

# INB TAKES A LEAP OF FAITH

Landing on the O365 Cloud



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# INB Takes a Leap of Faith



## Landing on the O365 Cloud

**INB was founded in 1989 by a group of** local business people who were unhappy with the fact that Spokane headquartered banks were getting absorbed by large, out-of-state banks. They felt strongly that being headquartered locally enables a bank to be more responsive to the needs of the local community. Today INB has total assets of nearly \$630 million, having grown from less than \$4 million the year of their inception. Their growth racks up to the following resources for their customers:

- INB has 16 locations throughout the Spokane area, North Idaho, The Palouse, and the Tri-Cities.
- INB's parent company, established in 1991, named Northwest Bancorporation, Inc. trades with the symbol NBCT as a publicly held company.
- INB's mortgage department, obtained through the purchase, and subsequent merger of a mortgage company in 1998, is now one of the larger mortgage loan originators in the Inland Northwest

market, with as much as \$100 million in home loans per year. In addition, the mortgage department works with home builders to finance the construction of new housing in and near INB's primary market area.

Beyond the convenience of virtual banking, utilizing a network of strategically placed locations, and offering competitive banking products, INB is home to experienced banking professionals that can help manage the many different aspects of your financial future including personal and business banking, commercial and consumer lending, and mortgage and construction lending.

### The Challenge

INB had a traditional PBX which had not only reached end-of-life, but was also at capacity. New employees were forced to use cell phones for communications, which meant 4-digit dialing was not available for them. This inconvenience and disparity from the company messaging system affected their ability to attract and

retain talented staff. The technology was just not present to support either employee productivity, or customer service to the level that INB had envisioned. Eric Landon, INB's Chief Technology Officer, was hired to correct this problem. Eric brought with him 20 years of experience, which included experience with Microsoft Lync on a voice platform.

The initial inspection of the INB infrastructure and voice system revealed antiquated communication lines, and therefore, a need for a complete refresh and expansion of the network architecture, with a security emphasis. Eric realized he had to really tackle functionality for communications with the same level of immediate urgency as he would address the infrastructure. The new infrastructure needed to support VoIP initiatives.

Cerium conducted a comprehensive assessment of the business, technical and long-term requirements of the INB network infrastructure. Cerium in partnership with INB, identified the organization's business workloads, computing and storage requirements, LAN/WAN requirements, failover, fault-tolerance and business continuity objectives. This partnership helped identify which services and workloads could successfully migrate to the cloud, and which services needed to remain on-premises. This important assessment asks questions such as:

- Could applications such as email and telephony live in the cloud successfully and securely?
- Did ATM and electronic banking services need to remain private?
- Which business application and computing workloads could migrate successfully to Microsoft Azure and which needed to remain within the organization's management domain (primary and secondary data centers)?

It was this thorough assessment, and consultative approach, that helped INB arrive at their final solution decision.

## The Solution

Cerium provided a complete Cisco network refresh and Microsoft Cloud PBX (Office 365) deployment. The network included Cisco routers, switches, and firewalls. Cerium provided design, configuration, and cutover services for the new Cisco Catalyst LAN switch and Cisco Integrated Services Router (ISR) devices. The PBX system was replaced by Micro-

soft Cloud PBX, AudioCodes Cloud Connector Edition, Microsoft Azure, and Polycom IP Phones. The solution offers centralized management over INB's branch locations.

Throughout the design process, Eric noted that Cerium *"took this engagement very seriously,"* providing different levels of deployment options to meet the budgetary needs of INB, rather than saying *"here is your solution and here is your cost."* Cerium also supported INB's decision process by exploring the risks, requirements, and viability of the solution to meet INB's goals.

*"We were so far in areas in technology enhancements. It was a great opportunity to take a giant leap instead of a small leap. We considered several solutions, including on-premises solutions."*



*Our decision to go with O365/Cloud PBX in a hosted environment came down to the expected growth of our organization, and a desire to have an easy deployment and ease of expansion. Even though it is a maturing solution, we did a lot of research,” said Eric. “With Cerium’s expertise, we determined Microsoft’s Cloud PBX could do what we needed now, and in the future.”*

Eric went on to say that the decision to implement Cisco infrastructure was based on Cisco’s proven stability and success in the financial industry, combined with his previous experience with Cisco gear. One of the differentiators for Eric’s decision to work with Cerium was founded on Cerium’s ability to provide both the O365 and the infrastructure, demonstrated proven expertise with both, availability as a local resource, and being already proven as a vendor for INB.

