UC Migration Assessment

CISCO Call Manager to Microsoft Teams

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ZIRO

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1 Introduction

1.1 How to Read this Document

This assessment is designed to give you a preview of the in-depth insights you can get by working with us to evaluate your PBX configuration before migrating to Microsoft Teams.

The colored icons below help define and sort feature parity gaps:

🏁 GREEN	⚠️ YELLOW	🔬 BLUE
Designates features such as lines and hunt groups that have been automatically assessed as migratable to Microsoft Teams without any loss in feature functionality	Designates entities such as lines and hunt groups that *can* be migrated to Microsoft Teams, but some feature functionality will be lost. The business impact of losing these features should be carefully reviewed.	Designates entities whose migration status cannot be determined automatically. They must be manually reviewed and resolved.
	EXAMPLES	**EXAMPLES**
	Forward On Busy: This feature is not currently supported by Microsoft Teams	*End Users with Multiple Extensions*: Microsoft Teams supports just one primary phone line per user. This could be resolved manually by adding configuration to the Session Border Controller (SBC) or by removing the extra lines.
	Simultaneous Ring to Multiple Destinations: This feature can be enabled in Microsoft Teams but to just a single destination.	*Analog Phone*: Microsoft Teams does not support analog phones directly. This could be resolved manually by connecting the analog phones to Microsoft Teams via an on-premises SBC. Alternatively, you could instead connect these lines to IP phones.

Things to keep in mind

- Entities marked in 🏁 **GREEN** are not always supported out of the box and may require manual customization.
- Entities marked in ⚠️ **YELLOW** that may have been configured in the CUCM for legacy reasons or reasons no longer relevant when moving to Microsoft Teams. Typically, these features can be easily removed without any business impact. For example, Wakeup Call (which enables a user to book a call to their phone as a reminder) can usually be removed with minimal business impact.
- The statistics in the Device and Extension sections of this report help you scope the number and type of devices you would need to replace and help you estimate the number of lines and licenses that will be needed.

1.2 Feature Parity Challenges

Legacy PBX systems like CUCM and modern UC systems like Microsoft Teams often have significant feature parity issues. There are several reasons for this:

- *Different data modeling*: The CUCM data model consists of several main entities and flexible configuration options for end users, devices, and lines. A big part of any migration is to map the legacy PBX's data into Microsoft Teams. Some of the data can be easily converted, but other conversions are more complex and will require manual review as a result.
- *Varying number of features*: Modern UC systems typically include a smaller set of telephony features than those found in legacy systems, resulting in feature gaps.

1.3 How to Use This Data

After reviewing the information in your assessment, ZIRO will help you determine all your options so you can identify any challenges and overcome them. No matter how to choose to continue your journey – on your own or with our team – you'll have everything you need to make your migration project a success.

2 Legacy PBX Review

The following are key high-level numbers extracted from the analysis of the CUCM configuration data:

CATEGORY	COUNT	NOTES
Extensions	23,449	Lines that are associated with an end user or a standalone device
Cisco End Users	17,746	
Orphan Cisco End Users	7,021	A Cisco End User not associated with any device or associated with a device that has no lines (subtotal of the Cisco End Users)
Cisco Devices	30,880	See section 6 of this report for a detailed breakdown of this figure
Devices with Lines	30,026	Out of the total number of Cisco Devices
Devices without Lines	854	Out of the total number of Cisco Devices
Standalone Devices	14,228	A device that is not associated with an end user out of the total number of devices
Devices enabled for extension mobility	8,500	Out of the total number of Cisco Devices
CTI Ports	15	Number of CTI ports
Hunt Groups	360	Number of hunt pilots
Pickup Groups	421	
Subscribed Services	6	Number of Subscribed Services used by Cisco Devices

