

Reality Check

APPLICATION SOLUTIONS FOR YOUR WORLD

LocaNet IP Telephony Systems Count on SmartNode™ Media Gateways

Located in Dortmund, Germany, LocaNet oHG implements secure IT, Internet and converged-communications solutions based on Asterisk open-source software. LocaNet's flagship product, "LocaPhone," is a full-featured telephony system that supports all standardized telephony interfaces and protocols. Providing telephony solutions that scale from 20 to 2000 extensions, LocaNet integrates home-office and branch-office networks to deliver fully-distributed enterprise telephony systems.

Customers that count on LocaNet solutions include such renowned enterprises as the PSD Bank Rhein Ruhr e.G. (with locations in Düsseldorf and Dortmund, Germany), Hengst GmbH & Co. KG (with locations in Germany, USA and China), the community of Böhnen, and the INTERSEROH Hansa Recycling GmbH.

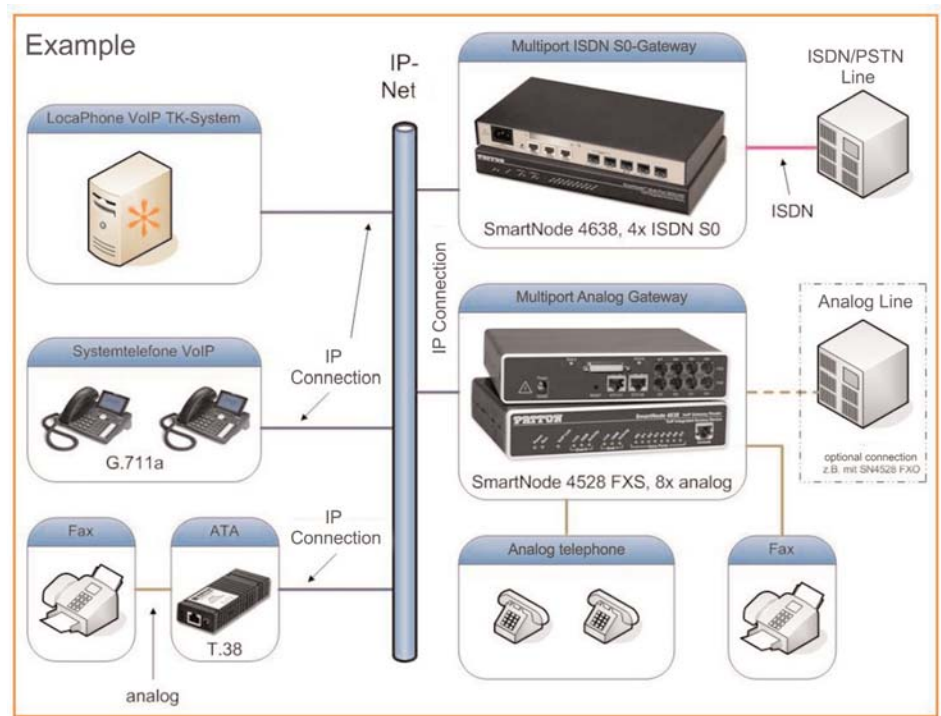
VoIP that works. With such demanding enterprise clients, LocaNet required a solution that offered high reliability and high port availability, and also delivered seamless integration with industry-standard ISDN equipment, protocols and networks. That's where Patton's award-winning SmartNode™ solution came into the picture. Since SmartNode™ multi-service gateways are time-tested and proven in numerous carrier and enterprise deployments

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Frank Ochmann, Sr. Technical Consultant, LocaNet

worldwide, Patton brought to LocaNet a wealth of experience and world-class expertise in implementing converged-IP telephony systems.

LocaNet selected Patton SmartNode™ gateway-routers as a critical element of their LocaPhone solution. Most



Asterisk-based phone systems rely on internal PCI cards (installed within the Asterisk server) to connect to ISDN or analog networks. LocaNet, however, has selected SmartNode™ VoIP Routers for deployment as external media gateways. But why?

