



Integrated Contact Centers for Microsoft Teams

Connect | Extend | Power

Luware
Nimbus

 **Luware**

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Abstract

There is a lot of confusion about how a contact center can be integrated with Microsoft Teams. A good way to distinguish integration methods is Connect, Extend, and Power. We shed light into the various approaches and how they benefit customers.

There are a bounty of cloud contact centers on the market. Available solutions for Microsoft Teams are differentiated between separate silo applications and products that are integrated with Microsoft Teams. The latter are further differentiated by various integration approaches – with different benefits and disadvantages for both solution providers and customers.

Integration approaches: Connect, Extend and Power

Many solution providers claim that their contact center solution is 'fully integrated' or 'native' to Microsoft Teams. However, these terminologies are often not clearly defined or are wrongly used. A clearer distinction between integration depths is provided by Microsoft: Connect, Extend and Power (Source: Microsoft). The table on the following page summarises the most distinctive aspects of each approach.

Table overview of Connect, Extend, and Power

| | Connect – Loosely integrated | Extend – Deeply integrated | Power – Access to Teams functionality |
|---|---|--|--|
| Product examples | Most contact center solutions | Luware Nimbus | Not possible yet |
| In short | Contact center solution connects to Teams using SIP connectivity | Contact center solution extends Teams app by accessing its functionality using Cloud Communication Graph API | Contact center solution can directly access Teams functionality by using Teams SDK |
| Technology | IP connectivity Only presence API (part of Graph APIs) is used | Microsoft Graph API-based solution Entire Cloud Communications API (part of Graph APIs) is used | Microsoft Teams SDKs (not available yet) |
| User client | Standalone client or third-party app in Microsoft Teams | Microsoft Teams | Microsoft Teams |
| Call connectivity/PSTN | Direct routing (SBC) | Direct Routing (SBC) or Calling Plans | Direct Routing (SBC) or Calling Plans |
| Call handling | Call arrives over SBC to contact center solution. The contact center solution finds the right person in Teams and then sends the call to Teams over a SIP trunk. | Call arrives directly in Teams and stays inside customer's Teams tenant; partner solution never 'handles' the call but only tells Teams to which employee it should send the call. | Call arrives directly in Teams and stays in the customer's Teams tenant. Contact center solution can access all call functionality directly in Teams and connect callers with the right employee. |
| Benefits for solution provider | <ul style="list-style-type: none"> Old/existing solution can be connected to Teams | <ul style="list-style-type: none"> Utilizing Teams calling infrastructure and client platform | <ul style="list-style-type: none"> Direct access to Teams' functionality and power Extended Contact Center can be adapted A standalone contact center client can be built |
| Disadvantage for solution provider | <ul style="list-style-type: none"> Limited access to Teams' functionality | <ul style="list-style-type: none"> Solution must be newly developed from scratch Solution cannot be integrated with other communication platforms or telephony systems besides Teams Dependency on Microsoft to release APIs | <ul style="list-style-type: none"> Same as Extended Contact Center solutions Dependency on the Teams APIs and SDKs |
| Benefits for customers | <ul style="list-style-type: none"> Employees can use Teams as only client (only for third-party apps in Teams) Anyone can take contact center calls (only for third-party Teams apps) Solution can be connected to other communication platforms if offered by solution provider (e.g. Skype for Business, Avaya, or Cisco phone system) | <ul style="list-style-type: none"> Teams as primary tool and experience hub for all employees Any employee can take contact center calls Optimized user experience No further employee training required as Teams is the only tool Change of modalities between audio, video and screen sharing Media stream stays inside Teams tenant Media stream is covered by Teams security & encryption Minimal latency Highest audio and video quality | <ul style="list-style-type: none"> Same as Extended Contact Center solutions A contact center client focused on handling calls can be built to improve agent experience |
| Disadvantage for customers | <ul style="list-style-type: none"> Media stream leaves the Teams tenant In standalone apps, call rings at multiple endpoints (Teams and contact center solution) Encryption and security for the media stream must be managed by solution provider Potential Latency Lower media/call quality Calls only; no change of modalities | <ul style="list-style-type: none"> Solution might not offer the same wealth of features yet Solution cannot integrate other communication platforms or telephony systems | <ul style="list-style-type: none"> Same as Extended Contact Center solutions SDKs are not available yet to build a solution for customers |

Connect: Loosely integrated contact centers using SIP connectivity

Contact centers built on the Connect model use Direct Routing to connect an independent contact center solution with Teams. The solution does not use the Cloud Communication API but only parts of the Graph APIs to obtain the presence status.

