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White Paper

Top 4 Service Provider Predictions & Trends for 2022

Strategic Trends Enabling Maximize Revenue Creation and Enhanced Digital Capabilities

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Executive Summary

If 2021 demanded we question the way we work, 2022 will demand we double down on the right technology investments. As C-level telecom executives tackle goals for the upcoming year, they will face an onslaught of priorities that range from the basic needs of regulatory compliancy to higher level priorities such as network longevity, how to secure their business, and revenue growth.

The COVID-19 pandemic has changed the way businesses work and communicate, and now the telecom world is jumping to adapt. In this new world, we estimate that today's telecommunications service providers have less than nine months to fundamentally change their current market positioning to survive and thrive in the years to come. **This transformation will require unprecedented network innovation, advancements in revenue generation, regulatory compliance, and security enhancements.** In addition, the network evolution must provide the flexibility to quickly develop, launch, and scale new services a broad range of for digital markets, including residences, small and medium businesses (SMB), and enterprises.

We looked at the trends in telecom over the past few years, which have been accelerated by the global COVID-19 pandemic, to give service providers guidance on how to meet their customers demand for digital services. Together, these strategic trends will enable you to maximize revenue creation and enhance digital capabilities to win business and market share.

47%
of CIOs say the pandemic has permanently accelerated digital transformation and the adoption of emergent technologies.

Source: Plural Sight - Tech in 2021

New Revenue Streams & Tech Stack Transformations

In a tenured market like telecom, how can ISPs, MSPs, and cable, satellite, and fiber providers generate new sources of income? The North American market is dominated by the big three telcos (AT&T, Verizon, and the combined T-Mobile/Sprint), which has caused service providers to become overly reliant on selling their network voice and data connectivity. **With a US GDP growth rate of only 2.7%, telco service providers need to focus on post sales revenue and generating new revenue streams.**

The shift from equipment-based revenue to cloud services-based revenue has arrived, and now installation, support, and warranty revenues are aligned with equipment sales and experience-based services. Organizations must identify, create, and deliver new offerings in shorter life cycles to meet changing customer needs.

Gartner's #4 Trend for 2022 — Cloud-Native Platforms

Cloud-native platforms are technologies that allow providers to build new application architectures that are resilient, elastic, and agile — enabling your business to respond to rapid digital change.

Cloud-native platforms improve on the traditional lift-and-shift approach to cloud, which fails to take advantage of the benefits of cloud and adds complexity to maintenance.

Source: Gartner - Top Technology Trends

Cloud-Native Solutions Create New Revenue Opportunities

Forrester predicts this the year to be bolder and more creative to meet the heightened expectations for digital experiences. To increase revenue streams and reach more customers, telcos need to increase the monetization of their existing assets and offer new and innovative services that meet the needs of their customer base.

SMBs — Ready for Change, Scalability, & Digital Solutions

SMBs are primed for change. Resilient companies that have opened themselves up to change and the need for agility have endured the through pandemic. As uncomfortable as change can be, businesses are more open than ever to adopting solutions that will save them time, money, and effort. 2022 is the time for service providers to leverage cloud-based cost savings, increased functionality, and easy onboarding to ramp up net-new customer adoption. Consider these options:

Business Lines
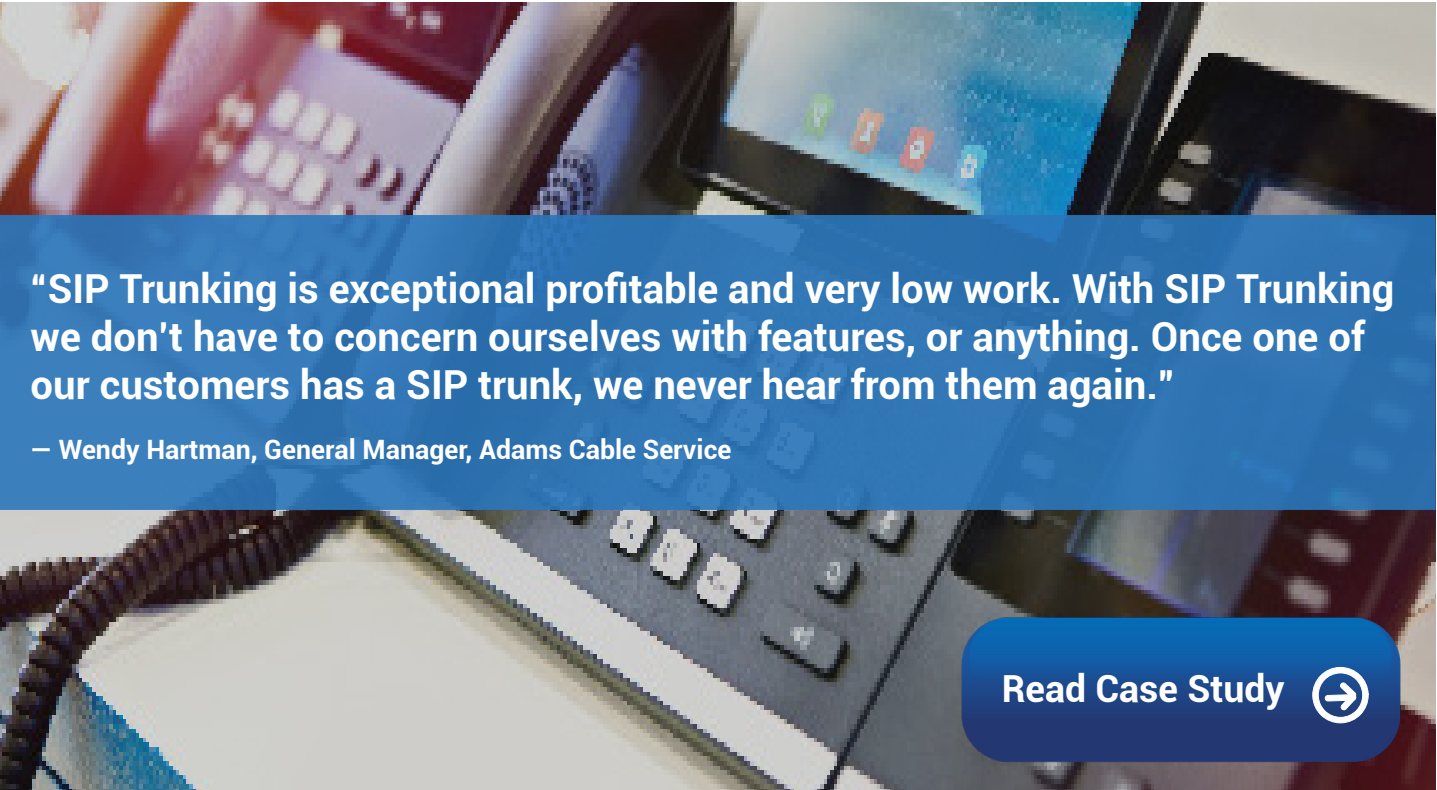
SMBs are ready to make enhancements to business-critical applications, but that doesn't mean all cloud hesitancy is gone. Long-standing resistance and fear of losing existing functionality have prevented some businesses from making the switch. A Business Lines solution meets those customers halfway by moving their analog phone lines to the cloud without sacrificing their existing infrastructure or functionality. **It's the optimal choice for service providers to address small office needs for analog devices.**

SIP Trunking

Businesses that aren't ready to abandon their investments in on-premises IP PBX solutions can turn to SIP Trunking for cost savings and flexibility. SIP Trunking creates a connection from a customer's on-site PBX system to your Voice over Internet Protocol (VoIP) network, using your broadband to replace the telco PRI and connect your customers with the public switched telephone network (PSTN). A single trunk can support a single call to many hundreds of simultaneous calls, meeting the needs of organizations both large and small. **Capitalize on this red-hot market to help customers embrace IP solutions and eliminate costly, static TDM connections.**

The flexibility and scalability of SIP Trunking solutions meets forecasted SMB needs by providing an easy to manage, easy to consume solution for service providers to offer. **The benefits for providers extend beyond a new revenue stream:**

- **Simplified Scalability.** Easily scale up or down as your customers' needs change. Flexibility = healthy margins.
- **Right-Sized Flexibility.** SIP trunk resources are flexible and easy to manage, plus there's no physical installation or setup necessary.
- **Instant ROI.** As a cloud-based solution, the majority are no risk, no upfront investment solutions that increases a provider's speed to market and ROI.
- **Set and Forget.** SIP trunks are often exceptionally profitable for providers with very low work. This low maintenance solution creates an elevated SMB experience and give providers an opportunity to add a new margin-heavy offering that won't stress their current support capacity.

