Cloud or On Site/Premise Unified Communications: Which Direction Should I Go?

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If you're not rushing to throw every application, system, and piece of data into the cloud, you're a dinosaur. You're obsolete. You need to retire.
Is this true? Are we missing the bus? Is cloud here to stay? Are we on another iteration of the "centralize/decentralize your Information Technology" yoyo?

This white paper puts the two systems into perspective. You will find answers to key questions, look at the pros and cons of each system, and enjoy a more in-depth analysis of the benefits of each of the two systems. Finally, we will provide a quick guide that can be used to determine the communication model that might be the best fit for your organization.

Introduction

With the explosion of cloud-based applications like Salesforce.com and Office 365, the popularity of placing all business applications in the cloud has increased exponentially in the last few years. You can't read a technical article or attend a tradeshow without seeing the word "CLOUD" every time you turn around. It seems to be consuming every conversation surrounding IT.

As it pertains to this white paper, how does this affect your organization's communications? Applications like CRM, helpdesk, email, and accounting are moving to the cloud at an extremely rapid rate.
What about voice, video, and Unified Communications in general? What about call/contact centers?

Premise-Based Unified Communications Isn't Going Away… Neither will Cloud

The industry has seen a much slower adoption of cloud-based Unified Communications than other applications. Although it's the fastest growing segment of Unified Communications sales, it still continues to represent the minority. Premise-based Unified Communications growth has been declining by about 6 % over the past three years, but still represents $5 Billion of the global IP Telephony market share. Unified Communications as a Service (UCaaS) represents a much smaller market share, at about $1Billion, but is growing year over year. Is this a trend that will continue? Will cloud flatten out too?

A study released by Synergy Research predicts that UCaaS will represent about 50% of the market in five years. Even so, both premise and cloud communications are here to stay. Still, what direction should you go? What's best for your organization? The answer depends. Every situation is different. With every organization comes a unique set of communication needs to support the mission. Some organizations are built for cloud, while others are not, but it's not always so black and white. Regardless of which system you choose, you will have to sacrifice some of the benefits of the alternate model.

Defining Cloud and On Site/Premise

Cloud Unified Communications comes in many forms and by many names. Some people call it hosted VOIP, others call it Unified Communications as a Service (UCaaS), and others call it the Cloud. Some say they're all the same, others claim they're all different. For the purposes of this document, we're referring to providers that build out the "brains" of the cloud service in a series of data centers. This includes call processing, Call / Contact Center, Unified Communication applications, PSTN (dial tone) connectivity, network connectivity, voicemail, auto attendants, Interactive Voice Response (IVR), SIP registration, a configuration and management portal and such.

Premise or On Site entails on-site hardware and software that services the Unified Communication tools your organization needs, to include call/contact center, PBX, video, IM, desktop sharing, collaboration solutions, PSTN termination, Unified Messaging, IVR, etc.

Ask Yourself Key Questions

- Is my staff centralized or are they dispersed across multiple small branch/home offices?
- Do I have a large IT staff?
- Does my CFO prefer OPEX versus CAPEX procurement models?
- What compliancy regulations must I adhere to?
- Am I international?
- Do I have a call / contact center?
- Am I growing at a rapid rate?
- Is my organization seasonal?

In order to determine the right direction for your organization, ask yourself some key questions.

Next, add up the pros and cons of each model to help you determine which yields the most benefit to your organization.

Pros and Cons You Should Know

There are definitely pros and cons to both On Site/Premise-based and cloud-based models. These may change depending on how your organization fits in. We will be describing each of these benefits below, but first let's take a look at them at a glance.

