



Amazon Connect: Delivering Speed, Intelligence and Flexibility for an Improved Customer Experience

A Frost & Sullivan Buyers Guide Excerpt

Contact Center Buyers Guide, North America, 2020

THE STUDY

This buyers guide examines the North American contact center market, and covers the contact center on-premise systems and hosted/cloud markets. This study is based on extensive primary and secondary research and is divided into 2 sections.

Section 1 provides analyst commentary on the most important forces affecting the North American hosted/cloud contact center market. A number of trends, including movement to the cloud, have been gaining steam for a decade. Others, such as creative pricing strategies or the creation of app stores for customers to more easily add new capabilities from third-party suppliers, are growing in strength. Frost & Sullivan expects that these trends will extend well beyond 2023.

Section 2 highlights and assesses the capabilities of the top-performing North American cloud contact center providers. The list is not exhaustive: Frost & Sullivan chose vendors based on the strength of vision and ability to execute; some offer complete contact center solutions while others offer compelling suites focused on areas such as agent performance optimization. Solution providers are listed in alphabetical order.



EXECUTIVE SUMMARY: THE COMPETITIVE LANDSCAPE AT A GLANCE

This buyers guide examines the North American contact center market for both premise- and cloud-based solutions. It considers full-suite, pure-play, cloud-based providers and those that provide premise, cloud-based, and hybrid solutions. It also includes a handful of telco-based providers that offer business process outsourcing (BPO) and hosting, as well as premise and cloud-based solutions directly to enterprise customers.

Key Trends

In the 2018 Cloud Contact Center Buyers Guide, Frost & Sullivan noted 3 primary trends driving the customer care industry: the adoption of cloud as standard; the continuing move toward omnichannel delivery in the context of digital transformation; and a focus by providers on developing solutions that address the needs of a changing workforce. These trends continued unabated in 2019, with further refinement, as Frost & Sullivan discussed in the 2019 combined premise and cloud buyers guide.

Cloud is still a given, but **hybrid cloud** is a hot topic. Companies are using the cloud not just to host contact center services but also to get a head start on innovation when rip and elevate isn't yet an option. As such, providers have adapted by:

- Continuing to bolster on-premise offerings so customers can get additional value out of their existing operations.
- Creating and stocking app stores for third-party cloud applications to deliver innovation for cloud customers and to supplement on-premise systems.
- Ensuring tight integration between cloud and on-premise applications.

Workforce engagement management (WEM) made its debut as one of the trends driving the industry in 2018 and 2019. Listen, Free, Motivate, Empower, Protect, and Enable are all descriptors of design considerations for workforce engagement.

The industry has finally reached the edge of the hype cycle for the umbrella term **artificial intelligence** (AI) and is actively harnessing a set of AI technologies to infuse intelligence across the customer contact landscape. Just as important, providers in this guide are learning how to properly market and position their AI wares in addition to building professional services and consulting resources to assist customers with strategic AI plans.

Frost & Sullivan has found that these trends are still driving the industry. For buyers, the good news is that the industry is in a stage of refinement and innovation related to the trends rather than introduction of new segments that result in diverse and confusing marketing messages. For instance, rather than gamification being an oft-dismissed request for proposal (RFP) check-off item, customers generally understand what it is, and providers need to discuss whether they have full gamification suites or are just using game mechanics to enhance WEM solutions. Or, rather than a supplier saying it has an AI chatbot or speech-enabled interactive voice response (IVR) solution, it can now talk about how its solutions provide process automation across all segments in its portfolio.

INTRODUCTION

Revenue for the North America hosted and cloud contact center market grew 12.5% in 2018 and is forecast to increase at a compound annual growth rate (CAGR) of 12% through 2023. While swiftly losing ground to the cloud, during 2018 systems revenue grew 3.8% year-over-year and is forecast to increase at a CAGR of 2.9% over that same forecast period. One caveat, however, is that as of publication of this guide the 2019 market share and forecast are still being determined; Frost & Sullivan expects the forecast for different application segments for both cloud and premise will shift due to the effects of the rapid shift to a work-at-home model because of COVID-19.



