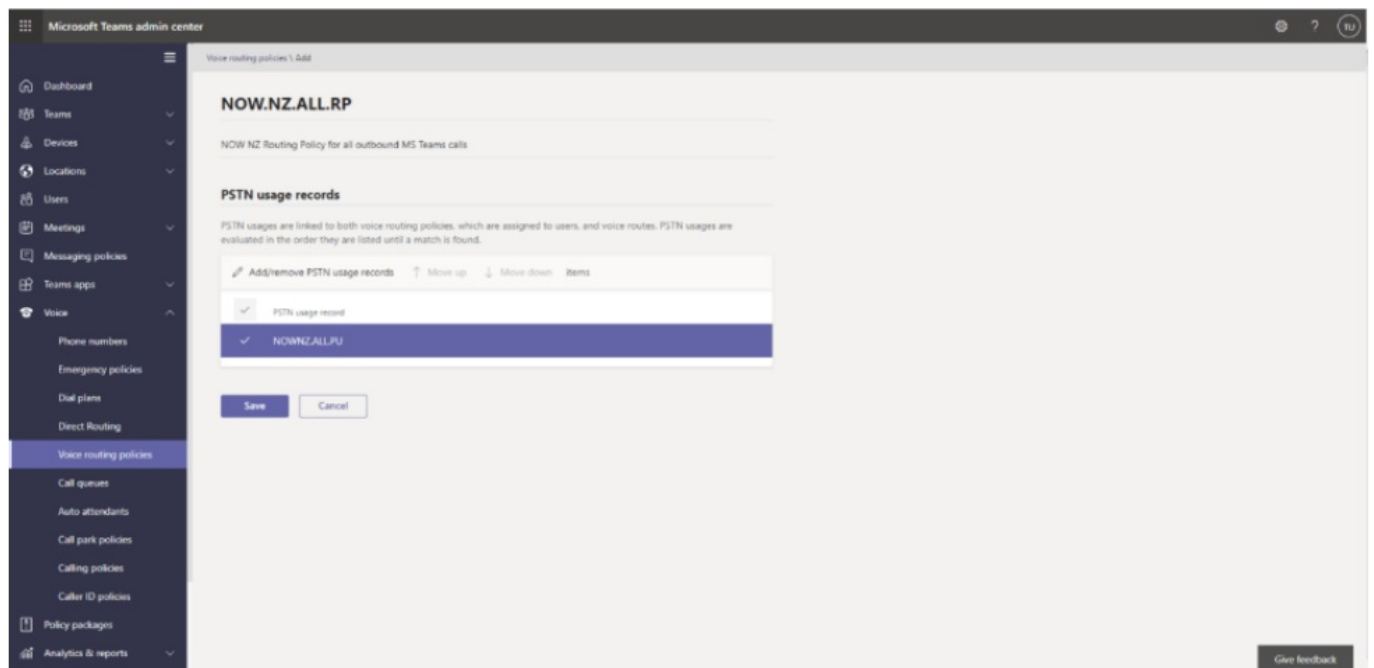
5.5.3 Create Voice Route(s)

It is not currently possible to create a voice route that includes Online PSTN Gateways that are derived trunk FQDN's) within the Teams admin portal. Therefore, FowerShell commands must be used as detailed in the supplied spreadsheet.

5.5.4 Setup User with DDI and Teams Voice Mail option

It is not currently possible to assign a DDI to a user or to define if Teams hosted Voicemail is to be used in the Teams admin centre. Therefore, PowerShell commands must be used as detailed in the supplied spreadsheet. The Online Voice Routing Policy is not defined yet.

