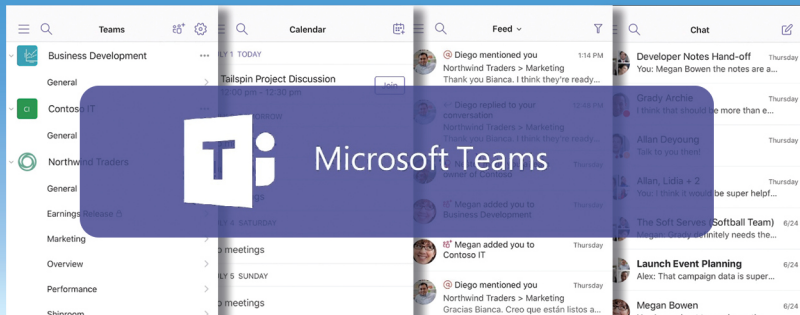


SmartNode™ eSBC for Microsoft Teams Direct Routing



Patton SmartNode devices unify traditional telephony and SIP-based All-IP systems with MS Teams Phone System. Enterprises can benefit from numerous advantages by choosing Patton SmartNode SBC and hybrid SBC.

Feature Overview

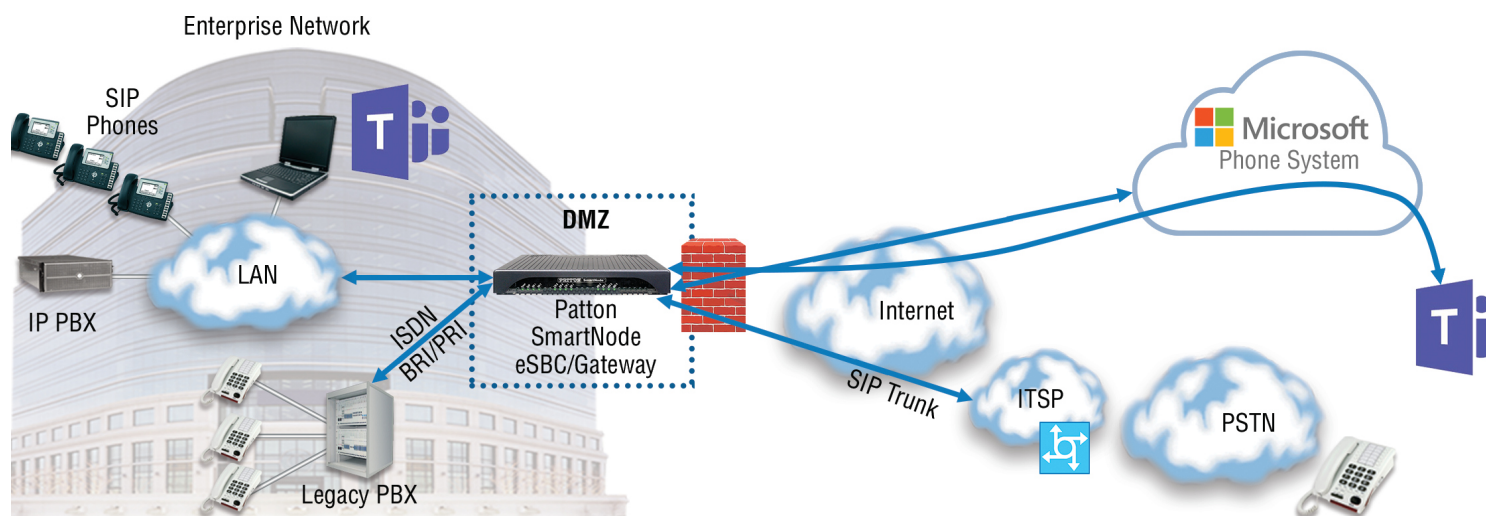
- System and technology convergence
- Direct routing: Legacy and All-IP telephony integration into MS Teams
- FXS long reach
- Ring groups
- PSTN integration
- Branch survivability & failover
- Least cost routing
- Increased security for LAN telephony protection
- IP routing with VPN option
- Patton Cloud orchestrated:
 - Floating software feature licensing
 - Remote troubleshooting
 - Call quality monitoring

Microsoft Teams is the “hub for teamwork” within office 365 that addresses the communication and collaboration needs of companies. The application delivers a single user interface for modern conversations that are threaded and integrated between communication modalities including chat, voice, video, meetings, conferencing and shared workspaces. Office applications such as PowerPoint, Word, and Outlook are directly integrated with Microsoft Teams—so you never have to leave the application to get teamwork done. The biggest benefit of Teams is that it delivers a unified

application that enables communication and teamwork to take place without requiring the user to toggle between applications.

