

A man and a woman are looking at a smartphone together in what appears to be a retail or office environment. The man is wearing a blue polo shirt and a lanyard, and the woman is wearing a light blue shirt and glasses. They are both smiling and looking at the phone. The background is slightly blurred, showing shelves and other people in the distance.

Retail Networking Guide:

How Cloud Computing Is Revolutionizing Retail



Introduction

To keep thriving in a highly competitive industry, savvy retailers are quickly adopting cloud computing technologies to boost sales, analyze customer information, and improve the user experience, while reducing costs and improving network performance.

The cloud is revolutionizing retailing through managed services. Prime examples include unified communications as a service (UCaaS) for voice and other collaborative tools, Wi-Fi-enabled Network as a Service (NaaS) for centralized data services throughout stores, and Software Defined-Wide Area Network (SD-WAN) for more effective use of Internet and MPLS network links.

As industry statistics show, successful retailers are leveraging these services to increase the efficiency of their organizations. With UCaaS, companies can improve the quality of voice calls while adding omni-channel contact centers, video conferencing, email, and a wide variety of other productivity features.

NaaS enables easy and cost-effective sharing of wireless connectivity, powerful analytics, and countless other network resources among all branches. With SD-WAN, merchandisers can maximize the use of costly MPLS connections or even replace MPLS entirely in favor of broadband.

As platforms for its managed cloud services, CBTS leverages highly secure, industry-leading platforms. Cisco's Hosted Unified Communications is the underpinning for CBTS' UCaaS service. Cisco's analytics-enabled Meraki underlies CBTS' Cloud Computing Network as a Service. For SD-WAN, CBTS uses VeloCloud, but its portfolio will soon expand to add Cisco SD-WAN, with Cisco's recent acquisition of Viptela.

CBTS implements these three services for organizations and performs proactive network monitoring, management, application delivery, and security from its dual redundant data centers on a 24x7x365 basis. A highly experienced partner, CBTS can also integrate your existing MPLS network and legacy data apps with next generation managed services.

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While these affordably priced, subscription-based managed services also cut expenses and raise performance for smaller businesses, all three services are optimized for larger retail chains, financial companies, government agencies, and other organizations with multiple distributed branches.

When these services are used together, the benefits multiply. Wrapping together UCaaS, NaaS, and SD-WAN provides a uniform one-stop shop for retailers.

"The idea is to create a consistent experience for your employees, IT staff, and customers. The easiest way to manage that is through uniformity. Think about how easy it can be to end up with a mix of vendors and services in just one store," explained Jon Lloyd, senior solutions design engineer at CBTS.

"That's a recipe for finger pointing when something goes wrong. Now take that single situation and multiply it by 100, or 1,000, or 5,000 locations. It's not a sustainable or efficient model."

Bundling together UCaaS, NaaS and SD-WAN can be particularly advantageous in a franchise model, according to Lloyd.

"You have to remember that franchisees always have some level of empowerment. When a franchisee has a problem, they may give corporate a chance to fix the problem. But if corporate can't fix the problem fast enough, the franchisee will solve the problem itself," Lloyd advised.

"So now put yourself in the corporate position. You have a mix of franchises who, over the years, may have migrated into using different vendors or service providers and there is not uniformity across your entire footprint of locations. You have no visibility into the overall network. Think about the position this puts your IT staff in, especially if franchisees call the IT staff for support. Your IT staff may be dealing with hundreds of sites that have a mix of disparate equipment. It's impossible to manage," he continued.

"But with our NaaS you know that the hardware—Wi-Fi switching, firewall—is going to be Meraki. Our NaaS solution has SD-WAN functionality, and we also partner with VeloCloud and Cisco specifically for SD-WAN. We can provide our hosted voice platform with Cisco or Polycom end points. We can do the bandwidth aggregation."

Here's a close look at the major trends in managed services for the retail industry—with expert commentary, statistics, and real life case examples—as well as why you should choose CBTS as your managed services partner.



UCaaS is on a major roll in retail

UCaaS, a managed service for voice and collaboration, is growing faster in the retail space than in any other industry vertical.

To replace outmoded analog PBX systems, which handle voice only, more and more retailers are moving to UCaaS, a managed service integrating digital telephony services that include not just voice-over-IP calling but contact centers, instant messaging (IM), email, conferencing, collaboration, advanced applications like call reporting, and much more.

The global UCaaS market will expand from \$17.35 billion in 2017 to \$28.293 billion in 2021, according to a report by Infiniti Research Ltd. The analysts predict that adoption will be greatest in the consumer goods and retail services vertical.

UCaaS helps retail outlets streamline business processes by enabling real time service and faster transaction closures, according to the report. Other verticals expected to gain traction from 2017 to 2021 include BFSI, logistics, and transportation.

