

Trunk Interop Test Plan

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1 Getting started

This document covers the necessary prerequisites and tests to perform in order to confirm interoperability between a SIP trunk provider and Call2Teams.

1.1 Audience

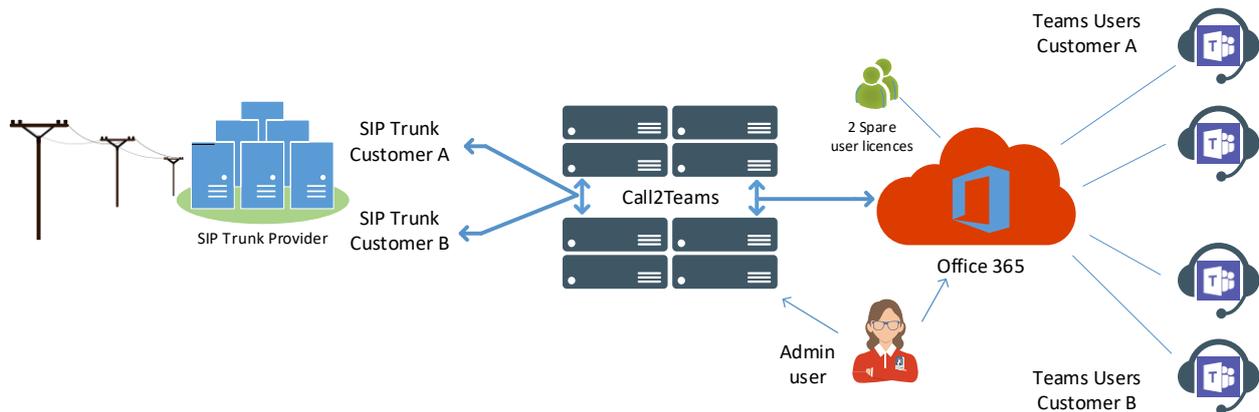
The administration and configuration of the Call2Teams connector requires competence in:

- Administering Office 365,
- Setting up SIP trunks for delivery to a customer end-point
- Understanding of SIP configuration terminology such as proxy, registration and refer

1.2 Pre-requisites

1. Watch the 6-minute video on the Call2Teams website:
<https://www.call2teams.com/call2teams-for-sip-trunks> to understand how the service is configured.
2. Allocate SIP trunk services for TWO separate customers, including dialable PSTN numbers & services. This is needed to ensure the SIP trunk service can handle concurrent customer registrations and calls coming from the same addresses for two customers. (customer A and customer B)
3. A single Office 365 account is needed: Take up the Office 365 E5 license trial if you don't have a sandbox or test account. You will need at least **Four** E1 licenses or better, with the Phone System add-on for the test-call users (an E5 license includes everything you need).
The E5 trial is available from <https://go.microsoft.com/fwlink/?LinkID=723562>
If you are a Microsoft partner, Office 365 E5 demo tenants are available from demo.microsoft.com
4. Run through the Office 365 set up and configure administration and test users and ensure you have at least one spare license not assigned to users (basic E1 or Business Essentials are enough, Phone System is not required for these spares).

Test environment overview



1.3 Tenant set-up

1. If you don't already have a Call2Teams account, then email Qunifi to set up your Call2Teams portal access. Email certification@call2teams.com requesting a trunk test interop PoC account.
2. Create at least three test users in the Office 365 tenant that will be used for the PoC and make sure these have Phone System licenses applied. Note the test user's login details. These users correspond to:
 - a. Customer A trunk first number
 - b. Customer B trunk first number
 - c. Customer B trunk second number
3. When you receive your portal access invitation from Call2Teams, click the link to accept the invitation and associate it with your Office 365 account. When prompted, sign in with the credentials for the **admin** user on the account you have created.
4. Go to the services tab in the portal and select trunks
5. For Customer A, select the *custom* template and configure the service template to connect to your trunks and verify registration
6. Repeat for customer B, select the *custom* template and configure the service template to connect to your trunks, and verify registration
7. If registration is OK, connect to the Teams tenant in the Teams tab by clicking the 'Enable Sync' button and providing the necessary permissions if asked
8. The test users can install the Teams client on PC or Mac (download from <https://teams.microsoft.com>) and ensure they can log in. Do not use the browser or mobile versions of Teams for interoperability testing.
9. In the Call2Teams portal, assign the DiD numbers to the Teams test users. Have two users connected to the trunks for Customer A and two users connected to the trunk for Customer B

10. Note: The Teams Calls button should appear on the left in Teams for the users that have been set-up, **it can take a few hours** for Office 365 to sync the settings across.
11. Some of the tests involve validating multitenancy: that is that multiple trunks can use the same IP address on both the Call2Teams and the trunk provider systems. However, Call2Teams may not allocate the same primary node for the trunks configured in steps 5 and 6. Therefore, it is necessary to request Qunifi support to align both test trunks onto the same Call2Teams node before testing.