Patton SmartNode eSBCs offer all the features needed for full interoperability between TDM or SIP Trunks, on-premise IP PBX, and the Microsoft Team Phone System application using Direct Routing. Microsoft Teams, including the Phone System application, rely on external telephony services—such on-premise or cloud-based PBX systems and SIP Trunks—to connect and deliver telephone services to the Teams application.

MS Teams Direct Routing Application Overview

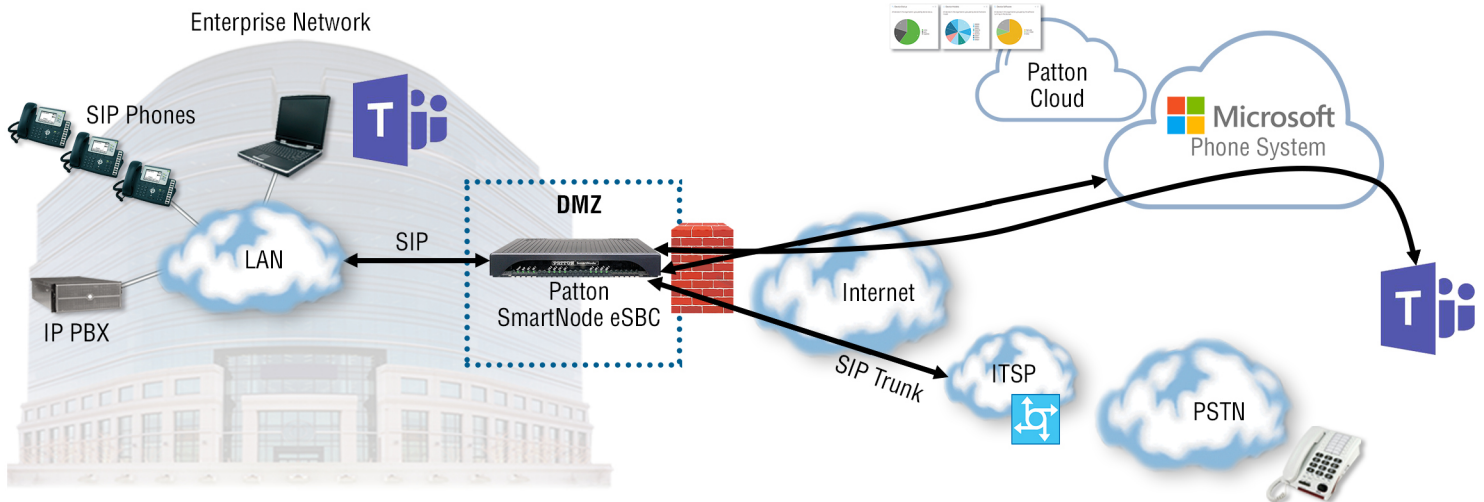


Microsoft Teams Direct Routing

Direct Routing use-cases:

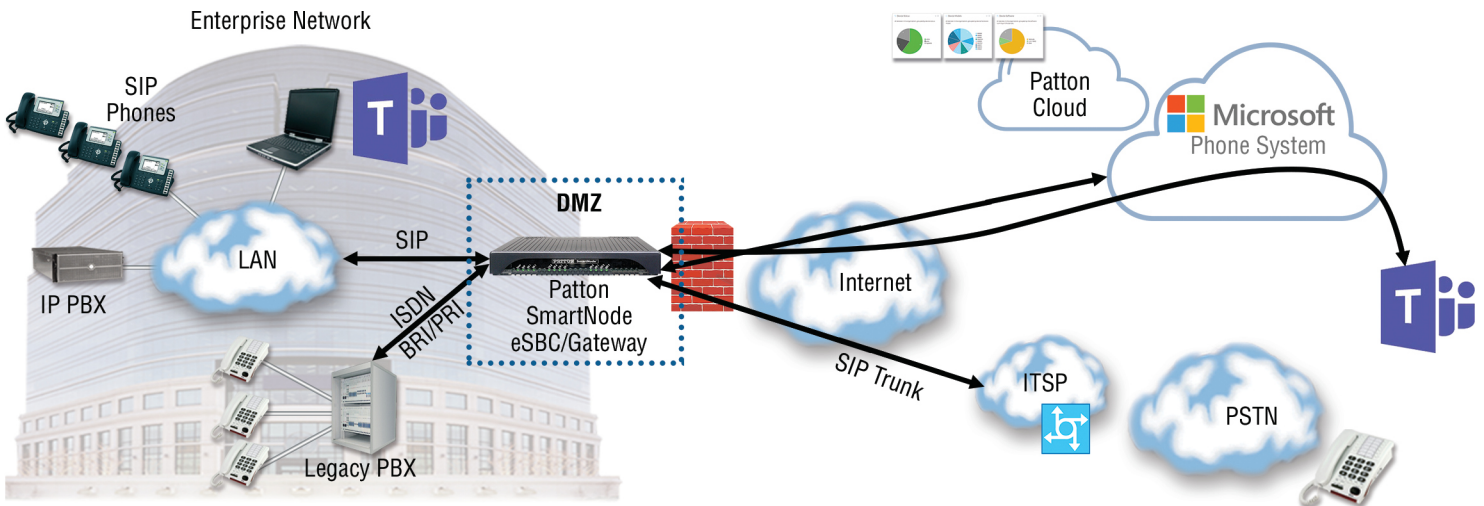
All-IP Scenario

- SIP Trunk & On-premise IP PBX Integration
- SIP Security
- SIP Normalization
- Call Quality Monitoring and Alerting



Hybrid SBC-VoIP Gateway

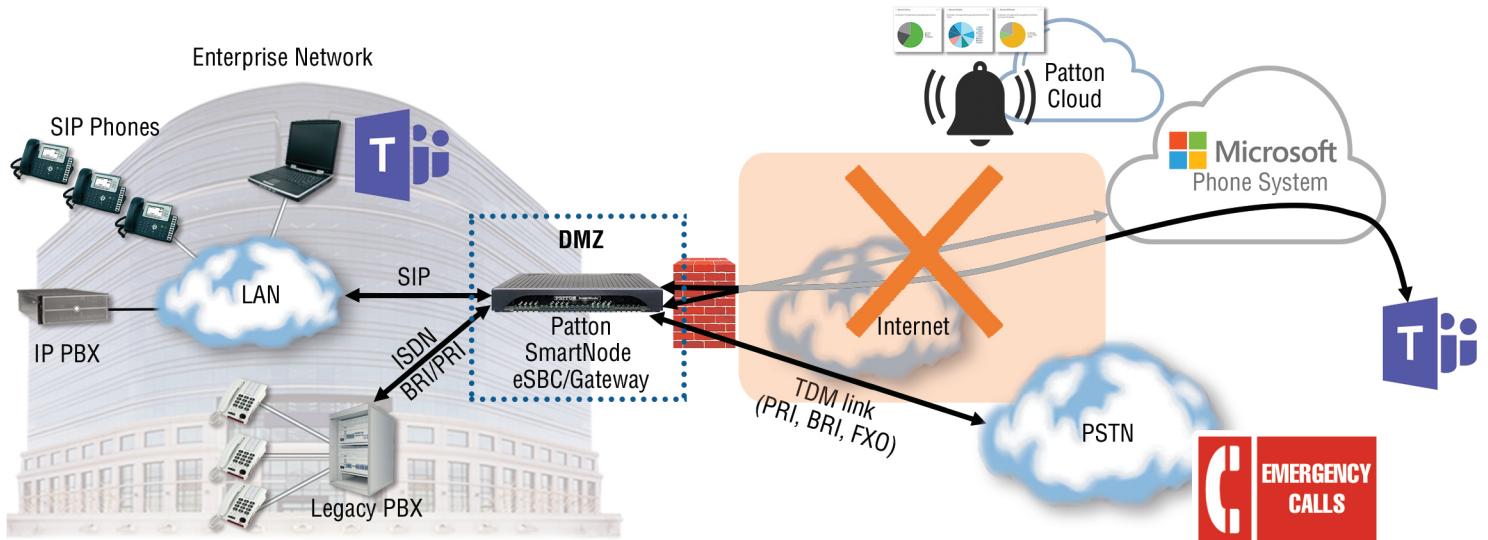
- Legacy Phone Equipment (PABX) + SIP-Based Infrastructure Integration
- SIP Security
- SIP Normalization
- Call Quality Monitoring and Alerting



Microsoft Teams Direct Routing

Survivability

- PSTN Failover
- Priority Call Service for Emergencies
- Local SIP Registrar
- Station to Station Calling



