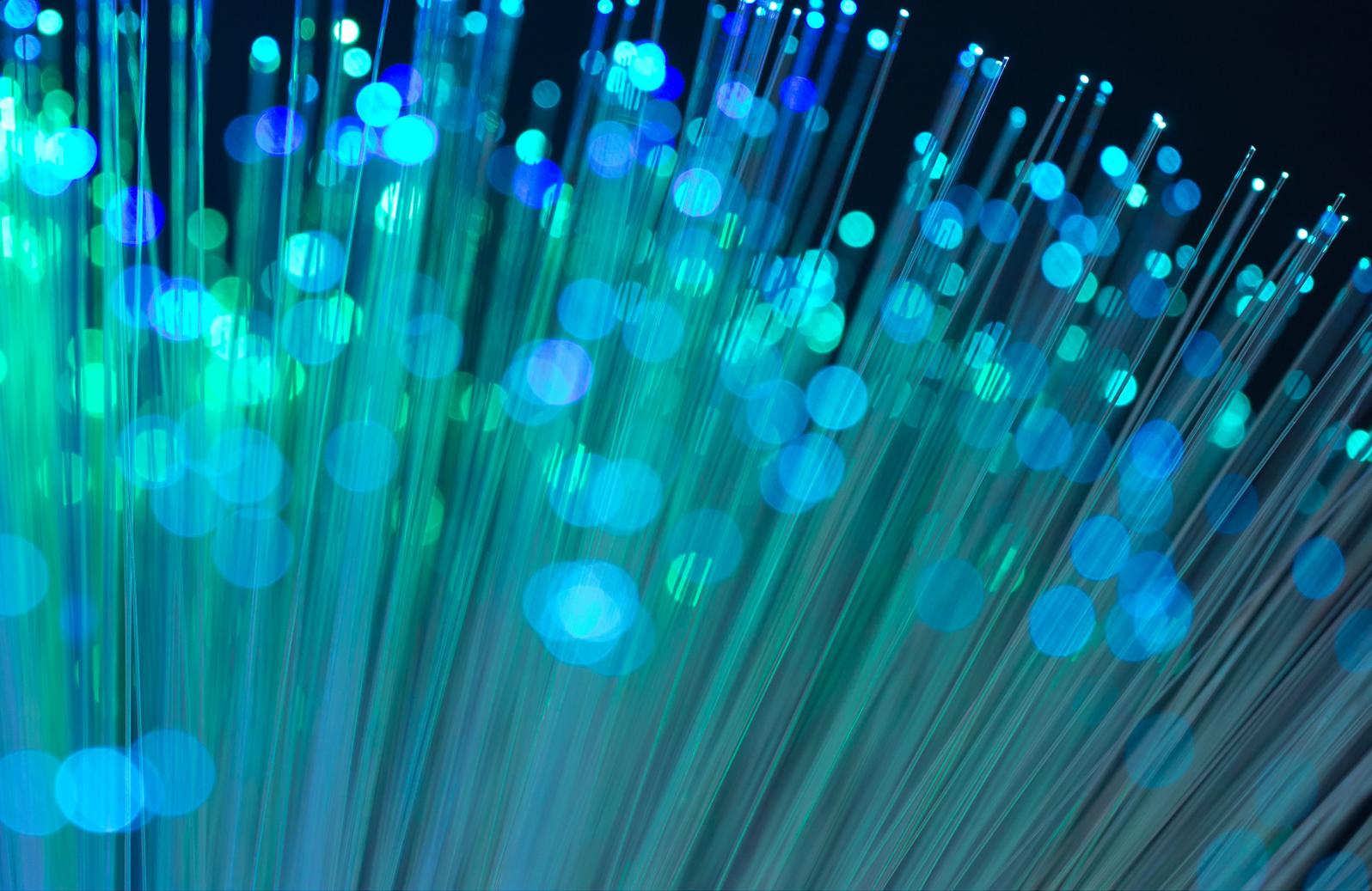




What Meeting Room System is Right For Your Microsoft UC Deployment

This white paper examines the different system architectures that are available in order to help businesses decide upon the right meeting room solution for their needs.