Table 1 - Overview

3 Cisco End Users & Extension Analysis

3.1 Statistics

DESCRIPTION	COUNT
Total number of Cisco End Users	17,746
Cisco End Users associated with a single physical device	369
Cisco End Users associated with multiple physical devices	1,943
Cisco End Users associated with both analog and non-analog devices	2
Cisco End Users associated with a PC softphone	10,600
Cisco End Users associated with a mobile application	1,669
Cisco End Users that have extension mobility	10,843
Orphan Cisco End Users	7,021

Table 2 - End User Statistics

DESCRIPTION	COUNT
Total number of extensions	23,449
Extensions shared between multiple Cisco End Users and/or standalone devices	125
Cisco End Users associated with a single extension	10,205
Cisco End Users associated with multiple extensions	520
Standalone devices associated with a single extension	13,513
Standalone devices associated with multiple extensions	1

Table 3 - Extension Statistics

3.2 Feature Parity

3.2.1 Overview

To identify feature parity gaps, the CUCM data needs to be mapped and compared to Microsoft Teams. The following examples shows the extent of feature parity that would need to be resolved before migrating into Teams.

From the 17,746 Cisco End Users, there are 10,725 associated with a device that has at least one line and is convertible to a Microsoft Teams user (8 of these Cisco End Users are associated with CTI ports). The remaining 7,021 Cisco End Users are orphans, and thus no feature parity analysis was carried out on these users.

There are 14,228 standalone devices that were mapped to 12,256 Microsoft Teams Common Area Phones (CAPs). This delta between the number of CUCM standalone devices and Microsoft Teams CAPs is due to the variance in data models between CUCM and Microsoft Teams. For example, multiple physical devices in CUCM that are configured with the same line(s) will be converted to a single CAP in Microsoft Teams.

The analysis also found 300 analog devices. Therefore, the total number of analyzed entities for feature parity is 23,273.

Feature Parity Analysis CUCM to Microsoft Teams

Target Entity Type	Count
User	10,717
Common Area Phone	12,256
Analog Phone	300
Total	**23,273**

Table 4 – Target Entity Types
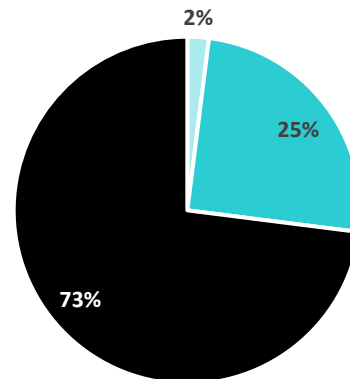
- 16972 Full Feature Parity
- 5779 Partial Feature Parity
- 522 Manual Review Required

3.2.2 Detailed Breakdown

In this section, we go into further detail to show the line and device features currently configured in the CUCM. Devices that have no lines associated with them are not included. The count column indicates the usage of this feature; individual entities can use more than one feature, and each will be counted separately (a single end-user that has both *simultaneous ring* and *forward on no answer* will be counted in both categories, for example).

#	STATUS	FEATURE	COUNT	CUCM FEATURE DESCRIPTION	COMMENT
1	🔬	Cisco End Users with Multiple Extensions	520	User with more than one extension.	Teams only supports one primary phone line per user. Some workarounds might overcome this limitation, e.g. configuration in the SBC or adding a delegation to a dummy user with the extra line.
2	🔬	Analog Phone	300	Analog telephone device that is connected to a remote gateway (e.g. connector to Fax, Intercom, Alarm, etc.).	Teams does not support analog phones directly. However, in many cases, they can be connected to Teams via an on prem SBC.
3	🔬	Shared Line	98	The same phone extension is associated with more than one user/phone. This scenario might indicate boss/admin relationship.	Teams supports only one phone number per user. In the case of the Boss/Admin scenario, Teams supports delegation.
4	🔬	Analog Adaptor	92	An adaptor that interfaces with legacy analog telephones, fax machines, analog conference telephones and other analog devices to IP-based telephony.	Teams does not support analog adaptors directly. However, in many cases, they can be connected to Teams via an on prem SBC.
5	🔬	Standalone Device with multiple extensions	1	Public / common area phone with more than one extension.	Teams CAP supports only a single extension
6	⚠️	Subscribed Services	8,944	Customized client services with which users can interact via the keypad and display.	Teams has a rich API for developing 3rd party applications.
7	⚠️	Forward Unregistered External	3,208	Automatically forward external (i.e. from the PSTN) incoming calls when the phone is not registered with the PBX (e.g. telephone is not powered on or not connected to the network).	Not supported by Teams.
8	⚠️	Forward No Answer External	3,205	Automatically forward external (i.e. from the PSTN) incoming calls when there is no answer.	Forward No Answer is supported. However, Teams does not distinguish between internal and external calls.
9	⚠️	Forward Unregistered Internal	3,180	Automatically forward internal (i.e. within the organization) incoming calls when the phone is not registered with the PBX (e.g. The telephone is not powered on or not connected to the network).	Not supported by Teams.