5.5.5 Assign the required Voice Routing Policy to the Teams User

a. Under the **Users** section of the Microsoft Teams admin centre, select all the users you wish to apply the required Voice Routing Policy to. This is an easy way to assign the same policy to multiple users. Then select **Edit Settings**.
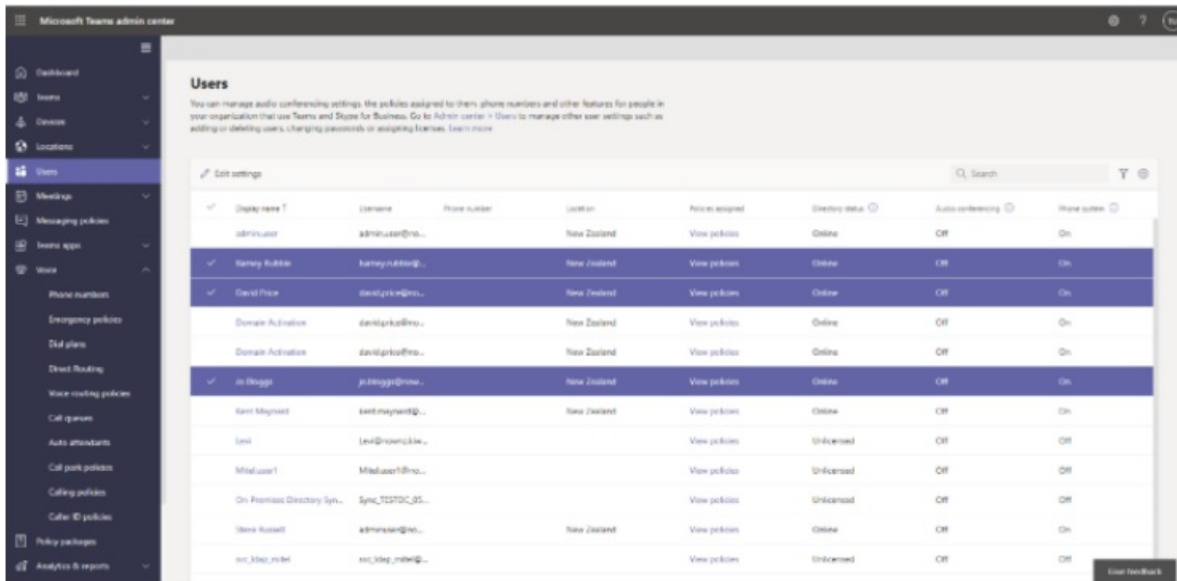
b. Scroll down to the **Voice Routing Policy** option and then select "**NOW.NZ.ALL.RP**" from the drop-down list. Then press **Apply**.
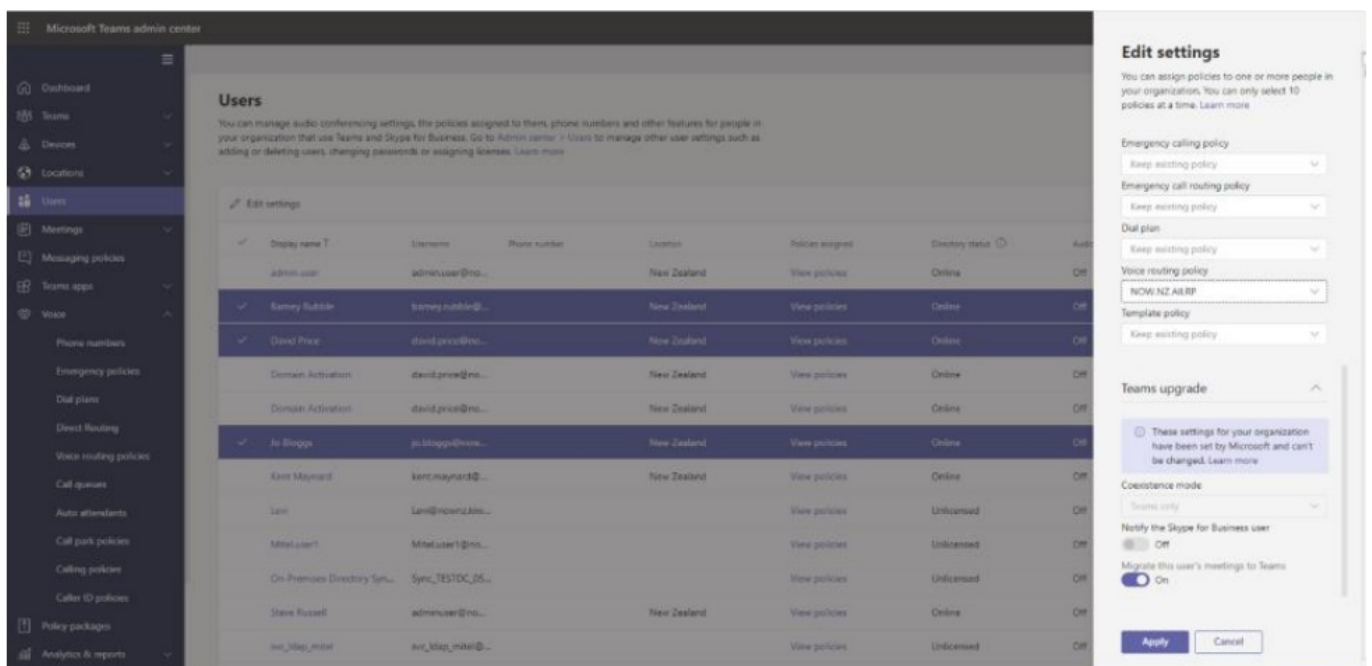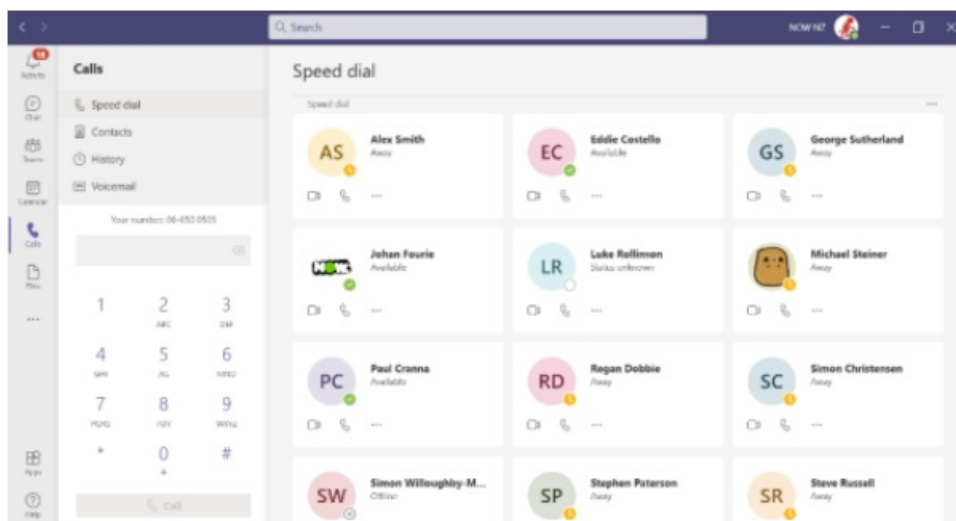