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Overview

Standardizing on Microsoft's UC platform, Skype for Business and/or Microsoft Teams, presents a conundrum when it comes to equipping meeting rooms. Meeting room systems range from:

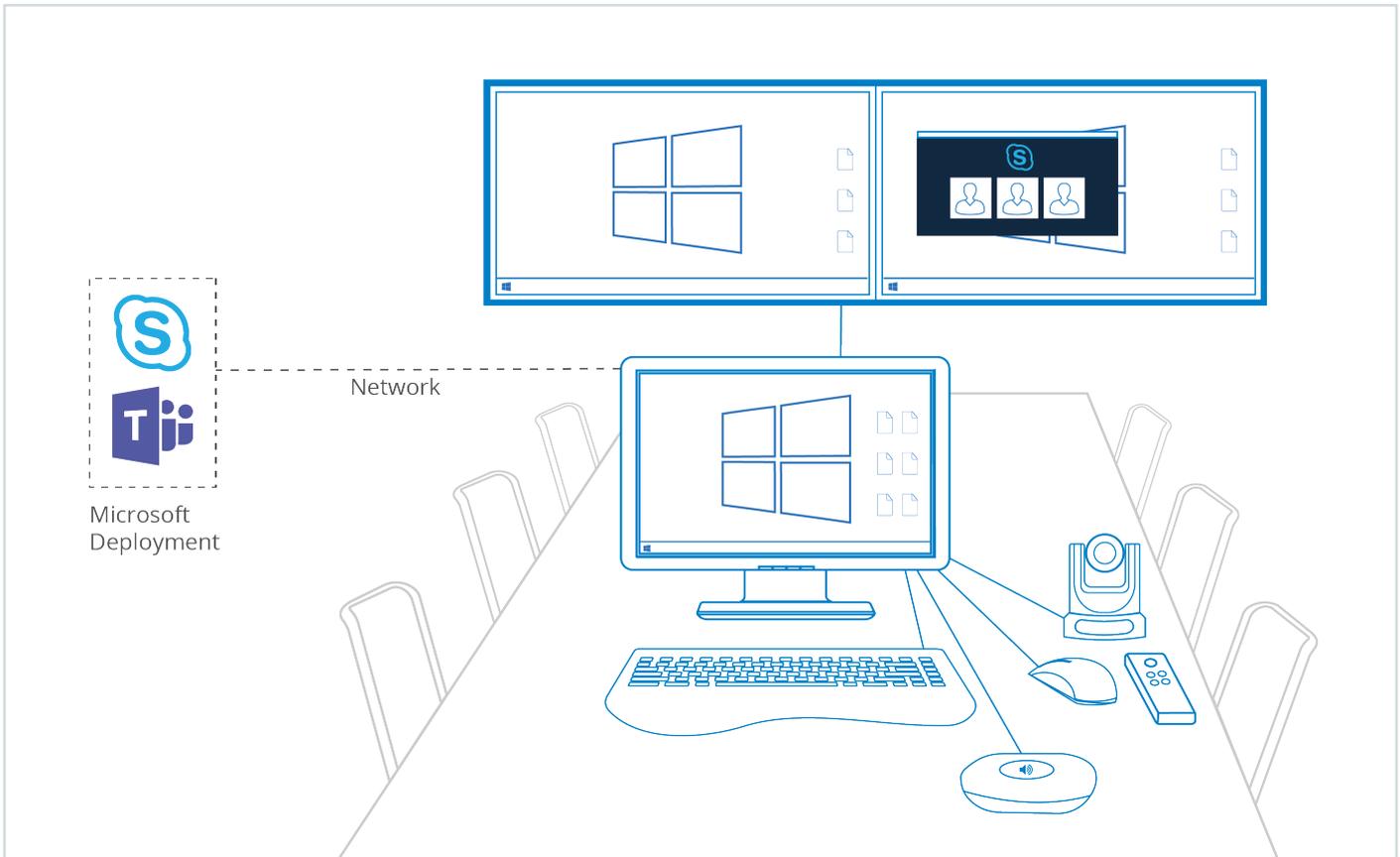
- compatible with
- certified for
- native
- designed for
- engineered for
- tested against
- works with

The right solution for your business should offer investment protection through its ability to follow Microsoft's fast moving collaboration roadmap and more importantly, it must be able to easily and cost-effectively adapt to a business's individual bespoke and evolving needs. Consequently, specific requirements, features, and integrations may need to diverge away from Microsoft's own roadmap. It must also be easy to use, ideally offering a familiar user experience, address both Skype for Business and Microsoft Teams and guard against poor utilization and rising support costs.