> **"SIP Trunking is exceptional profitable and very low work. With SIP Trunking we don't have to concern ourselves with features, or anything. Once one of our customers has a SIP trunk, we never hear from them again."**
>
> — **Wendy Hartman, General Manager, Adams Cable Service**

Read Case Study ⊙

Enterprise — Automation, Digital First, & Customization

The recent pandemic forced a lot of enterprises to allow employees to work from home, and much of that flexibility is expected to be permanent. Now, enterprises are more open to adopting advantageous cloud-based solutions and will expect their providers to deliver new subscription models that remove them from the constraints of ownership and provide additional business agility and flexibility.

Automation

Opportunities for human error are everywhere. With an on-premises deployment, end users and service providers must coordinate multiple locations and numerous personnel with different training, education, and proficiencies. Then, once the hardware and system requirements are in place, end users must download the application, log in with their credentials, and learn how to use it. These are all pivotal moments in which human error can have both short-and long-term implications. **According to 84% of IT leaders surveyed, human error was the top cause of serious incidents.** Between human error and this years unprecedented increase in number of complex security attacks, automation will be vital in 2022.

Digital First

COVID decimated many businesses, forcing even Fortune 500 companies to reduce headcount and run lean operations. Cloud-native solutions, by nature of their next-gen technology, do not require the same volume of hands-on maintenance or legacy technical expertise to keep the network performing. Digital-first platforms also reduce the burden on IT teams by remotely handling all provisioning, upgrades, security, enhancements, and maintenance — so your business doesn't have to manage it.

Customization

Automation and cloud computing have some inherent challenges. Notably, each company has unique requirements ranging from branding, platform interoperability, end customer features, protocols, and more, which can be complicated with a one-size-fits-all solution. **2022 will be the year that enterprises demand more from their providers than existing on-premises solutions can deliver.** Cloud communications platforms offer unparalleled flexibility for customizations like private label branding, mobile applications, features configuration, UI changes, and more, giving enterprises the opportunity to build a unique service for their customers.

Gartner's #9 Trend for 2022 — Distributed Enterprises

Distributed enterprises reflect a digital-first, remote-first business model to improve employee experiences, digitalize consumer and partner touchpoints, and build out product experiences.

Distributed enterprises better serve the needs of remote employees and consumers, who are fueling demand for virtual services and hybrid workplaces.

Source: Gartner - Top TechnologyTrends

8 in 10 consumers will see the world as ALL digital.

Consumers have much higher expectations that digital experiences work well. Providers will need to be ready to meet these expectations.

Source: Forrester - Predictions 2022

Unified Communications as a Service (UCaaS)

The number of enterprises opting to host less hardware on premises is forecasted to increase in 2022 as they seek flexible, cost-effective, and mobile solutions. UCaaS solutions provide a broad range of powerful and scalable communication tools — like real-time messaging, video conferencing, presence, screen sharing, and more — to optimize in-office and remote teamwork, making it an easy avenue to digitalize customer businesses.

Service provider-built suites are specifically engineered with your margins, ease of use, and growth in mind. Complement your existing network with a full-stack cloud communications suite to effortlessly become a UCaaS provider — no additional costly hardware, truck rolls, or network expansions needed. **Best-in-class platforms make it easy for providers to leverage a UCaaS solution to create a new revenue stream.**

- **Seamless Provisioning.** UCaaS solutions that integrate with existing SBCs, IMS components, PBXs, and VoIP switches give providers long-term viability and integration with a customers' mission-critical business applications.

- **Software Updates.** Cloud-based solutions automatically distribute new software updates to ensure end users always have the latest security updates, compliance measures, and next-gen technology — without the need for intervention and maintenance from your team. Mature solutions may also allow end user IT administrators to instantly deploy new features to all employees or a specific subset, which enables end users to self-manage their communication solution rather than the burden being placed on their service provider.
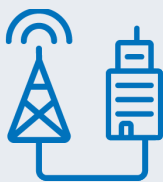
50%
Existing customers are 50% more likely to try your new product.

