CLARIFYING ANSWERS TO COMMON QUESTIONS

What are the technology topics and issues that keep you up at night?

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We spend a lot of time with contact center managers and the technologists who support them. Through our work, we've noticed that the same questions keep popping up regarding the optimal architecture and infrastructure, especially for a distributed operation. Since these issues may be keeping some folks up at night, we thought we'd provide some guidance for a good night's rest.

How Can I Use Local Numbers?

Historically, local numbers were tied to the connection of phone lines between a Local Exchange Carrier (LEC) Central Office and a physical location (e.g., office building). To get a local call to route to a distant contact center, and potentially to tap the features offered by toll-free services, the LEC would use Remote Call Forward (RCF) to send calls from the local number to a toll-free number assigned to the center. Sounds complicated, doesn't it? While this arrangement provided a means for companies to create a "local" presence, it left a window open for potential problems. Someone could remove the RCF inadvertently, which would cause callers to get Ring/No Answer instead of a service representative. And it might take awhile before folks even noticed that they were not receiving the calls! RCF is a good backup to temporarily route calls to an alternate site for Business Continuity and Disaster Recovery (BC/DR). But RCF is not 100% foolproof for a permanent call-routing solution.

In 1996, the FCC mandated that all LECs support Local Number Portability (LNP). This feature empowers the customer to have any local number assigned to the endpoint and supporting LEC of its choice. It lets the contact center manage local numbers in the same fashion as toll-free numbers, sending local calls to either a premise- or cloud-based environment. And the center can choose which carrier delivers the calls.

IP networking adds an additional layer of flexibility. You can terminate your local calls to a gateway device on your premises and pass them to your IP-enabled ACD routing engine. This engine directs calls to one or more sites and/or queues. Technologies such as Multiprotocol Label Switching (MPLS) provide adequate measures to ensure that voice quality does not suffer. In addition, the widespread adoption of Session Initiated Protocol (SIP) facilitates centralized trunking across carriers and equipment manufacturers.

LNP, IP networking, and SIP lower operation costs through a reduction in the number of access trunks and IP voice compression. Savings in per-minute usage charges result from more efficient queue management. Some businesses have gone so far as to eliminate toll-free numbers, given that many people place calls from mobile phones with unlimited long distance.

How Should I Handle Remote Offices?

Many businesses have several locations spread across a large geographic area. Even though many are national corporations, local presence in a community is a key to success. These businesses want the option of advertising a local number as opposed to a toll-free option. So, how do you connect all those locations together, along with centralized supporting contact centers, without losing that all-important local presence?

In the past, each location had to have its own Private Branch Exchange (PBX) to support its internal communications needs as well as local dialing and long distance. Today, a centrally located IP-enabled "PBX" (or enterprise voice platform, such as Microsoft Lync—see sidebar) can handle all of the communications requirements for remote offices. To do this, you replace the local PBX with a router/gateway tied back to a centralized solution. You save money by eliminating support for the legacy investments (e.g., a bunch of small key/hybrid PBX systems) as well as gaining efficiencies in trunking through MPLS and SIP. The single, common platform provides ease of management and greater functionality within each office and across the enterprise. This configuration also equips the remote sites to serve as backup (or surge

capacity) for the contact center.

One of the challenges in moving to a common platform is the enterprise dial plan. Internal users may be accustomed to a shortened dial plan (e.g., dialing a four-digit extension to reach a coworker instead of the full seven-digit number). When combing multiple offices onto one system, you'll likely run into users with duplicate numbers so need to expand to longer dial plans (e.g., seven digits). Be sure to account for user training and change management when adopting an expanded dialing plan.

On the flip side, one of the nice features (and one of the ways to address the dialing challenge) is its conveniently displayed company directory that allows users to search-by-name and click-to-dial. Many directories allow users to customize that display to their preferences, as well as add external numbers. Also look for the ability to set up a "find me/follow me" feature that allows users to add multiple numbers to the system and direct the system to find or look for them when away from the office.

Be sure that the router/gateway supports the ability to configure a local access circuit for BC/DR as well as E911 services. Ideally, if you lose access to the centralized system, each local router/gateway should be able to operate autonomously, albeit with reduced functionality.

Which Is Better: Distributed or Centralized Trunking?

When moving to a centralized architecture, whether for the enterprise and/or a multisite contact center, the question that often arises is: What is the best way to set up access trunks (local and toll-free)? Generally speaking, the most cost-effective solution is to centralize access instead of maintaining distributed trunks at each physical location. If your company centralizes trunks at their data centers (which may or may not be collocated with the contact centers), you will likely use VoIP across your private data network (via SIP or MPLS network) to deliver calls to agents.