Across industries, market drivers for UCaaS include low cost of ownership compared to other communications tools, suitability for capex spending models, continuous service and support, and increased demand among SMBs, according to the survey.

However, UCaaS is also moving upstream fast to large enterprises transitioning from opex to capex, observed Matt Douglass, senior director of solutions engineering at CBTS.

The contact center in CBTS' UCaaS solution includes an omni-channel feature that can prove very useful for understanding the customer experience and improving retention and margins.

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In one survey, Dimension Data found that 42 percent of contact centers foresee a future reduction in voice contacts, while 27 percent forecast an increase in non-voice communications.

Without omni-channel, though, customer information obtained through various channels—such as voice calls, email, and IMs—can easily get siloed. Phone calls received over analog phone systems don't integrate easily with emails.

"The overriding challenge in today's contact center, directly related to the current drive to provide the customer with an optimal service experience, is to bring together the numerous communications channels so that they appear to the customer as a single pipeline to service," pointed out Paul Stockford, principal analyst at Saddletree Research.

Cisco's Context Service, which is included in all CBTS contact center solutions, is an omni-channel capability that securely stores customer interaction data from all channels and delivers it to the retailer's employees, so they can respond more efficiently to ongoing contacts from the customer.

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‘Successful’ retailers are combining Wi-Fi with analytics for sales and loyalty

NaaS will grow at an even faster rate than UCaaS, soaring from a \$35.3 billion market in 2016 to \$126 billion in 2022 for a CAGR of 28.44 percent, according to Market Research Futures.

NaaS is a “broad umbrella term” referring to services for network connectivity which leverage the cloud and virtualization to unify network and computing resources, said Lawrence Surtees, VP and principal analyst, communications, at IDC.

“In a cloud delivery model, NaaS frees organizations from having to manage complex and expensive network resources, including wireless LANs [Wi-Fi], security appliances, switches, and application delivery controllers in an organization’s datacenter or campus network. And when these resources reside in a provider’s network, they can be shared easily and ubiquitously by an enterprise’s branches.”

Wi-Fi, in fact, showed a more significant impact on sales and loyalty than any other technology, in a survey of retailers representing all retail sizes and types, conducted by IHL Group with Airtight Networks. Almost half of the participating retailers claimed increased customer loyalty because of deploying in-store employee Wi-Fi, with an associated 3.4 percent increase in sales.

The survey found that 28 percent of respondents claimed increased customer loyalty because of deploying in-store customer Wi-Fi, with an associated 2 percent uptick in sales.


Another study, conducted by IHL with NCR, found that stores offering in-store Wi-Fi experience 663 percent higher sales growth than those that do not.

“The most successful general merchandisers also focused on providing actionable analysis for sales associates. More than half—56 percent—use analytics to make the best decision at point of interaction,” according to the report.

Another 21 percent of general merchandisers said that Wi-Fi increases the time that shoppers spend in stores, “almost always a positive for GMS because more time generally leads to more sales.”

Customers can spend some of their time in stores reading product barcodes with their smartphones and researching product reviews online.

Retailers compete, too, on the quality of their Wi-Fi. Guests are likely to spend more time at restaurants with reliable high bandwidth connections, according to Lloyd. “Then after the meal, they might add dessert,” he observed.



Merchandisers also use Wi-Fi, said Lloyd, to perform financial analysis of customer transaction data, to analyze foot traffic, and to send out personalized marketing promotions while customers shop in stores.

Wireless access points in stores can detect Wi-Fi signals from customers' phones to determine where the customer is located in the store—let's say, health and beauty aids, the soda cooler, or the shoe department.

A series of observations will show which locations they are going to, and in which order. The store can then analyze this data and test new layout, merchandising, and marketing strategies for generating more revenues.

The same data can be leveraged to transmit customized coupons based on customer location.

"Sending a quick 'sale' offer to a shopper's smartphone—or allowing the shopper's barcode reader to find a product rating—can finalize a purchase that otherwise might not have taken place," noted analyst firm Deloitte.

Cisco's Meraki platform features Edge router appliances for top quality in-store Wi-Fi which are easy to deploy in branch locations. Meraki's auto VPN feature provides secure data connectivity between the central office and all branches, for real-time company-wide communications, said CBTS' Lloyd.

Built-in analytics enable retailers to examine foot traffic patterns as well as to determine which employees are using in-store Wi-Fi to access various applications. Retailers can also set rules restricting certain apps to specific individuals or user groups.

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SD-WAN is giving retailers better, less costly connectivity

Across all industries, SD-WAN is now stepping from the early adopter to the growth phase of the product lifecycle, with even greater implementations in managed services than in DIY, according to a report by Frost & Sullivan.

