Meeting the Connectivity Challenge in Today's Digital Health Care Environment

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In the present pandemic we have seen an explosion of telehealth and cloud computing.

The ability to quickly scale bandwidth to support emerging telehealth technologies is a necessity.

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Virtual urgent care visits grew by <u>683%</u> & nonurgent virtual-care visits grew by a <u>4,345%</u> between March 2 and April 14 2020

Predicting Sevenfold Growth in telehealth by 2025

Telemedicine Is Being Used in Many Scenarios During the COVID-19 Pandemic:

A patient with mild respiratory symptoms needs evaluation, but has been told not to go to the emergency room

A patient has no symptoms of COVID-19, but had contact with someone infected by the novel coronavirus and wants to be evaluated

A patient needs care for an unrelated reason (e.g. management of chronic health condition), but cannot go in-person due to clinic closure or fear of coronavirus exposure

A provider has been quarantined due to COVID-19, but can continue to see patients from their home via virtual visits

A patient with severe symptoms of COVID-19 is hospitalized, and needs a specialty consult with an infectious disease doctor in a remote location

Technology impacts how healthcare professionals provide care to patients and collaborate with colleagues.

Harnessing technology to benefit patient care begins with voice, data, unified communications and cloud solutions, like software defined wide area networks (SDWAN).

The best solutions will provide strong service levels to support industry leading care while staying responsive to the ever-changing regulatory requirements.

Regional Telemedicine Projects

- 2009: FDRHPO created the North Country Telemedicine Project (NCTP) – 46 Sites

- 2011: FDRHPO partnered with the Adirondack Champlain Telemedicine Information Network (ACTION) – 40 Sites

- Funded by FCC Rural Health Care Pilot Program & NYS DOH Heal 21 grant.

- **Networks built through partnership of DANC, Westelcom, SLIC, Firstlight (Primelink, Tech Valley), and Crown Point Telephone.**

- **Westelcom Provides Internet, NOC, and Threat Intelligence Services to both networks.**

- 2015: FDRHPO began collaboration with the Adirondack Health Institute (AHI) to form the North Country Telehealth Partnership