SECTION 1: MARKET TRENDS

The key trends that were discussed in the Executive Summary have matured over the past two to seven years and have remained remarkably solid in the last three. As noted in last year's guide, "After decades of focusing on cost-cutting and isolating performance issues in the contact center, the industry turned its attention toward improving the experience of customers, and then to the workforce that serves them. In this decade, the key trends have revolved around the concept of people being facilitated by technology. Omnichannel customer care addresses the functional silos and breakpoints in context continuity of the customer journey. Digital transformation (the process of using digital technologies, including advanced communications, to remove cumbersome obstacles to growth that have built up in an organization over time) is now at the core of strategic planning. Intriguingly, the use of AI in the contact center has moved front and center as the industry has matured past using AI as point solutions, such as virtual assistants and bots, to infusing AI across the customer contact landscape in a variety of ways and methods. Finally, WEM has emerged as a familiar term and essential concept, and is at the heart of the development and application of solutions geared toward improving EX in the same way as improving the CX."

The industry has not been without other changes taking place, however, as detailed below.

COVID-19 Ready

Impossible to predict or ignore is the impact that the COVID-19 epidemic has had on customer contact. 2020 added pandemic to the list of events in the phrase "unforeseen events" that is often tagged onto discussions about BCDR initiatives. Alongside fires, floods,

hurricanes, and other natural disasters, COVID-19 brought to the forefront the need for the contact center backup plans the industry has long pushed for. Almost overnight, millions of people including contact center employees were conscripted candidates for working remotely. The industry quickly responded in kind with WAH models, free or trial offers for remote agents, and generous pricing models, even as they dealt with their own shift to WAH.

Many vendors were prepared for the move. For example, CoreDial's CoreNexa Contact Center was designed using WebRTC with teleworkers in mind, so from a technology (not management) perspective, agents merely had to go home and log in through a Chrome browser and everything was the same. Edify, with its next-gen cloud contact center platform, as well as Thrio, were designed with a work-from-anywhere model in mind.

Overall, solution providers did a spectacular job in moving masses of workers home. On the UCC front, companies such as RingCentral, 8x8, Cisco, Mitel, Enghouse, OnviSource, and Avaya provided communication and collaboration software for free for months. Cisco threw in free security services as well.

On the contact center side, providers quickly put together packages with temporary complementary remote agent solutions. Along with this appeared dozens of websites with information on WAH including best practices and use cases to act as guides for companies struggling with the sudden change.

In some cases, such as with Avaya, providers set up their own technical support contact centers to assist customers in making the change. Talkdesk announced a solution aimed at connecting skilled WAHA talent with companies seeking to hire agents. Talkdesk CXTalent is a talent job matching service for agents, supervisors, and system administrators that connects skilled individuals seeking WAH jobs with companies hiring a contact center workforce. It comes with free training available through Talkdesk Academy for job seekers to develop essential skills through four progressive levels of coursework and Talkdesk certification. Within 10 days of launch, the CXTalent platform was supporting 9,000 Talkdesk certified agents and 1,000 professionals with supervisor experience.

We will always have events that trigger a rapid response and the need to put a Plan B in place. If it's not COVID-19 it will be COVID-20 or something else. However, this particular event just added fuel to trends we were already seeing in customer contact. Better work/life balance, the need to increase employee engagement, and the desire to be empowered and more mobile had been growing in importance for years, and the WAHA model that has been used as a perk for employees is a core component of these and other trends. And the "no choice if you want to stay in business" aspect of the pandemic simply forced many businesses to put aside their reluctance and dive right in.

Some vendors tweaked solutions to more fully assist with BCDR. For instance, Verint's WAH support program included pre-built COVID-19 categories for Verint Speech Analytics to help identify customer and employee business challenges and aid compliance, as well as a

KM starter package and WAH intelligent assistant. NICE, in addition to its CXone@Home program, also introduced one for its NICE Employee Virtual Attendant (NEVA) solution in a NEVA@Home package. Aspect was on the verge of introducing the latest version of its WFO suite when the pandemic hit, and introduced several upgrades to the suite including an improved mobile UI with the look and feel of the agent desktop, expanded cloud options, improved quality management, intra-day scheduling, and improved performance tools.