SD-WAN orchestrates services among UCaaS, LANs, software as a service (SaaS) applications, security systems, and private and public clouds, including clouds hosted on Microsoft Azure and Amazon AWS platforms, said CBTS' Douglass.

SD-WAN implementations are expanding even more rapidly than either UCaaS or NaaS. The global SD-WAN market will skyrocket from \$300 million in 2017 to \$1.5 billion in 2022, for a CAGR of 38 percent, Frost & Sullivan notes.

Market drivers for SD-WAN include cost savings, more efficient use of private and public networks, and the ability to optimize hybrid network activity and application-aware routing, according to the report.

Modern SD-WAN architectures add QoS and bandwidth prioritization to the equation, enabling IT managers to build in rules for applications. Managers can specify 100 percent uptime for a specific application, for example, or remediation of packet loss or jitter, Douglass said.

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SD-WAN can be run over existing private WAN links, such as MPLS and Ethernet, as well as over broadband architectures like cable, fiber, DSL, Wi-Fi, and 4G cellular LTE.

SD-WAN enables cost effective use of these public Internet and private networks, according to the analysts. Depending on circumstances, an organization might decide to operate mission-critical apps over more costly private links while running other apps over the Internet.

Alternatively, a branch site might use a high-capacity Internet link as a primary circuit, with a low-speed MPLS circuit as a backup. Then, if the Internet link does not come through with the needed QoS, mission-critical apps can be dynamically rerouted to run on the MPLS link.

A company might even totally eliminate MPLS by using Internet links in active-active mode, with the controller selecting the link that best meets QoS requirements for a specific app.

SD-WAN also brings better connectivity with both the cloud and branch offices. "The centralized, policy-based routing capability of SD-WAN can increase the performance and reliability of branch networks," according to Frost & Sullivan. Adding SD-WAN at new branch locations is quick and easy, because edge routers are self-configuring.

The number of customer sites in SD-WAN deployments is set to soar from just over 90,000 in 2017 to almost 463,400 in 2022, states the report.

As of 2017, 78 percent of these SD-WAN customer sites were already appearing in managed as opposed to DIY settings, a percentage expected by Frost & Sullivan to increase to 85 percent by 2022.

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Over half of the survey respondents expect to replace some of their MPLS with SD-WAN.

Also according to the survey, VeloCloud leads the SD-WAN market with a share of 27.5 percent, followed by Viptela—now owned by Cisco, and about to be renamed Cisco SD-WAN - at 14.4 percent.

CBTS' NaaS solution, which is built on Cisco's Meraki, also offers some SD-WAN functionality. "It can bring two circuits and failover when one goes down. It can do auto VPN. It has application visibility," Lloyd observed.

"Meraki is designed to replace your internal network and act as an edge firewall, so the SD-WAN functionality is a good solution if your apps live within your network/ on prem. However, if your applications no longer live in the network but instead live in the cloud, Meraki can't help the experience of the application."

Consequently, CBTS also partners with VeloCloud—and will soon partner with Cisco on Viptela—to support that application.

"Let's say you're a pizza retailer and hosted voice is mission critical to your business. Every call equals revenue. Say the hosted voice application does not live within your environment but is hosted in the cloud," said Lloyd.

"In that scenario, you would use VeloCloud for SD-WAN, in combination with the NaaS stack, so you can still have that 'business in a box' functionality while also enjoying the quality of experience that VeloCloud will bring to your hosted voice application that's in the cloud."

CBTS' nationwide group of highly experienced networking professionals can assist you in deciding whether your organization requires more SD-WAN functionality than what's provided in Meraki, and, if so, in choosing between VeloCloud and Cisco Viptela.

According to the survey, VeloCloud leads the SD-WAN market with a share of 27.5 percent.



CBTS retail clients complement NaaS with UCaaS

Several of CBTS' clients have started with CBTS' NaaS service and then added UCaaS, also known as Hosted UC, as a complementary application to further take advantage of the Meraki infrastructure for business agility and growth. The cost benefits are clearly evident.

Client A, a one-stop center for tire service, generates sales through multiple channels. Voice is a mission critical channel, though, because prospective customers who can't get through the phone lines with questions about products and pricing will frequently give up and call a competitor instead.

After undergoing repeated voice outages on its legacy copper network, Client A engaged CBTS for a solution that would stabilize and improve its network. The client has more than 100 locations, with about 10 employees per location. Generally, at least one employee at each location handles phone calls, schedules appointments, and completes customer transactions. The client requires a software app to manage its tire inventory and a point of sales (POS) app for transactions.