Why SmartNode? SmartNode™ media gateways offer many convincing advantages over server-based PCI cards. First, for telephony systems incorporating VoIP gateways, the achievable port density is significantly higher—and offers significant cost advantages—over PCI cards. Each server provides a limited number of PCI slots. So providing ISDN connectivity for up to 2000 LocaPhone extensions would require a very large number of servers with the associated hardware and installation costs. While PCI cards require connection to the server's system bus, SmartNode™ gateways execute system signaling over the local

IP network. So as the system grows, there is no need to purchase and install additional servers.

Home office advantages. When integrating home offices into the corporate network, even more SmartNode™ advantages appear. Because SmartNode™ can provide access-router as well as media-gateway capabilities, the media gateway secures both voice and data traffic by creating a VPN IPSec tunnel to headquarters. There is no additional software, to install and maintain.

Quality and Reliability. Since banks, governments, and industries expect reliable operations at all times, a telephony outage would be disastrous for LocaNet customers. So LocaNet selected SmartNode™. Why? Because SmartNode™ solutions are built on a proven software and hardware platform that offers the reliability of field-

tested, carrier-grade customer premise equipment. SmartNode™ equipment can be installed into 19" racks with redundant power supplies and redundant LAN ports, which deliver even higher availability. While the entire



"When comparing the number of ports and port density, the SmartNode media gateway wins almost every time. The advantage of flexible scaling also represents a cost benefit."

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server (and telephony system) has to be taken down to exchange a PCI card, overall system operations can be maintained while replacing a VoIP Gateway.

Survivability and Simplicity. Because the voice gateway and server are physically separate elements, the telephony system can be more survivable, simpler, and less costly.

If the server fails in a PCI-card scenario, PBX functions and PSTN connections are both lost and the voice system goes down. By enabling a distributed network architecture, VoIP gateways eliminate this single point of failure. With Dial Backup and IP Link Redundancy features, SmartNode™ gateways deliver survivable voice and data communications to ensure continuity of business operations.

SmartNode Advantages vs. PCI Cards

- ✓ Flexible scalability
- ✓ Can be swapped during operation
- ✓ Enables fail-over concepts
- ✓ Works also as a VPN router
- ✓ Low power consumption
- ✓ Location-independent installation
- ✓ Telecom demarcation point

Keep them separated. Unlike a PCI card, the VoIP gateway need not be co-located with the server. For single-site enterprises, installing the gateway adjacent to the PSTN connection avoids the cost and hassle of pulling additional cable to the data center where the server resides. For multi-site enterprises, VoIP gateways eliminate the cost of buying and installing servers for every branch. A single server at headquarters can support each branch-office gateway through the IP network.

Stability. The myriad of existing telephony protocols often creates interoperability problems for communications service-providers. In addition, most available ISDN protocol stacks are comparatively young. That means they don't yet cover the full set of protocols and features a typical enterprise requires, and aren't yet sufficiently mature for carrier-grade deployment. In contrast, Patton's SmartWare™ is a stable and mature platform, supporting an extensive set of protocols and ISDN features—all converted to SIP, the current de-facto standard for VoIP communications. With a SmartNode™ gateway connection, any existing telephony system can provide its specialized services and functions, without having to learn ISDN first.

Interoperability. SmartNode™ also solves such interoperability issues as T.38 fax and tunneling ISDN data connections over SIP, which remains a major problem for enterprises migrating into the world of Voice-over-IP. Without SmartNode, neither of these applications would work reliably on Asterisk based system.

Cost aspects. Contrary to popular perception, media gateways are not more expensive, but often less expensive—and certainly more cost effective—than PCI cards. Comparing port count and density, the media gateway wins hands-down almost every time. In addition there is the monetary value of flexible scalability. SmartNode™ gateways can be added to or removed from the network on demand without taking



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the entire telephony system down. In this way, LocaNet can easily address ever-changing customer needs and technical requirements. One point that should not be forgotten when calculating costs is the reliability of the product. Often the solution that appears less expensive at first sight turns out to be much more expensive in the long run—for both the customer and the system integrator.

Satisfaction. Frank Ochmann, senior technical consultant at LocaNet in Dortmund is very satisfied with his SmartNode™ solution. He says "We can serve our customers with better functionality and more attractive prices, thanks to the SmartNodes and Patton-Inalp."