### Implementation

Throughout the phased implementation, the O365 solution was run in parallel to the NEC system. As Eric described, Cerium came up with a way to “trick” the existing NEC system to “think” it was the lone communication system. In reality, INB was cutover to the new AudioCodes PRI and had SIP trunking available, so the new O365 could be deployed without losing the NEC system. This strategy prevented disruption to INB’s operations, and also prevented any need for an overnight cutover, and allowed for flexibility in cutover phasing.

Cerium performed due diligence with the infrastructure implementation, and the service provider for the MPLS and SIP connections, so the data cuts went quickly and smoothly at all the branch locations. Cerium’s approach to changing the infrastructure and voice at the same time since Cerium provided both services and the engineers worked closely together to help eliminate any surprises.

*“We could cut over 1 or 10 users (or any number) at a time. This was an unexpected and fantastic brainstorm, and is a credit to Cerium’s expertise,” said Eric.*

### User Adoption

Some of the procurement and implementation decisions for this engagement were focused on the highest level of user adoption, to maximize ROI. For example, since INB had already been using Microsoft Office for their email platform, the user interface was simple and familiar.

INB also standardized on a Polycom 501 phone. Every end user has the same phone on their desks. From a support perspective, this improves technical support across the enterprise, since each desk has the same technology, and also affords ease of transition for users that travel. They will always find familiar equipment and a familiar user environment at each location.

**“It’s changed  
how we do  
business.”**

— Eric Landon,  
INB’s Chief Technology Officer



On the first day of beneficial use, go-live day for the first phase, the CEO of INB came to Eric and gave him two thumbs up. He said to Eric *“it’s just so easy!”*

The implemented system works without complication, and there is now continuity within the network. Staff members echo the voice of the CEO, saying that the solution *“is easy, and it works.”*

What has been most remarkable is the overwhelming and revolutionary change to productivity and the office environment. *“It’s changed how we do business. It makes us so available to each other, from phone, tablet, computer, soft phone with ear bud,”* said Eric. He highlights the *presence* feature as the most impactful to end users. It is the layers upon which *presence* affords itself to end users that has given it the most revolutionary impact. Presence brings the ability to communicate with all of the channels. *“It’s just so much more efficient.”* He adds that staff members are also now heavily using instant messaging as a critical tool to make their communications more efficient.

## The Greatest of Outcomes

The infrastructure upgrade and the O365 deployment brought more than the tangible improvements on productivity for staff. It brought a cost savings over what had been previously spent on telco, and increased bandwidth to enable O365. It also increased the security infrastructure. The most measurable effect was the reduction in operating costs by at least 10%.

Prior to implementing O365, INB had a standalone conferencing solution. Now Eric categorizes their conferencing environment as revolutionary. *“It works, it’s not complicated, saves us significant amount of money, and we have full control over it. We don’t have to rely on a vendor for it, as we previously did.”*

From a customer perspective, Eric says INB is better at answering the phones with the new system in place, and that the call handling after the initial touch with the customer is vastly improved. He still feels there is room for improvement with their processes, but says *“we are excited about using more of the advanced features of O365 for more queueing, auto attendant and call center.”*

## Lessons Learned

If Eric could offer a lessons learned topic for other organizations considering their own transformative implementation to a Microsoft Cloud PBX, Eric would offer the following:

1. It is always easier to undertake technology changes one system at a time. It is less of a strain on internal resources (your IT department). For example, have your



## Auto Attendant & Call Queues

The current release of Microsoft Cloud PBX (February 2017) includes the core voice features most users need to communicate on a daily basis. Microsoft is continually enhancing this service, and offers new features in Preview (beta testing) for customers to test before releasing them as generally available.