On Site/Premise UC	Cloud UC
Generally large capital outlay or financing required	Monthly operational expense model (OPEX)
More control over the support relationship with your communications vendor	You may see yourself at mercy of your cloud provider. Make sure you have a good vendor.
Increased hands-on IT management and maintenance	Reduced/eliminated internal IT management expense

Better control over disaster recovery and business continuity (DR/BC) considerations	More difficult to influence design/less flexibility as it pertains to redundancy
Changes in the system requires upfront investment for hardware, licensing, and software	A much more flexible “consumption” model: pay as you need basis.
More flexibility in application integration	Less flexibility in application integration
Adding specialty applications entails man-hours and a capital outlay to invest in software and hardware.	Easier to roll out specialty applications. Simply “turn it on”
Total cost of ownership (TCO) for an enterprise-class premise platform is less than for a cloud platform over time	Total cost of ownership (TCO) is greater over time
Hardware and software can become obsolete	Less hardware and software to manage except end devices (phones)
Administration and customization flexibility	Less control over administration and customization
On Site/premise communications expenses are generally much more difficult to predict	Predictable expenses makes this system easier to budget
Better maintenance and troubleshooting visibility	Limited visibility into system health
Upgrades can be more impactful to operations as it requires downtime, software upgrades, end-user tool upgrades, and staff involvement	Upgrades are done by provider and have little impact on operations
Business continuity is more at risk with a headquarter disaster and no data center.	Business continuity can be more available with a headquarter disaster because system is in the cloud.
When implementing a contact center, on-premises phone systems might need to be replaced if there are multiple disparate systems	A cloud contact center can generally be implemented even across multiple disparate phone systems

*Source: Inflow Communications, White Paper July 2015

In order to help us compartmentalize, the next section isolates each of the benefits of On Site/Premise and Cloud from the above matrix, and describes them using a more in-depth approach.

Benefits of Premise Unified Communications

More Control Over the Support Relationship with your Communications Vendor

We feel that this is one of the most important benefits of going with an on-premise solution. The more mission-critical your communication needs are, the more important this is. Unlike CRM or accounting, your communication system is the most visible application you provide for your organization! It affects every aspect, including employees, your C-level suite, shareholders, customers, and vendors. Furthermore, Unified Communications comes with a unique set of challenges.

Regardless of it being in the cloud or on site/premise, many things can affect the delivery of your communications application. These include everything from your network and telecommunications providers to the small wires connecting your systems together in your physical cabling plant. Regardless of the model, you need a specialized, competent technology partner to help you along the way. This isn't a static system like a storage array or network switch, this is absolutely a moving target whose dynamics change every day. With this in mind, ask yourself, who's generally providing cloud UC services? Are they small, boutique, specialized organizations that are intimate with your own unique set of needs and environment? No. Most cloud providers at this stage in the game are telecommunications carriers, manufactures and other larger organizations that can afford to effectively build out the infrastructure required to deliver the service.

The next question to ask yourself is, "traditionally, how well has my telecommunication carrier supported my service (analog line, PRI, etc.) up to this point?" When there have been issues, how quickly and effectively did they resolve them? How aligned are they with my environment and business needs? Most often the answer is "mediocre at best". Now hand your carrier your most visible, mission-critical communications applications. If they can hardly support plain old telephone lines, what makes you think they're going to excel at managing ALL of your communications?

The above scenario remains true for the services and partnerships provided by larger

companies and manufactures. With a premise-based system, you maintain control over this relationship. You get to evaluate and select a vendor that meets your support, business, and partnership requirements. If that vendor is acquired or doesn't work out, you have the freedom to move. This is simply not the case when you relinquish all control of your communications system to a third party cloud provider. You lose control. You are at the mercy of your provider, and with larger organizations, they might be good today and horrible tomorrow. That's the nature of the industry. Being a smaller fish in a larger pond, how quickly will they respond to your service outage?

Better Control Over Disaster Recovery and Business Continuity (DR/BC)

When we design a Unified Communications solution for our customers, first and foremost, we're thinking about Disaster Recovery and Business Continuity. With a premise-based system, this is easier. We often make provisions for carrier redundancy by implementing SIP trunks and diverse network paths. We accommodate for network redundancy by implementing things like multiple carrier aggregation points with automatic fail-over for multi-site customers. Other examples of such provisions include distributed call processors and application servers distributed across multiple sites and network switches. We think about multiple software and hardware failure scenarios by deploying "N+1" processing and "distributed" intelligence across multiple communications components, locations, and data centers.