Note: when Voice Routing Policies are applied in this way it may take a few hours to update the user configuration and show the applied policy against these users.

5.5.6 Voice Dialpad appearance

Within 24 hours of phase 5.5.5 completion the users should get the MS Teams Dial Pad that indicates that Direct Routing is now setup and user is licensed correctly.

5.6 Phase 6 – User Test, number porting, final test and care handover.

5.6.1 User test calls

a. Make PSTN test calls to and from each user. The DDI's assigned may not be the final ported DDI's required (if porting has been requested) however they will still be valid for making and receiving test calls, until final porting of numbers is completed.

b. Please test the following functionality and provide feedback to NOW of any issues found.

Note: All numbers must be dialed in full National format (in the same way as from a mobile phone).

- Outbound calls to landline and mobile numbers
- Inbound calls to DDI
- Calls to external IVR's that require DTMF input
- Hold and resume calls
- Transfer calls to Landline or mobile number
- Inbound calls to Meeting Rooms (if applicable)
- Inbound calls to Groups (if applicable)
- Inbound calls to IVR's (if applicable)

5.6.2 Number Porting

The final phase of the onboarding process includes porting across any required numbers from your old phone system and network provider (if applicable) onto NOW's voice network. This will take place on the date required by the customer although the exact time is dependent on the losing network so cannot be predetermined exactly, but usually falls within a two to three-hour window.

Once the numbers have been ported across to NOW, our engineers will contact you and confirm.

5.6.3 Final testing with Ported Numbers

We recommend that you perform both inbound and outbound PSTN testing for all MS Teams Direct Routing users, and inbound testing for rooms, groups and IVR's to ensure all routing is being performed as expected and that the correct (ported number) Caller ID is being displayed Lo called parties for outbound calls from MS Teams o PSTN.

