



ZCorum™

Broadband Consultant Success

Things You'll Need to
Complete Your Client's Network



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Introduction



What is the most important value you provide as a broadband consultant? Communicating your knowledge of all aspects of a broadband project.

The project's success is not only about the construction of the network, or even the finished infrastructure. It's also about the necessary, everyday services of connecting subscribers' devices, delivering quality IP-based services, handling customer support calls, and monitoring the network. All of these go into operating a successful broadband business.

These critical tasks may seem overwhelming, but you would do a disservice to your client if you don't provide a full picture of what they need. As a consultant, you are considered the expert in the room. You can verify that confidence by transforming your client's vision into actionable items and deliverables.

Provisioning Systems

Device activation is a first line critical function of broadband service, so having a solid provisioning platform and the right people to manage it is also critical. Look for an advanced, commercial-grade broadband provisioning system that supports the needed protocols for the type of broadband service your client will be deploying, whether that is fiber, cable or wireless. It's also important to have TR-069 gateway support, as well as support for activating voice devices (Packet Cable eMTAs and SIP ATAs). Provisioning data should also be backed up for redundancy should any local equipment go down.

Your client may not have the staff or expertise to set up and manage the provisioning system. A good option is to find a vendor who can take on the complicated set up and management, including ongoing maintenance and troubleshooting of the operating system, servers and provisioning software. If that vendor can provide provisioning as a service, with the equipment hosted on their network, that will greatly reduce the upfront costs.



End User Support

End user technical support will be crucial for the success of your client's broadband business. Word of mouth advertising can be good or bad, and a bad experience travels much faster and further than a good one. Whether your client's subscribers have a simple question, or if they are experiencing an issue with the service, they must receive immediate attention and a successful resolution.

Technical support staff will need a working knowledge of multiple broadband technologies and equipment, including SmartTVs, streaming services, cell phones, tablets, gaming systems, and others. Subscribers will expect help and support for their email account, their home network and WiFi setup, virus protection, and internet web browsers. Your client's commercial subscribers will need set up for router configuration and connection status. Providers should expect support calls to come 24/7/365, especially during prime time, on weekends and over holidays.

Your client may not be prepared to set up, train and manage a quality broadband support group on their own. If not, outsourcing to an experienced and efficient customer support provider will reduce your client's customer service costs and improve the subscriber's experience. If outsourcing is an option for your client, it's best to recommend a vendor that focuses solely on supporting broadband services so they have the staff and expertise to assist with everything from the connection, to the home network, and popular Internet applications. Contracting with a U.S. based facility is a plus.

Plant Maintenance

Your clients will have to keep track of the health of their plant equipment and also the customer premise equipment, such as routers, modems and other CPE in the customer's home. Diagnostics and performance metrics are available for data, voice and video services and provide wide and necessary visibility into all the plant components to keep everything up and running.

Diagnostics, tracking and reporting will help your client find problems quickly and reduce repair time, maintaining their reputation and reducing churn. Diagnostics tools will limit the number and length of very expensive truck rolls, improve the quality of new installations, and increase efficiency in their support staff. Recommending ways to reduce the costs of operating their business will enhance the value you bring and ensure your clients long lasting success.

Look for a diagnostics application that:

- Provides a full picture of issues and metrics in the network, including WiFi, VoIP, OLTs, ONTs, cable modems and CMTS equipment if applicable, and which issues should be addressed first.
- Displays real-time and historical information with advanced mapping capabilities. Geocoded diagnostics data will help your client find the source of problems and reduce repair time.
- Offers an intuitive interface for use by different departments, from network operations and support, to installation and maintenance. This will help staff from multiple departments do their job better and more efficiently, saving your client time and money every day.



Management and Protection of the Network

Management involves monitoring for outages and network attacks, keeping up with network continuity and changes, and ensuring subscribers can stay connected and reach the content they want. Managing equipment and monitoring network infrastructure and traffic can be complicated, time consuming and inefficient, but there are excellent options that you can recommend.

Network Monitoring and Equipment Management

Your client will need tools to help them manage and monitor their network. Applications are available that can provide insight into the performance of the network and the traffic traversing it. Monitoring applications can let you know the status of equipment and when there are issues, and some can even automatically discover new equipment when it is added to the network, making it much easier to keep track of equipment inventory and the architecture of the network. Some applications can store equipment configurations, and track those changes and who made them. Some monitoring applications include a NetFlow component, which provides insight into traffic flows such as where traffic is going to, where it is coming from, and which applications and protocols are most used. With the right management and monitoring application your client can automate complex, time-consuming network management tasks and gain valuable insight into the use of the network, making life much easier.

The IPv4 Conundrum

Even though IPv6 addresses are readily available, your clients will still need an inventory of IPv4 addresses. This is because IPv4 content is expected to be accessible on the Internet for years to come, and IPv6 is not backward compatible. This is true even in a greenfield deployment. Even if the provider's network is IPv6 from the start, every subscriber will still need access to an IPv4 address to reach that content. Buying IPv4 addresses is one solution, but at recent prices of \$50 or more for a public IPv4 address, purchasing IPv4 addresses for 3,000 subscribers would cost at least \$150,000.