What Frost & Sullivan expects to see is a continuation and broadening of WAHA adoption, not just because companies had to do it, or as a perk, but because of other benefits as well. Many will see it as a way to cut down on the cost of physically running brick-and-mortar contact centers, and might continue with some form of WAH to scale back. But something even bigger might push the model to continue as the world has now witnessed something almost no one expected to see: the clearing of air pollution, reductions in traffic accidents and fuel consumption, and other factors that are hard to ignore. As we come out of this crisis, many companies will take social consciousness into account, and try to do their part in creating a better global sociological and environmental situation. From interviews with the suppliers in this guide, on average we expect anywhere from 45% to 65% of agents to remain in a WAH situation.

Cloud: Ready or Not

All of this just accelerated the move to the cloud for millions of agents across all suppliers. This also somewhat pushed another trend we are seeing in cloud, but in one particular segment: telco providers. When Frost & Sullivan published its first Cloud Contact Center Buyers Guide in 2018, the majority of telco suppliers were offering enterprise customers premise-based systems from the same vendors that they themselves use for BPO and managed services offerings, primarily Cisco and Avaya. A few also had offered customers the ability to license cloud seats as well. Now these providers have all forged deep relationships with other cloud platform providers.

For instance, early on Bell Canada partnered with 8x8 for its on-demand cloud platform. CenturyLink's cloud platform was based on Genesys for interaction routing and IVR, but was expanded in 2020 to include Genesys Cloud, giving CenturyLink a global, unified cloud service for network services and applications and contact center. Similarly, AT&T started off with a broad array of platforms, including those from Cisco, Avaya, Genesys, NICE inContact, TTEC, and CSG International (CSGi). In 2020, however, AT&T shifted its approach with the launch of AT&T Cloud Contact Center platform, which is based on the Five9 service. TTEC, which is the largest Cisco reselling partner in the United States, has solidly maintained the relationship that has spanned 16 years.

The end result is that the majority of telco providers have rethought their portfolios, and customers will have to evaluate not just the core contact center components but the value-added services these suppliers provide, whether it's the use of the company's network

or additional services, such as CenturyLink's Voice Clarity Measurement and Enhancement service. Certainly, these providers' ability to partner and help lead a company through digital transformation are key criteria in accessing further engagement.

Acceleration of Process Automation

The infusion of AI across the entire contact center landscape continues apace. AI, as it applies to the contact center, is an umbrella term that encompasses AI, ML, NLU, DL, and other related technologies to improve the CX. Since 2019, companies moved from talking about AI in a narrow way (focused on point solutions such as speech-enabled IVR or virtual assistants) to the matter of how to effectively plan for and deploy AI-enriched solutions across the customer contact landscape in a way that improves both the CX and the EX.

Now the number of companies doing so has mushroomed. Many have business units that focus solely on AI, and some have developed a CoE with a focus on integrating AI-infused solutions into customer environments. Now we have a vast array of applications including virtual assistants, predictive routing, process automation, voice biometrics, assisted and unassisted RPA, and automated forecasting and QA.

Frost & Sullivan further sees a shift with companies pushing the adoption of process automation as an integral part of business optimization strategies. Marketing of the benefits of process automation has ramped up, particularly as it applies to offloading agents of tedious, error-prone work but also in the broader goal of improving EX. Then suddenly when COVID-19 hit, process automation got a further boost as a tool to assist agents in times of change. NICE's Neva@Home again provides an example of blending a virtual and live workforce to reduce costs and improve CX and EX.

Conclusion

The contact center industry was already experiencing a time of great innovation when unforeseen events both tested and accelerated change. In 2020 and in the next year or two, Frost & Sullivan expects to see some fallout of smaller, start-up companies that didn't have the financial resources to make the necessary course corrections. Some will cease to exist and others will get acquired for their talent and intellectual property. Acquisitions will allow more established companies to continue on the path of innovation and bolster their ability to help end-user customers innovate and change as well. The ability to help customers transform their customer contact organizations may well end up being one of the top differentiators in the coming years.