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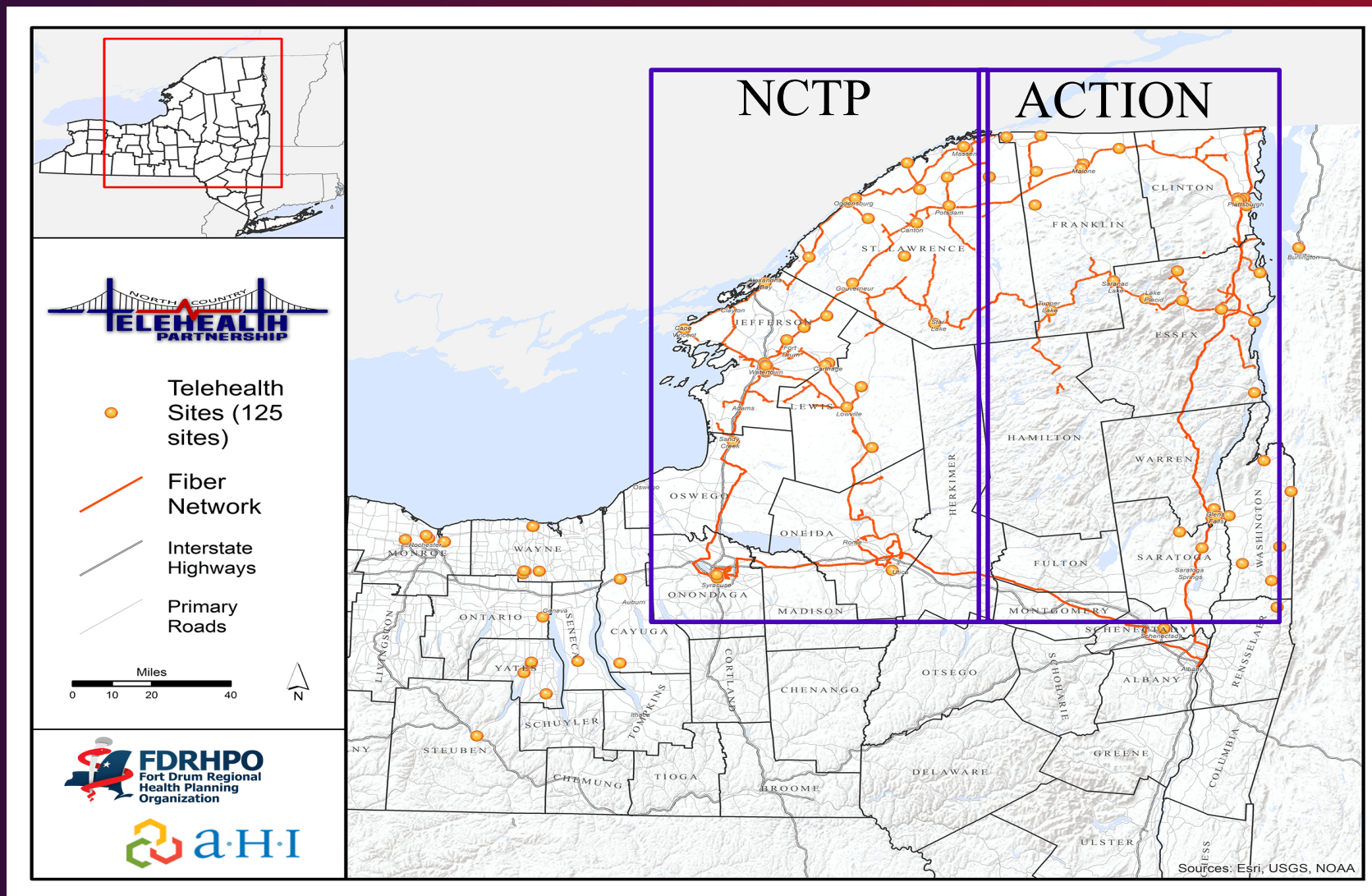
This growing reliance means accessing data in real time to optimize patient care. This requires an IT infrastructure that will deliver high performance and reliability, especially at times of high demand.
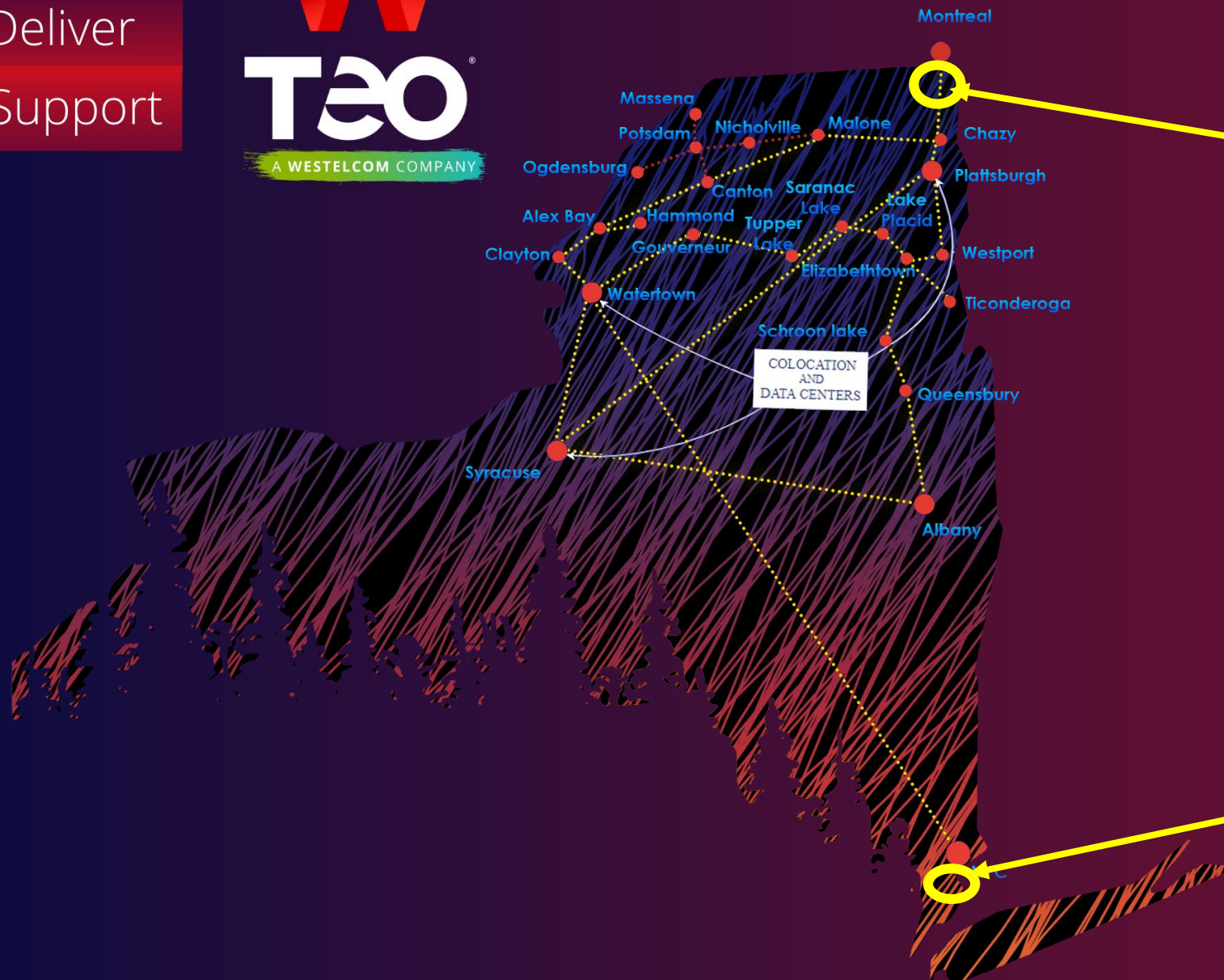
When it comes to advanced cloud solutions our fully customizable services provide the security, reliability and scalable connectivity the healthcare industry demands. And that makes all the difference when it comes down to what's most important – patient care.

