

# Network and Security Overview



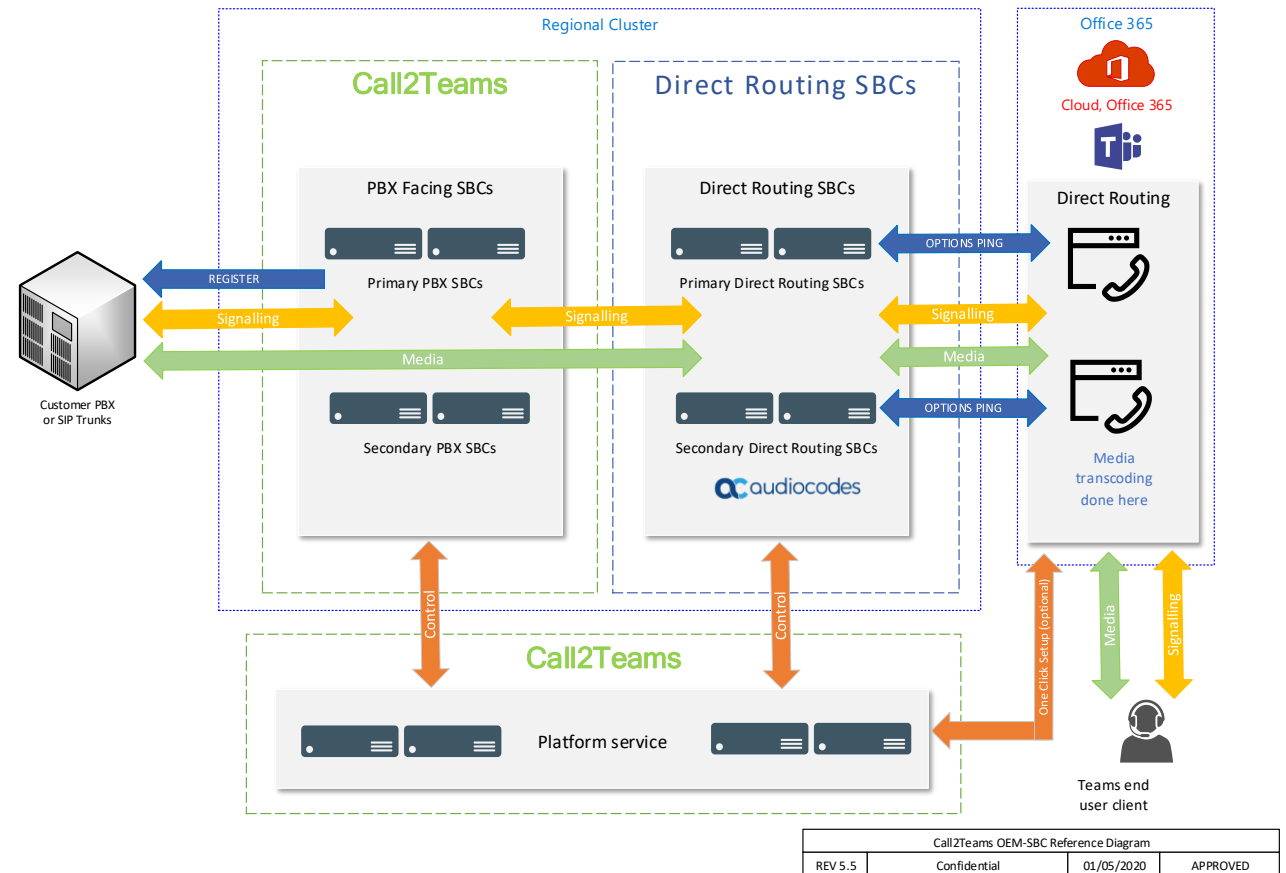
# Global network

- Operating across 4 continents
- Each customer has access to at least two nodes, more if they have international reach
- Nodes are chosen automatically in the Call2Teams portal depending on the location of the customer's PBX or phone service
- Operates in primary/secondary high-availability