Connected Contact Centers can be integrated with Teams in two ways:

- The contact center solution is a **standalone client** or website with proprietary calling and other modalities such as video or screenshare. It only uses the connection to Teams to retrieve the employees' presence status.
- The contact center solution is a **third-party app** within Teams that uses the standard Teams voice calls. It leverages Teams as a telephony solution, allows any Teams user to be a contact center agent, and facilitate finding internal experts and involving them in customer service.

The benefit for solution providers is that they can use an existing contact center solution and integrate it with any communication platform relatively quickly and easily.

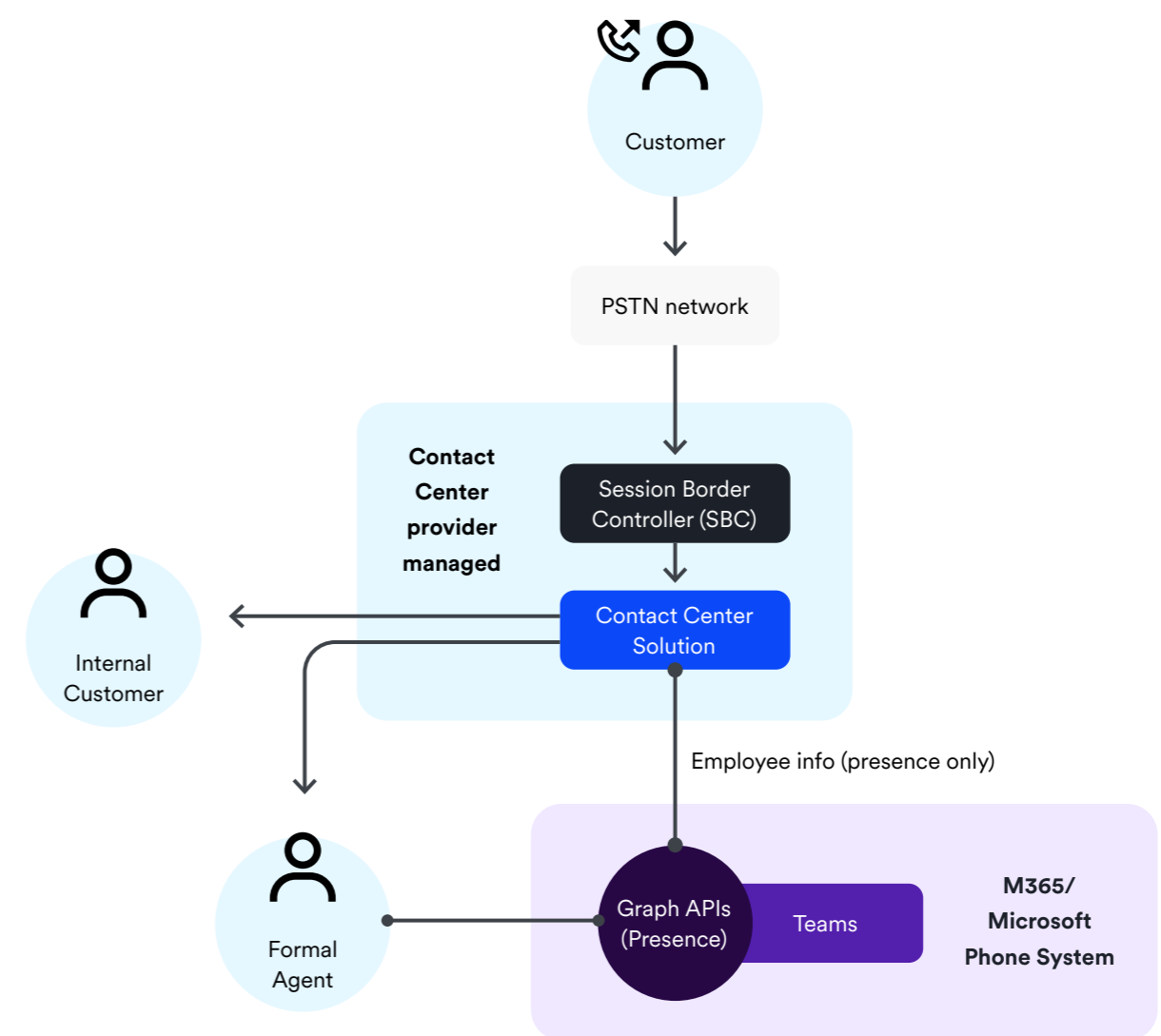
Call handling: Going through multiple systems