Specifications

SIP Signaling & Media

- Non Media Bypass Direct Routing
- Media Bypass Direct Routing (Coming Soon)
- SIPv2 over UDP/TCP or TLS
- SIP call transfer, redirect, diversion, forking
- Overlap dialing, PRACK, P-Header support
- Multi-instance, simultaneous support of multiple registrars
- DTMF in-band & out-of-band
- SIP B2BUA
- G.722, G.711m/A-law
- G.723.1 (6.4 kbps)
- G.729, 729a, 729ab (8 kbps)
- G.726 (16, 24, 32, 40 Kbps)
- AMR-NB (4.75, 5.15, 5.9, 6.7, 7.4, 7.95, 10.2, 12.2 kbps)
- Fax relay T.38, bypass G.711
- iLBC at 13.33 kbps (SIP-SIP only)
- SILK (SIP-SIP only)
- RTP & SRTP

- G.168-2004 echo cancellation (128 ms)
- Silence suppression and comfort noise
- Adaptive and configurable dejitter buffer
- Configurable RTP packet length

Legacy Equipment Integration

- FXS/FXO
- BRI
- PRI/S2M, E1-T1

Management, Quality of Service, SLA Assurance

- Patton Cloud based Call Quality
- Voice priority, DownStreamQoS™
- High Availability, Redundancy & Survivability*
- Traffic Management, shaping policing
- Customizable WebWizard, Web-based GUI HTTP/HTTPS access, CLI Telnet/SSH
- Secure Auto-Provisioning (Zero Touch) with built-in root CA

Dimensions & Packaging

- HW based CPE
- SW only Cloud & on premise
- MS Azure
- Hyper-V

Connectivity & IP Networking

- HW based 2x GIG Ethernet ports (Auto MDI-X)
- DHCP Client and Server
- PPPoE Client (multi-session)
- IP Multi-Netting, VLAN, Secondary IP
- IPv4 and IPv6—Dual Stack
- ICMP
- Dynamic and static NAT and NAPT
- Intelligent ACL
- DNS, DynDNS
- NTP Client & Server
- VRRP, GRE, BGP, LACP, RIP
- SSH, HTTPS, NAT, DMZ (port forwarding), MAC and port filtering
- OpenVPN & IPsec*

* Licensed Feature at additional charge Patton Cloud based features & services depend on Cloud Service plans which are to be purchased separately

Microsoft Teams Direct Routing

Supported Models

eSBC products supporting Teams: using Trinity SW version 3.19.x and higher
SmartNode™ 5501 —Enterprise Session Border Controller—SN5501/8P/EUI and SN5501/16P/EUI models
SmartNode™ 5531 —Enterprise Session Border Controller with BRI Ports
SmartNode™ 5541 —Enterprise Session Border Controller with FXS/FXO Ports
SmartNode™ 5551 —Enterprise Session Border Controller with mixed BRI and FXS/FXO Ports
SmartNode™ 5571 —Enterprise Session Border Controller with PRI Ports

Coming Soon
SN5600
vSN (virtual SBC)

Gateway products supporting Teams: using Trinity SW version 3.19.x and higher
SmartNode™ 4131 —VoIP Gateway with BRI Ports
SmartNode™ 4141 —VoIP Gateway with FXS/FXO Ports
SmartNode™ 4151 —VoIP Gateway with mixed BRI and FXS/FXO Ports
SmartNode™ 4171 —VoIP Gateway with PRI Ports
SmartNode™ 4740 —VoIP Gateway with FXS Ports

Important

MS Teams Direct Routing is certified for Patton eSBC and gateway products that support transcoding (as listed above).

MS Teams Direct Routing is **not** certified for Patton SBC models that do not have onboard DSP processors, like the virtual SBC, SN5600 (appliance) or the SN5501/4B/EUI (entry level SN5501 without DSP).

License Overview

New Teams License	Description
CBFL-MST*	Cloud Based Feature License (12 months) for Microsoft Teams activation (includes Teams Activation, TLS, unlimited SRTP, and Silk passthrough)
TSW-MST*	Permanent License for Microsoft Teams activation (includes Teams Activation, TLS, unlimited SRTP, and Silk passthrough)
SVC-INTEG-MST	Professional Services for up to 3 hours of MS Teams integrations support

***Note:** Additional SIP sessions above what is included with the hardware must be purchased separately.

Activating Microsoft Teams functionality on a Patton SBC is easy!

1. If you have a gateway that does not have eSBC licenses installed, it must be upgraded to an SBC first (contact your Patton Sales Rep).
2. Add the **TSW-MST** or **CBFL-MST** license to the device.
3. If you want Patton's service team to help you get the device configured, use **SVC-INTEG-MST**, or use a Patton-provided [Configuration Wizard](#) and video content (coming soon) to self-configure the device.

That's it!



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