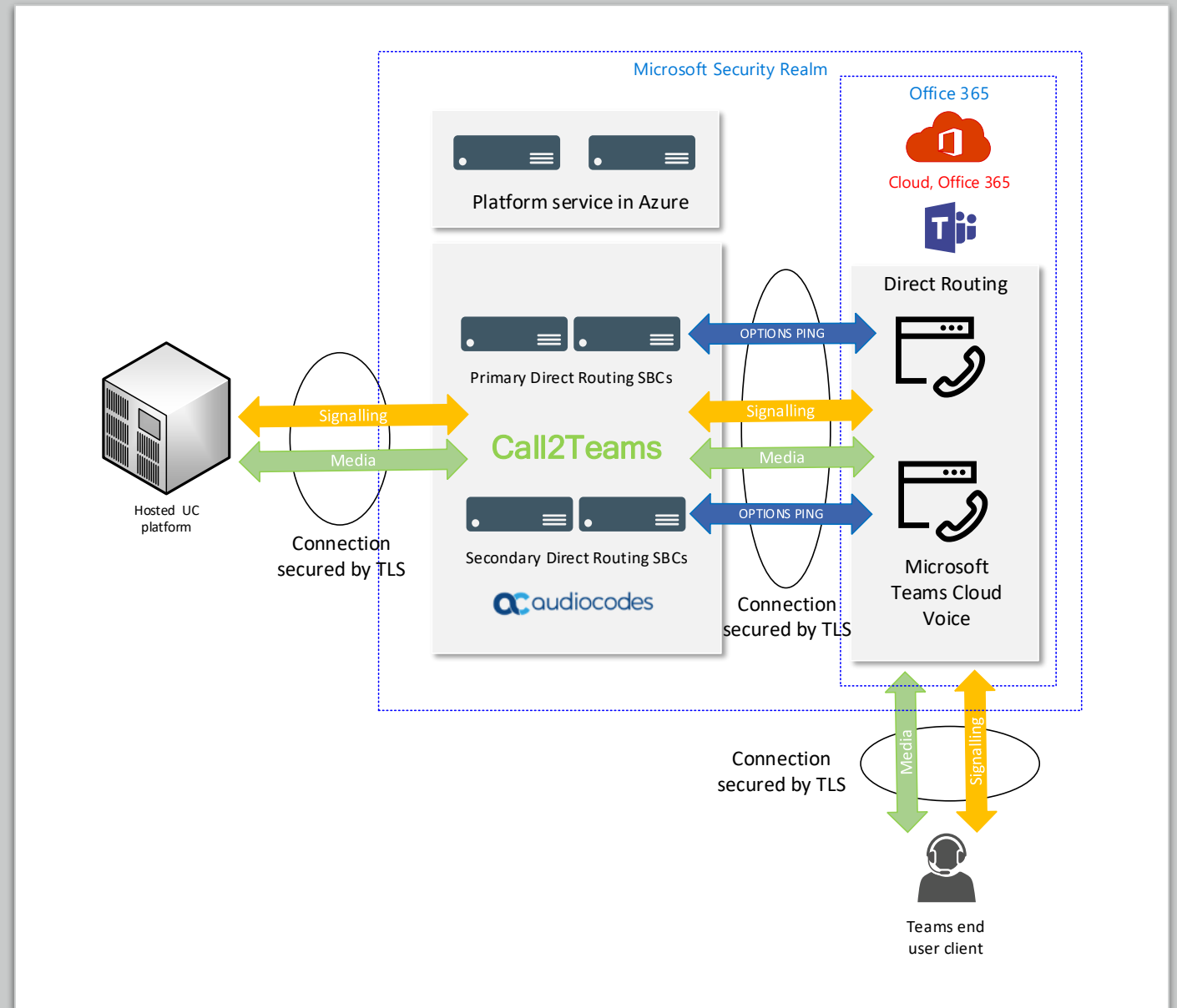
# Node architecture

- PBX SBCs manage PBX and SIP Trunk registration and call signalling
- Direct routing SBCs carry media between Microsoft and the customer.
- The platform service spans the entire platform and manages all call routing and user access.
- Major nodes have multiple SBCs with 'decomposed' architecture, allowing elastic scalability.