Choosing a contact center provider is an important decision that must be based on a robust evaluation methodology that includes a thorough check of customer references. The following provider profiles offer detailed company and solution portfolio information as a way to start this process.



SECTION 2: COMPANY PROFILE

Amazon Web Services

COMPANY BACKGROUND AND CURRENT PERFORMANCE

Amazon was founded by current CEO Jeff Bezos in 1994, initially as an online retailer of books. But from this humble beginning it has grown into one of the largest companies in the world, focusing on eCommerce, cloud computing, and AI. Headquartered in Seattle, the company is the world's largest provider of cloud IaaS and PaaS through its AWS subsidiary. The company reported revenue of \$280 billion in 2019.

AWS's entry into the formal area of customer contact was not by chance. While it might not have seemed an obvious avenue to many in the industry, the move was driven by the fact that Amazon had been running a massively scaled contact center operation of its own for decades in supporting its retail business. Its own contact centers handle millions of customers in hundreds of languages around the world, supported by more than 100,000 agents during seasonal peaks.

While designing its own platform, Amazon went through a process of evaluating the process and technology stack required to run its centers, and looked at where it was in technology maturity and where it wanted to go. The four focal points for design were scalability, an open architecture, reliability, and simplicity. For example, it wanted those running the contact center to be able to make operational changes without reliance on IT, and easily add new applications as needed internally or from third parties.

Amazon Connect is based on this same technology and was brought to market and launched at the Enterprise Connect show in March 2017. Since then, Amazon has seen rapid growth. Amazon Connect resonates with businesses of all sizes due to the breadth of capability to support the most sophisticated multinational enterprise contact centers, but also the simplicity of deployment for self-service-style customers.

In particular, the company has seen significant traction in finance, insurance, healthcare, and the public sector.

Amazon brings some significant components to the party in its AWS ecosystem.

Components of note:

- Development (AWS Lambda, Amazon AWS Gateway, AWS Step Functions)
- Storage (Amazon S3, Amazon Glacier)
- Database (Amazon RDS, Amazon Dynamo DB, Amazon Redshift)
- Analytics (Amazon Athena, Amazon Kinesis, Amazon Glue, Amazon QuickSight)
- Messaging (Amazon Pinpoint, Amazon Simple Notification Service, Amazon Simple Email Service)
- Security (AWS Identity and Access Management, AWS Directory Services)
- Management (Amazon CloudWatch, AWS CloudFormation, AWS Cloudtrail)

INFUSION OF AI ACROSS THE AWS PORTFOLIO

An additional component that AWS has to offer dovetails with one of the driving trends in the industry: the use of maturing technologies under the umbrella of AI, used to dynamically personalize and bring intelligence to customer interactions and workforce operations. In this area, AWS has significant resources. With Amazon Connect, AI is not a separate thing. When AWS launched Amazon Connect, it announced capabilities that utilize AWS AI assets across its portfolio, including Amazon Polly for TTS and Amazon Lex for NLU. Also now in use are Amazon Transcribe for transcription services and Amazon Comprehend for NLP and sentiment/keyword matching.

The combination of these and other AWS technologies has produced a number of interesting use cases. For example, Alexa for Business, the enterprise version of the popular consumer-oriented intelligent assistant, can be used with custom skills to enable an executive to query the contact center for relevant operational data, such as whether a specific target is being met, by simply using voice. Using a combination of Amazon Comprehend and Amazon Transcribe, a company can transcribe real-time interactions or recorded calls, then run them through Amazon Comprehend analysis to identify key phrases, categories, times, dates, locations, and sentiment and produce insights from interaction data.

Most recently, AWS added Contact Lens for Amazon Connect, which uses AWS ML, NLP, and STT to transcribe contact center calls, creating a fully searchable archive to surface customer insights, uncover emerging trends, and to troubleshoot customer issues. It also can make use of call-specific analytics such as silence detection and sentiment analysis. AWS trained the ML models for Contact Lens for Amazon Connect specifically for contact center conversations including multiple languages and custom vocabularies. The capabilities can be added to Amazon Connect with a few clicks.