10	⚠️	Forward Unregistered	1,016	Automatically forward incoming calls (regardless of their source) when the phone is not registered with the PBX (e.g. telephone is not powered on or not connected to the network).	Not supported by Teams.
11	⚠️	Forward No Coverage	902	Forwards calls when the hunt list is exhausted or timed out, and the associated hunt-pilot for coverage specifies "Use Personal Preferences" for its final forwarding.	Not supported by Teams.
12	⚠️	Forward on Busy	467	Automatically forward all calls (regardless of their source) when the line is busy.	Not supported by Teams.
13	⚠️	Time-Based Simultaneous Ring	417	Provides users with the ability to be reached via a single enterprise phone number that rings on both their desk phone and another destination (e.g. cellular) simultaneously, based on a configured schedule.	Teams supports simultaneous ring. However, this cannot be configured based on the time of day.
14	⚠️	Forward No Answer Internal	202	Automatically forward internal (i.e. within the organization) incoming calls when there is no answer.	Forward No Answer is supported. However, Teams does not distinguish between internal and external calls.
15	⚠️	Forward No Coverage Internal	145	Forwards internal calls when the hunt list is exhausted or timed out, and the associated hunt-pilot for coverage specifies "Use Personal Preferences" for its final forwarding.	Not supported by Teams.
16	⚠️	Forward No Coverage External	124	Forwards external calls when the hunt list is exhausted or timed out, and the associated hunt-pilot for coverage specifies "Use Personal Preferences" for its final forwarding.	Not supported by Teams.
17	⚠️	Forward On Busy Internal	117	Automatically forward only internal (i.e. within the organization) incoming calls when the line is busy.	Not supported by Teams.
18	⚠️	Forward On Busy External	110	Automatically forward only external (i.e. from the PSTN) incoming calls when the line is busy.	Not supported by Teams.
19	⚠️	Simultaneous Ring to Multiple Destinations	49	Provides users with the ability to be reached via a single enterprise phone number that rings on both their desk phone and more than 1 destination (e.g. cellular) simultaneously	Teams enables users to use single number reach by configuring Simultaneous Ring, however only to one destination
20	⚠️	Busy Lamp Field	15	Devices with BLFs configured monitor the real-time status of another user at a directory number or SIP URI and enable incoming calls to be picked up.	Teams inherently supports monitoring user status but does not enable incoming calls to be picked up
21	🏁	Forward All	2,942	Enable user to forward all calls to a directory number.	

22	🏁	Forward No Answer	665	Automatically forward incoming calls (regardless of their source) when there is no answer.
23	🏁	Speed Dials	428	Devices with speed dials configured.
24	🏁	Simultaneous Ring	259	Provides the user with the ability to be reached via a single enterprise phone number that rings on both their desk phone and another destination (e.g. cellular) simultaneously
25	🏁	Delegated Line	27	The same phone extension is associated with more than one user/phone in a boss/admin relationship

Table 5 - Feature Parity Detail

4 Groups

4.1 Feature Parity Analysis

4.1.1 Overview

To identify Hunt and Pickup Group feature parity gaps, the CUCM data is mapped and compared to Microsoft Teams.

