AN-VGW-100

Sangoma VoIP Gateways

Extending Analog Phones to Campus Deployments: Working with Enhanced Network Proxy

Contents

1. COLLEGE COMMUNICATION SYSTEMS NEED FAILOVER

VoIP adoption is gaining momentum and it is evolving voice communications, even in college campuses.

Translating the concept of "toll quality" or "PSTN quality" to a new underlying infrastructure is not an easy task and bringing VoIP and Unified Communications distributed architecture or convergence into a single infrastructure triggers many questions by decision makers.

Whether it's simple toll bypass or more complicated Unified Communications applications, driven by companies such as Microsoft, Cisco, Avaya and IBM, etc., ensuring service continuity is quickly becoming "most wanted attribute" of any serious deployment. Any step back becomes a roadblock.

Survivability or resilience is therefore one of the most important questions on the mind of decision makers. What does this mean in this context?

A "Survival Enabled" VoIP deployment is one that has included a series of attributes and characteristics in all its components—in the underlying infrastructure, as well as all the distributed entities—in order to provide, at least, the same customer experience expected on legacy systems regarding transparency and availability.

Some large colleges serving more than 200,000 students are still based on a single server. In the event of connectivity issues with that main server, the school can be forced to struggle with faulty communication pathways for vital systems, which is exacerbated if if the college has multiple locations. VoIP gateways allow its systems to register to a local proxy if that state's servers fails, allowing for uninterrupted usage of intercom calling and emergency systems access.

2. WHAT IS A VOIP GATEWAY AND WHY DO I NEED ONE?

A college campus has multiple concerns that can be addressed by utilizing a VoIP gateway. Deciding which gateway is appropriate for which site hinges upon both the type of analog system that is being integrated into VoIP and the number of lines that must be accommodated. Specific concerns must be addressed, including redundancy, routing, and reliability issues.

VoIP gateways work in two ways, dependent upon a campus' needs. A gateway can be used to convert incoming PSTN/telephone lines to VoIP/SIP. This allows calls to be placed on a regular telephone network.

A gateway can also be used to connect a traditional PBX/phone system to the IP network. This allows calls to be made using VoIP. Calls are then placed using a VoIP service provider. Placing calls using VoIP allows for more efficient rerouting of communications interoffice and also across multiple sites, reducing telephony costs and improving call quality.

A Vega 50 Gateway, for example, can provide the ideal failover solution to the college's communication concerns. The Vega 50 Gateway is able to combine ease of use with the reliable connectivity that the college required to support the network for its extended campus systems.

The flexibility of the Vega 50 Gateway to accommodate a variety of analog implementations, coupled with the functionality of being able to connect to either a PBX or PSTN, gives the college the ability to maintain its communications systems through VoIP technologies with ease. The Vega 5000 Gateway can be added in some of the college's medium-sized locations, ensuring that no one campus is ever disconnected from any other.

3. UNDERSTANDING COMMUNICATIONS CHALLENGES WITH INTEGRATING ANALOG SYSTEMS ON COLLEGE CAMPUSES

Analog, or legacy systems, date back over 60 years. While there is still a need for traditional communications systems, today's campus environment requires a higher connectivity than these systems were built to provide. The advent of cellphones, smartphones, and the Internet means that campuses must be able to communicate across multiple pathways.

Analog systems were never built with these newer pathways in mind. Some campuses have begun to experience an increased number of reliability and connectivity issues associated with these analog systems, resulting in dropped calls and poor communication lines between geographical locations.

In other cases, the lack of integration and redundancy between sites causes issues as well. Lack of redundancy can increase maintenance costs, while having systems that are not fully integrated either interoffice or between sites can result in broken communication pathways. Safety concerns can arise due to the reliability issues associated with using outmoded or overwhelmed technology