Support of the MS Teams direct routing will now pass to the NOW Care Team. Issues related to inbound or outbound PSTN calls for Teams should be raised to this team.

## Appendix 1 – Direct Routing Overview

Direct Routing is made up of the following routing elements:

- **Voice routing policy** – This is a single routing policy that is assigned directly to one or more Teams users and which contains configuration elements called "PSTN Usages".
- **PSTN usages** – This is a template for one or more voice routes which can be shared in different voice routing policies.
- **Voice routes** – Each voice route has several attributes which makes it unique, as follows:
    - **Matching dialed number pattern (e.g. +642 – where all NZ based mobile calls use this route or .* where all dialed numbers use this route)**
    - Set of online PSTN gateways to use for calls where the calling number matches the pattern, based on the unique SBC domains the customer has been assigned.
    - Priority number (e.g. 1 being the highest)
    - One or more voice routes can be added to a PSTN usage.
- **Online PSTN gateway** – A pointer to an SBC hosted by the Direct Routing carrier (NOW) that also stores the configuration, which is applied when a call is placed through the carrier's SBC. These online PSTN gateway FQDN'S resolve to the carriers SBC IP addresses.

A. Single Voice Route
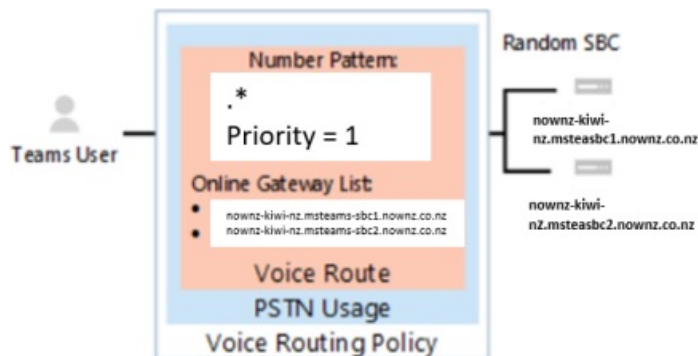
B. Multiple Voice Routes
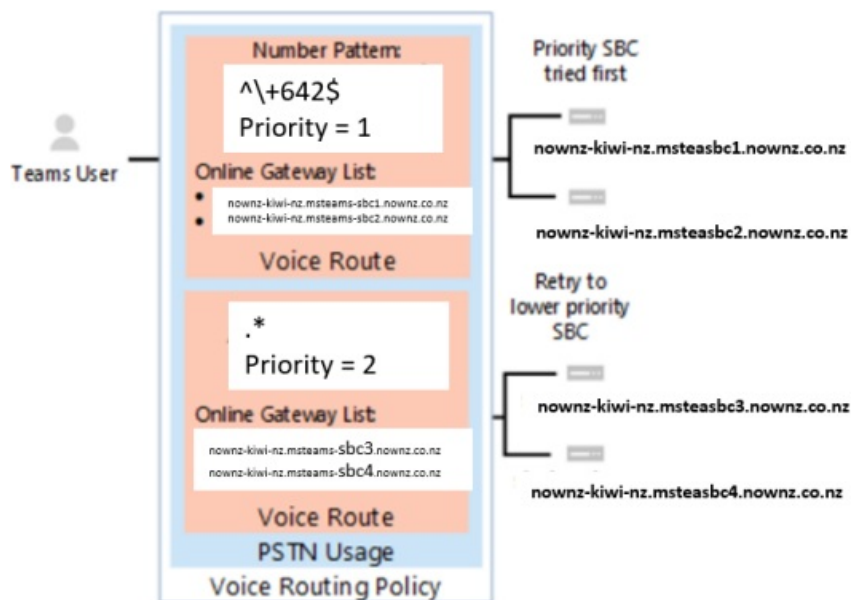
Above diagram demonstrates the relationship between these voice configuration elements.

Example A – This shows a single voice route in the PSTN Usage, which allows all dialed digit (.*) and calls are load balanced between both SBC's. The PSTN Usage is assigned to the Voice Routing Policy, which in turn is assigned to the MS Teams user.