This whitepaper explores the architectures currently available and the circumstances under which each is an appropriate choice for your business.

PC based

A PC running Microsoft Windows, with USB connected camera and audio devices, and support for one or two screens.



This category is subdivided into three:

- **Bring-your-own-device** – a user in the room uses their own laptop as the interface
- **An in-room PC** – a PC deployed in the meeting room connected to USB peripherals and a keyboard / mouse to provide the user interface
- **An integrated device** – a touch screen PC is supported by a dock providing connectivity e.g. The Logitech SmartDock

On the plus side, a PC based solution adheres to Microsoft's collaboration roadmap as it runs the same desktop collaboration software, or a variant, in the meeting room. As new software versions are released, meeting rooms can be updated with the latest collaboration toolset allowing the room experience to keep pace with desktop functionality. The PC based room solution works for both Skype for Business and Microsoft Teams as both clients can be supported side-by-side.

The breadth of software support and functionality provided by Microsoft Windows is an asset that IT departments rely on to deliver desktop and mobile computing to their users. The compromise made to achieve this flexibility is in lowering the system's reliability and availability when compared with a dedicated embedded product e.g. a network switch. This is a well-balanced compromise for a desktop user where an occasional loss of service impacts one person's productivity. However, this same compromise is not appropriate in a meeting space, where a loss of service is likely to impact all local and remote users. Simply put, meeting rooms cannot rely on Microsoft Windows.

An enterprise that opts for PCs in meeting rooms will inevitably encounter a raft of support issues including:

- Manually logging users out and rooms back into their dedicated accounts
- Replacement of missing/removed peripherals
- Re-configuring audio and video devices
- On-site support for users (help with specific functions like screen sharing)
- Rebooting unresponsive PCs
- Rebuilding PCs following repeated issues

Businesses must also take into account the impact of scheduled Windows updates, which can disable a whole video meeting room estate due to unexpected changes, such as a difference in camera settings or audio drivers. These regular updates can result in all rooms losing access to cameras or audio devices.

PC based solutions are a low cost option, which have the capacity to levy a high price in terms of support staff, and cause poor room utilization and lost productivity.