These Preview features are listed on <http://skype-preview.com>. Two preview features we are excited about and due out soon are Organizational Auto Attendants and Call Queues. These features will provide Cloud PBX customers more control over routing calls during and after business hours. INB has been testing these features in Preview and will likely deploy them once officially released.

architecture in place prior to the voice deployment. That said, he is very glad they undertook both at once, as INB realized some cost savings in the combined deployment over what they might have accrued with separate projects.

2. Secondly, he recommends having all disparate vendors or providers collaborate in weekly meetings. This way your telco provider, data provider and unified communications provider are clear on the work each is doing, the most efficient timing of each party’s work, and that the work of one vendor is not impeding the progress of another.

In a final statement, Eric adds *“I wouldn’t want it to get lost in this story that I had great confidence with this leap of faith, because I didn’t. I was nervous in the beginning, and doubted myself at first. But I have great confidence in the solution now. Our decision to take this leap boiled down to having performed our due diligence in our selection process. We knew there was risk, but we had examined the risk, mitigated it, and knew it should work out well for us.”*

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Is cloud voice right for your business today? If not, how do you take advantage of Microsoft's universal communications offerings without locking into a premises-based approach for years to come?

### Choose Your Solution

Cerium can help you choose the right voice solution for your organization: an all-in-the cloud solution delivered by Office 365 or a hybrid solution that combines on-premises software and Office 365 services. We can help you decide how to best provide Private Branch Exchange (PBX) functionality along with access to the Public Switched Telephone Network (PSTN) for all users in your organization.

### All-in-the-Cloud, On-Premises, or Hybrid?

The solution you choose depends on your current and future needs, such as whether you want—or are required—to retain functionality provided by your on-premises deployment, whether you need features that are currently available only with your on-premises enterprise voice solution, and what your plan is for moving people to the cloud.

If you choose a hybrid deployment, you can choose from one of two options to connect your existing PSTN carrier: circuit, and contract with Office 365. Your users are homed in the cloud and are enabled for Cloud PBX, but their calling is processed through software on premises.

Contact us at [solutions@ceriumnetworks.com](mailto:solutions@ceriumnetworks.com) to get started.

## DDoS Strikes May Hide Other Attacks

Distributed Denial of Service (DDoS) attacks are sometimes used by cybercriminals to distract businesses while hackers sneak in through the back door, Kaspersky Lab reports in its 2016 Corporate IT Security Risks survey.

The survey found that when DDoS attacks have been used by cybercriminals as a smokescreen, businesses also faced threats such as losses and exploits through mobile devices (81 percent), the actions of other organizations (78 percent), phishing scams (75 percent) and even the malicious activity of internal staff (75 percent).

*“DDoS prevents a company from carrying on its normal activities by putting either public or internal services on hold,”* said Kirill Ilganaev, head of DDoS protection, Kaspersky Lab. *“This is obviously a real problem to businesses and it is often ‘all hands on deck’ in the IT team, to try and fix the problem quickly, so the business can carry on as before. DDoS can therefore be used not only as an easy way to stop the activity of a company, but also as a decoy to distract IT staff from another intrusion taking place through other channels.”*

The information security practice at Cerium exists solely to help our customers understand and address potential risks to their computer networks. These risks include the availability of the systems and the confidential information stored on those systems. When customers are committed to improving their security posture, Cerium can offer an independent audit-driven perspective to test and validate the controls that are in place.

Cerium has provided comprehensive security assessments to our broad base of customers since 2007. Our information security and audit services have included the following:

- Regulatory compliance assessments for NIST SP 800-53, NIST SP 800-66, ISO/IEC 27001 and 27002, GLBA, HIPAA, FISMA, NERC CIP
- Security assessments
- Risk assessments
- Additional services
- External vulnerability testing
- Black-box penetration testing
- Application security testing
- Social engineering scenarios
- Policy and procedures review
- Roles and responsibilities & separation of duties
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Realize better ROI from your communications solutions with well-trained & confident personnel

### Upcoming Classes

Avaya Communication Manager  
Basic System Administration Training

May 1-2 | Seattle, WA

Avaya Communication Manager  
Advanced System  
Administration Training

June 12-16 | Seattle, WA

IP Office Basic Administration

March 15 (8:30-12:00) | Seattle, WA

IP Office Advanced Administration

March 15 (1:00-4:30) | Seattle, WA



Visit [www.ceriumnetworks.com/clc](http://www.ceriumnetworks.com/clc) for the latest courses or contact us at **971.404.2704** or [clc@ceriumnetworks.com](mailto:clc@ceriumnetworks.com) for more information.