1.4 Starting the tests

1. Run these interop tests in the section below and validate that the behavior is as expected.
2. If all tests are successful then you can submit a request to certification@call2teams.com for a new template to be created in the Call2Teams portal. Include the following:
 - a. A copy of this test plan with table 1.4.1 completed. It can be copied if multiple templates are required.
 - b. (optional) a document to include with the template describing any configuration that must be performed on the trunk as part of the setup. Should include screenshots where possible and be provided in word format.

1.4.1 Template specification

Use the online form at

<https://form.jotform.com/201546833973361>

To submit trunk templates for adding to the portal.

Also please ensure you are listed on our find-a-partner page by completing this listing form:

<https://form.jotform.com/202416190722043>

2 Test cases

2.1 Single calls

2.1.1 Single incoming call 1

| | Description | Expected Result |
|--------|---|--|
| Step 1 | From an external number, dial the customer A trunk first number | Teams rings for the correct user The caller-id matches the external number that originated the call |
| Step 2 | Answer the call in Teams | 2-way audio is established |
| Step 3 | Speak for 45 seconds | The call continues to work |
| Step 4 | Place the call on hold in Teams | The caller hears hold music |
| Step 5 | Resume the call in Teams | 2-way audio is re-established |
| Step 6 | Blind transfer the call to another external number | The external number rings The caller-id matches the external number that originated the call |
| Step 7 | Answer the call | 2-way audio is established between the two external devices. Teams hangs-up. |

2.1.2 Single incoming call 2

This checks that the trunk passes the destination through correctly for a second number on the trunk

| | Description | Expected Result |
|--------|--|--|
| Step 1 | From an external number, dial the customer A trunk second number | Teams rings for the correct user The caller-id matches the external number that originated the call |

2.1.3 Single outgoing call 1

| | Description | Expected Result |
|--------|---|---|
| Step 1 | From the Teams user assigned the customer A trunk first number, dial an external number | The external number rings. The caller-id matches the customer A trunk first number |
| Step 2 | Answer the call in Teams | 2-way audio is established |
| Step 3 | Speak for 45 seconds | The call continues to work |
| Step 4 | Place the call on hold in Teams | The caller hears hold music |
| Step 5 | Resume the call in Teams | 2-way audio is re-established |
| Step 6 | Blind transfer the call to another external number | The external number rings |

| | | |
|--------|-----------------|---|
| | | The caller-id is the customer A trunk first number |
| Step 7 | Answer the call | 2-way audio is established between the two external devices. Teams hangs-up. |

2.1.4 Single outgoing call 2

This checks that the trunk passes the caller id through correctly for a second number on the trunk

| | Description | Expected Result |
|--------|---|--|
| Step 1 | From the Teams user assigned the customer A Trunk first number, dial an external number | The external number rings. The caller-id matches the customer A Trunk second number |

2.2 Multiple calls

It is critical, that the trunk provider IP address is the same for both trunks; and the Call2Teams IP address is the same for both trunks. Otherwise, the test will not check multi-tenancy correctly.

2.2.1 Two incoming calls on different trunks

| | Description | Expected Result |
|--------|---|--|
| Step 1 | From an external number, dial the customer A Trunk first number | Teams rings for the correct user The caller-id matches the external number that originated the call |
| Step 2 | From an external number, dial the customer B Trunk first number | Teams rings for the correct user The caller-id matches the external number that originated the call |
| Step 3 | Both Teams users answer | 2-way audio is established on both calls |
| Step 4 | Teams hangs-up the first call | Both parties see the call hang-up |
| Step 5 | External hangs-up the second call | Both parties see the call hang-up |

2.2.2 Two outgoing calls on different trunks

| | Description | Expected Result |
|--------|---|---|
| Step 1 | From the Teams user assigned the customer A Trunk first number, dial an external number | The external number rings and shows the correct caller-id |
| Step 2 | From the Teams user assigned the customer B Trunk first number, dial an external number | The external number rings and shows the correct caller-id |
| Step 3 | Both external numbers answer | 2-way audio is established on both calls |
| Step 4 | Teams hangs-up the first call | Both parties see the call hang-up |
| Step 5 | External hangs-up the second call | Both parties see the call hang-up |