'Connect' is simply a connection between the contact center solution and Teams. Therefore, the call first arrives at the contact center solution, which then retrieves the presence status of employees in Teams. There are two ways how calls are then handled.

In both cases, the call and therefore the audio stream first arrives in the contact center solution (managed by the solution provider) and either stays there (standalone solution) or is sent to Teams (third-party app). The solution provider must ensure security and encryption for the calls on its solution. Furthermore, it is important where the solution provider has hosted its service geographically, which should be considered regarding GDPR, internal data policies and voice quality.

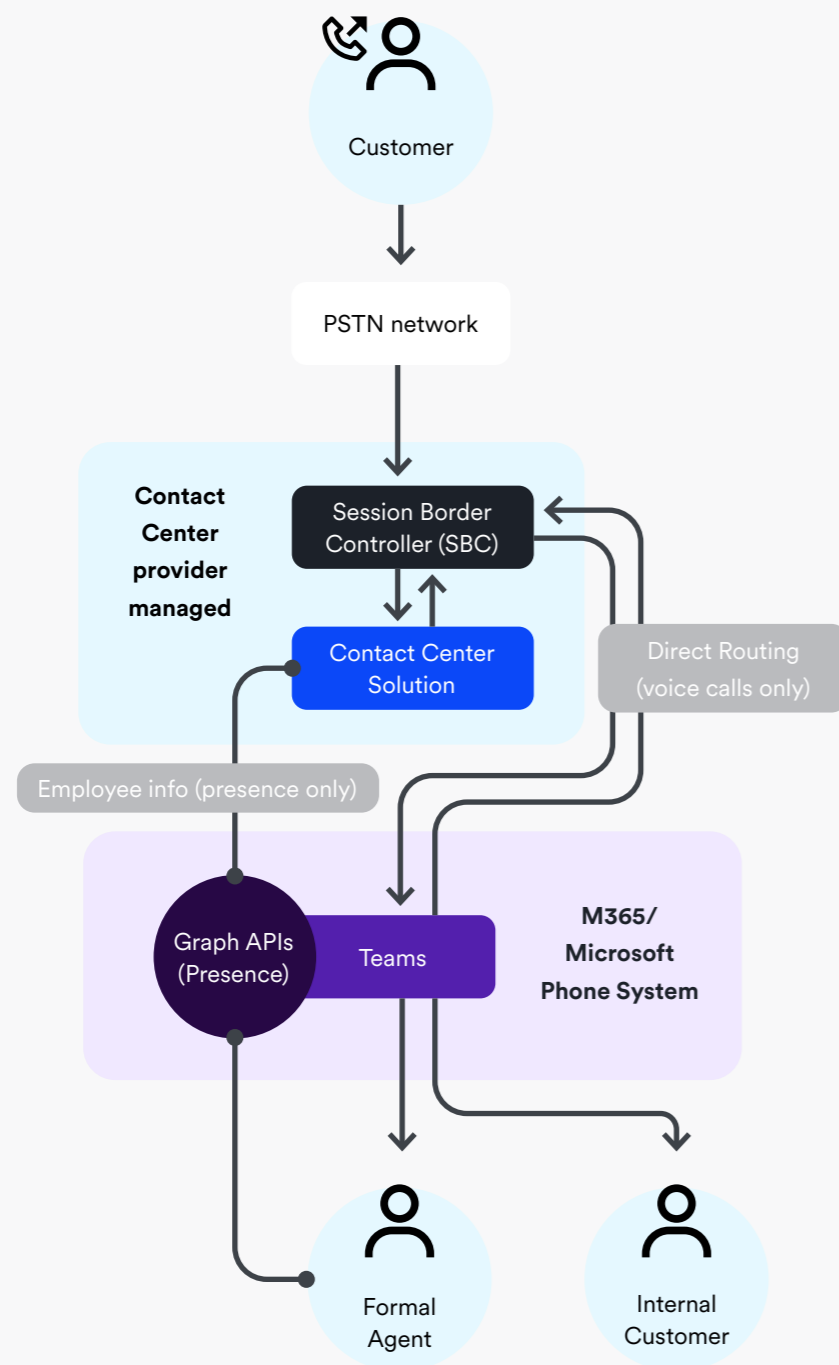
Call handling with standalone client

The contact center solution routes the customer interaction to an available employee in the standalone contact center client. Any modality that the solution offers (e.g. voice, video, chat, screenshare) can be used. These are not Teams-modalities but proprietary interactions within the contact center solution. Standalone clients are often used for 'formal agents' in traditional contact centers.



Call handling with third-party app in Teams

The contact center solution sends the customer interaction to Teams using Direct Routing – the employee receives a normal Teams call. This is particularly suitable for informal agents, i.e. employees who take customer calls irregularly, for example internal helpdesk or call groups. Optionally the solution provider might offer a dedicated Teams app for users with additional functionality e.g. information about the current call, optimized user interface, or 360° customer view.



Corporate strategy: connecting multiple communication platforms

The major advantage of connected contact centers is that they can connect to various communication platforms or telephony systems. This can be beneficial for companies with multiple communication and telephony systems in place (e.g. Teams + Skype for Business, Avaya, Cisco, Mitel etc.), who want a single solution for multiple contact center departments. Connected