



U.S. Department of State - Bureau of Information Resource Management

Overview of Department of State secure global network infrastructure in support of overseas U.S. Diplomatic Missions



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Bureau of Information Resource Management

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UNCLASSIFIED



Agenda

- Global Telephony: Teams Phone System
 - Melbourne Use Case
 - Global Telephony Design
- Emergency Preparedness: Khartoum Evacuation – Overview
 - Khartoum Evacuation – Walkthrough
 - Forward Leaning Initiatives
- Infrastructure at State
 - TrON – Transport Only Network
 - Cloud Platforms & Analytics
- Questions

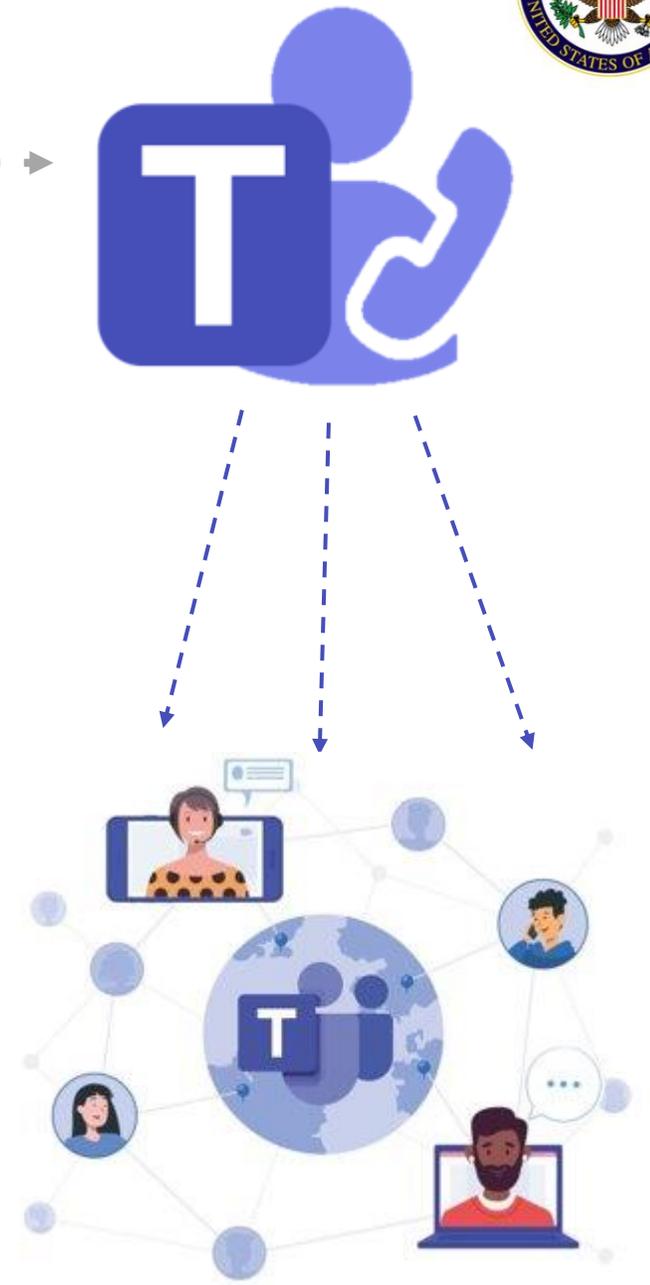


Global Telephony – Teams Phone System



Microsoft Teams Phone System (TPS) offers a **cloud-based** phone system, also known as Unified Communication as a Service (UCaaS). The new solution aligns with the Department’s “Future of Work” mobile and hybrid work environment initiative. It allows users to make and receive internal and external (non-DOS) phone calls from the Teams soft client on any Department managed device (e.g., OpenNet workstation, GO Desktop, GO Mobile, GO virtual, and GO Browser).

It is a quantum leap from **analog/digital voice-only** solution to a true **collaboration solution** that ALSO supports voice capabilities. It is both location & device agnostic. One of the most noted benefits is that UCaaS provides the advantage of rapid response to Worldwide Catastrophic events – as a software versus hardware-based response.





Global Telephony - Melbourne

Failing legacy telephone system consistently affects Melbourne's Consular operations - leading to calls going unanswered

Current Infrastructure:

- 79 telephones and users
- PBX (CS1000 5.5)
- Cabling infrastructure are a mix of Cat 5 and 6.