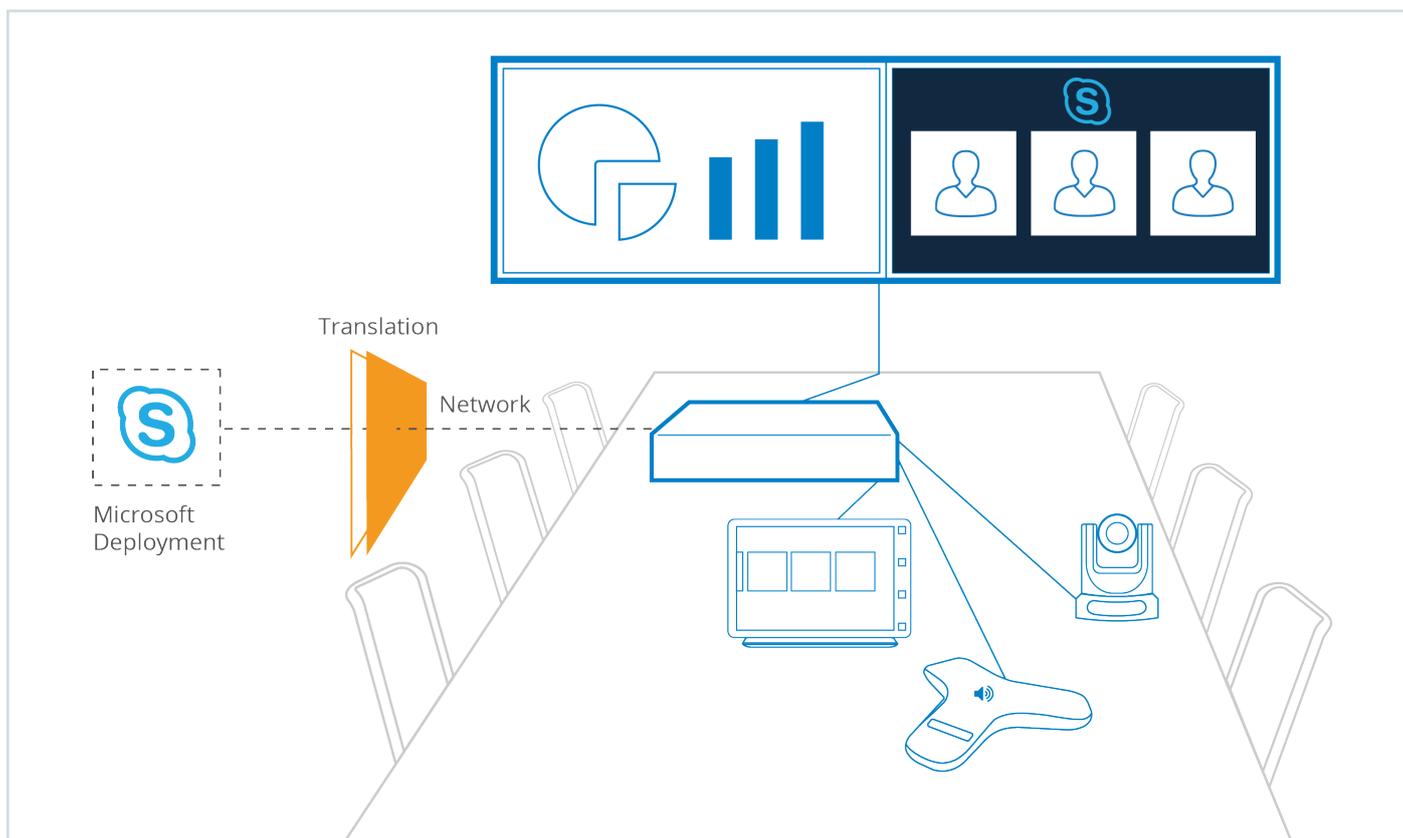
WHEN TO CHOOSE: PC BASED



If requirements are for a small number of rooms in an environment where technical intervention during meetings will be tolerated, PC based solutions are an entry point into providing Microsoft collaboration spaces. Their limitations prevent more widespread deployment, however, experience of their shortcomings can be of assistance when justifying additional capital expenditure on more reliable, robust and powerful solutions.

Compatible video conferencing devices

The second architecture is an evolution of the traditional standards based H.323/SIP video conferencing systems. Here, a dedicated hardware codec connects to a range of professional camera and audio peripherals. As the hardware codec is often H.323/SIP based, an additional interoperability service or translation layer is required to enable communication with Microsoft's collaboration platforms.



The hardware codec often runs an embedded operating system such as Linux, which provides levels of availability and reliability appropriate for meeting spaces. The manufacturer also has the flexibility to implement functionality that complements Microsoft's collaboration toolset, tailoring the meeting room experience as required. For instance, a flexible user interface might be provided, allowing the user journey to be customized to specific requirements. These systems typically address a range of meeting room sizes from huddle room through to boardroom.

The translation layer required to connect video conferencing devices to Microsoft's collaboration environment can be implemented in two ways:

- **An on-codec translation layer, allowing direct connection between the codec and your environment**
- **An off-codec interoperability service providing the translation layer, delivered by on-premises, hosted or cloud infrastructure, allowing an indirect connection between the codec and your environment**

Both methods being loosely integrated with your Microsoft environment limit the ability of the hardware vendor to follow Microsoft's roadmap. As new functionality is added by Microsoft at the desktop, vendors must perform reverse engineering, before modifying their translation layer, to bring the same experience into the meeting room. In the best case, there is a significant delay between users benefitting from functionality at the desktop and this being delivered to the

meeting space. User productivity is affected and adoption falls because users lose the familiar Microsoft experience in meeting rooms. In one recent example, it took a large video conferencing vendor over 18 months to enable partial presentation sharing support in meeting spaces.