70%
The probability of selling to an existing customer is between 60% and 70%.

Existing customers are also 31% more likely to increase their average order spend with your business.

Source: SEMRush - Customer Retention

Tech Transformation & Workforce Replacement

The continued use of TDM-based networking has already become increasingly challenging, with **shocking price increases ranging from as much as 30% to 100%** for both Multiprotocol Label Switching (MPLS) ports and access circuits. Service providers who continue rely on a legacy softswitch into 2022 are at an elevated risk of service interruptions and shrinking revenue.

While this is a forecasted trend, it is not a tomorrow problem.

Many telecom networks have invested a majority of revenue in their switch, but they're weighed down by outdated networks, complex infrastructures, and rising maintenance costs. Unfortunately, delivering a traditional voice solution requires costly network expansions and the use of legacy hardware that is both time consuming and expensive to maintain. Additionally, on-premises MPLS solutions have limited capacity, leading many providers to throttle the connection and lower the quality to allow more users. Enterprise customers are now realizing that while they could scrape by with constrained resources, they can get better service in the cloud.

2022 is the year for bold moves and increasing the monetization of your network by migrating it to the cloud. As providers consider their options for 2022, here are some risks and considerations to consider.

BroadSoft Softswitch Operational Risks

For the last twenty years, BroadSoft has been a leading cloud communication services vendor. BroadSoft was used by more than 600 carriers and 25 of the largest UCaaS service providers in 80 countries and accounted for 45% of the world's UCaaS market.

However, as many softswitches and class 5 switches are nearing (or have already reached) end of life, many service providers will need to decide how to address a rapid migration to another solution and evolve their voice networks to be more agile, competitive, and profitable within the next year.

Many switches that have become obsolete still support significant revenue streams for voice — that's risky for providers. As system failure rates increase, the cost per subscriber will rise due to fixed operational costs and legacy voice customer turnover. Service providers using outdated equipment risk service disruptions and declining sales due to:

Lack of Innovation

Service providers must, at minimum, keep pace with security and compliance regulations and market demand for new UCaaS and collaboration solutions.

Single Point of Failure

Failures may occur not in the softswitch itself but from having a single switch at a single site. While many service providers have geo-split two halves of a switch, its often only from one side of a city to the other. Few providers have scaled to implement a nationwide active-active geo-redundant solution to mitigate the risks of failure and network outages.

Lack of Support

Many vendors have gone out of business and no longer support older equipment. Additionally, as systems are discontinued, customers will no longer have vendor support and replacement parts will eventually be depleted.

Aging Workforce

As skilled personnel retire in greater numbers year over year, providers will have an increasingly challenging time locating replacements who have the knowledge needed to manage hardware developed twenty years ago. The cost to retain those employees or train someone new will be significant.

In addition, Cisco is now competing with customers. Service providers are now in the awkward position of competing with Cisco, their platform provider. This isn't ideal because it limits the go-to-market leverage for service providers and induces acute conflicts around the strategic aspect of the relationship which will impede successful partnerships, roadmap innovation, and general information flow.

So, what are your options?

FIGURE 1. Leverage Softswitch Replacement Options

Softswitch Exchange

Exchanging an existing softswitch for a newer model can sustain providers for a few additional years. But with the rate of technological advancements, increasing consumer bandwidth needs, and the rising demand for collaboration tools, service providers are more likely to find themselves at a competitive disadvantage.

Network Functions Virtualization

Network functions virtualization (NFV) layers software onto existing legacy systems. Although this offers some short-term user benefits, service providers still face scalability issues and the burden of manual maintenance updates. In the long term, NFV solutions are expensive, complex, and can't keep pace with industry changes.

Cloud-Native Solutions

Unlike conventional wholesale VoIP solutions, carrier grade cloud platforms offer customizable, turnkey solutions leverage next-gen technology to bring all the benefits of the cloud — web scalability, unrivaled service agility, and healthy, sustainable margins — to your network. They are suitable for a virtually any provider in including cable, ISP, MSP, satellite, fiber, and more.

How are you planning to replace your softswitches?