Design
Deliver
Support

QiX

77 Members to include...

➢ Akamai

➢ Amazon

➢ Cloud Flare

➢ Google

➢ Hurricane Electric

➢ Limelight

➢ Microsoft

➢ Twitch

➢ *Westelcom*

➢ Zayo

We make Net work

QiX

MONTRÉAL INTERNET EXCHANGE

NYIIX

230 Members to include...

➢ Akamai

➢ Amazon

➢ Apple

➢ Cloud Flare

➢ Google

➢ Facebook

➢ Microsoft

➢ Netflix

➢ Twitter

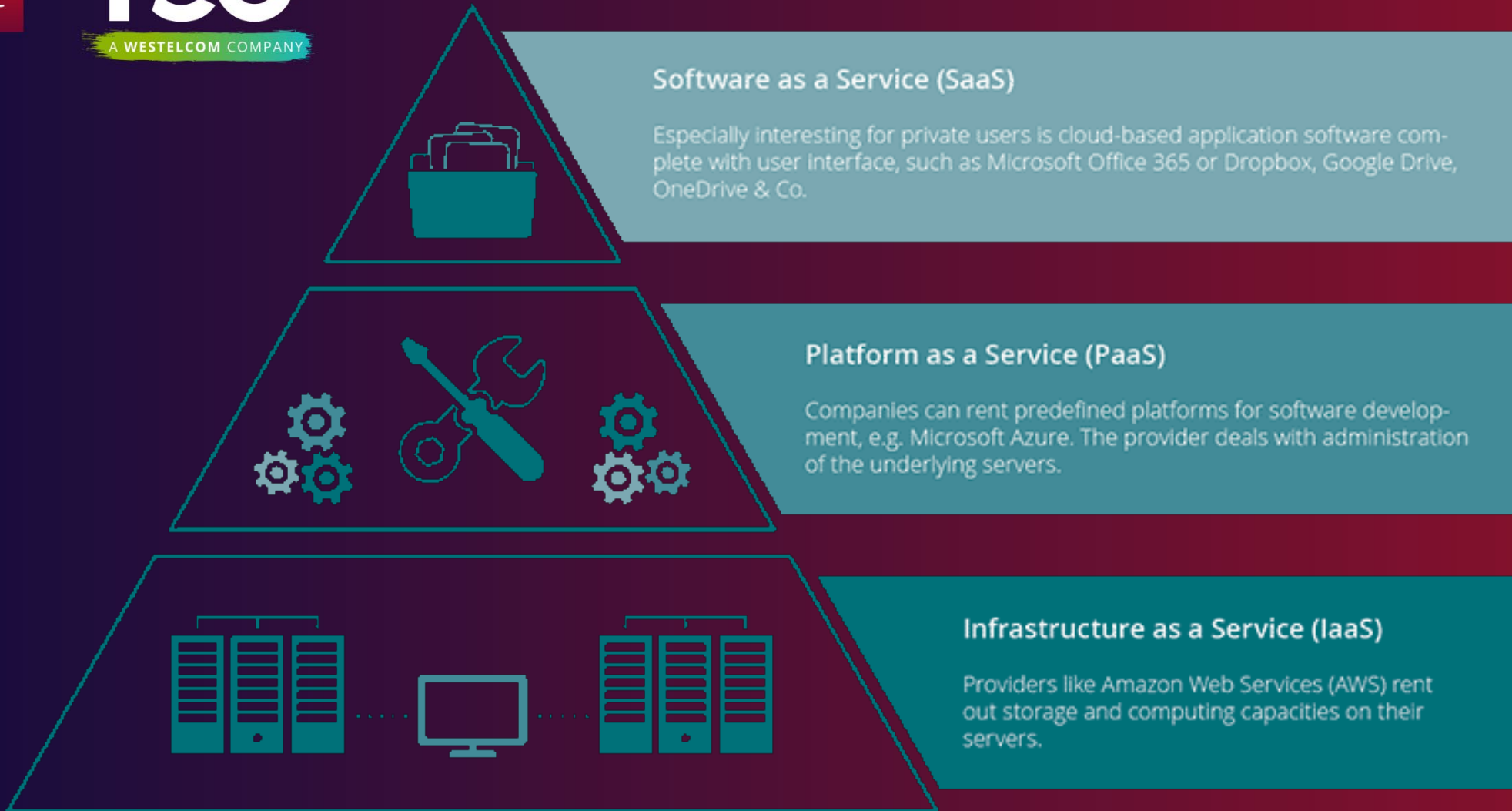➢ *Westelcom*

➢ Yahoo

NYIIX®

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- aaS Comparisons

  - IaaS

  - PaaS

  - SaaS

- Microsoft Solutions Overview

- A new connector will allow healthcare organizations to launch virtual consultations with patients or colleagues in Teams, directly from their electronic health record (EHR) system. US healthcare IT vendor Epic will be the first to integrate with Teams in 2020, with support for other EHR systems coming soon.

- Teams will also integrate with Nuance Dragon Ambient eXperience (DAX), an AI-powered clinical documentation tool, that will allow healthcare professionals to securely record interactions between clinicians and patients during telehealth consultations, and then automatically generate clinical notes. This is currently in private beta.

- Offerings

- Network

- Network Intelligence

- Mission Critical
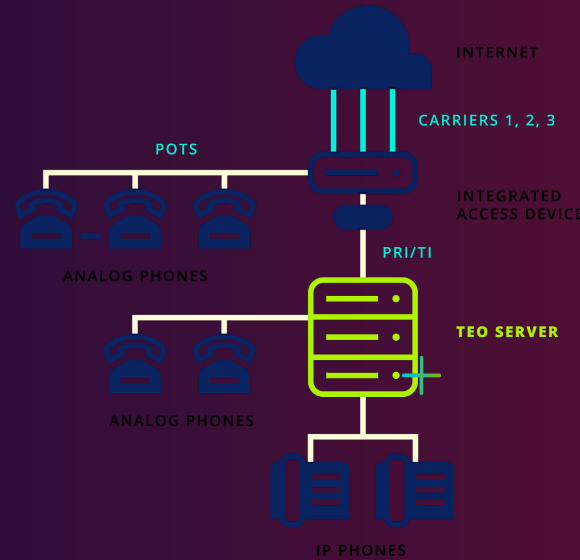
Voice+ Solutions

Advantages

- Multiple Features
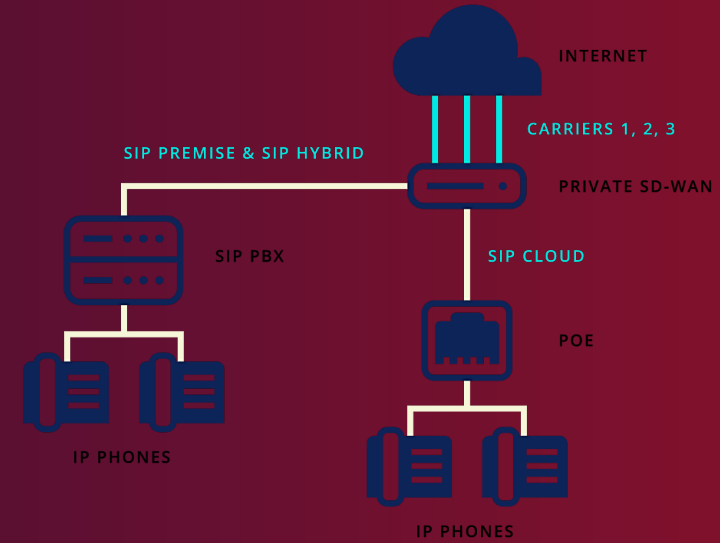- High Quality
- High Reliability
- High Performance

Specialized Verticals:

- Educational
- Healthcare
- Banking
- Governments
- Manufacturing
- Media
- SMB's

