



## **Businesses depend on Teams to collaborate & operate, and Teams runs better with VOSS**

---

Against a challenging external environment, organizations must be flexible, dynamic, and adapt to survive. In recent times, the pressure to quickly introduce remote working has been unprecedented, with little time for the normal planning that would go alongside the introduction of new tools and workplace processes.



### TAKE CONTROL WITH VOSS FOR COLLABORATION

Organizations that have been successful in delivering this digital workplace are now agile, mobile, and fully connected – at any time and from anywhere. Microsoft Teams has become the underlying foundation, delivered as part of the Microsoft 365 suite of products and licenses, and with integration into the rest of the Office 365 suite of applications. Microsoft Teams has firmly established itself as part of the digital IT ecosystem and organizations have become highly dependent on it. However, this rapid adoption has bypassed normal planning processes. The business challenge now is to manage, control, and ensure that your UC service continues to deliver the benefits it has promised.

# Challenges solved

---

**Single point of control:** providing a highly automated and agile single point of control for individual and bulk changes. Extends the benefits of a VOSS-managed collaboration solution to departments and users with Microsoft Teams.

**Fast resolution to service requests:** delivers customer self-service for fast resolution to service requests, with comprehensive controls to manage access and change across the solution.

**Multi-step workflow automation:** simplifying and streamlining requests, removing underlying complexity and aligning with business processes.

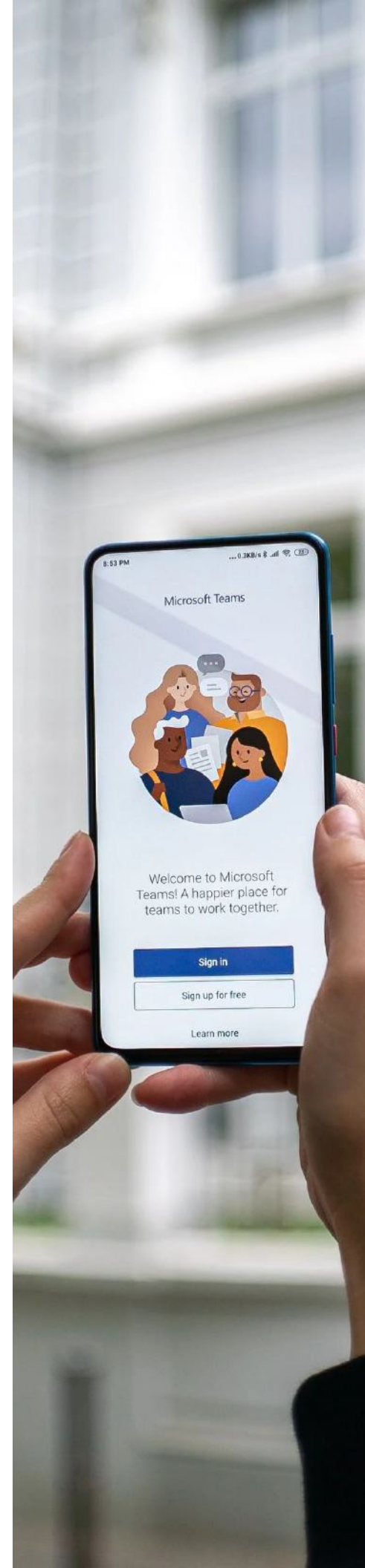
**Local viewpoints:** segmenting larger Microsoft tenants to align users and services with local departments and business units.

**Enterprise voice integration:** integrates enterprise voice with Cisco, Avaya, and MS Teams Direct Routing, with dial plan controls, so clients can freely communicate, including on-net calling.

**Real-time dashboards:** for monitoring service performance and availability, tracking usage and user experience, and keeping licensing and costs under control.

**Self-healing:** contains self-healing rule set to automate corrective action and minimize delays to service recovery.

**Single integration point:** provides a single and consistent integration point into high layer text service management, billing and reporting systems.



## Addressing business challenges

---

**Whether you are running Teams exclusively or in parallel with other collaboration solutions, we can help.**

VOSS provides end-to-end management of Microsoft Teams, UC and collaboration solutions, and enterprise voice, allowing organizations to take control of their UC estate. Businesses depend on Microsoft Teams and Microsoft Teams runs better with VOSS management solutions.