We think your approach should be to leverage the cloud, not build one.

POTS Is Out, Digital Is In

What Telecom Providers Need to Know Today

In 2017, the Federal Communications Commission (FCC) told telecom providers to begin sunsetting their plain old telephone service (POTS) lines, which has left service providers in the difficult position of either significantly increasing prices to maintain their legacy copper POTS lines or finding an alternative solution.

According to the FCC, there are still more than 36 million POTS lines in the United States, with an average monthly cost of $65 per line, that will be disrupted unless individual service telecom providers utilize a copper line replacement solution.

Discontuniation of POTS

Telephone companies have already begun retiring copper-based communication lines. FCC Order 10-72A1 mandates that all POTS lines in the US be replaced with an alternative solution — such as fiber or wireless connections — by August 2, 2022.

Replacement Options

As traditional copper landline infrastructures are discontinued, enterprises are faced with increased costs to support those legacy analog lines.

Replacement Options & Service Providers Considerations

As it stands today, businesses have two options: a full rip and replace of their entire communications infrastructure or a digital POTS replacement solution. **Most providers have invested considerable time and capital into their current infrastructures, making a full rip and replace cost exorbitant and time prohibitive.**

Historically, certain applications including security alarms, gate access, and fax lines have run more effectively on legacy analog lines, which customers still need; however, unified communications solutions do not work well with analog devices. In vetting a POTS replacement solution, service providers will need to consider the following:

DECISION CONSIDERATIONS

Time to Market
With the mandated sunsetting of copper lines, telecom providers need to build or acquire a POTS replacement by August 2, 2022.

Technology Refresh
An alternative solution is needed to transition legacy POTS environment to a modern VoIP infrastructure to address the FCC mandate.

Scalability
Providers that serve a wide range of customers need a solution that can scale from 20 lines to thousands.

SOLUTION OPTIONS

Carrier or Private Fiber
Only cost effective for high bandwidth or performance requirements.

Cellular
Not applicable for remote locations with unreliable signal, or locations with specific security requirements.

Private Wireless Networks (PWN)
Not feasible for all rural areas, and alternative options are not likely to meet enterprise bandwidth or latency performance requirements.

IP-based DSL or Cable
Feasible only where available and if it meets service security requirements.

As providers decide the best way to move forward, most will select a digital or cloud-based POTS replacement for flexibility, scalability, and low CAPEX. **Here are the top benefits of a cloud-based cooper lines replacements solution:**

- **Future-Proof.** Cloud solutions enable service providers to leverage next-gen technology with lower costs, enhanced reliability, and simplified migration to digital lines while continuing to support analog lines.

- **Cost Reduction.** With a turnkey, market-ready solution, providers can avoid large capital investments and eliminate unpredictable costs for ongoing maintenance, IT staffing, and training. Carrier-grade solutions typically have a flexible pricing model that delivers an immediate return on investment (ROI). If per-site pricing is available, end users can gain greater savings for multi-line sites.

- **Single Solution Technology.** It's safe to assume that each of your business customers has at least one or two POTS lines that support business-critical applications. A single solution offering would allow service providers to replace every hardline connection with a cloud-based line.

COUNTLESS APPLICATIONS

Elevator	Card Machine	Fire Alarm	Security Gate	Remote	Panic Buttons
POS Machine	Elevator	Security Alarm	Remote	Legacy PBX	Fax Line

Critical POTS Replacement Components

In selecting a POTS replacement solution, providers should consider the following:

Equipment - Inquire about what customer premise equipment (CPE) hardware is provided and what needs to be purchased separately. CPE typically includes an analog telephony adapter (ATA), an uninterruptible power supply (UPS), and an LTE/5G router for backup cellular connectivity and always-on visibility.

Installation - Will installation be your responsibility or the vendor's? Consider looking for an end-to-end solution that includes custom on-premises installation, coordination with local guidelines and specialty vendors, provisioning, call control.

Management - Do you want a single-box or multi-box solution?

Single-Box - If it breaks, it must be replaced. Backup devices are not typically kept on site, which extends the downtime to potentially business critical lines such as 911 or emergency lines.

Multi-Box - Provides better quality and easier management than single box solutions available and often backed by SLAs of 99.99%.