## Communication Elements

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## Understanding Cerium's Co-Delivery Maintenance and Support with Avaya

While enterprise telephony has been migrating to software-based solutions for several years now, many enterprises still have traditional PBX systems, or a mixture of solutions in disparate evolutionary life stages of unified communications systems. Support services for these solutions is complex, to put it mildly, and generally includes a license-based or contract-based plan through the manufacturer or a vendor.

In this article, we will overview our co-delivery support plan for Avaya Blue (legacy/Nortel) and Avaya Red (Aura, IPO) systems. As Avaya's largest regional Business Partner in both employees and overall Avaya regional sales volume, Cerium is able to provide a greater level of support than other partners who have less locally available resources and technical capabilities. Because of our large regional scale, Cerium has been able to apply these economies and efficiencies in support to the Northwest. Additionally, Cerium provides maintenance and support programs to large enterprise systems for customers on a global level. We do this through a direct relationship with Avaya. Our customers derive quantifiable value from our ability to optimize their Avaya support model and provide superior service.

### Avaya Direct vs Cerium Co-Delivery Support

**With Avaya direct support**, organizations purchase entitlements that include remote monitoring, and varying levels of support for break-fix tickets, parts re-



placement and onsite support. Avaya's current program is called Support Advantage. Under this envelope, Avaya offers two levels of support, Essential or Preferred. Preferred includes remote monitoring through Avaya's Expert Systems and Diagnostic Server, and both Essential and Preferred Support Advantage include the options for Upgrade Advantage subscription service, parts replacement, onsite support, an interactive customer web portal, and a standardized invoicing system based on licensing.

**With a support plan from Cerium,** monitoring can be conducted by Cerium, using a suite of tools and utilizing the Diagnostic Server for a best of breed monitoring solution that provides true anticipation based support, as well as Tier 2–3 remote engineering and onsite support. Cerium provides management for on-site and technical support, and product replacement. If there is an escalation to Avaya for Tier 4 or higher support, Cerium manages the ticket through resolution and closure.

Cerium's support model provides a combination of capabilities from both Cerium and Avaya. Like Avaya, Cerium also offers an interactive web portal for customers, which includes capabilities to generate reports, monitor trouble ticket status, and even procure parts. Additionally, Cerium's support model allows us to bill only for services used for customers who require utility based OpEx billing, or on a time and materials basis, and allows us to add and subtract users for a true pay-as-you-go support structure.

With Cerium Support Services, the comprehensive support management needed to keep both legacy Nortel and Avaya systems running at the optimal level is possible through a single resource. Cerium brings to the table the advantage of our local, onsite support when needed in the Northwest. Cerium's investment in a secondary NOC in the Philippines has enabled us to offer true follow-the-

sun support, so both our monitoring and our remote support is attended by highly skilled and certified engineers.

### How Does It Work?

Cerium Support Services offers a comprehensive menu of hardware and software support options, covering a wide range of networking and voice products from Avaya's legacy portfolio. If your system is under one of Avaya's lifecycle stages, including End of Maintenance Support, Cerium can provide superior services tailored to your needs. These services are available to protect your investment in Avaya Meridian 1, Avaya

## DID YOU KNOW?

Avaya is the solution in 95% of the Fortune 500.

Communication Server 1000 (CS1000), Avaya CallPilot, Avaya Contact Center solutions, Avaya Business Communications Manager and Avaya Networking Solutions, for example. Many times, depending on the age of your Nortel infrastructure, these services are provided on a best effort basis, however many of our current clients use this flexible service offer to accommodate their migration to newer platforms over time. With Cerium's investment in supporting both Avaya Blue (Nortel) and Avaya Red (Avaya Aura), you will not have to worry whether your requirements are Avaya Red or Avaya Blue as you upgrade.