contact centers use common functionalities across communication platforms to provide users on all platforms with these contact center functionalities. Companies who are invested in the Microsoft ecosystem and want to use Teams as a holistic communication and telephony solution (for all customer interactions incl. end customer and internal service; all modalities with voice, video, chat, screenshare) should consider an Extended Contact Center.

User Experience: double calls and poor audio quality might occur

In standalone clients, the communication platforms are independent of one another. Consequently, users might simultaneously receive a contact center call and a Teams call. Solution providers can deliver a better user experience with a third-party app. In this scenario, employees use Teams as the only client and can only receive calls through Teams, eliminating the possibility of multiple calls. Regardless of whether a standalone client or a Teams app is used, the call handling is managed by the contact center solution and is routed through different systems and locations. This can lead to latency and poor call quality such as delays and jitter. In Connected contact centers with third-party apps it's also not possible to change the modality to video calls or leverage the chat or screensharing from within Teams; interactions are limited to voice calls only.

Connect is best...

- If voice calls are enough
- For companies who have multiple communication platforms (e.g. Teams, Avaya, Cisco etc.) in place and do not plan to consolidate

Extend: Deeply integrated contact centers using Cloud Communications API

Contact centers built on the Extend model use a completely API-based integration, that makes use of all Cloud Communication APIs (part of the Graph API) for presence status, call handling, call functionality, and more.

Extended solutions are built on and exclusively for Teams. Solution providers cannot use an existing solution but must develop a completely new solution using the newest Cloud Communications Graph APIs. Many solution providers claim to be 'native' or 'fully integrated', but only few solutions are an Extended Contact Center.