Providers Need an Immediate Plan
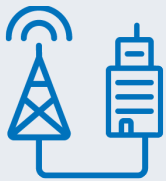
36M

According to the FCC, there are still more than 36 million POTS lines in the United States each with an average cost of $65 per month.

Avoid Impending Revenue Loss

13%

Only a few years ago, AT&T was losing revenue on legacy voice POTS lines at 13 percent YoY. Over the last four years, their business segment has experienced a 36% drop in revenue.

Source: FCC - FORM 10-K

Securing Communications Platforms Is No Easy Task

Communications and collaboration trends are constantly evolving, which means security and regulatory compliance are too. With remote working here to stay, providers and their business customers are facing the challenge of trying to adhere to regulations while employees outside of their secure work environment.

We're regularly bombarded with news stories and reports of privacy breaches, such as illegal distribution of sensitive company materials or compromised code in popular applications used on computers or mobile devices.

Securing a collaboration and communications platform is no easy task. With so much precious information at stake, these platforms present significant new surface areas of risk. As service providers and business leaders' vet new solutions and growth opportunities, they need to consider the solution's strategy for managing a geographically dispersed customers, the risk of loss of data or network intrusion, and the consequences of not addressing emerging area of collaboration security, compliance, and governance — because **around 30% of businesses aren't using the right security tools and software to protect devices and data.**

> **"Add unified communications to core compliance and risk management programs, don't ignore it. As the fastest growing channels, video conferencing and collaboration chat are most susceptible to risky/non-compliant behavior and oversharing of sensitive information."**
>
> **— Anthony Cresci, VP of Business Development, Theta Lake12**
>
> Source: Gartner - Top Security Risk Management Trends for 2021

One of the largest challenges for an organization is understanding how and where various rules and regulations apply, especially in a global market, as a data breach of any sort can result in hefty fines. For example, in 2018 **Pacific Gas & Electric was fined $2.7 million for leaving 30,000 records about its information security assets exposed online for 70 days back in 2016**, which occurred after a third-party vendor had improperly copied data from the utility network to their own network. The increasing number of mobile, WFH, and flexible work agents only adds to the complexity.

DDoS Attacks on the Rise

Over the last few months of 2021, companies have seen a prolific rise in distributed denial of service (DDoS) attacks targeting VoIP providers. In some cases, these attacks overload the target's servers with an extremely high volume of traffic, controlled remotely by a network of malicious software (botnet), to break their defenses, bring down their website, exploit vulnerabilities, and gain access or control.

Several security firms have recently observed a marked increase in this sort of activity, which are often attributed to politically motivated groups. According to Ronen Kenig, director of Security Research at Incapsula: "Most DDoS campaigns rely on automated attack tools like Mirai to launch high-volume assaults with the press of a button. **We suspect that DDoS has become the weapon of choice because it is more convenient and effective than penetrating a target's network and launching an attack from within."**

DDOS Attacks in Q1 2021

Total Attacks: 2.9 million

Increase: 31% year over year (YoY)

Max Size: 480 Gbps

Max Throughput: 675 Mpps

Top attack type: UDP (encompasses all 30+ UDP Reflection/Amplification DDoS Vectors tracked)

Source: CSO - DDos Activity in 2021

Gartner Market Recommendations

DDoS mitigation services help protect servers or networks from an attack. Security and risk management leaders responsible for network security should determine their enterprise's risk level and pay for DDoS mitigation services accordingly.

- Low risk organizations can save money with less expensive and less experienced providers that offer DDoS mitigation as a feature.

- Medium- to high-risk enterprises should evaluate experienced scrubbing centers that analyze traffic for malicious activity or content delivery network (CDN) providers who maintain stable data transmissions for even large amounts of traffic.

Source: Akami - Garter 2020 Market Guide for DDos Mitigation Services

"Organisations need a way of monitoring employees to ensure they are adhering to regulations and have the support they need to deal with customer inquiries securely from home"

— **Steve Smith, the CEO of Fonative16**

Source: UC Today - Security Regulations & Compliance Round

Regulatory Compliance — E911 is Not Optional

In 2022, compliance with Kari's Law and RAY BAUM'S Act will be a top priority for service providers. These laws, which were passed with overwhelming bipartisan support, aim to ensure the public has greater access to emergency services and improve the potential for emergency response outcomes. The new requirements include:

1. **Kari's Law.** Any multi-line telephone system (MLTS) manufactured after February 16, 2020, must be able to dial 911 without first dialing an extension to reach an outside line. Additionally, a notification must be sent to a central location at the facility when a call to 911 is placed to notify on-site personnel who can prepare for the arrival of emergency services.

