

Cisco Unified Border Element for Microsoft Direct Routing

Introduction

On June 11, 2020, Cisco and Microsoft jointly announced Cisco® Unified Border Element (CUBE) as a certified session border controller for Microsoft Phone System Direct Routing. This announcement compliments recent CUBE developments that enable interworking with a number of cloud services and represents the first step in achieving CUBE certification for all Microsoft Direct Routing operating models.

Q What is Direct Routing for Microsoft 365 Phone System?

A Direct Routing is a PSTN interconnect option for Microsoft Teams Phone System that allows customers to use their own telco services, rather than Microsoft's calling plan. This is much like the Cisco Webex® Calling Local Gateway solution, which CUBE may also be used for.

Q Why should customers consider CUBE for Direct Routing?

A CUBE is Cisco's market-leading, feature-rich session border controller, used and trusted by tens of thousands of customers around the globe. CUBE securely interconnects unified communications systems and services to ensure consistent and compliant end-to-end services. As a feature set of the Cisco IOS® XE network operating system, CUBE has rich routing and network security capabilities baked in and is available with a wide number of platforms to suit any requirement.

Q Which Direct Routing features have been certified?

A Initially, CUBE is certified to interconnect Microsoft Phone System to the PSTN with Media Bypass disabled. Additional certification for E911 services will follow shortly, as will certification for calls with Media Bypass enabled and analog gateway mode.

Q Certified SBCs can provide a connection to customers' PBXs as well as to the PSTN. Are calls between Cisco Unified Communications Manager (UCM) and Phone System supported?

A Interworking with PBXs is not specifically covered by the Microsoft certification, so should be assessed on a case-by-case basis and tested by customers appropriately. An application note will be provided to describe common call flows between Cisco UCM and Microsoft Teams clients. Features, in this case, are likely to be limited to those that would be expected with UCM clients and the PSTN. Using UCM to simply route calls between Phone System and the PSTN is supported.

Q Which platforms may be used for Direct Routing?
A Any Cisco routing platform validated to run the CUBE feature set may be used for Direct Routing.

Q Which software version is required?
A Cisco IOS XE Release 17.2.1r is the first certified release for Direct Routing.

Q Is additional licensing required to use Direct Routing?
A No, calls between Microsoft Phone System and the PSTN are treated the same as any secure trunk call. The same licensing requirements apply in this case.

Q How should I size a solution correctly for Direct Routing?
A Assuming that PSTN call legs are unencrypted, the RTP-SRTP (SHA1-80) performance figures advertised for CUBE platforms should be used as a baseline for selecting an appropriate platform. Note that capacity figures are provided for guidance only. Feature mix and traffic profile will ultimately dictate overall capacity.

Q Is Direct Routing a new CUBE feature?
A No, the requirements for Direct Routing use generic CUBE features. Minor enhancements were made to some aspects of these features to meet certification requirements, which were delivered with Cisco IOS XE Release 17.2.1r. Additional minor enhancements planned for Cisco IOS XE Release 17.3.1 are required to meet requirements for Phone System Media Bypass mode.

Q How should CUBE be configured for Direct Routing?
A An application note will be provided to describe how to configure CUBE to interwork with Microsoft Phone System. Many application notes describe validated configurations for connecting to service provider SIP trunks. For more information, see www.cisco.com/go/interoperability. Together, this content may be used to configure CUBE for Direct Routing.

Q Who should I contact for technical support?
A The Cisco Technical Assistance Center (TAC) can assist with issues relating to CUBE features. Microsoft technical support must be contacted directly for any issues related to Microsoft Teams or Phone System. Customers with Cisco Solution Support will benefit from warm case handover between Cisco and Microsoft, should this be necessary.

Q Are there any other support processes?
A Customers are encouraged to monitor their Microsoft Teams admin center dashboard for system messages, which may detail requirements for configuration changes from time to time.

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