TDM/PRI/TI +

INTERNET

CARRIERS 1, 2, 3

POTS

INTEGRATED ACCESS DEVICE

ANALOG PHONES

PRI/TI

TEO SERVER

ANALOG PHONES

IP PHONES

SIP +

INTERNET

CARRIERS 1, 2, 3

SIP PREMISE & SIP HYBRID

PRIVATE SD-WAN

SIP PBX

SIP CLOUD

POE

IP PHONES

IP PHONES

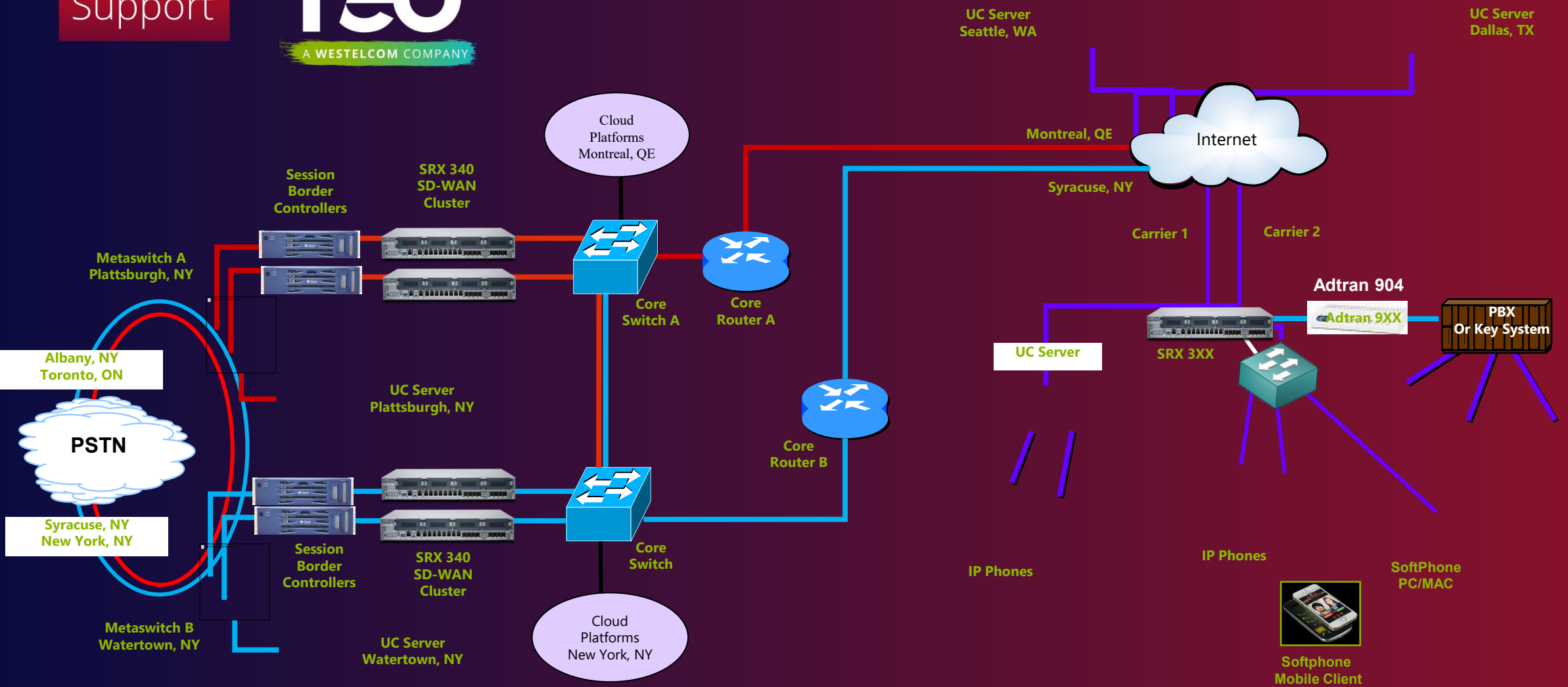**Voice+ Solutions Include TDM+, PRI+ & SIP Trunking+ Products, Which Are Layered With SD-WAN**

Advantages:

- Higher quality of service
- Full redundancy
- Higher reliability
- Enhanced network intelligence and reporting
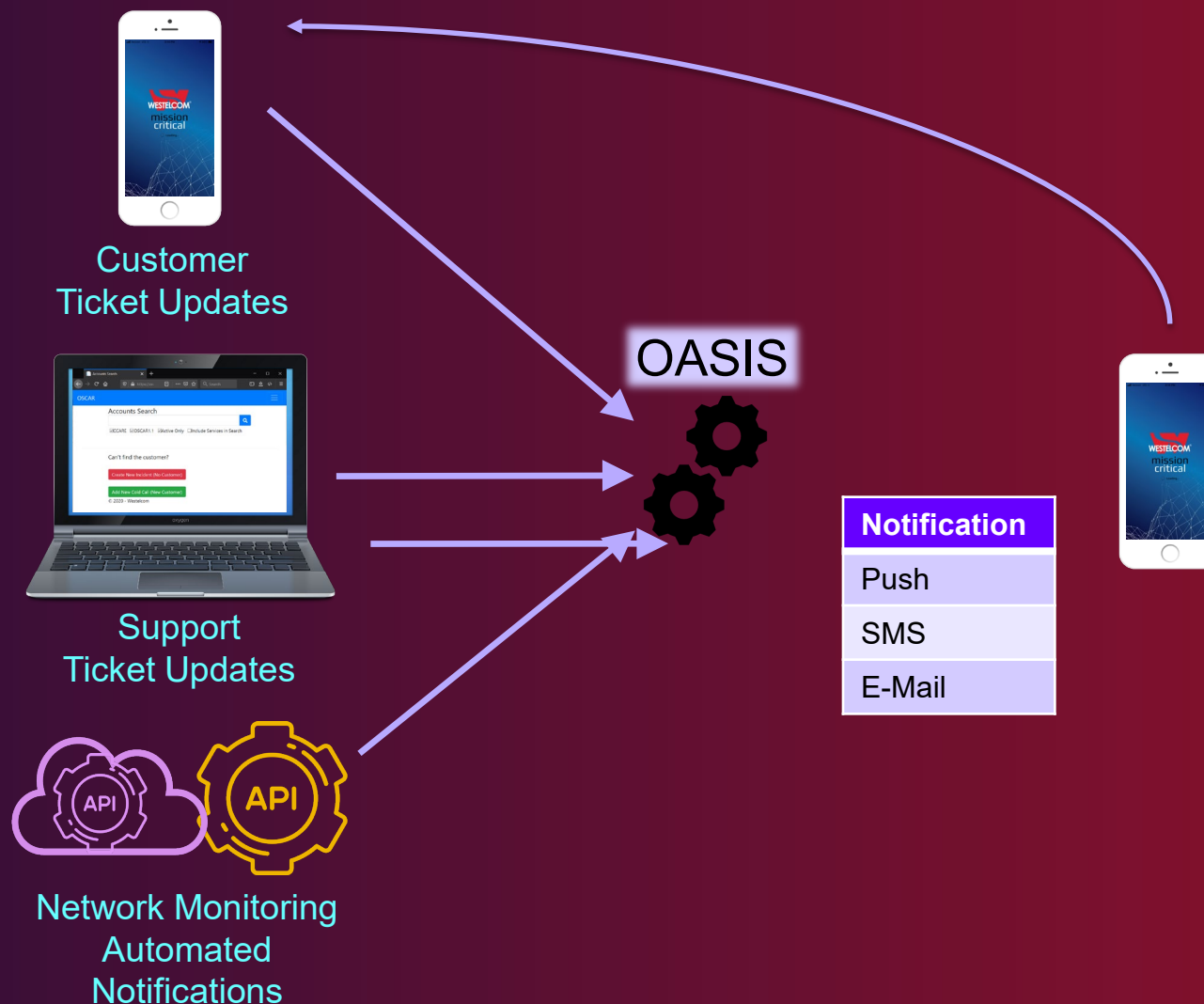
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- What is SDWAN
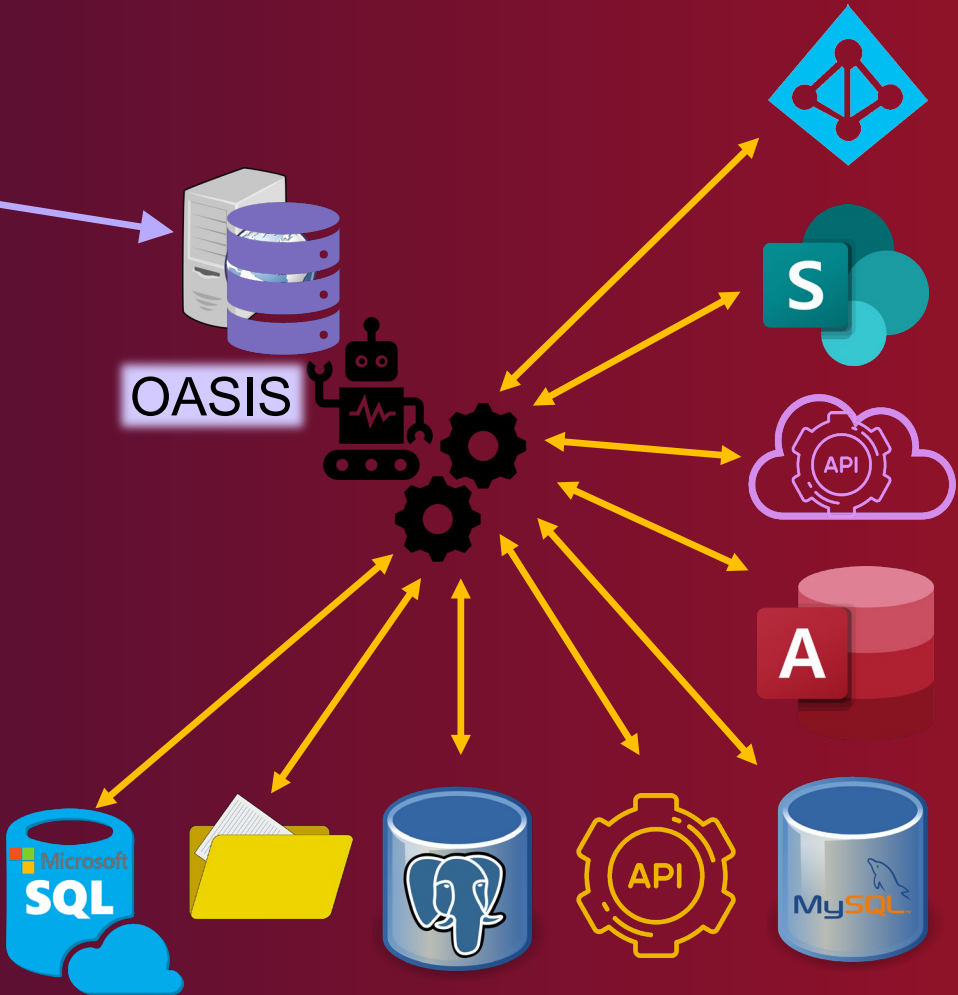
- Business Drivers

- Use Cases

- Sample Network Diagram

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A software-defined wide area network(SD-WAN) is a specific application of software-defined networking (SDN) technology applied to WAN connections, which are used to connect enterprise networks – including branch offices and data centers – over large geographic distances.