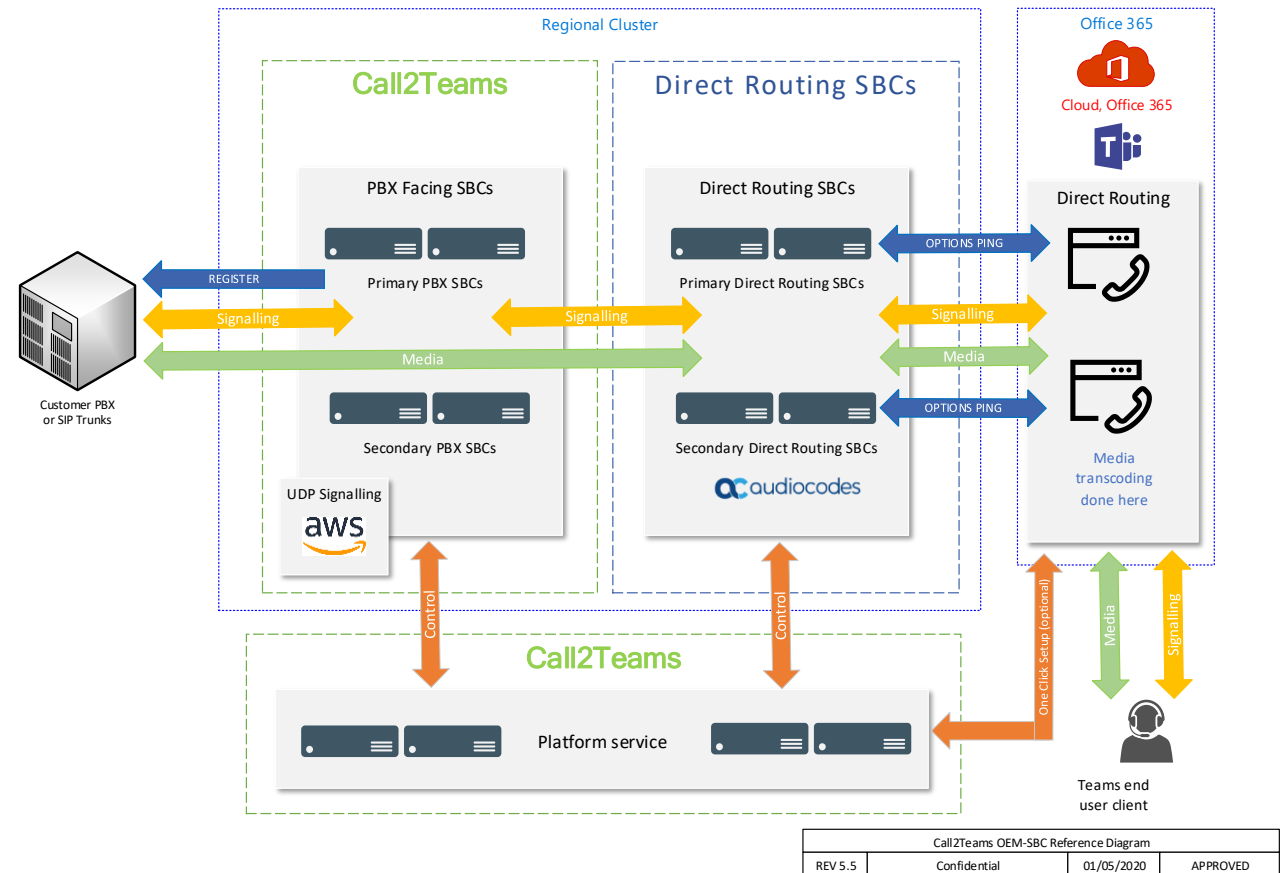
# End to end security

- All call legs can be secured by TLS encryption
- TLS 1.2 or later is supported
- Platform infrastructure hosted within Microsoft Azure
- Customer data held in the Microsoft security realm for both Teams and Call2Teams