Following the analysis of Hunt and Pickup Group configuration data in CUCM, there are 360 Hunt Groups and 421 Pickup groups that are convertible to Microsoft Teams.

Note: Black in the below graph denotes Hunt Groups or Pickup Groups configured in the system, without any associated extensions. This suggests that the group is probably not being used and might be left over from past configurations.
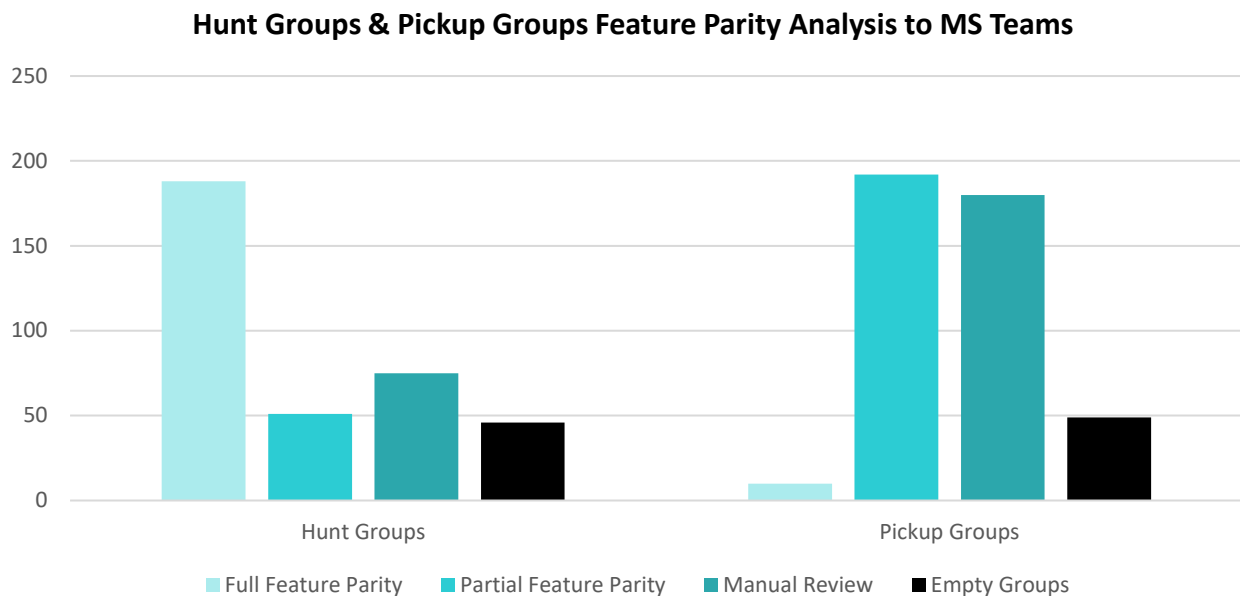
Hunt Groups & Pickup Groups Feature Parity Analysis to MS Teams

Figure 2 - Hunt Groups & Pickup Groups Feature Parity Analysis to Microsoft Teams

4.1.2 Detailed Breakdown

The following table details the Hunt and Pickup group feature parity gaps currently configured in the CUCM.