4. WHAT'S ENHANCED NETWORK PROXY?

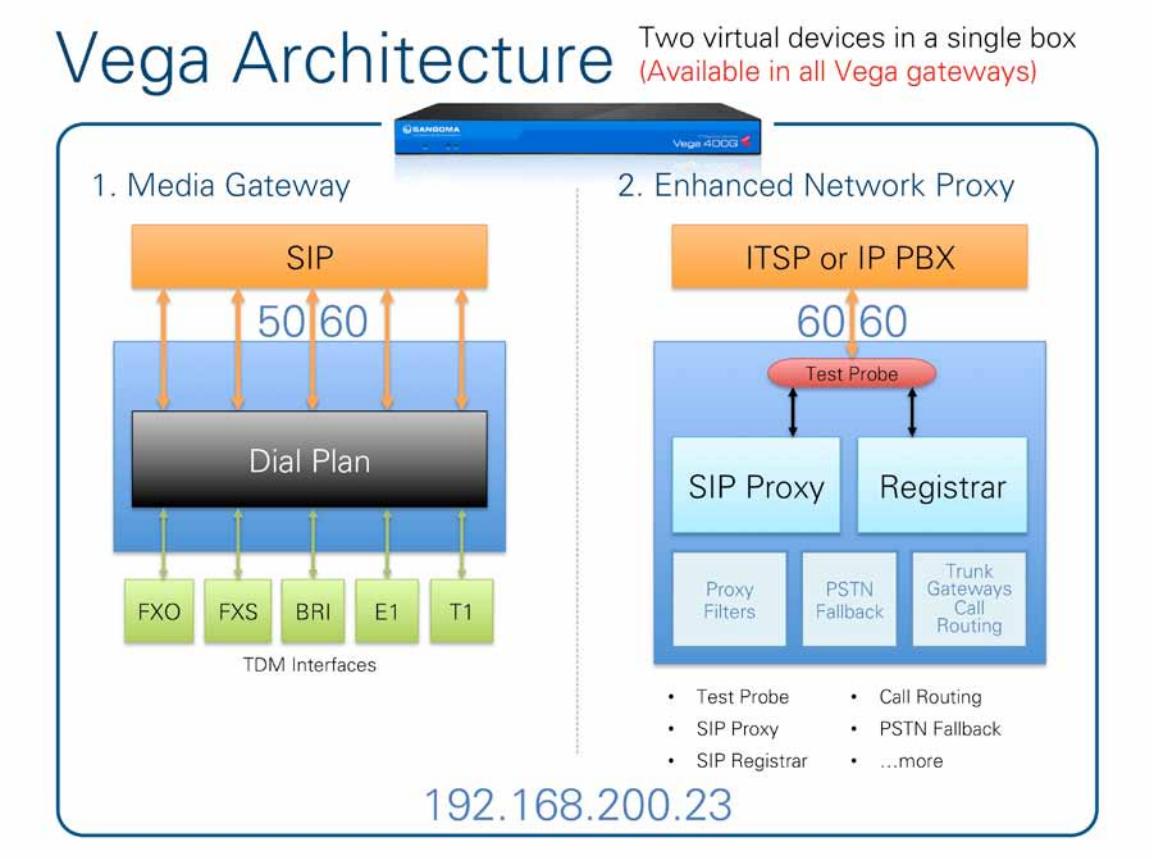
Not all VoIP gateway systems are created equal, however. Some can be clumsy to use and deliver inconsistent results. Some of the smaller solutions on the market may lack a much-needed built-in proxy, which would be required by the college to push calls directly to the devices in the event of an external network failure. These smaller solutions, without the built-in proxy, are easily rendered obsolete in the event of systems upgrades.

Sangoma's Enhanced Network Proxy (ENP) provides failover to IP phones, endpoints and the PBX using an internal SIP Proxy and Registrar. This proxy is treated as separate SIP device on the network and uses a separate SIP port on the Vega.

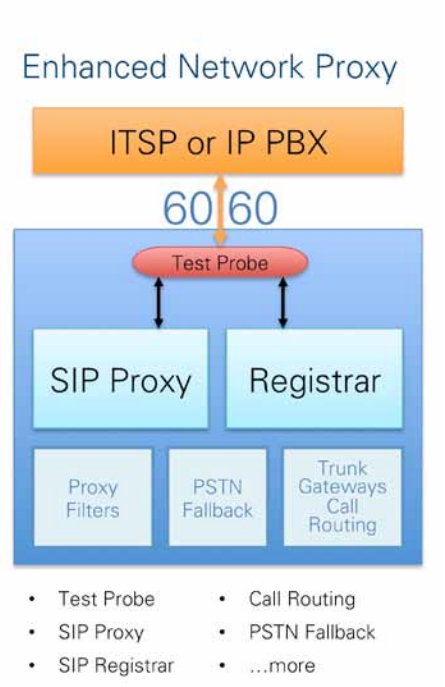
When using ENP, rather than having all the network traffic go directly from the SIP endpoints to the ITSP or PBX, the SIP phones and PBX instead send the SIP traffic to the Vega gateway. The Vega gateway then sends that SIP traffic from those phones or other endpoints onto the ITSP or IP-PBX.

By doing this, the Vega is able to cache the SIP registrations. Then in the event the PBX or hosted ITSP service fails, the IP Phones will still be able to call between themselves, because Vega with ENP enabled directs the calls in lieu of the PBX. Furthermore, if the optional FXO lines are used as a backup trunk, connectivity to the PSTN will be maintained even though the PBX is down.

Sangoma's ENP architecture:



How Enhanced Network Proxy works:



5. CONCLUSION

When looking to integrate telephony systems on college campuses. Sangoma Gateways can connect analog systems to VoIP service providers, allowing calls to travel via VoIP rather than traditional phone lines. This reduces congestion and provides a seamless pathway for communication systems to connect, regardless of geographical location.

Sangoma VoIP Gateways provide an ideal failover solution, allowing for vastly improved communications reliability and ease of use. Sangoma Vega Enhanced Network Proxy (ENP) is included with all Vega Gateway appliances at no cost. It just needs to be enabled. It offers advanced proxy and registrar features. Call routing capabilities are easy synchronized with the already powerful call control engine of the Vega gateway. Probe test capabilities detect IP PBX/ITSP availability in no more than 15 seconds. Safety concerns related to emergency calling capabilities can be eliminated, and telephony costs can be greatly reduced by seamlessly integrating systems across multiple sites.

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