# AWS usage

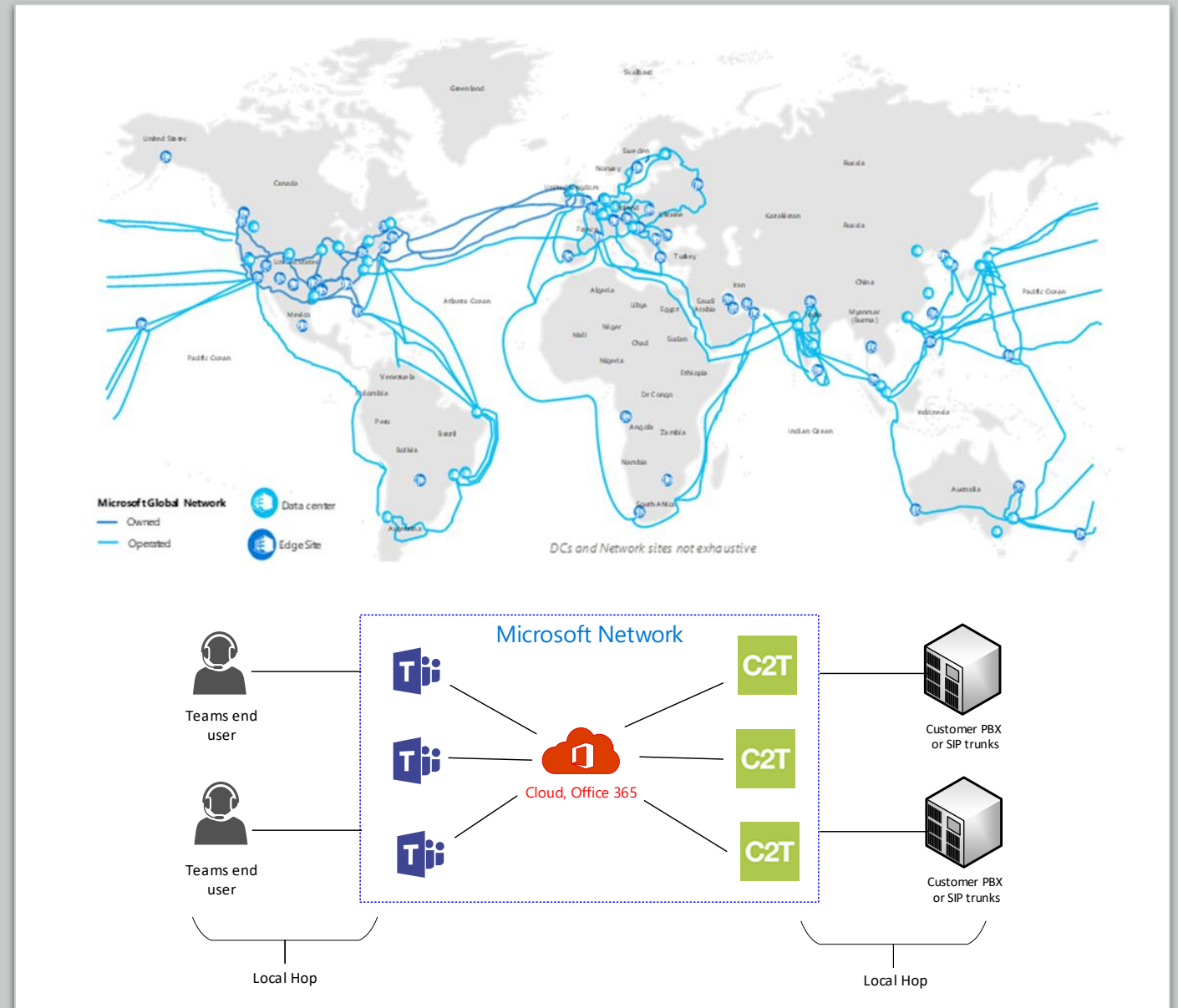
- Azure is incompatible with UDP for certain signalling scenarios
- A small AWS resource is used to support UDP
- AWS is not used for TCP or TLS so select these if an Azure-only option is required