Central to operating the digital workplace and the new demands arising from it is the concept of digitizing the service delivery process - #DigitalServiceDelivery. The VOSS management solution eradicates traditional aspects of manual task administration, disparate portals, non-integrated systems, duplicated data, and the need for highly skilled technical staff, and replaces these with a core set of tools and capabilities:



### Reliability

Measure the service in real-time, identify trouble spots and rapidly resolve issues, with an element of self-healing to deliver a utility style service to users. Users work without a break and so should the service – with good quality audio, limited dropped calls, and instantaneous video.



### On demand

Customers now expect a complete self-service experience, from order through delivery through to day-to-day service management. Self-service requests are placed via an intuitive and non-technical portal with suitable security controls in place.



## **Direct routing**

Provisioning and management of enterprise voice with Direct Routing: Having deployed Microsoft Teams internally, organizations are eager to expand and connect to external parties – making and receiving calls to the public telephone network. This enables an organization to keep its numbers, has suitable call and dial plan controls, makes use of the native Teams dialer (to encourage usage), and allows on-net calling with existing systems.



## **Dashboards and reporting**

To gain actionable insights into the adoption, usage, performance, and user experience across the public cloud service (Microsoft Teams), on premise applications, and additional systems, the solution provides facilities such as telephony break-out, call recording, contact center and conferencing.



## **Getting to Teams**

Getting to Microsoft Teams in the first place: Many organizations have already invested in existing systems, so want to migrate users to Microsoft Teams at their own speed, whilst keeping users connected, which requires the right planning and tools.