A better solution to the IPv4 problem for your client is to deploy Carrier Grade Nat (CGNAT). CGNAT significantly reduces the number of IPv4 addresses needed to start up a broadband network, as well as mitigates the skyrocketing cost of buying more IPv4 addresses as the subscriber base grows. Rather than purchasing an IPv4 address for every subscriber, CGNAT easily allows for an oversubscription of 128 subscribers to a single, public IPv4 address. That brings that \$150,000 figure for 3,000 subscribers down to \$1,200. And, as your client adds subscribers over time, that cost savings will multiply.

DDoS Protection

Even with the best network, companies are vulnerable. One common threat for service providers are distributed denial of service (DDoS) attacks, which have become more prevalent, harder to identify and more difficult to respond to. A single DDoS attack can impact your client's service for hours or even days. Making matters worse, DDoS attacks scripts are readily available and can be launched by someone with little technical experience. Your client's network needs automatic, real-time, always-on protection to keep DDoS attacks at bay. Any solution that is selected should be scalable, with flexible deployment options, and it should provide protection against the full spectrum of distributed denial of service (DDoS) attacks--from multivector and volumetric attacks to network protocol and application attacks.



Regulatory Compliance

There are various federal mandates that must be followed, and not doing so can be costly. For example, one you should make sure your client is aware of is the Communications Assistance for Law Enforcement Act (CALEA), which is a federally mandated law for providers enforced by the Federal Communications Commission (FCC). This law requires that broadband operators be prepared to assist law enforcement in executing electronic surveillance pursuant to court order. Broadband providers need to have the policies and systems in place before a CALEA request is received to ensure that lawfully-authorized electronic surveillance can be securely performed in a timely manner. Setting up and managing the necessary processes and equipment for CALEA compliance can be difficult, time consuming and costly. But, not being prepared can be considerably more. If your client is not able to assist, they can be fined by the court up to \$10,000 per day for each day of non-compliance, and could be ordered to bring their network into compliance by a court-specified deadline.

Fortunately, the FCC allows TTP (trusted third party) solutions providers to set up and manage CALEA compliance on behalf of broadband operators. Recommending a CALEA TTP provider is a cost-effective solution and ensures your client's CALEA responsibilities are properly managed and ready when needed. Certified network engineers available to manage the ongoing compliance program will also provide peace of mind for your clients.

Value-Added Services

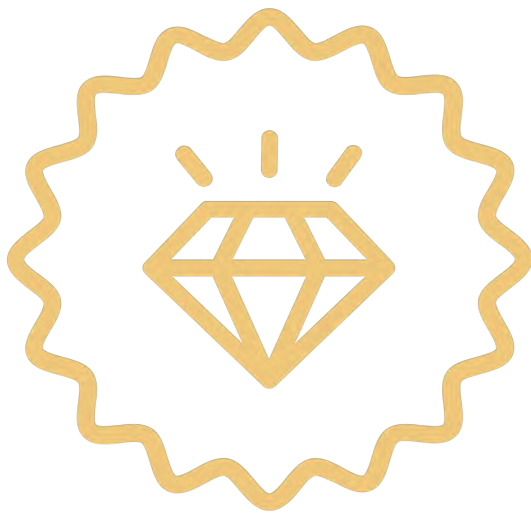
Your client is deploying broadband to improve the quality of life in their community. To make the most out of that investment your client can provide additional IP-based services that subscribers will want. Value added services can increase the ARPU and stickiness with additional services such as Voice and IPTV offerings and offset some of the dwindling revenue of video services.

Residential and Commercial Voice

Your client should consider providing residential and commercial voice service to their broadband customers as a way to gain additional revenue from their broadband business. While this might seem complicated, you can suggest they contract with a provider who offers a cloud-based VoIP solution. The right provider will already have the voice infrastructure, applications and support processes in place. This will allow your client to quickly offer a fully featured residential and commercial voice service at much less expense and with far fewer resources than if they were to set up and manage everything on their own. Your client will get the benefit of immediate revenue without the hassle of managing a voice network, obtaining and porting phone numbers, dealing with e911, etc. Providing multiple services over their broadband connection will also help reduce subscriber churn.

IPTV

It may seem counterintuitive to recommend that your client offer a Pay TV service when some subscribers are cutting the cord. However, there is still a market for a linear TV offering. With the fragmentation of programming across multiple streaming platforms, and the cost of those streaming services rising, many subscribers miss the days of being able to sit down and select live programming from a guide. Similar to VoIP, there are hosted IPTV solutions that will provide an opportunity for additional revenue for your client without the hassle of setting up the back-end infrastructure or dealing with programming contracts. If your client does not offer IPTV, their subscribers will still be streaming video over their connection. Your client might as well get some revenue from that use of their network. A hosted solution can even provide enough margin for your client for them to reduce the cost of video service for their subscribers.



Final Thoughts

Many broadband operators have learned that partnering with a seasoned managed services provider, rather than doing it all themselves, saves time, money and a hundred headaches. Recommending a broadband company with a suite of managed services will reduce your client's operational costs, increase their subscribers' satisfaction, and provide additional revenue opportunities.

ZCorum has been helping provide managed services and support to Internet Service Providers since 1995. Let us help you make your client more successful. They will thank you for it. To learn more, give us a call at 800-909-9441. Or, you can see everything we offer on our website at ZCorum.com.



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ZCorum is a partner that has managed networks for nearly three decades and covering over 1 million broadband subscribers. We provide a suite of managed services that will reduce the operational costs, increase the subscribers' satisfaction, and provide additional revenue opportunities for your clients. Let us work with you to enhance your service to your clients. Let us know how we can help.