2. **RAY BAUM'S Act.** The caller's dispatchable location information – including the calling phone number's street address and building, floor, room number, or other information needed to precisely identify the caller's location — must be sent to the public service answering point (PSAP) with the call. T**his is required for fixed MLTS devices by January 6, 2021, and for non-fixed MLTS devices by January 6, 2022.**

Location compliance for landlines is not new; however, with the expansion of communication tools, users are now able to make calls from desktops and tablets, making location detection, and compliance more complex for service providers.

There may be legal consequences if these changes are not implemented.

E911 Compliance Is a Must for Telco Service Providers

All telecommunication systems must be capable of connecting with 911, regardless of what type of phone or service they use.

E911 Compliance in Action

During an emergency that requires immediate medical assistance, what happens if a phone doesn't transmit the caller's location accurately?

Or worse, the call could not be made in the first place because the caller didn't know an extension needed to call an outside line. The time wasted in these situations will be important and could make a difference between life and death.

Source: FCC - MLTS 911 Requirements

How Service Providers Can Ensure Compliance

One of the first things a business should do to ensure they are fully E911 compliant is to contact their carrier. It is important for carriers to find out if their provider offers a 911 service and what, if any, costs may be associated. By using an industry-leading cloud communications platform, **service providers can often bypass the effort and time to ensure compliance as the carrier would manage it on their behalf.**

Conclusion & Recommendations

In 2022, we expect telecom leaders will be forced to evaluate their conventional on-premises investments, perceptions of long-term revenue streams, and how to protect their businesses. **We're seeing technology firms shift investments and resources away from legacy technologies to excel in 2022 and beyond.**

All companies, regardless of size, market, or industry must embrace this evolution with enthusiasm. A **resilient company that is well set to grow post-pandemic will be characterized by its digital agility more than anything else.** In 2022 planning, C-level telecom executives must address a plethora of objectives for the coming year, with the following predictions being the highest priority:

4 Service Providers 2022 Predictions Summarized:

Revenue Growth

Cloud platforms have shorter development cycles, delivering new functionality and product lines for services providers to easily create a new revenue stream while avoiding the cost and time-intensive research and development. Revenue growth is a top line priority.

Network Transformation

Softswitches and class 5 switches are legacy infrastructure. The time is now for providers to address the obsolescence of today's networks and seek a future-proofed platform for growth.

POTS Replacement

Regulatory compliance is a base need. Telecom providers must comply with legal requirements. For most providers, a full rip and replace is not an option. Digital copper line replacements are the least disruptive to customers because they are the cleanest and most hands-off way for service providers to comply with the mandated sunsetting of all POTS lines.

Security

In prioritizing protecting your business and network transformation, seek an established cloud-native platform that has a multi-layered approach with the following:

The Future of Telecom is in the Cloud

The very nature of a cloud-native platform delivers agility in a way on-premises networks cannot keep up with, including rapid innovation of new products, enhanced security measures, and the ability to easily comply with government mandated regulations.

Look for a cloud provider with these best-in-class qualities:

1 Consistency

- Constant security benchmarking
- Network penetration testing
- Threat audits
- Full SOC 2 Compliance
- Stringent access controls
- Multi-factor authentication
- Network firewalls and SBCs
- Fully walled customer partitions

2 Superior Infrastructure

- Elastic cloud architecture
- Platform components are 100% virtualized
- No individual servers or clusters (built in redundancy)
- Proactive network monitoring & optimization

3 Resiliency

- Zero-downtime architecture
- Intra-site and inter-site redundancy
- Automated failover to georedundant
- Secondary failover location
- Real-time data replication between data centers

Get Started! ⊕

To learn more about how a cloud communications platform can add a powerful, profitable, and sought after solution to your network, **contact our sales team today.**

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