#	STATUS	FEATURE	COUNT	CUCM FEATURE DESCRIPTION	COMMENT
1	🔬	Call Pickup Groups with non-user entries	180	Members of a call pickup group can answer a call that comes in on a directory number other than their own within the pickup group. These groups also include Analog or external lines numbers	Teams Group Call Pickup supports only users and CAPs (e.g. not external PSTN or analog).
2	🔬	Hunt Groups with non-user entries	75	A Hunt Group is the method of distributing phone calls from a single telephone number to a group of several extensions. These groups have Analog or external lines numbers	Teams call queues supports only users or CAPs as agents (i.e. not analog or external numbers).
3	⚠️	Call Pickup Groups	370	Members of a call pickup group can answer a call that comes in on a directory number other than their own within the pickup group.	
4	⚠️	Hunt Groups with Call Pickup	67	Calls to a Hunt Group with call pickup can be answered remotely from another device using a predefined number.	Teams supports Call Pickup. However, it does not differentiate between calls made to a hunt group and calls made directly to the user.
5	⚠️	Call Pickup Groups with no members	49	Call Pickup Groups configured, without any associated extensions.	This is probably a legacy configuration and can be ignored.
6	⚠️	Hunt Groups with no members	46	Hunt Groups are configured, without any associated extensions.	This is probably a legacy configuration and can be ignored.
7	⚠️	Hunt Groups with Hunt Algorithms that are not Supported	30	A Hunt Group algorithm is used to determine where to route the call when the current extension is unable to answer the incoming call. These hunt groups use algorithms that cannot be mapped.	Teams supports call queues that gives similar functionality. However, Teams does not have an equivalent hunt algorithm that is used in the source PBX.
8	⚠️	Hunt Groups with Called, Calling or Connected Number Transformations	3	When a call is received by this hunt group either the called number, calling number or connected number will be transformed.	Teams supports call queues that gives similar functionality. However, in Teams, number transformation is not supported.
9	🏁	Hunt Groups	188	A Hunt Group is the method of distributing phone calls from a single telephone number to a group of several extensions.	

Table 6 - Group Feature Parity Detail

5 Devices

5.1 Device Summary

Below is the breakdown of the device types following the analysis of CUCM configuration data (excluding unused devices):

Devices Breakdown

Soft Phone — 16,284
IP Phone — 7,976
Mobile Phone — 4,468
Video Phone — 342
Analog Phone — 306
Audio Conference Phone — 257
Wireless IP Phone — 215
Analog Adaptor — 92
Telepresence — 78
CTI Port — 15
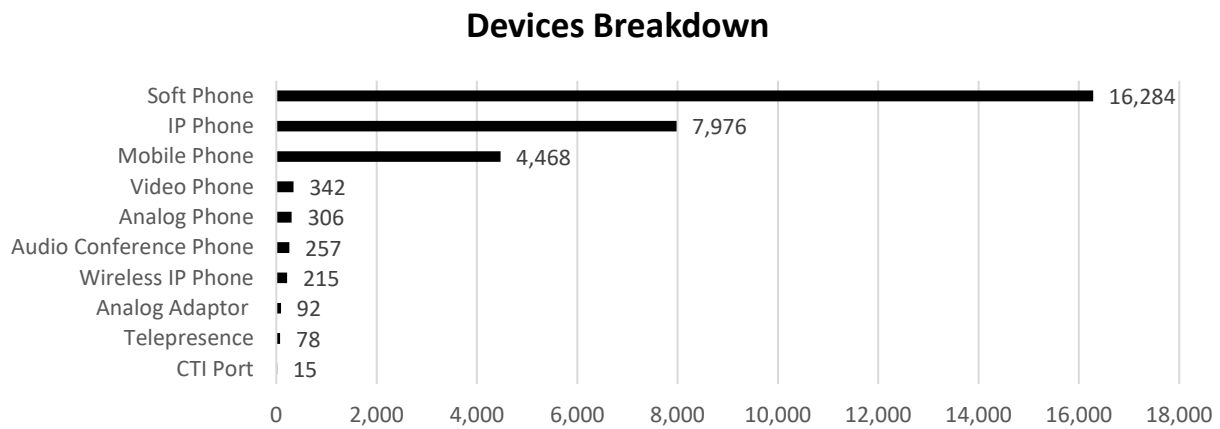
Figure 7 - Devices Breakdown Graph

DESCRIPTION	COUNT
Soft Phone	16,969
IP Phone	7,014
Mobile Phone	4,488
Analog Phone	389
Video Phone	349
Audio Conference Phone	259
Wireless IP Phone	219
Analog Adapter	99
Telepresence	78
CTI Port	16
Total	**30,033**

Table 8 - Devices Breakdown Table

5.2 Device Details

Following is a detailed breakdown of CUCM device types by device model and count.