Luware Nimbus

Luware is among the few software suppliers with an Extended Contact Center for Teams. The customer service suite Luware Nimbus was developed from scratch, cloud-native with the most modern technology, and deeply integrated in the Microsoft ecosystem. The solution scales optimally and adapts flexibly to customer needs.

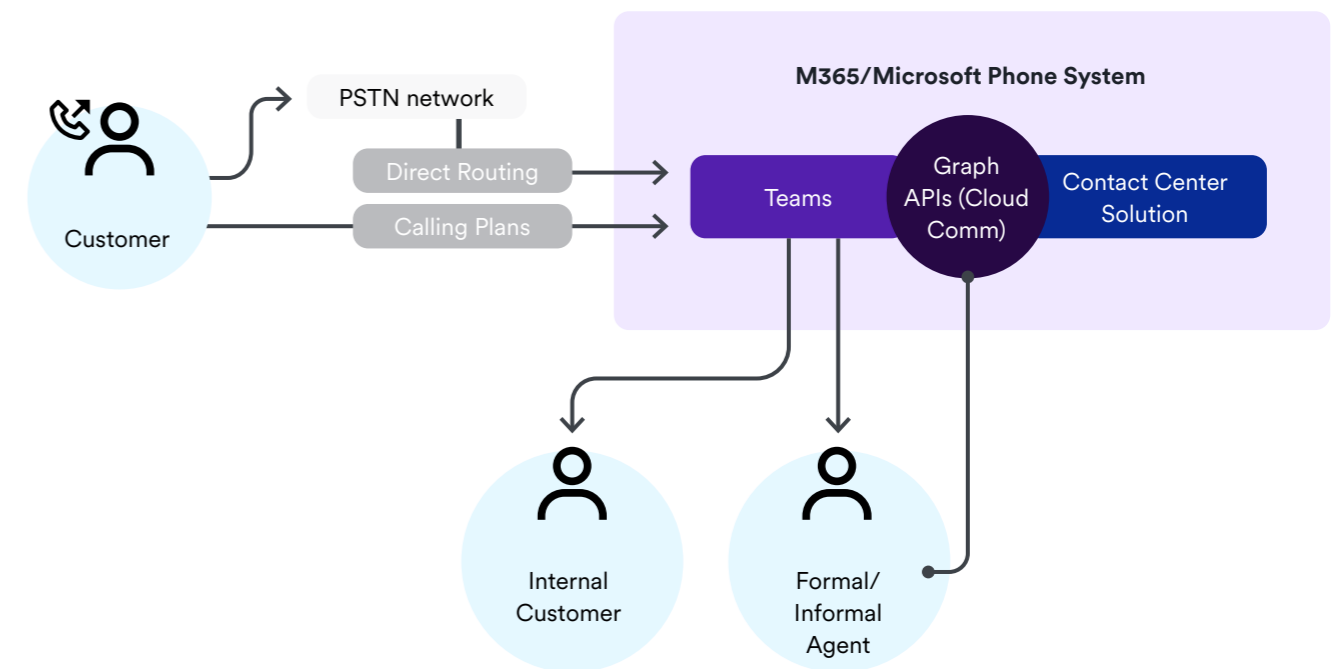
“ Extend is a much deeper integration than Connect, as it fully utilizes the Teams calling infrastructure and client platform. Extended contact center solutions use APIs for everything and utilize the Teams framework for their application; agents use Teams as their client application and can access all the Teams functionality. ”

Michael Jakob
Luware CTO

Call handling: Media stream stays in Teams tenant

Extended contact center solutions never 'touch' the call; they just tell Teams what to do with it. The beauty of this approach is that the call and media stream stays inside the customer's Teams tenant. Because the solution provider doesn't need access to the call, everything from security to encryption is covered by Microsoft. As the call always stays in the location of customer's Teams tenant, the call handling is also covered by the company's approved GDPR and internal data policies. Because it all runs within Microsoft Azure and the customers' Teams Infrastructure, delays and jitter are reduced to a minimum and highest audio and video quality is ensured.