Business Drivers:

- Redundancy/Reliability of Network/WAN
- Costs of redundancy
- Network and application awareness
- Ability to steer traffic based on application needs
- Centralized management and control
- Security

Application:

- Ability to prioritize vital mission critical applications over less urgent tasks
- Central management allows IT staff to manage multiple campuses from one central location without a team at each site.
- Provides more efficient, reliable, and secure access to cloud platforms.
- Allows for complete visibility of WAN to include mobile, IOT, and remotely accessed cloud environments.
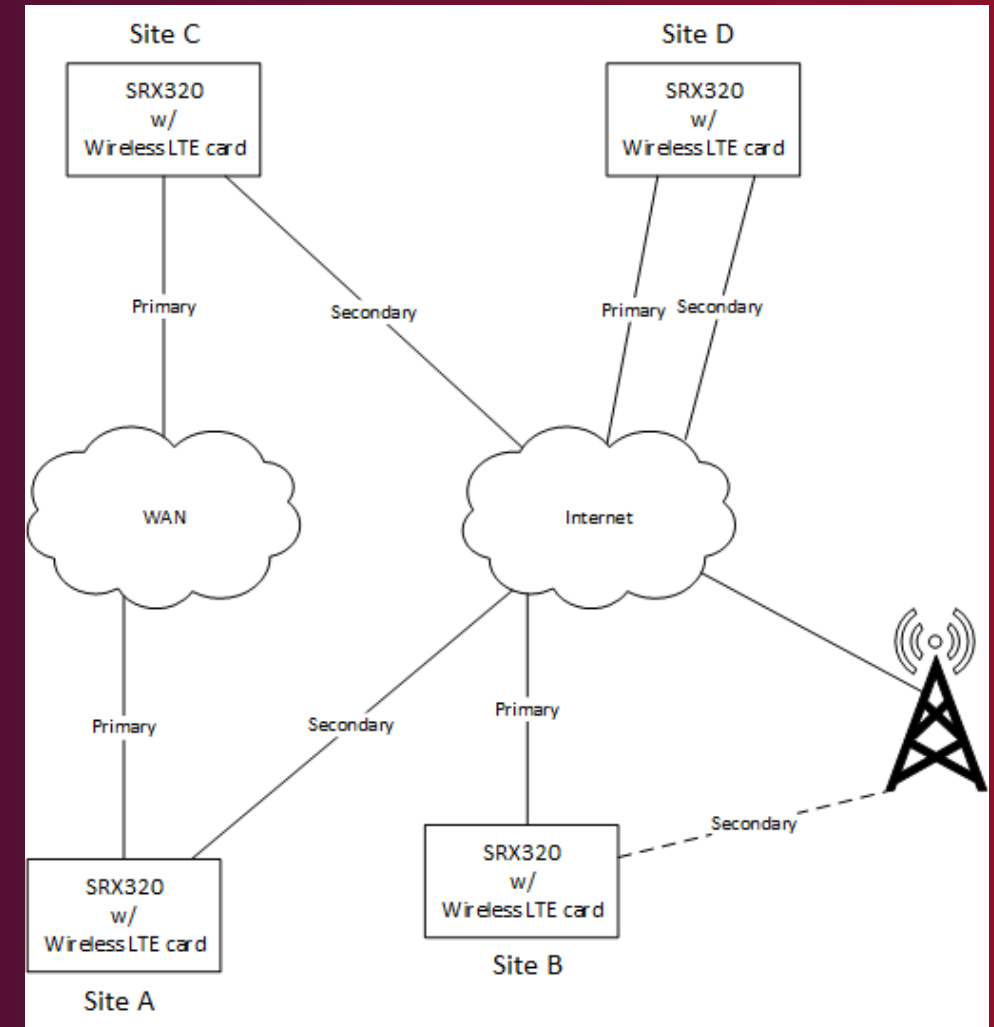
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Use Case #1: WAN Connectivity

In an SDWAN, various network connection types can be used to build a redundant, reliable network. This includes Fiber(Ethernet), Broadband(Internet), and Cellular (Internet).This is for customers that have multiple locations and want to connect privately, securely and redundantly.

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Use Case #2: Backup Internet

For backup access to the Internet, again several types of connections can be used. This can be a mix of different types (Fiber, Cable, DSL, Cellular).This solution is for customers who depend on the internet to operate their business. They could be use cloud app such as O365 or a cloud-based cash register. Application awareness and

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Use Case #3: Remote Worker

Redundancy and reliability for the remote worker with the ability to leverage and segment traffic based on need. Prioritize business traffic while making sure the kid's games, content delivery does not impact your video/voice calls.

SD-WAN Implementation & Design

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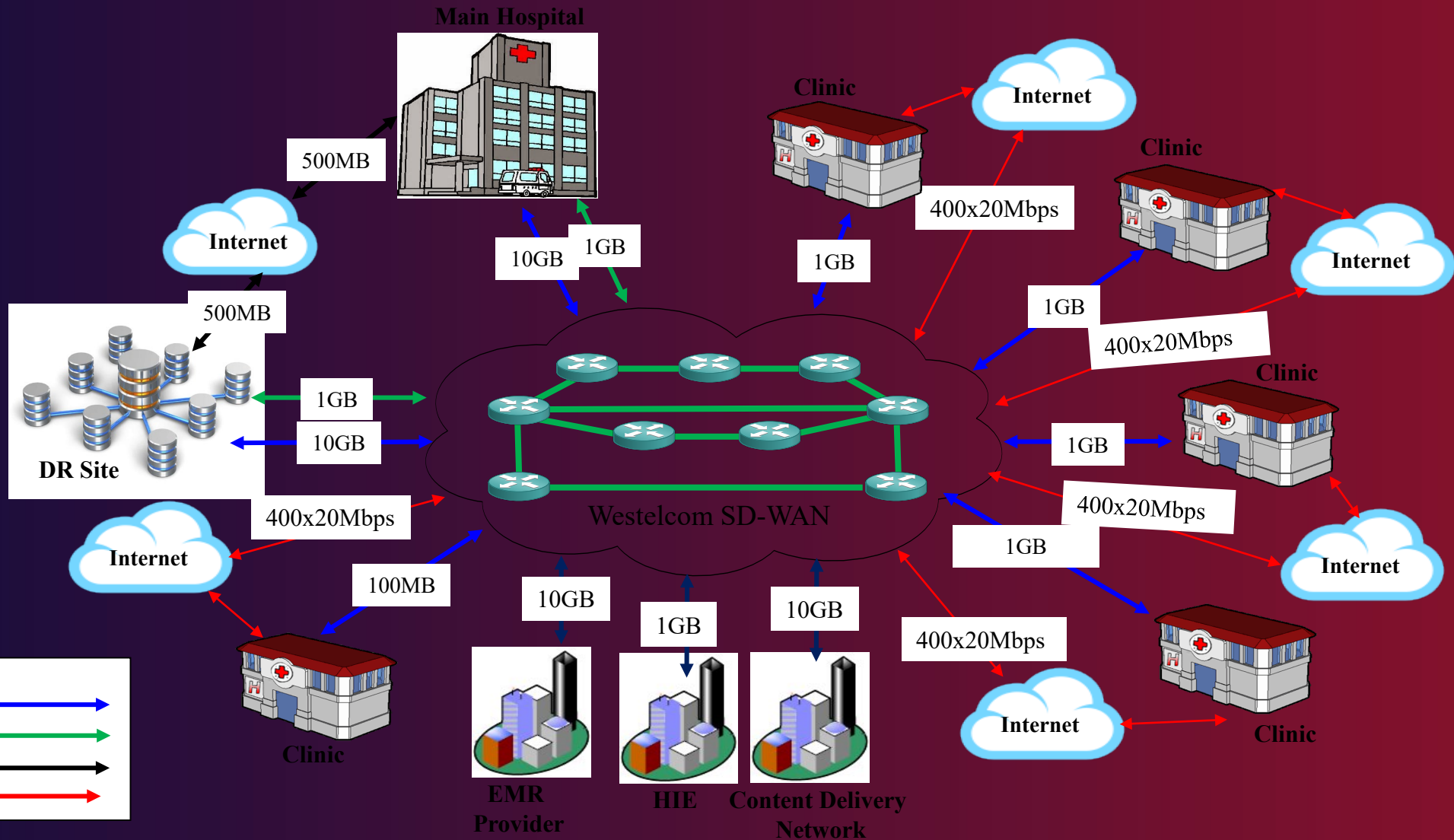
UC