# Latency & call quality

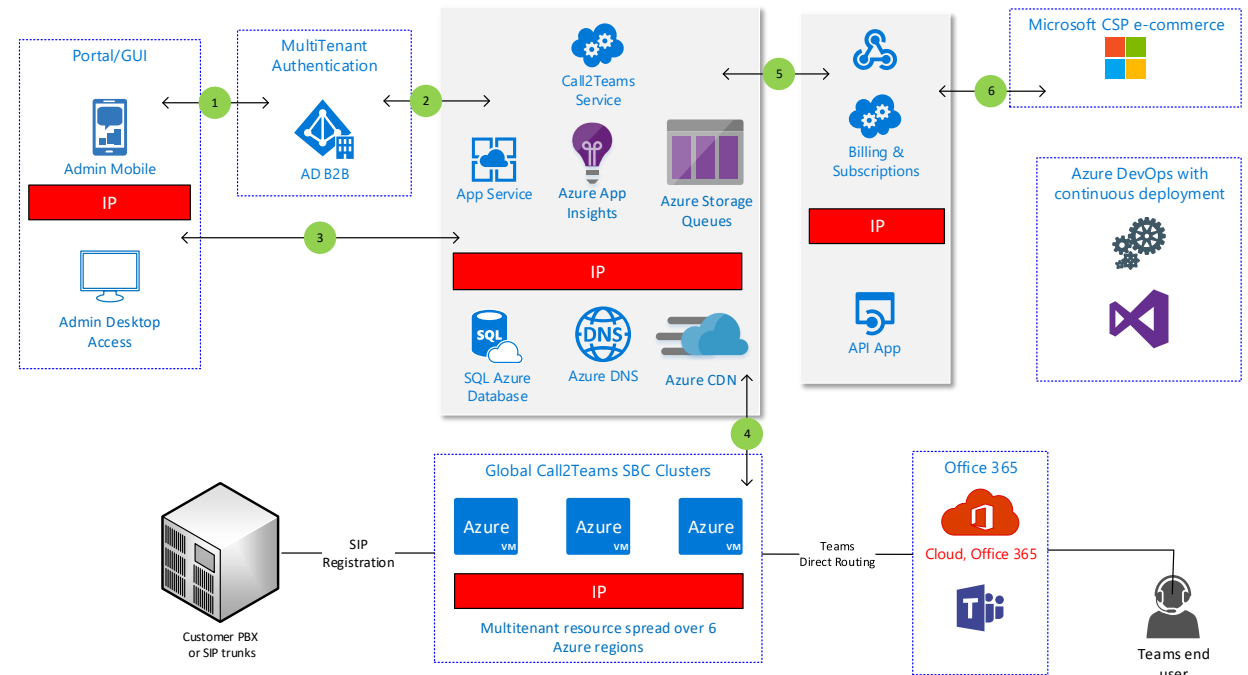
- Teams users connect to the nearest Microsoft network POP
- The global Microsoft network is extremely high-performance for voice
- The Microsoft network carries the voice traffic for nearly the entire journey
- Through Call2Teams node optimisation, traffic will step-off the Microsoft network near to the PBX or Trunk
- Users do not report call quality or latency problems, even between continents

**Call2Teams**<sup>®</sup>



# Microsoft IP-CoSell

- Call2Teams is validated by Microsoft for IP-CoSell, can be recommended and sold by the MS sales team
- Status awarded due to extensive use of Azure technology
- Application also uses single sign on for user authentication
- SBCs are Microsoft direct routing approved