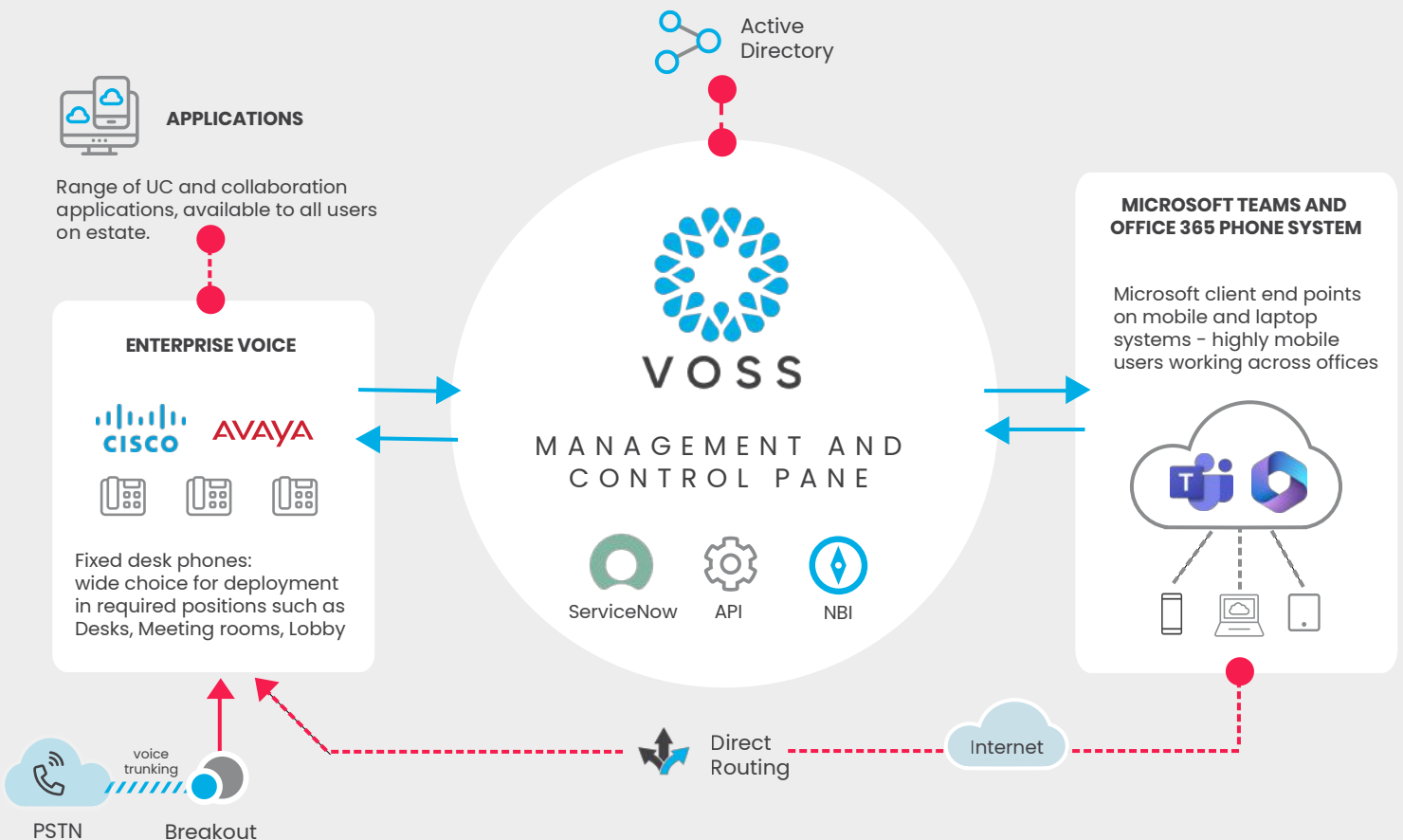


## A solution overview

VOSS Automate is a multi-node system with no single point of failure. It is hosted in either a public (Azure, AWS) or a private cloud data center and is integrated and fully synchronized with the existing Microsoft Teams collaboration service. VOSS provides a single point for control and management of the underlying collaboration service – through a web portal, bulk-loading facilities, or a REST API. The latter is suited where the system serves as an integration and automation layer – connecting into adjacent platforms, tools, and business processes (e.g., ITSM platforms such as ServiceNow).

During deployment, critical business processes and workflows can be identified, and the system is adapted to satisfy these through template configuration; no traditional coding is required.

### EXTENDING MS TEAMS TO ENTERPRISE VOICE



# Deployment models with enterprise voice (Microsoft only)

---

Deployment models include 'Microsoft Only' or 'Hybrid', depending on the level of integration required with existing systems and applications. In either case, enterprise voice is enabled through suitable Microsoft licensing (E5 or the Microsoft Phone System license) and telephony break-out using Microsoft Direct Routing. This provides benefits in retaining the existing numbering plan (E164 telephony numbers and internal extensions) and commercial arrangements around call plans and tariffs.

Users with enterprise voice enabled make use of the native Microsoft Teams dialer for incoming and external calls. This level of familiarity and use of the same tool (as for internal collaboration) makes the user experience intuitive, driving adoption. No new applications are required on the desktop, nor is there a need for further training.

Users are configured with enterprise voice through the Quick Add Subscriber workflow – which automates the allocation of numbers, migration of existing services, and underlying set-up.

Licensing can be enabled (optional) in the workflow (for example uplifting to E5 or allocating a Microsoft Phone System license), with the workflow managing the inherent delay across Microsoft AD (licensing) and the Teams portal itself.



## Integration with existing systems (hybrid)

---

Many organizations that use MS Teams also have an investment in an existing telephony platform – Cisco, Avaya. A hybrid deployment delivers a tightly integrated service whereby:



Existing handsets can be retained alongside Microsoft Teams as the soft client of choice, allowing users access to a wide range of devices to suit their individual requirements. User profiles are available for Cisco (only), Microsoft (only), or multi-vendor (both Cisco and Microsoft devices and clients).



Users may freely communicate between any endpoint using either internal extension dialing, E164 or through a user's contact card. Calls are kept on-net as required, to avoid unnecessary call charges.



Existing dial plan controls and PSTN break-out points are maintained to provide consistent dialing (including emergency calls) and robustness on the solution.



Migration workflows can move users, as required, from the existing service and onto Microsoft Teams without any major disruption.

## Single point of management

---

VOSS Automate provides a single point of control for fast and immediate access to manage Microsoft Teams, existing systems, Direct Routing, and supporting components (SBCs). This access is available through an intuitive web portal, via loaders for bulk operations or can be activated from the VOSS API. Access controls, branding, data visibility, and presentation are all configured to suit the various types of administrators, user, departmental manager, or persona that makes use of it.

This interface also allows management of multiple customers through a single portal, controlling access to the required entities under a flexible management hierarchy.

Multi-step workflows enable administration through a service desk without the need for advanced technical skills. Workflows are underpinned by automation and operate across several underlying sub-components, promoting driver flexibility.