Centralized trunking leverages economies of scale. In a distributed environment, you must size your access lines to meet peak volume at each individual site. Multiple sets of small numbers of trunks are far less efficient in traffic carrying capacity than pulling them all together in a common group. Moreover, since your sites will likely have peak periods at different times of the day, you'll gain additional efficiencies

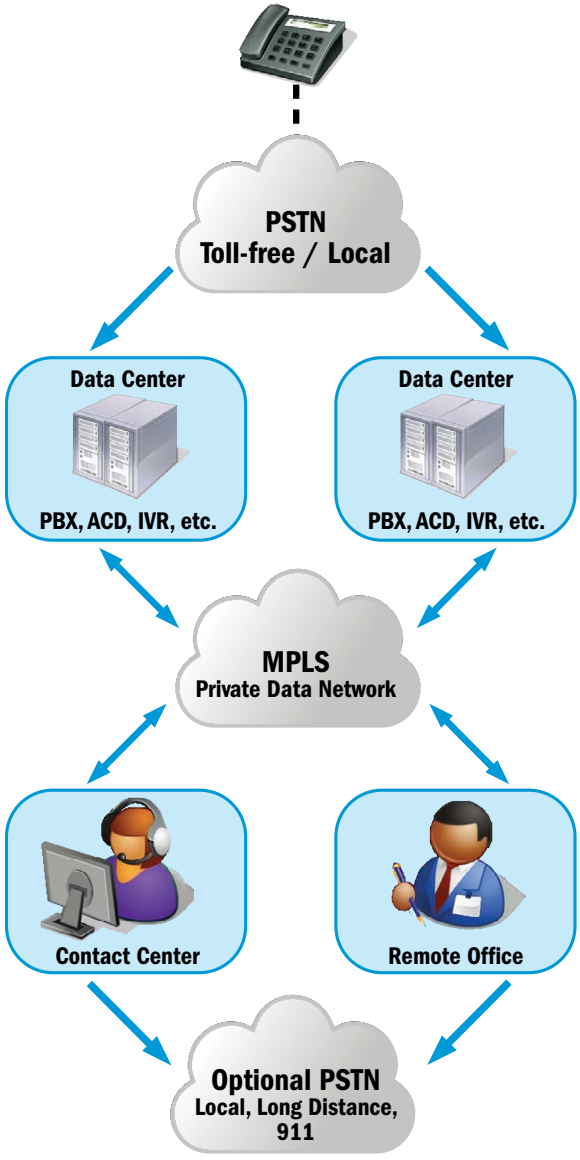
A few other considerations when deciding whether or not to centralize:

- Centralized trunking reduces the hardware requirements at each site, not to mention the lowered cost of management.

Table 1: Key characteristics of Premise and Cloud-based Solutions

KEY CHARACTERISTIC	PREMISE	HOSTED/CLOUD
Speed	Generally takes more time to implement, test and move into production	Can be procured, configured, tested and implemented faster
Capabilities	New features/functions await scheduled upgrades	Vendor adds capabilities on a regular basis
Investment	Capital outlay or operating lease	Fee-based services (operating budget)
Maintenance & Support	In-house (IT) responsibility	Vendor responsibility
Flexibility	Pay for licenses based on anticipated (peak) staffing levels	Pay for what you actually use
Control	Greater control	Less control

Figure 1: High Level Architecture for Centralized Trunking, Local Numbers and Remote Offices



Should I Consider Microsoft Lync?

Another item that has come into the conversation, usually from the IT department, centers on Microsoft Lync. Microsoft has evolved Lync from an instant messaging system into a platform that can replace a company's PBX. IT departments tend to find Lync attractive because they already have expertise with Microsoft products and, therefore, find it easier to support than proprietary PBX/ACD equipment. However, Lync is not a robust contact center tool with multimedia routing and reporting, call recording, workforce management and other advanced features. The contact center can find value in Lync in other areas, such as instant messaging, viewing presence of coworkers and supervisors, and reaching out to a subject-matter expert outside of the contact center. If Lync is a good fit for the organization as a whole, make sure that your contact center vendor integrates with it.

- Consider centralizing across at least two physical sites to provide disaster recovery options in case of a single-site failure.
- Plan for 911 access at all your remote sites as mentioned earlier. You can accomplish this via E911 service or by simply installing a local business line on the gateway at each site to route 911 calls.

My System Is Old! Now What?

When a vendor provides notice that your technology has reached its "end of life," there are several things you should consider before taking action. First, check on when the "end of support" is, as that is the more risky classification. If you are not experiencing problems and can sustain operation for a reasonable cost (e.g., through an extended maintenance contract with the vendor or a third party), you may be able to get a bit more life out of the current system. However, keep in mind that delaying replacement may prevent you from taking advantage of newer features and functions, as well as prevent you from realizing savings and service improvements.

If you choose to upgrade or replace, you should evaluate competing vendors' abilities to provide bundled services versus leverage elements you have via an integrated solution. These days, many vendors provide a complete suite of features and functions from PBX, ACD, IVR, reporting, recording and quality monitoring, and workforce management tools. Others, specialize in a particular technology (e.g., advanced ACD) and then provide interoperability with other adjunct systems, such as workforce management. But don't just take their word for it: You'll want to check the *level* of integration vendors offer and ideally talk to others with your combination of solutions (adopt a "show me" attitude!). You need to consider the entire picture in making decisions about specific elements.

Should I Stick with Premise or Move to the Cloud?

Another consideration is whether to go with a premise or cloud-based solution. Hosted solutions are a subscription service, based on the number of users licensed on the system. Hosted solutions relieve internal IT demands, as the ongoing maintenance and support of the system is supplied by the vendor, including upgrades, configurations and feature enhancements. When considering the hosted vs. premise path, keep in mind the key characteristics outlined in Table 1.

How Should I Move Forward?

Although contact centers and their business drivers evolve, and trends come and go, technology remains the vital enabler of the center. Strong interdepartmental communication equips leaders to manage change effectively and address the hot topics of the day. The contact center must have a strong working relationship with IT and jointly develop a technology strategy that addresses all areas of concern for the contact center and the enterprise. The contact center's strategy should align with the business' strategy. When these areas come together, contact center leaders rest a bit easier each night.

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