Beyond the delays incurred by the translation layer, it is sometimes impossible for a vendor to deliver Microsoft functionality. In some cases, features are protected by encryption, preventing the vendor from reverse engineering. Other times, the video conferencing hardware itself forms the limitation.

Traditional video conferencing codecs are designed specifically for communicating using the H.323 and SIP standards. As such, the microprocessors chosen are highly specialised at encoding and decoding the video, content and audio codecs used by these standards, while also being cost-effective and low power. Microsoft's collaboration solutions use different standards and codecs, which are designed to run on the more powerful, flexible microprocessors found in desktop computers. Certain Microsoft collaboration functionality will not run on the processors found in traditional video conferencing devices. A good example of this is the most common technology used to present content in Skype for Business meetings, the Remote Desktop Protocol (RDP) explaining why some solutions in the market today cannot always send content into Microsoft meetings.

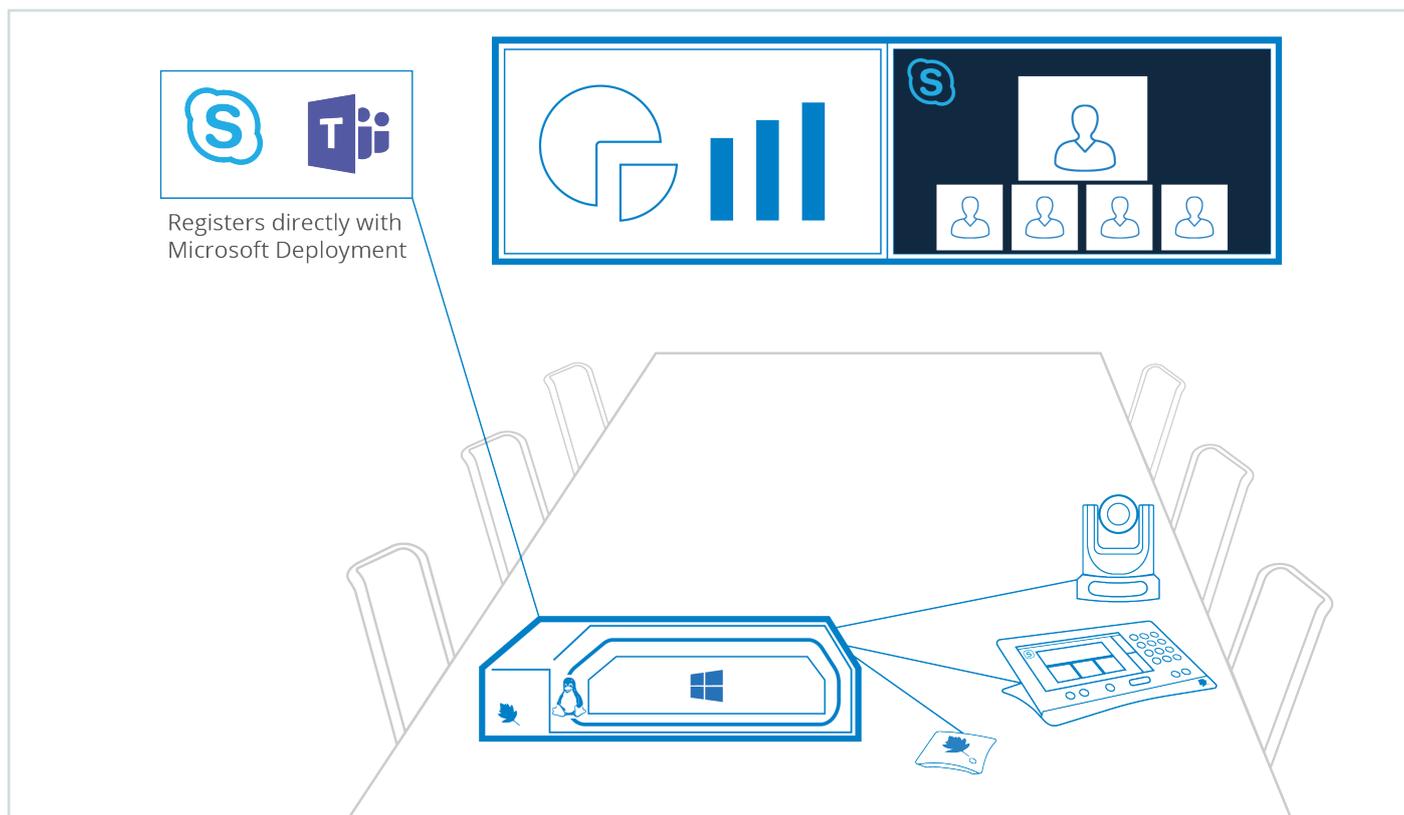
WHEN TO CHOOSE: COMPATIBLE VIDEO CONFERENCING DEVICES



Compatible systems address all room sizes and offer fully integrated professional peripherals such as PTZ cameras, touch screen interfaces and microphones. It is the fully integrated system that delivers a great meeting room experience and by working with a suitable vendor, there will be enough flexibility to allow the solution to evolve to meet your business requirements in the short-term. However, these solutions soon run out of steam, are under-powered, and cannot provide investment protection. This is borne out by their inability to keep abreast of Microsoft's collaboration roadmap. Microsoft Teams support being a good case in point, where today there are no compatible systems able to accommodate Teams and no indication from either Microsoft or the vendors, in this category, that this will be possible in the future.

Native Microsoft solutions

The native architecture described here is unique to StarLeaf's Microsoft product portfolio. A dedicated hardware codec that contains an embedded Windows environment providing the native Skype for Business and Teams experience, protected by a Linux wrapper. As with the compatible solution, these systems offer a great meeting room experience with integrated professional cameras, microphones and a touch screen controller but now also provide a tight integration to your Microsoft environment whether Office 365 or on-premises. Likewise, they are available in a range of configurations to address all meeting room sizes.