### **VOSS Automate: On demand customer self-service**

With a management system in place, increasingly customers are looking to encourage end user self-service and delegate control to departmental managers, closer to where users consume a service. Self-service requests range from ordering new services through to the day-to-day management and change of services that are already in use. With an integration point into billing and charging (VOSS NBI) and a near real-time feed, a wide range of services can be accessed through the self-service portal, and customers are assured that any charges that are levied are accurate and up to date.



## Reliability and deliver to commitments

---

VOSS Insights offers an integrated solution providing advanced and actionable business intelligence and monitoring, covering voice and service quality used to operate the collaboration service against business service level agreements (SLAs). Data is contextualized on fully customizable dashboards along with dynamic reports for additional detail. For critical locations or proactive services, synthetic testing of endpoints can be deployed to generate test traffic, diagnose faults, and assure critical connections.

The connection into Microsoft Teams is seen as particularly important given this part of the service operates over the Internet, providing end-to-end coverage of public cloud, on site, and data center services.

End-to-end assurance data is collected and if proactively detected issues or events are found, corrective automated 'self-healing' action may be undertaken.

### VOSS Insights: Accelerating adoption and usage

VOSS Insights also provides powerful business context and visibility on usage of the Microsoft Teams services – calls, meetings, and chat – along with user experience, which can be tracked, monitored, and used for trend analysis to assist in improving the user experience and accelerating adoption across the organization.



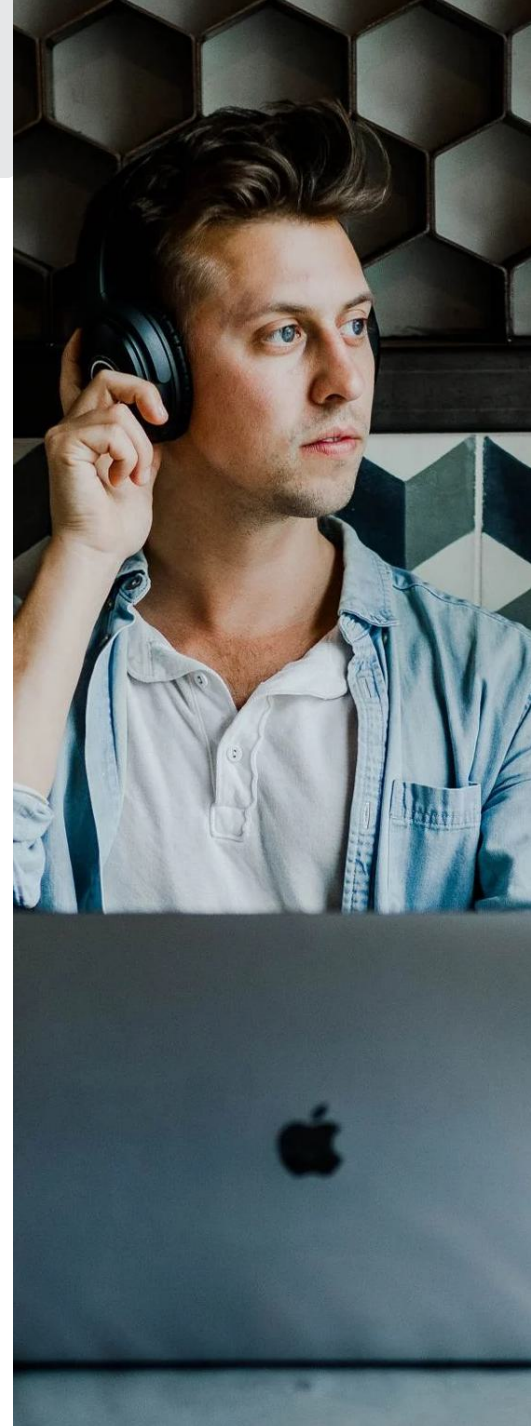
## VOSS migration to Microsoft Teams

---

Once connected into both the existing telephony platform (Cisco, Avaya, Skype for Business) and Microsoft Teams, all users and associated numbers, services, and configuration can be synchronized and presented in a consistent way through VOSS. Workflows are provided to assist with the migration of users to Microsoft Teams with or without enterprise voice.

### VOSS Phone Server

VOSS Phone Server is a complementary application server, providing telephony registration and call handling features for devices that cannot easily connect into Microsoft Teams. These endpoints are part of the existing system, are in use by users, and the business case does not justify a replacement cost. During migration, the devices transfer onto VOSS Phone Server, which is connected (SIP trunking) into the existing SBC infrastructure and then managed through the VOSS web portal. Menu workflows are provided to make the deployment of devices fast, simple, and intuitive. New phone types can be easily added as required.