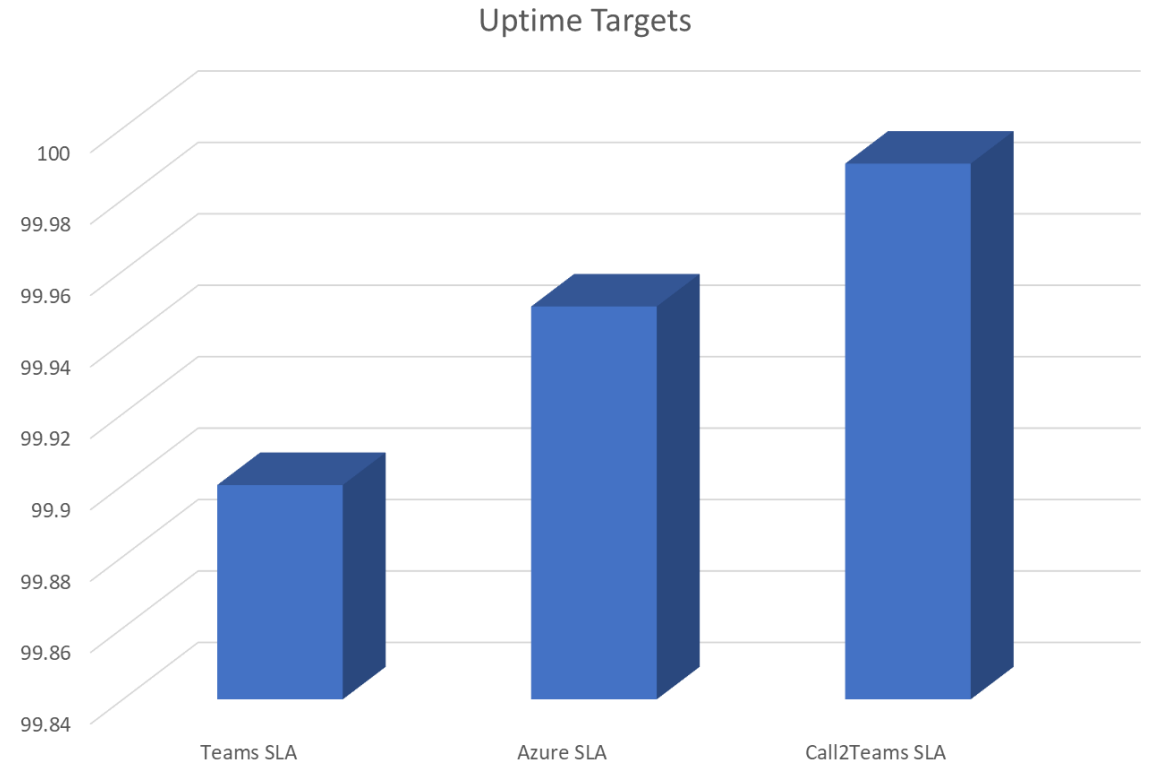


- Admin logs into portal
- Azure Active Directory validates the Admin's identity
- Admin interacts with the Azure App-service
- Call2Teams Application pushes service configuration out to SBCs running in Azure VMs and collects usage information
- Subscription and billing is orchestrated from SQL Azure
- Azure API and Webhooks perform e-commerce transaction to Microsoft CSP portal for subscription purchase, management and billing

Call2Teams Azure Reference Diagram			
REV 4.2	Confidential	31/7/19	APPROVED

# SLA targets

- Microsoft Teams/PSTN voice has an SLA target of 99.9%
- Azure components used by the platform have SLA targets of 99.9- 99.95%
- The architectural design uptime target of the Call2Teams™ platform is 99.99%
- Microsoft's Teams SLA is the limiting underpinning factor





# Documented security

- ISO27001 and UK Gov Cyber Essentials certified organisation
- Comprehensive infosec documentation available (NDA)
- Minimal Personal Identifiable Data storage overheads
- Compliant with HIPPA business associate agreements