Example B – This shows two voice routes within the PSTN Usage. Calls made from MS Teams to NZ Mobile numbers (i.e. starting with +6422 digits) will attempt to route via the first route, however if the SBC's are down in this route, they will route via the second route.
All other calls will route via the second route.

Appendix 2 – Customer Firewall and network preparation

This link provides important recommended network requirements for MS teams. Please ensure these have been observed.

https://docs.microsoft.com/en-us/microsoftteams/prepare-network

Appendix 3 – Using PowerShell

Connecting to PowerShell for MS Teams

If you have never setup the MS teams powershell module then please follow these steps to install it.

https://docs.microsoft.com/en-us/microsoftteams/teams-powershell-install

It is recommended to follow the section "Installing using the PowerShellGallery" from above.

Once Ms Teams Powershell module is installed then you can utilise it as follows.

1. Open FowerShell as Administrator
2. Connect-MicrosoftTeams

Appendix 4 – Setup and Licencing for MS Teams Rooms

Follow these example steps.

Disable-CsMeetingRoom "**test_meetingroom@nownz.kiwi.nz**"

###Remove all Meeting Room and Skype licenses from user, wait 2 mins, then re add Meeting Room license

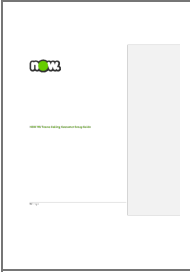Set-CsUser -Identity "**test_meeting@nownz.kiwi.nz**" -OnPremLineURI tel:+6468787112 –
EnterpriseVoiceEnabled $true -HostedVoiceMail $false

Enable-CsMeetingRoom -Identity "**test_meeting@nownz.kiwi.nz**" -RegistrarPool
"**sippoolsy3au106.infra.lync.com**" -SipAddressType EmailAddress

Grant-CsOnlineVoiceRoutingPolicy "**test_meeting@nownz.kiwi.nz**" -policyname Tag: **NOW.NZ.ALL.RP**

Appendix 5 – Glossary of terms

Reference	Description
Active User	A user who accesses an app for a given period of time
DDI	A Direct Dial-In Number specific to a user, group, room or IVR that can be called from PSTN
Direct Routing	Direct Routing adds calling to Microsoft Teams. Keeps existing phone numbers whilst enabling users to make and receive calls using MS Teams client
DNS	Domain Name System – is a hierarchical and decentralised naming system for computers, services or other resources connected to the internet or a private network
MS 365 Business Standard, MS Teams Phone Standard, E3 or ES	Office 365 licence versions available
FQDN	Fully Qualified Domain Name – also referred to as an absolute domain name specifies the exact location in the tree hierarchy of the DNS and can only be interpreted in one-way **myhost.example.com**
IVR	Interactive Voice Response
MS Teams calling	MS Teams Direct Routing Service provided by NOW
Now	NOW New Zealand
Online PSTN Gateway	A pointer to an SBC hosted by the Direct Routing carrier (NOW) which stores the configuration, that is applied when a call is placed through the carrier's SBC.
Oracle SBC	Oracle Session Border Controller Helps service providers provide trusted, carrier grade, real-time communications such as VoLTE, VoIP, video conferencing and calling, IM and IPTV.
PBX	Private Branch Exchange is a system that allows an organisation to manage incoming and outgoing phone calls (including internal communications)
PSTN Usage	A template for one or more voice routes which can be shared in different voice routing policies.
PSTN	Public Switched Telephone Network is used for the landline telephone system.
SBC	Session Border Controller.
TXT	Stands for TeXT – electronic lines of text
VM	Voice Mail
Voice Route	Route towards a specific destination, uniquely identified by a dialed number pattern, priority and one or more online PSTN gateways.
Voice Routing Policy	A single routing policy that is assigned directly to one or more Teams users and which contains configuration elements called "PSTN Usages".
IVR	Interactive Voice Response

Documents / Resources

NOW MS Teams Calling [pdf] User Guide
Untitled, MS Teams Calling, MS Teams, MS, Teams, Calling

References

- **Prepare your organization's network for Teams - Microsoft Teams | Microsoft Learn**
- **FQDN (Fully Qualified Domain Name) Definition**
- **User Manual**