TEAMS

TEO

API

CRM

Unified Communications:
The blending of IP communication tools like telephony, mobility, presence, messaging, and meeting solutions that can be accessed from multiple devices at any given time.
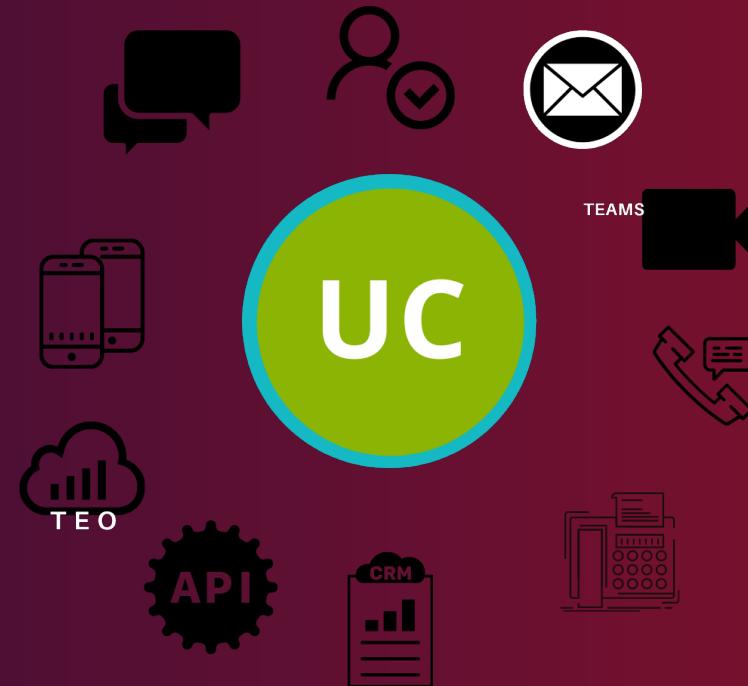
- Customers want all encompassing communications technology, so we deliver that by blending our communication tools and making them accessible on multiple devices at any time leading to improvements in end user productivity and processes.

- The solution makes it easier for companies to reach decisions and get work done more efficiently.

- UC is also the result of companies wanting to create a better Customer Experience strategy. Companies now need to "move at the speed of the customer" from multiple devices, regardless of location, & no matter the time of the day.

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Mindful Features

- Voice
- Presence
- Email Integration
- CRM Integration
- Voicemail & Voicemail to Email

- Presence-based call routing
- Conferencing
- Instant Messaging
- Schedule-based call routing

- Video
- Mobility
- Integrated Fax
- API Integration

We craft it all, so it works well together...

System Software - Our UC solution is built from the ground up for UC, with single code base for premise and cloud deployments. This means only Teo can deliver cloud+ deployments for total peace of mind

Hardware - We design and manufacture our solutions from end to end, including system hardware and desk phones.

Desk Phones - Teo has been making desk phones since 1972, and that contributes to making phones that are easy to use, reliable, and will last for years to come.
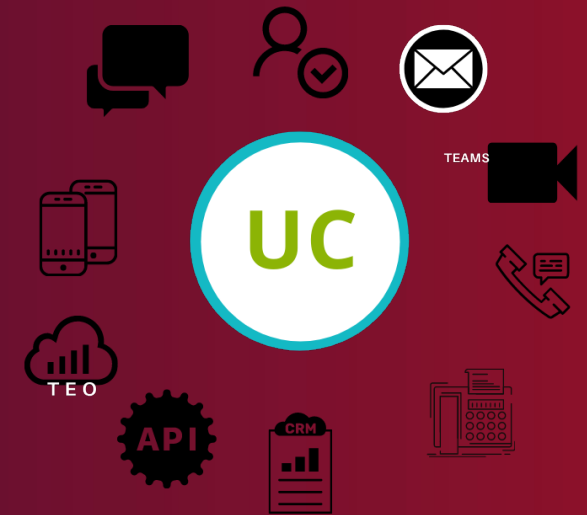
Ideal End-User Profile for UC-Voice-SD-WAN