As an Avaya Diamond Business Partner, Cerium is able to take on the role of manufacturer conduit, making us well-suited to deliver on our comprehensive support models. As an example, an enterprise model for several of our government and corporate clients includes Avaya Support Advantage with Upgrade Advantage on Avaya Communication Manager, and on-call emergency service for legacy Nortel systems. Cerium

has many clients for whom we provide this support model to. Our support plan is combined with Cerium Support Services for product replacement and onsite technical resources. This support model is provided 7x24x365.

There is an advantage to engaging in our co-delivery model during a migration. With your Avaya Support Advantage and Avaya Upgrade Advantage subscription service on Communication Manager, Cerium will migrate the support program as users are migrated to new platforms. Your invoicing is then for services based on the system the user uses. With this migration strategy, customers will not incur charges for services that are not yet being used.

### Geographic Availability

Most service calls can be resolved with remote engineering support. With our ability to globally monitor around the clock, and the availability to co-deliver through Avaya, and Avaya partner resources, Cerium is able to provide this support model to customers with sites throughout the United States and abroad. This affords our customers with the convenience of a single resource, unified invoicing, and more efficient trouble ticket management.

### Closing

Cerium can provide maintenance coverage for all your Avaya products and applications. Our co-delivery support model combines Cerium Support Services and Avaya Support with competitively discounted pricing, and fully meets the goals and objectives that organizations hope to achieve in reducing maintenance costs, and gaining efficiencies in project management, and trouble ticket resolution. Cerium is committed to excellence in customer service – we will place great care, consideration and emphasis in assuring your satisfaction in our services. Contact us today at [solutions@ceriumnetworks.com](mailto:solutions@ceriumnetworks.com) to learn how we can customize a support plan for your organization.



# BORDERPATROL

Enterprise session border controllers help ensure security, interoperability at the edges of communications networks.

The session border controller (SBC) is one of the bedrock technologies in IP communications, acting as a gatekeeper between customer and carrier networks in order to implement security and regulate traffic. However, it has traditionally been a one-sided relationship, with SBCs implemented almost exclusively by carriers on their side of the connection.

As the threat landscape evolves, organizations are rightfully becoming reluctant to depend entirely upon service providers to secure the network edge. This has led to steady growth in the market for customer-side SBC deployments, commonly known as enterprise SBCs (eSBCs). According to the technology market research firm Infonetics, eSBC

revenues grew from just over \$60 million in 2013 to \$271 million in 2015, with the market expected to reach \$422 million by 2018.

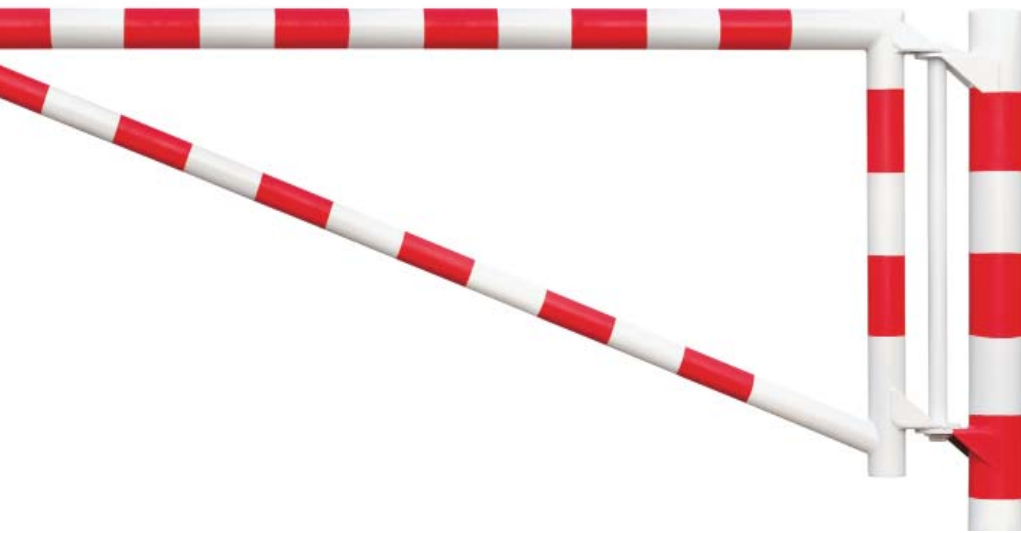
*“The use of enterprise session border controllers is becoming more mainstream with the adoption of SIP (Session Initiation Protocol) trunking services, where SBCs are used as a border element between enterprise and service provider networks,”* said Diane Myers, principal analyst at Infonetics.