## VOSS FOR MICROSOFT TEAMS

**Technical Details****Architecture**

The cluster contains multiple nodes for robustness and scalability; flexible deployment options are provided. The nodes can be installed on premise, into private geo-redundant data centers, or onto a cloud service (such as Microsoft Azure, Amazon AWS, or Google Cloud services). Access to intuitive web portal, bulk load, or REST API. Overbuild to integrate and synchronize with existing Microsoft tenants.

**Drivers**

VOSS drivers are included and activated during the workflow process. Access to Microsoft applications is primarily through PowerShell scripting. The scripts typically run under the Skype for Business administrator account (limited rights). Scripts are short to avoid issues with timeouts imposed due to business security policies. Where a provisioning action transgresses across Microsoft applications, any incurred latency (e.g., between licensing and configuration) is managed within the workflow.

Drivers available for Microsoft (PowerShell), Cisco AXL, Avaya Aura, and generic sub-components (REST).

RBAC, AD authentication, Single Sign-On.

**Security and segmentation**

Multi-tenant with hierarchy - a tree representing customers/companies, departments, and sites - administrators configured at a hierarchy node to secure data visibility (they have no access outside of their node).

Audit and transaction log - all actions taken by an administrator are logged for audit purposes into the transaction log. The log also serves as the point to roll back commands should they fail and offers the ability to 'edit and replay' under these conditions.

Privacy and security notices - configuration of warnings, notices and links to cookie and privacy policies for best practice and compliance with regulatory requirements such as GDPR.

**Extensibility**

Adaptation template framework for rapid development of new features, optimization of workflows and alignment with business processes.

## Technical Details

VOSS is designed to operate in large, complex enterprise environments where performance working at scale, robustness, multi-tenancy, and concurrent access are important requirements.

### Industrialization

- Multi-node architecture cross data center, no single point of failure
- Multi-threading of requests – fast / parallel processing of requests
- Full backup and recovery capabilities
- Warning and security notices / banners presented at login
- Alarming, reporting into assurance platforms / NOC (SNMP, Syslog)
- Complete transaction logging for traceability and audit purposes
- Detailed logging and diagnostic tools

### Choice of clients to meet user needs

Flexibility to manage a wide variety of clients across Microsoft only and hybrid solutions – allowing a choice of client as suited to a user's needs. Support for Cisco and Avaya IP phones and soft clients, analog devices, Microsoft Teams clients, third party SIP devices. Clients can be freely mixed and matched depending on user needs irrespective of their location and can communicate using internal extension dialing. This simplifies the deployment alongside an existing telephony estate.

Fast user provisioning through VOSS quick add subscriber workflow.

### Number management

Single view and inventory of E164 and internal numbers.  
Allocation of numbers as part of service provision for users.  
Number cooling for an amount of time – leavers from an organization.

### Microsoft Direct Routing and deployment nodes

Solution can be deployed as Microsoft only – providing management of users on the Microsoft tenant, enterprise voice through Microsoft Direct Routing (including SBC) and break-out points.

Solution can be extended to integrate with existing telephony systems (Cisco, Avaya) in a hybrid configuration – with dial plan management coordinated across systems, providing seamless dialing between any client, number management, call controls and call routing. Personas are supported for Microsoft only clients, Cisco/Avaya only clients (IP phones, soft phones) or multi-vendor (Microsoft and Cisco/Avaya).

PSTN break-out (inbound, outbound calling) is provided and managed in both deployment models. The Microsoft standard Calling Plans (Microsoft Business Voice) for domestic and/or international calling are not required and are replaced by the above.

### Billing and reporting

Where changes are made and these result in a billable change, these are reported dynamically and automatically northbound into a suitable billing platform for timely and accurate raising of charges. This capability requires the VOSS NBI Module (optional).

Included with VOSS Automate is a reporting feed (SDE) for the combined estate that can be consumed by higher level reporting systems.

## Technical Details

### Analytics and assurance

Broad range of dashboards and reports covering:

- License consumption vs. inventory
- Active users, teams, workspaces
- Call behavior, call quality
- Guest activity
- Device usage
- Teams live events
- Service status and health
- Resource utilization (memory, disk, CPU)
- Active connections (SIP)
- Loading, latency, throughput through the solution