- Small to mid-enterprise

- 10 to 500 FTE's

- Multi-locations

- Mobile workforce

- Limited internal IT resources

- Vertical focus in healthcare, legal, banking, real estate, manufacturing

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VOIP Phones
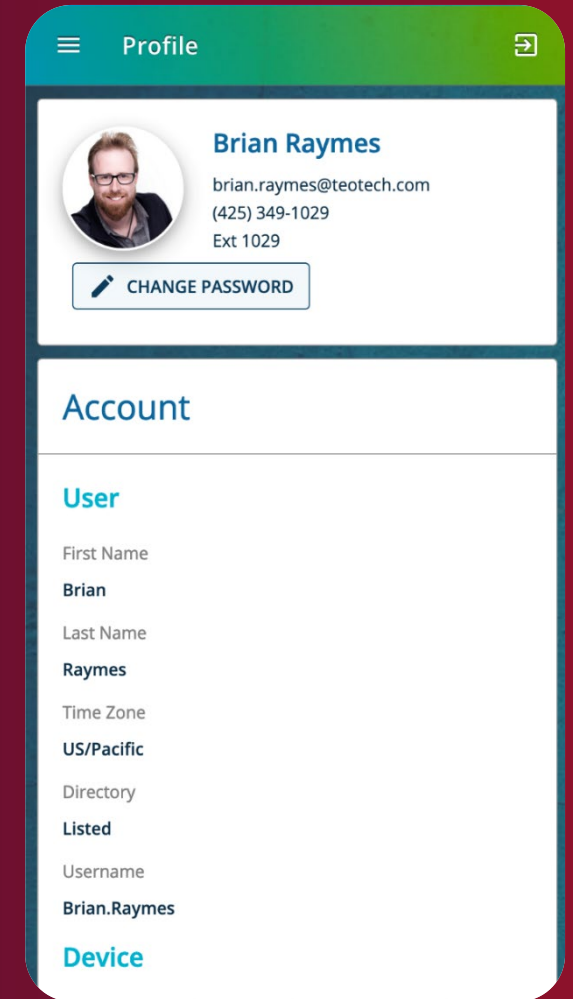
- Can be installed in a home office location, provided access to a router with an Ethernet port and high-speed internet connection are available.

- Installation of a home phone will require the phone to be powered with a power supply or PoE switch, and an Ethernet connection from the phone to the router.

PC/Mac Softphone

- Make and receive voice calls using your office phone number on your Windows PC or Mac .

- Enjoy HD video calls with the ability to video conference with up to four other extensions Publish your own presence status and know the presence status of anyone in the organization in real-time.

- Can be operated with USB or Bluetooth headset, or with the audio/microphone/video capabilities built into your PC or Mac

Mobile Softphone

- Make and receive calls using your office phone number from any smartphone.
- Our Mobile Softphone empowers the mobile workforce with voice and HD video.
- Publish your own presence status and see status of anyone in the organization in real-time.
- Peer-to-peer messaging other Teo UC users.

≡ Profile ⤓

Brian Raymes
brian.raymes@teotech.com
(425) 349-1029
Ext 1029

✎ CHANGE PASSWORD

Account

User

First Name
Brian

Last Name
Raymes

Time Zone
US/Pacific

Directory
Listed

Username
Brian.Raymes

Device

Teo

1029 - Brian Raymes

0 / 20mb | 0 / 20mb | 0 / 20mb

- 🏠 Home
- 〰️ Activity
- ➤ Fax
- 👤 Profile
- 📅 Schedule
- ⤴️ Routing
- 🖥️ Devices
- 🔔 Notifications
- 📞 Greetings

Activity

Search...   🔍

	ALL		VOICEMAIL		RECORDING		FAX

↗	**Garrett Allen**	1031	**Wednesday**	33 sec	REC	ⓘ
↙	**Garrett Allen**	1031	**Wednesday**	7 sec		ⓘ
↙	**Garrett Allen**	1031	**Wednesday**	4 sec		ⓘ
↪	**Garrett Allen**	1031	**Tuesday**	1 min 57 sec	VM	ⓘ
↪	**Brian Raymes**	1029	**05/07/2020**	47 sec		ⓘ
↗	**Jerry Richards**	1028	**05/06/2020**			ⓘ
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↪	**Brian Raymes**	1029	**04/29/2020**	17 sec		ⓘ

Case Study

Client Background

- **Cloud Deployment: Phoenix, Arizona**
- **2 locations**
- **42 users**
- **Mobile physicians traveling to various locations**

Pain Points

- **Limited internal IT resources**
- **Outdated phone system**
- **antiquated features**
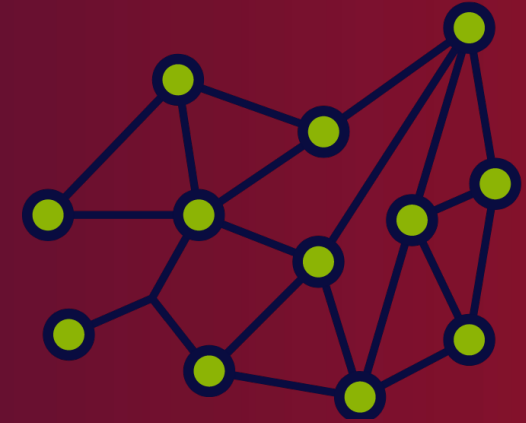- **multiple vendors for hardware and services**

Solution

Teo tailored a solution complete with:

- **Time-of-Day routing**
- **Mobile dialer applications**
- **One central place for communication tools**

MEDICAL

Deal Size

SPG
RETHINK HEALTHCARE

Westelcom owns our own network and that means private connectivity to the cloud for your medical facility. Behind our cloud you will find high quality data centers and network intelligence that is protecting your information and the systems that drive healthcare in the North Country and beyond.

As a Smart Rural Community Provider, Westelcom brings more than just fiber optic networks to the communities we serve. We bring

GROWTH, ECONOMIC PROSPERITY & CONNECTION

- Increasing home values by over 3% or an average of $5437
- Providing relocating options for families and young professionals
- Facilitating at home distance learning for all ages
- Connectivity options for local agriculture to modernize operations
- Mission critical services to hospitals, schools, governments, small and large organizations
- Telemedicine is made possible - providing robust virtual care and monitoring

Questions?