IT Predictions and Anti-Predictions for 2019: Networking, Security, Cloud Communications

What You'll Learn

» How IT and security are evolving
» The most anticipated technologies
» Why SD-WAN may not be a panacea

Today's enterprises face a rapidly advancing IT landscape and immense pressure to stay ahead of the pace of transformation. But to operate at the speed of what's coming next, executives need to heighten their awareness and anticipate the future. That includes the ability to better understand the impacts of emerging technologies, foresee new trends on the horizon, imagine where IT innovation will take us in 2019 and then bring it to life.

IT Predictions

We will See a Continued Convergence of Networking and Security

Today, there cannot be an executive-level discussion about your corporate network that doesn't include security. Likewise, it's hard to talk about security without talking about networking. Network and security operations can no longer operate in silos, and many IT leaders are working to bring them together into a unified whole. The following serves as evidence of today's network-security convergence:

- **Convergence in Strategy and Tactics**

  » Zero Trust strategies are gaining traction as they align network micro-segmentation and security monitoring.

  » Many CIOs and CISOs are working to create a symbiotic IT strategy that unites network design and security operations--rather than security as "just an afterthought."

- **Customers Demand Convergence**

  » CIOs/CISOs want better visibility and access with unified dashboards that permeate the entire global IT environment, covering both the network and security domains.

- **Convergence in Solutions**

  » Secure Hybrid Networking solutions are beginning to integrate security analytics directly into the network performance dashboard, uniting visibility across both domains into a single viewpoint.

  » Modern networking solutions are making security functions a built-in feature. One such example is the pairing of SD-WAN with integrated firewalls.

  » Extending security from the WAN designs down to the LAN switches and Wi-Fi architectures.

Machine Learning will Begin to Shift to Artificial Intelligence

2019 will be the year that machine learning begins the shift to artificial intelligence through the use of complex simulations of biological neurons instead of simple mathematical ones. Machine learning models currently use simplified mathematical models of neurons. But with specialized hardware, better neuron simulations will lead to the next generation of machine learning—the simulation of biological brains. We can see this in specialized hardware such as the SpiNNaker project, Brainchip's Akida, and Blue Brain's neuromorphic cortical columns. While AI is not real yet, we're starting to see early evidence of the shift.

Anti-Prediction: Real Artificial Intelligence Does Not Yet Exist, but Ironically 2019 will be "The Year of AI"

2019 will be "the year of AI" for sales and marketing hype, because for many companies revenue generation depends on the wording "AI" and the advertisement of "AI-based solutions." Thus, we can expect the use of "AI" in everything from investment banking to toy design to dishwashers. Real AI does not yet exist (nor will it in 2019) but marketing teams everywhere will embrace the term fully. While AI is still a ways away, no one will realize it.

Networking Predictions

5G's New Consumption Models will Have IT Leaders Reevaluating their Network Design

4G was priced on a consumption-based model with per-gig pricing, capped with overage fees. But 5G will likely come with new monthly fixed pricing models based on bandwidth. These changes will open the door to new and novel use cases for fixed wireless that were not considered previously. It will trigger CIOs to reevaluate their network design including active and backup connectivity.

Wireless Aggregation Hubs will Become the Next Location for Edge Computing

As IoT explodes, it will increase the demand for more localized data processing. Enterprises will need to process that data at the edge of their network--rather than at the data center, where it has the potential to overwhelm backend infrastructure. The most convenient place will become the wireless aggregation hub or tower, where micro data centers or even mobile edge computing "cloudlets" will best accommodate IoT's processing demands. These solutions will be built under or near a cell tower location in order to leverage the tower's multi-gigabit fiber connection.

Anti-Prediction: SD-WAN will Not, In Fact, Destroy MPLS

- SD-WAN isn't "killing" MPLS--rather, it is driving hybrid networks that combine both private and public connectivity. MPLS is not dead.

- SD-WAN is a routing feature—it's not a new network connectivity type (despite how people talk about). It's only a "middleman" used to reach public Internet access/broadband.

- With rare exceptions, SD-WAN isn't generating net new connectivity. Instead, it often triggers a lateral move from dual-MPLS connections to a primary MPLS connection with a broadband or direct Internet access failover.

- Cited SD-WAN cost savings estimates are often overblown. Masergy finds that enterprises save 0-30%--not the hyped 90+%. Some buyers need to be talked out of the hype. SD-WAN is not for everyone.

- SD-WAN will soon become an absorbed feature within broader network solutions.

Security Predictions

Supply Chain Security Risks will Become More Apparent and Mitigation Challenges will be Daunting

The threat of maliciously implanted hardware and software during manufacturing and sourcing, particularly with foreign suppliers, has become more apparent. The industry has struggled to define the scope and challenges of mitigating these risks. As visibility increases, more supply chain compromises will surface. And as more compromises are discovered, there will be no quick or easy fixes, particularly with semiconductor suppliers.

With the Frequency and Severity of Today's Data Breaches, Security Due Diligence will be Tested

The Equifax breach taught us that social security numbers and consumer history are no longer effective methods to authenticate applicants for credit cards and bank loans. Nonetheless, financial services companies will continue to use these methods because fast and easy credit equates to more profit. In 2019, class action lawsuits may test these now lax practices since they no longer represent security due diligence for protecting consumers--who bear much of the pain and clean-up costs of identity theft.

Any Attacks on Public Cloud Infrastructure will Cause Us to Rethink Availability Risks

Large cloud providers (SaaS/IaaS/Paas) now have the economies of scale and scope to properly implement security, and in 2019, they will prove their security merit. As a result, cloud migration will continue to amass around large providers. With this trend, however, will come an increased concentration of risk in 2019. What used to be many distributed private data centers are now a few, large public data centers. Sooner or later, there will be an event (i.e. a global Internet outage or a bomb targeting the public data centers of large providers), which will cause a reevaluation of availability risks.

Cloud Communications Predictions

Team Collaboration will Become Mainstream, Driving Productivity to New Heights

In 2019, Team Collaboration applications that deliver virtual project workspaces will come to the forefront as the centerpiece of unified communications offerings. Embedded into cloud communications platforms, Team Collaboration will be formally adopted and supported by IT departments. More importantly, user adoption will reach the masses. Instead of only small groups, departments, or workpods using these virtual project spaces, Team Collaboration will fully saturate the enterprise, making it the new normal and taking project productivity to a new level.

Innovation will be Unleashed as Enterprises Put iPaaS Technology in the Hands of Operations-Focused Employees

In 2019, more organizations will realize the promises of agile cloud application integration by placing "self-service" iPaaS solutions in the hands of employees closer to each business function. The next evolution of iPaaS technology addresses complex enterprise needs, giving executives confidence to release these tools to process managers and employees focused on operations. More workers will be empowered to automate the enterprise, meaning innovation will start to be unleashed--trickling down to lower levels for a deeper, more significant impact.

Predictive Customer Service will Emerge as Enterprises Adopt Cloud Contact Centers with Real-Time Voice Recognition and Analytics Engines

In 2019, enterprises will capitalize on cloud contact center solutions that integrate data analytics with real-time voice recognition technologies to enhance the customer experience. Expect predictive customer service and contact center agents supported by digital assistants that will preemptively provide relevant information to the agent's desktop. These more intelligent service interactions might even be capable of starting to change the way millions of customers feel about calling and interacting with service departments.

About Masergy

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