When it comes to cloud, it's more difficult to get that level of design flexibility as it pertains to redundancy. Yes, you can implement multiple network connections to your cloud provider. Yes, with cloud, you're not relying on your core facilities to maintain service because the processing is done in the "cloud". That all said, once you move your longstanding, published, phone numbers to the cloud, you're relying on that cloud provider to accommodate or "upstream" carrier redundancy. How and with who are they connected to Tier 1 network providers and the PSTN? How secure and geographically distributed are their data centers? With thousands of other customers on their platform, how quickly are they going to respond to your "instance" outage?

More Flexibility in Application integration

It's becoming more and more important for enterprises to get more out of their Unified Communications. Simple voice communication isn't enough. Business requirements are demanding things like CRM and database integration for sophisticated call routing, reporting, and screen pops. Business intelligence should be at the forefront of all enterprise organizations. How easily can you aggregate all of your systems' data (CRM, voice, email, web chat, usage and utilization) into one "single pane of glass" for holistic and

easy-to-navigate business intelligence? Because the Unified Communications data resides on your network, and because the systems are most likely standards-based, you get more flexibility to meet these evolving business requirements with on site/premise communications systems.

Total Cost of Ownership (TCO) Win

Yes, generally you'll spend less on an (Enterprise-Class) Premise system than on an (Enterprise-Class) Cloud Platform over time. Generally by year four or five, you've more than paid for a premise system with monthly cloud payments. An Enterprise-Class Premise-Based Unified Communications system is going to last at least five years and more likely eight to ten. If the premise system is software centric, your investment is going to last longer if you own the licenses indefinitely and you only need to refresh server hardware and handsets over time. We refer to the term "Enterprise-Class" above because, like premise technology, cloud providers are not created equal. You're going to pay more for a provider that has a robust platform, reliable, high quality, and solid customer service. There are still "commodity" cloud providers that race to the bottom on price. Unfortunately, they have to pay for it somewhere. That generally comes in the form of severely reduced quality, oversubscription, and criminally poor customer service. A 30% customer churn isn't uncommon with these types of providers.

It's actually built into their business model! As hosted phone systems made their initial debut, the driving factor behind moving from premise to cloud was price. Many of these early adaptor customers suffered. Many moved from cloud provider to cloud provider-seeking reprieve. Many went back to premise. If your Unified Communications platform is mission-critical, and you're trying to prepare a cost analysis between premise and cloud, make sure to compare the right cloud providers. As we'll discuss below, one of the tangible costs that absolutely has to be accounted for is labor. What are the human resources required to maintain the premise-based system. This includes employee compensation, opportunity cost with time, and training.

Administration Flexibility

Premise-based Unified Communication systems will generally provide you more control over the administration and customization of your system. A prime example would be customizing how calls flow through your system and into and out of auto attendants and Automatic Call Distribution Groups (ACD). Other more advanced examples might be things like outbound caller ID masking based on number dialed, integrating with onsite databases for unique call routing, or routing inbound calls based on area code. As compared to owning and managing your own premise-based system, the administration tools for cloud systems are

often more limited. You can't "get under the hood" to truly customize the solution to meet your unique needs. This is due to the very nature of cloud platforms; they must support many systems or "tenants" on one platform, creating more administration restrictions for the individual tenants.

Maintenance and Troubleshooting Visibility

Premise-based Unified Communications systems will generally come with much better tools to monitor, troubleshoot, and resolve issues than their cloud-based counterpart. Examples would include things like voice quality, packet loss, memory usage, SIP debugging, and DTMF issues. Because you own the entire technology stack with premise, you're going to be better equipped to manage these things. Cloud voice systems might give you a glimpse into the "system health" but there would be very little you could learn or accomplish with this. Again, this is due to the very nature of cloud technology, the provider is equipped with these tools, but you're not. You're expected trust and rely on your cloud provider to leverage these tools to keep the entire cloud platform, including your little "tenant" running optimally with little to no service degradation or disruption. This comes full circle to our first point on selecting the right provider or vendor partnership.