IP Phone

MODEL	COUNT
CISCO 6921	2,652
Cisco 7811	1
Cisco 7821	416
Cisco 7841	4
Cisco 7861	5
Cisco 7906	17
Cisco 7911	863
Cisco 7931	86
Cisco 7940	46
Cisco 7941	2,647
Cisco 7942	554
Cisco 7945	171
Cisco 7960	219
Cisco 7961	130
Cisco 7962	92
Cisco 7965	24
Cisco 7975	14
Cisco 8811	2
Cisco 8841	41
Cisco 8861	5
Cisco 8961	2
Third-party SIP Device (Advanced)	21
Third-party SIP Device (Basic)	2
TOTAL	**8,014**

Video Phone

MODEL	COUNT
Cisco 7985	2
Cisco 8845	63
Cisco 8865	2
Cisco 8941	73
Cisco 8945	60
Cisco 9951	9
Cisco 9971	32
Cisco Cius	1
Cisco DX650	5
Cisco DX80	33
Cisco Webex DX80	4
Cisco Webex Room Kit	57
Cisco Webex Room Kit Mini	1
Cisco Webex Room Kit Plus	7
TOTAL	**349**

Audio Conference Phone

MODEL	COUNT
Cisco 7832	45
Cisco 7936	34
Cisco 7937	88
Cisco 8831	83
Cisco 8832	6
Cisco 8832NR	3
TOTAL	**259**

Telepresence

MODEL	COUNT
Cisco Telepresence Codec C40	2
Cisco Telepresence Codec C60	3
Cisco Telepresence EX90	4
Cisco Telepresence MX200 G2	4
Cisco Telepresence MX300 G2	21
Cisco Telepresence MX700	4
Cisco Telepresence MX800 Dual	5
Cisco Telepresence Profile 52 (C40)	1
Cisco Telepresence Quick Set C20	3
Cisco Telepresence SX10	6
Cisco Telepresence SX20	25
TOTAL	**78**

Soft Phone

MODEL	COUNT
Cisco IP Communicator	2
Cisco Jabber for Tablet	2,243
Cisco Spark Remote Device	9
Cisco Unified Client Services Framework	14,714
Cisco Unified Personal Communicator	1
TOTAL	**16,969**

Analog Phone

MODEL	COUNT
Analog Phone	389
TOTAL	**389**

Analog Adapter

MODEL	COUNT
Cisco ATA 186	86
Cisco ATA 187	12
Cisco ATA 190	1
TOTAL	**99**

CTI Port

MODEL	COUNT
Cisco CTI Port	14
CTI Remote Device	2
TOTAL	**16**

Mobile Phone

MODEL	COUNT
Cisco Dual Mode for Android	2,218
Cisco Dual Mode for iPhone	2,270
TOTAL	**4,488**

Wireless IP Phone

MODEL	COUNT
Cisco 7925	25
Cisco 8821	10
Spectralink IPDECT	184
TOTAL	**219**

About ZIRO

ZIRO is the only IT company that makes UC hassle-free. That's ZIRO as in zero headaches, zero roadblocks, and zero nonsense. ZIRO = no hidden terms, back-end battles, excuses, or BS.

We're all about no-hassle and infinite possibility.
IT has been a headache for too long – from comparing dozens of potential tools and navigating the minefield of vendor oversell, to battling through back-end setup and being inundated with onboarding tickets. Our mission is to change that, so we started by making UC painless – at last!

We make simplicity the golden rule.
Everything we do or say is about turning hassle into harmony and complexity into sweet simplicity. Our internal systems, customer contracts, software interface, service delivery, external communications – we mean everything. And we always, always say what we mean.

We are here to make your job easier.
We work for the ones whose necks are on the line. We translate the hogwash so decision makers can make confident choices. We help the ones who are always on call offload a lot of their stress and empower those who want to help (but are unsure how) with solutions they can use.

Delete the hassle. Start at ZIRO.