Extended Contact Center: Microsoft Teams calling infrastructure and client platform are used



Corporate strategy: The Microsoft way

Extended contact center solutions fully leverage a company's investment in the Microsoft ecosystem. A disadvantage for solution providers is that they cannot integrate their solution with any other communication or telephony platform. They only integrate into and fully focus on Teams – which is also one of their key benefits. They don't have to take any other system into account and can thus leverage all features and functionalities of Teams. Therefore, Extended contact centers are highly beneficial for companies who follow a one-platform strategy with Teams or those who are in the process of getting there.

With an Extended Contact Center, customers are assured that the solution provider has gone 'all in' with Microsoft.

As Extended Contact Centers are built from scratch, they might offer a smaller set of features compared to Connected solutions as it takes time to develop functionality and because they depend on available APIs from Microsoft. "Extended solutions are for companies who are willing to go one step back today to go 10 steps ahead in the future," says David Fischer, CSO at Luware. "Building our Extended Contact Center Nimbus required large initial investments into the solutions' architecture and foundation. Now we can fully focus on extending its functionality."

Teams as Experience Hub

At Luware, we strongly believe in the 'Microsoft-way' and that Teams will become the central experience hub for all employees. Our product will evolve alongside Teams and the entire Microsoft ecosystem, leveraging its functionality and power.

User Experience: Teams as experience hub

Extended contact center solutions use Teams as the central experience hub, which means: one single sign-on for users, and Teams as the only client for agents and employees. There is no additional call toast, no switching between applications, no additional training is required. Everything is in Teams: the presence status, the call, the call handling.

Because it's a normal Teams call, employees can benefit from the entire Teams calling functionality: voice suppression, conferencing, hardware and headsets, on hold etc. They can even change modalities just like in any other Teams call which can be very beneficial for internal help desks: employees can easily switch from a voice call to video or add screensharing.

'Extend' is best...

- For companies who want to go the 'Microsoft way'
- When Teams is intended as the single communication platform
- For Multinational enterprises who communicate across countries, regions, and continents
- When you want to leverage the Microsoft platform for encryption and security
- For companies who value long term strategy over current functionality

Power: Directly accessing Teams functionality through SDKs (not available yet)

With the 'Power' approach, solution providers utilize Microsoft Teams SDKs to get Teams functionality right into their contact center solution. SDKs are software developer tools and can be seen as 'pieces of Teams' that solution providers can directly use in their applications. Instead of telling Teams what to do, such as in the Extend approach, a contact center built with Power can directly access Teams functionalities such as the presence status, call handling, or calling. 'Power' is not available yet but will bring many benefits once released.

From Extend to Power

We are excitedly awaiting this new integration approach. As far as we know, Extended Contact Centers can be adapted using SDKs to be turned into a Power Contact Center. A close collaboration with Microsoft means that we get early access to APIs and SDKs, which allows us to evolve our solutions in parallel with Microsoft's technology advancements. We are always up to date with the newest integration methods and will incorporate the Power integration for our contact center solution, Nimbus, when it becomes available.

Call handling: Handle the call itself

As with Extend, the call arrives directly in the Teams tenant and always stays there. Due to the Microsoft SDKs, the contact center solution doesn't have to tell Teams what to do with the call but can handle the call itself.

User Experience: Teams as an experience hub

Employees' experience is very similar as in Extended Contact Center solutions. Agents use Teams as a single client for both collaboration, internal communication, and customer service. Alternatively, solution providers can provide a dedicated contact center client that optimizes the agent experience. As with Extend, employees benefit from the highest audio and video quality as well as all standard Teams calling functionality.

Conclusion

1. **Break down silos.** A contact center should be part of your corporate communication strategy in terms of technology and processes. Every employee can be a customer service touchpoint.
2. **Evaluate your platform strategy.** A multi platform approach comes with many caveats. Consider leveraging the entire Microsoft ecosystem with Teams as the central experience hub.
3. **Consider long term strategy over current functionality.** Chose a contact center solution that aligns and grows with your strategy.