Issues:

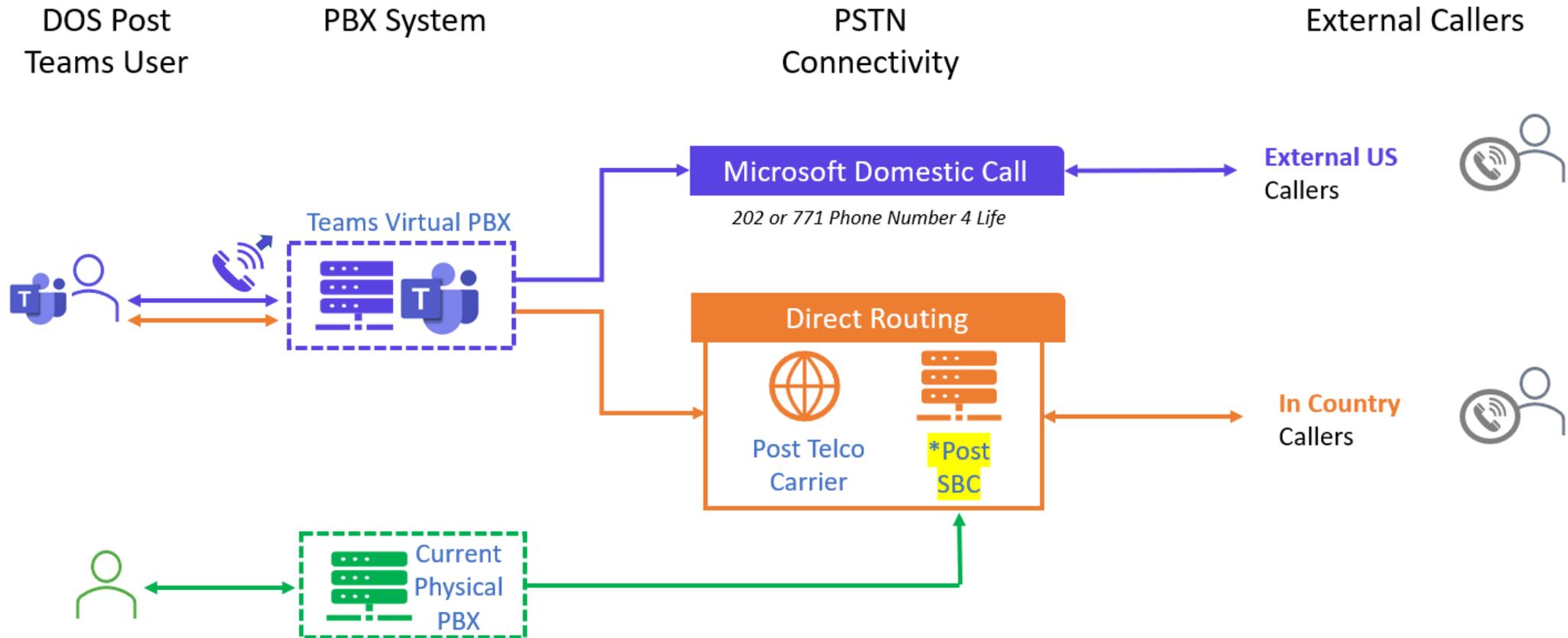
- Auto-Attendant experiencing frequent service interruptions
- Wiring issues further degrade services
- Minimal on-site phone system expertise

Solution:

- Pilot Teams Phone System Call Plan + Direct phone number Routing
- Pilot Overseas TPS Call Queue with local in country number
- Leverage UCaaS solution to improve / expand Posts communication capabilities



Global Telephony - Design



* New design to incorporate traditional phone system.



Emergency Preparedness: Evacuations / Drawdowns

Breakdown of Departures

Order Departure

10 Posts went on ordered departure since 2021
Regions: Africa, Western Hemisphere, and Europe
Reasons Include Foreign Leadership Event / Terrorism / Security

Authorized Departure

16 Post went on authorized departure since 2021
Regions: Africa, Europe, South / Central / East Asia, Western Hemisphere
Reasons Include: Health, Civil Unrest, Hurricane, Political Unrest

Total Numbers

26 Posts have been placed on authorized or ordered departure since 2021



Emergency Preparedness: Khartoum Evacuation - Overview

CRISIS COMMUNICATIONS

- Setting the Scene
- Transportation Infrastructure
- Internet, Power & Cellular
- Task Force Relevance
- Initial Communications
- Paper Files
- Social Media and Clandestine Operations