Benefits of Cloud-Based Unified Communications

Monthly Operational Expense Model

This is one of the most attractive benefits of going with a cloud-based Unified Communications Model. The large capital outlay most often associated with premise-based communications is avoided. These capital resources can be better allocated to organizational functions like marketing and sales. This is extremely advantageous for a startup or rapidly growing organization with capital constraints.

Reduced or Eliminated Internal IT Management Expense

By partnering with the right cloud Unified Communications provider, the system should essentially be "hands off".

All programming changes, troubleshooting, and end-user support should be offloaded from your staff to the cloud provider. This is even more pronounced if your organization is less centralized, has minimal IT staff, and has multiple remote satellite offices. As mentioned above, this is a critical component to consider in your Total Cost of Ownership (TCO) evaluation of both technologies. Generally, the less complex your communication needs are, the more this cloud benefit applies to you.

A Much More Flexible "Consumption" Model

With cloud Unified Communications, you can generally scale user seats up and down as you see fit. You can also scale applications up and down as your organization needs them. Example of consumption-based cloud Unified Communication applications could include fax server, conferencing, and Contact Center/Automatic Call Distribution (ACD). Essentially, you'll only pay for the services you need and nothing more. This is in contrast to premise Unified Communications where you're essentially stuck with an investment you made in hardware, licensing, and software. This was a huge problem for organizations that were forced to significantly reduce their workforce or geographic footprint in the recent economic downturn. The cloud model is outstanding for organizations that need the flexibility to scale up and down. Examples could include outbound call centers and companies whose employee count and revenue vary greatly according to the season.

Easier to Roll out Specialty Applications

Often times your organization might have a few staff or executives that want specialty Unified Communication applications like Automatic Call Distribution (ACD), fax server, mobility, or speech-to-text translation applications. With premise-based communication systems, that often requires a project. This project entails man-hours and a large capital outlay to invest in software, hardware, and outsourced specialty professional services. With cloud, you simply "turn it on" for those users. It should just work. Once these people move on or don't need the application anymore, you turn it off and stop paying for it.

No Hardware and Software to Manage

Next to the OPEX financial model, this is probably the next most popular benefit of cloud communications. Premise systems generally require hardware that goes obsolete, software that needs to be upgraded and patched, or precious server room and rack real estate. This is why cloud is so popular with organizations with limited or no IT staff and small remote offices. Even if there are IT personnel, the right cloud Unified Communications system can free them up to focus on other activities like assisting revenue generation.

Easier to Budget

Cloud Unified Communications expenses are predictable. They generally have a linear relationship to the number of staff you have. Capital intensive technology expenses like premise communications are generally much more difficult to predict. It's not nearly as linear because large upgrades need to happen to "support" the next tier or group of users. An example might be the need to

purchase an additional chassis or server to accommodate the next 1000 users. This is especially true for organizations that add offices regularly. The expense to add ten remote cloud communication users is much easier to predict than the expense to add the right software, hardware, and professional services for a remote premise-based communications system to support those same ten users.

Upgrades are Easier

With both systems, rolling out new features, bug fixes, and applications generally require a system upgrade. The way cloud providers build their systems should make upgrades much easier. Equate this to Salesforce.com. They're continually upgrading their infrastructure with little impact to the millions of users that rely on it daily.

Cloud providers can easily enhance and upgrade millions of users across their platforms fairly easy. Premise upgrades can be more impactful to the organization as it requires downtime, software upgrades, end-user tool upgrades, and staff to make it happen. As such, the chance of impacting users is increased.

Business Continuity

We discussed the benefits of premise-based Unified Communications as it pertains to having more flexibility to design a solution that's more robust. That said, if implemented with the right cloud provider, a cloud solution could provide Business Continuity benefits as well. As the cloud technology (should) resides in geographically redundant data centers with backup generators, and redundant PSTN and network connections to multiple upstream providers, it can be considered very robust. This is especially true if you build disparate, carrier-diverse, connections into the cloud provider.