A native architecture combines the strengths of Architecture #1 and Architecture #2 while mitigating their limitations.

The Linux wrapper provides availability and reliability levels fitting an enterprise meeting room environment. Its flexibility allows StarLeaf the freedom to implement functionality that complements Microsoft's collaboration toolset, tailoring the meeting room experience to your evolving business requirements. As an example, StarLeaf offer the only centralized management platform, which allows an operations team to deliver a quality of service to all users.

Protected by Linux, the embedded Windows environment provides tight integration with the Microsoft collaboration deployment. This enables full access to the collaboration toolset available to your users at the desktop. As Microsoft releases collaboration functionality, it is immediately accessible to the StarLeaf native solution and can be implemented rapidly. This has been proven many times with features such as Office 365 support, Enterprise Voice capabilities, bi-directional RDP as well as VBSS content support. Most recently StarLeaf is the first (and currently only) solution that works for both Microsoft Teams and Skype for Business users for both meeting join and point to point calling. This demonstrates that the native architecture enables StarLeaf to closely and rapidly follow Microsoft's collaboration roadmap, while ensuring that users benefit from a consistent user experience across all their devices and into the meeting room.

WHEN TO CHOOSE: A NATIVE MEETING ROOM SOLUTION



Choose a native solution when ease of use and low cost of ownership are key drivers for meeting room and collaboration spaces. The native system will maintain a seamless workflow from desktop through to the meeting room ensuring users have a consistent and familiar experience. Reliability and utilization are assured via the central management platform, which offers IT support, estate oversight and the ability to remotely monitor and fix problems as they occur.

The native architecture provides the ultimate in investment protection. It allows StarLeaf to deliver functionality through collaboration that supports your evolving business requirements, while simultaneously remaining in lock step with Microsoft's collaboration roadmap.



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