2021 LESSONS LEARNED AND PREP

- Alternat Command Center Readiness
- Old Hardware
- Scanning Documentation
- Shredding Documentation

RESOURCE ASSESSMENT & ALLOCATION

- What resources are available and where are they needed?
- Mission-wide Focus Assessing Staff Fatigue and Stress
- Ongoing Reassessments
- The more prepared you are the more you will be able to assist others



Emergency Preparedness: Khartoum Evacuation - Walkthrough

2021 Military Takeover

- Alternate command center was up and running but lacked wireless and enough PCs to accommodate all sections
- Alternate command center testing frequency
- Lessons-learned on evacuating quickly if needed

Hardware

- Remediating old and unused equipment waiting for destruction
- Requested a team to come onsite to train new hire on destruction
- After they were done, the new hire continued to destroy or donate to other posts

Documentation

- New hire continued to digitally scan any new documentation that did not require a hard copy onsite
- Lessons learned on retaining older documents
- Scanning any documents that were needed to be saved and then shredding afterwards

2023 Civil Unrest

- All of these actions reduced the time needed to destroy immensely and allowed the high-side to remain operational for as long as possible



Emergency Preparedness: Forward Leaning Initiatives

The Department requires a broad spectrum of communication platforms and tools to conduct day to day operations. Utilizing enhanced visibility, dynamic bi-directional alert notification systems, and enterprise monitoring and systems architecture, the Tactical Communications support team can efficiently monitor all aspects of tactical communications.

Dynamic Bi-Directional Alert Notification Systems	Fast and relevant alerts using multiple communication methods.
Interactive Mobile	Dashboard accessing relevant secure communication monitoring information from any device at any location
LEO (Starlink & OneWeb)	Leveraging VSAT capabilities offered by Low Earth Orbit satellite systems for greater throughput
Contingency Preparedness	Monitoring portal for system testing validation., iPOST type monitoring for Crisis and Contingency readiness.
Off-Site Use of Private Mobile Diplomacy (PMD)	Leveraging NSA's framework for a Commercial Solution for Classified (CSfC) system will allow for access to states ClassNet system from Domestic locations.



Network Traffic Flows and Security

Transport Only Network (TrON)

Objectives

Enterprise Local Area Network (LAN) / Wide Area Network (WAN)

					
Single Transport Network	End-User Connection	Transport Only	Segmentation of Devices/Servers	Eliminate DINs/NENs	Expand Industry Security
Consolidate UCMNet and SWAP as one centrally managed unclassified transport only network.	Migrate post and annexes to use the new consolidated network as their primary transport for end-user connectivity.	Simplify governance to only be transport, not include the endpoints or storage resources.	Separate devices from systems and enable end-users to securely connect to applications from any network.	Stop the proliferation of DINs/NENs by providing a flexible Zero-Trust platform that meets customer requirements.	Enforce segmentation according to communication needs and leverage TIC 3.0 recommendations.



Cloud Platforms & Analytics

Data Storage & Backup

Storing and backing up data on the cloud providing a cost-effective, scalable, and secure way to store data, with the added benefit of anywhere-access

Disaster Recovery

Typically involve storing backups of data and applications in the cloud, which can be quickly restored if a disaster occurs

Desktop as a Service (DaaS)

Back-end of a virtual desktop infrastructure (VDI) is hosted by CSP

Test & Development Environments

Developers can quickly spin up and down environments as needed; speeds up the appdev process + reduces costs

Database Modernization

Migrating legacy databases to cloud, such as relational, NoSQL, in-memory services, etc.; improves performance, scalability, flexibility

Web & Application Hosting

Hosting websites and applications in the cloud to reduce costs, increase scalability, and improve performance

Serverless Computing

Automatically manages the allocation of compute resources; developers can focus on code vs. managing servers. Ideal for event-driven apps and microservices

Big Data Analytics

Process and analyze large datasets (big data); cloud can handle storage, analysis & visualization of big data, makes it easier to gain insights from the data

Machine Learning & AI

Tools and infrastructure to train machine learning models, perform AI tasks, and analyze data at scale

DevSecOps

Automated tools for building, testing, and deploying applications including support for continuous integration/continuous delivery (CI/CD) and infrastructure as code (IaC)



Questions?