## Traffic Control

There is a growing emphasis on customer-side protection as organizations of all shapes and sizes continue to adopt unified communications (UC) solutions in order to optimize processes, decrease

operational costs, improve efficiency and increase productivity. While the benefits are compelling, UC can introduce a number of security and operational challenges. In a recent Dimensional Research survey commissioned by Dell, 77 percent of respondents said they have data security concerns with their UC solutions, and 55 percent report they spend time every week responding to UC quality issues.

Many challenges stem from the fact that IP-based communications platforms are inherently open, unlike traditional copper-based voice networks that are closed and therefore reasonably secure from outside threats. Voice, video and data traffic conveyed along the public Internet is potentially exposed to a wide range of threats.



Complicating matters is the fact that conventional IP networking components such as routers and firewalls are not designed to manage real-time communications and can cause latency problems for time-sensitive voice and video traffic. Interoperability issues at the network edge can create additional performance problems.

eSBCs help alleviate these concerns. Deployed as either dedicated hardware devices, software applications or virtualized network functions, eSBCs help secure the network edge, regulate traffic in and out of the network, and normalize signaling and media used in real-time communications.

## Securing SIP

The best eSBCs are not merely repackaged versions of carrier-grade products, but are designed to be affordable, scalable and easy to manage and install. Many of the design characteristics are focused on securing voice communications through SIP trunks.

SIP is the standard signaling protocol used to establish voice and video connections in UC solutions running across a data network. A SIP trunk connects

the IP-PBX to the traditional Public Switched Telephone Network (PSTN) over an Internet connection. However, there is significant risk with connecting the UC system with an IP connection. Because SIP packets are typically delivered in plain text, they can be attacked or manipulated by hackers.

The eSBC boosts security by serving as the connection between the UC infrastructure, the Internet and the SIP trunk. It terminates and re-originates each communications session, processing traffic in real time to identify incoming threats. It also offers deep packet inspection, policy enforcement and other security functionality, providing more control than an application-layer firewall.

## Speaking the Language

Another key function of an eSBC is to act as a translator at the network edge. Since SIP was introduced in 1999, there has been constant development of new extensions to add features on top of the basic protocol — sometimes there can be multiple extensions that perform the same function, such as call forwarding or caller ID. As a result, SIP providers generally run customized versions of

the protocol. An eSBC at the network edge provides protocol normalization to enable communication with multiple carriers.

An eSBC also must translate a wide range of the codecs that convert audio signals into compressed digital form. Early VoIP solutions used fairly standard sets of codecs, but carriers and service providers have since developed dozens of new codecs — some of which may not be supported at both ends of a communications session. With support for most codecs, eSBCs can normalize communications without any data loss or latency.

Such protocol translation and normalization is important for organizations that take an incremental approach to VoIP migration, enabling legacy and IP systems to coexist during the transition. The eSBC intercepts calls from the telecom provider and routes them to the appropriate system in a way that is seamless from the end-user's perspective.

Support for mobile devices in a UC environment is another factor in the growth of eSBC deployments. By delivering secure SIP communications for mobile devices, an eSBC eliminates the need for remote workers to dial into their network through a virtual private network (VPN) tunnel. This simplifies authentication and eliminates the performance overhead of establishing a VPN tunnel.

Organizations today need a workforce of employees who can stay connected to business communications while in the office or on the go. While the growth of mobile and UC platforms enable new levels of collaboration and productivity, technology conflicts can occur along the boundaries between wired, wireless and cellular networks. Enterprise session border controllers ease those conflicts by connecting disparate networks, mitigating security threats and ensuring reliable communications.

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Find out more at [ceriumnetworks.com/vxrail](http://ceriumnetworks.com/vxrail)



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