This blending of AI capabilities also feeds agent and supervisor dashboards and analytics. For example, using Amazon Transcribe and Amazon Comprehend allows for next-best action as well as sentiment scores with icons on the agent’s desktop during a call so that agent can see whether an interaction needs to be improved in real time, along with a suggested action that could result in lower AHT, higher revenue conversion, and improved CX. All of this metadata becomes part of the call record for the contact, acting like a call detail record for the CX.

PORTFOLIO DESCRIPTION AND ANALYSIS

One of the design tenets for Amazon Connect, shown in exhibit 2, is that “easy things should be easy, and difficult things should be possible.” The GUI allows non-technical users to build contact flows without ever writing code. It was developed with an API-first design to enable contact center providers to easily add capabilities as well as suit the needs of developers.

EXHIBIT 2: Amazon Connect

The graphic features the Amazon Connect logo at the top, followed by the text: "Easy to use, omnichannel cloud-based contact center service that scales to support businesses of any size". Below this is the tagline "The fastest path to customer service innovation". Four circular icons represent key features: Skills-based contact routing (a flowchart), Voice & chat recording (a microphone), Real-time and historical analytics (a magnifying glass over a pie chart), and High-quality voice capability (a speaker icon). At the bottom, two sections describe the architecture: "Service Architecture: Multi-Tenant across multiple availability zones connected through low latency links" and "Telephony Architecture: Host toll-free and direct dial numbers (DID) on our managed network of carriers". The AWS logo is in the bottom right corner.

Source: AWS

Features include:

- Dynamic and personal contact flows
- Skills-based routing
- Call recording

- Real-time and historical reporting and analytics
- Natural language chatbots using Amazon Lex
- AI-powered speech analytics
- Outbound calling
- High-quality audio
- Open-platform API
- Omnichannel experience through a single UI

Amazon utilizes partners for some value-added services (WFO)/WFM, CRM, and QM) for various components of the contact center. For instance, Amazon Forecast can provide forecasts for the contact center; it is not a fully featured WFM package, but can work alongside a partner-provided solution. With its API-first design, it supports connectivity to a wide breadth of partners, with more than 225 of them fully trained and vetted by Amazon. A sampling is provided below.

- **CRM, incident/case management, business process management:** Appian, Acqueon, Astute Solutions, eGain, Freshworks, Kustomer, Microsoft Dynamics CRM, Pega, Salesforce, SAP, Servicenow, SpiceCRM, SugarCRM, Symbee, Verint, Zendesk, Zoho
- **WFO/WFM, speech analytics, QM:** Agyle Time, Aspect, Calabrio, CallMiner, Globitel, Monet (now part of Verint), NICE, OpenText, Qualtrak, Teleopti, Verint, VoiceFoundry, ZOOM International
- **Analytics, media channels and communications, location services, payment services:** callstats.io, dialogtech, DrVOIP, here, Payshield, Pindrop, Recursive Labs, RingCentral, Twilio, VoiceBase, webtext
- **AI-driven analytics:** clinc, Discourse.ai, Luminoso Analytics
- **Reporting:** Aceyus, Cloudhesive, Code, eMite, Tableau
- **Outbound and visual IVR:** Acqueon, Callvu, Enghouse Interactive, USAN, Radish, VHTcx
- **Headset call control integration:** Jabra, Poly, Sennheiser
- **VoC:** SMG Track (via VoiceFoundry), Verint
- **CX Assurance/Testing:** Cyara

SALES AND SERVICES MODEL

AWS sells Amazon Connect directly globally and through technology ISVs and go-to-market reseller partners. A notable strength of the platform is the AWS ecosystem of technology partners. In the past year, AWS has continued to strengthen its partnerships with its

technology partners. For example, Salesforce introduced Service Cloud Voice, which seamlessly integrates Amazon Connect, to provide agents with a complete set of tools in their workspace. Salesforce already relied on AWS as its primary public cloud provider, but chose Amazon Connect as its preferred contact center technology and is reselling it as part of its Service Cloud Voice offering. The companies are also making AWS content available on Salesforce Trailhead, Salesforce's free online learning platform, to help anyone become proficient in the cloud.