Often times, we'll recommend making sure you implement one MPLS (or similar) connection into the cloud provider with an alternate, Internet-based, backup connection should the primary fail. These connections should enter your building on different and separate transport mediums and be with different carriers.

Cloud communication systems are especially useful if you lose power to your headquarters for an extended period of time, or lose the building entirely (natural disaster). With cloud, users could log into their "cloud" portal and point their Direct Inward Dial (DID) number to their home or mobile phone.

Many cloud providers now offer advanced mobility options by leveraging softphone technology on PCs or mobile devices – continuing to deliver enterprise-class Unified

Communication features (presence, music on hold, IM, conference, etc.) to your mobile device.

In multi-site organizations, the remote sites would continue to function, with 100% features, while the headquarter site is offline. In essence, with cloud Unified Communications, you can easily avoid a single point of failure.

Understanding your prospective cloud providers' underlying infrastructures should be a top priority in your evaluation process.

Leveraging a Cloud Contact Center across disparate PBX systems

An example could be a company that has disparate phone and ACD systems at each branch. This might be due to acquisition or to a lack of standardization in the branch office procurement policies. Instead of ripping and replacing all of the premise phone systems, this company could "layer" a cloud contact center across all sites that could deliver inter-branch call routing, presence, and a common set of Unified Communications tools delivered to the agents on their desktops.

Quick Guide: Which Direction Should I Go?

Ideal Premise Unified Communication Organization

- Larger, centralized staff and locations
- Larger, mission critical Contact Center Applications that are the "life blood" of the organization
- Security and regulatory compliance is important
- Favor a Capex model
- Very specialized application integration needs
- Knowledgeable IT personnel
- Zero-tolerance for downtime and service interruptions
- More complex communication requirements

Ideal Cloud Unified Communication Organization

- Many small and remote offices or locations (retail for example)
- Decentralized
- Rapid growth of people and offices
- No mission-critical Contact Center needs
- Already consuming cloud applications
- Minimal or no IT staff
- Seasonal
- Prefer OPEX Financial Model
- Less complex communication requirements

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Next Up: Hybrid Unified Communications, Pick the Best from Both Worlds

What if you're not a clear "shoe-in" for either? What if you require specific benefits from both models? What if you could pick the benefits of each model and customize a solution that BEST meets your needs? Is this possible? Until now, such customization was not entirely possible. Now, you can leverage a hybrid model. Now you can extract the benefits of each model and paint your own "communication picture." In our next white paper and seminar series, we'll discuss the concept of "Hybrid" Unified Communications and give examples of multiple design scenarios with varying degrees of cloud and premise.

About the Author

Travis Dillard is the President of Inflow Communications, Inc. He joined Inflow in 2006 and began shaping Inflow to be what it is today: a firm that strives to be the most focused and competent Unified Communications provider in the nation.
Travis has been in the technical communications field for over 20 years. His career started in the United States Air Force, traveling the world as a Combat Communications Technician focusing on tactical voice, Satellite Communications, and global Wide Area Networks.
Travis earned his BS in Business while in the Air Force from Embry Riddle Aeronautical University, graduating Suma Cum Lade.
Upon leaving the military, he founded Packet Network Architects (PNA), a Northwest Wide Area Network (WAN) integrator that specialized in Voice over IP and Frame Relay technologies. He sold PNA in 2001 and filled the Director of Sales and Marketing role for Accolade Technologies, a Northwest Integrator of voice, video and data, specializing in Avaya communications systems.
In 2009 Travis became President and owner of Inflow and hasn't looked back.

About Inflow Communications

Inflow Communications is a national leader in ShoreTel Unified Communications and Contact Centers. They currently support over 60,000 endpoints across the globe and have offices on the West and East Coasts. The company was founded in 1997 as a small, regional IT support organization in Portland, Oregon to become one of the nation's top Unified Communications providers in today's market. Inflow's tireless dedication to knowledge, innovation and unrivaled customer service has landed them in ShoreTel's top 2% in global customer satisfaction and as their fastest growing partner in the world.