CBTS recommended NaaS to meet the client's Wi-Fi and other networking requirements and Hosted UC to meet mission-critical needs for voice calling. The combined solution adds redundancy by offering seamless failover between multiple and diverse connections, adds advanced technology, integrates with existing assets in the client's data center, and leverages Meraki for valuable financial analytics. Using these analytics, the client has examined customer transactions to determine the cost/benefit of opening and closing at certain times.

The combined NaaS/UCaaS solution has shown proven results, cutting downtime at the branches by 10 percent while generating cost savings of about 50 percent—from \$90,000 monthly to \$40,000—including the cost/benefit of opening and closing at optimum times.

Client B, on the other hand, runs 55 factory showroom locations. Each branch has a dedicated manager and support staff, but there is local IT support at the branches. More and more, Client B is turning to cloud-enabled applications such as Salesforce.

For Client B, CBTS recommended NaaS to meet connectivity, budget and customer service requirements, with Hosted UC to lower costs and simplify IT operations. Also under the partnership, CBTS' highly trained IT pros are augmenting the capabilities of the client's in-house IT staff.

NaaS is bringing increased network speed to Client B's 55 branches, while reducing network costs by 50 percent. Hosted UC has lowered voice costs by 40 percent while raising overall efficiency on the telephony side.



Book seller adopts SD-WAN with NaaS and UCaaS

Another CBTS client, a multi-location bookseller, has contracted with CBTS for a managed solution which integrates SD-WAN from VeloCloud with NaaS and Hosted UC.

Voice is mission-critical for this client, too, since customers often contact one of the company's three brick-and-mortar bookstores by phone to find out whether a title is in stock.

Client B had been depending on a centralized phone system housed in a data center. Each brick-and-mortar store connected to the phone system, together with inventory and other software applications residing in a distribution center, over a single 1.5 meg MPLS line.

The bookseller wanted to eliminate the risk associated with an MPLS circuit going down, because this failure would cut off the voice systems at the stores in addition to access to the distribution center.

CBTS recommended Hosted UC together with Meraki-based NaaS and SD-WAN from VeloCloud. The combined solution eliminates the need for MPLS, raises bandwidth at each store from 1.5 megs to 50 megs or more, and also provides a redundant voice solution which makes sure that all phone calls can be answered at all times.

A multi-location bookseller has contracted with CBTS for a managed solution which integrates SD-WAN from VeloCloud with NaaS and Hosted UC.

CBTS can revolutionize your networks

All three services from CBTS are subscription-based, requiring no capex investment. Through affordable monthly payments, organizations pay only for the services they use, removing ongoing hardware/software licensing and upgrade costs along with any need to deploy internal IT staff at branches.

All of that, though, is only the start of the efficiencies your company can achieve through lower expenses and improved performance.

For competitive reasons, no retailer today can afford to do without top-of-the-line voice calling and Wi-Fi at branch locations. Customers will not put up with phoning a store and getting no answer, getting dropped from a call during a conversation, or trying to access in-store Wi-Fi and getting nowhere.

UCaaS brings high-quality VoIP with value-added services such as collaboration tools, IM/presence, the omni-channel call center, and conferencing over video, audio or the web. The call center enables merchandisers to efficiently capture data from phone calls for integration with all other channels.

The analysis of in-store traffic patterns and transaction data provided by CBTS' NaaS service can help you to formulate new strategies for revenue generation and cost savings.

Working together, CBTS' three services also add tremendous efficiency to IT operations. "It's this idea of business in a box. Again, SD-WAN, NaaS, and Hosted Voice coupled with bandwidth aggregation become a one-stop shop with CBTS," summed up Lloyd.

"So now the concept is the corporate parent can tell the franchise owner or store manager to call CBTS when something goes wrong. It's one-number resolution. There is no more finger pointing. We have full visibility and monitoring into the network. We can pinpoint use cases for specific stores to identify the issue and address it within the same framework," Lloyd remarked.

"And as the corporate parent opens new sites, they give the new address to CBTS to set everything up."

Choose CBTS because of its proven expertise in managed services, its willingness to perform all needed equipment installation and configuration, and its ability to provide a custom cost/benefit analysis for your company.

To learn more about the benefits of cloud computing, request a free one-on-one consultation with CBTS today.

About CBTS

CBTS is a wholly owned subsidiary of Cincinnati Bell (NYSE:CBB) that serves enterprise and midmarket clients in all industries across the United States and Canada. From Unified Communications to Cloud Services and beyond, CBTS combines deep technical expertise with a full suite of flexible technology solutions that drive business outcomes, improve operational efficiency, mitigate risk, and reduce costs for its clients.



Contact us today at cbts.com