AWS also announced a strategic, go-to-market solution package with Zendesk based on an enhanced integration between Amazon Connect and Zendesk Talk Partner Edition. It allows Amazon Connect customers and Zendesk Support customers to utilize multiple AI and ML services from AWS to improve agent efficiency while reducing interaction handling time. Most recently, AWS announced a strategic partnership with ServiceNow. The companies will market an AI-powered CCaaS offering for IT support and will include Amazon Connect, Lex, Transcribe, and Comprehend as well as ServiceNow's digital workflows.

Amazon works with consulting partners including Accenture, Cognizant, Deloitte, Presidio, Servion, and Tata. Some, such as VoiceFoundry, are specialized, Amazon-authorized reseller partners that are dedicated to Amazon. These partners go through a contact center and cloud competency certification.

The company has dedicated sales specialists, solution architects, business development managers, customer success managers, professional service consultants, and partner segment leads globally to support Amazon Connect.

Amazon uses a consumption-based pricing model: no licenses, up-front payments, long-term commitments, or minimum monthly fees are required, allowing companies to only pay for the minutes they consume for Amazon Connect usage plus any associated telephony services. Amazon Connect usage is determined by the minutes that the end customer is connected to the service. For telephony, Amazon Connect offers both DID and toll-free phone numbers that are charged on a per-day basis; there is a per-minute charge for any calls based on the type of phone number for inbound calls and the destination of outbound calls.

In North America, Amazon Connect costs \$0.018 per minute. For telephony, domestic US DID numbers are \$0.03 per day (\$0.93 per month); US toll-free are \$0.06 per day (\$1.86 per month); US DID inbound calls are \$0.0003 per minute; US toll-free inbound calls are \$0.012 per minute; and US outbound calls are \$0.0065 per minute. Chat is priced at \$0.004 for each chat message sent by customers, agents, or the company purchasing chat via contact flows. Global pricing can be found [here](#).

Customers can get started with Amazon Connect using the AWS Free Tier at no cost for 12 months. After initial deployment, customers receive 90 minutes per month of Amazon Connect service usage, a DID number from the country in which the AWS region is located, 30 minutes per month of inbound DID calls, and 30 minutes per month of outbound calls

made to numbers in the country in which the AWS region is located. In the United States, customers also get a US toll-free number and 30 minutes per month of inbound toll-free calls made domestically.

STRENGTHS	CONCERNS
<p>Amazon Connect was launched after the company had 10 years of experience managing large-scale cloud contact centers for Amazon Customer Service.</p>	<p>While Connect runs on AWS, some providers are running their contact centers on networks such as AWS, but also providing options for failover or other reasons on other networks.</p>
<p>Telephony services are included with Amazon Connect, which is designed to scale to meet telephony needs. There is no need to maintain a separate contractual vehicle for voice. A company can port numbers in and out, and own the number, but AWS manages them.</p>	<p>Despite a deep ecosystem of third-party suppliers, some companies may choose to go to a single-source provider for all contact center functionality.</p>
<p>AWS ecosystem and technology (ISV) partners provide key components on top of contact center functionality.</p>	
<p>An elegant set of native capabilities under the AWS AI umbrella enables companies to easily add capabilities such as virtual assistants and bots, or infuse AI components in areas such as routing and analytics.</p>	
<p>Pay-as-you-go pricing provides flexibility and cost savings.</p>	

CUSTOMER RECOMMENDATIONS

Best Fit

Scalability and Pricing. Customers looking for a service provider that can offer telephony and contact center infrastructure and that lets them quickly scale up and down would do well to check out what Amazon Connect has to offer in the way of scalability and pricing.

Innovation. Amazon Connect's quick implementation speed and rapid ability to innovate, coupled with myriad native capabilities for enriching the CX, such as its Contact Lens for Amazon Connect, are an attractive option for new companies and those looking to replace aging infrastructure.

Caution

Not All-in-One. Companies looking for an all-in-one provider, and a central point of contact for feature upgrades, may prefer more traditional providers.

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