

All-IP Session Border Controllers

SmartNode VSN Virtual CPE



SmartNodes are the leading and field proven CPEs running Patton Proprietary OS. The same, feature-rich software used for the CPEs can also be used in virtual environments for a high level of scalability and service availability.

Overview

Patton's Virtual SmartNode (vSN) delivers the features you need for advanced voice network applications that need to be easily scaled up and down. At the same time, it eliminates hardware limitations which are required for the performance of the application.



The Virtual SmartNode provides the comprehensive feature set needed for you as an enterprise or service provider looking to virtualize your infrastructure.

Secure your VoIP infrastructure by encrypting signaling streams using the Virtual SmartNode.

DoS prevention, trust peer, toll fraud prevention, stateful firewall QoS, voice quality assessment and monitoring and much more, is part of the virtualized Patton SmartNode* as well as IP routing, including IPv4 and IPv6 networking features.

SmartNodes are the leading and field proven CPEs running Patton Proprietary OS. The same, feature rich software used on the purpose build hardware devices, can also be used in virtual environments for a high level of

Features

- **VoIP Security** - Network separation with SIP Back 2 Back UA, intrusion protection, DoS prevention, trust peer, Signaling encryption (SIP-TLS), Stateful Firewall
- **Session Control** - Dynamic SIP Session allocation for a high number of calls. SessionRouter allows flexible call routing and numbering plan adaptations, CLIP/CLIR, hold, transfer, and much more.
- **SIP Normalization** - SIP-SIP Interworking – Normalizing different, vendor specific SIP implementations – “dialects”. Demarcation point, separation between networks
- **Network Monitoring & Assessment** - Network monitoring probe* for QoS measurements and proactive alerting to minimize problems. SLA assurance at demarcation point
- **Load Balancing** - Call load distribution across multiple network links.
- **IP Routing & Networking** - IP Routing Protocol support; GRE, VRRP, RIP, L2TP, etc.
- **High Availability** - Stateful call failover incl. proactive dead call detection. SBC redundancy and failover to secondary, virtual instances
- **Proprietary Software** - Utilizes proprietary Trinity™ Software for added security

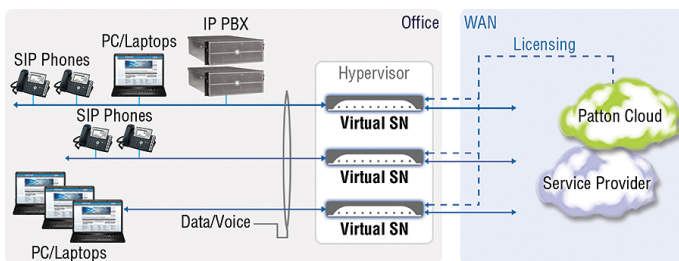
scalability and service availability.

Applications

The Virtual SmartNode is designed to run in virtualized enterprise networks, telephony service provider datacenters, cloud provider infrastructure, etc. Addressing varying call capacity needs from clients can easily be done, scaling up and down the required licenses on the virtual SmartNode using a floating license model through the Patton Cloud. The Patton Cloud automatically distributes the obtained licenses to where they are needed (vSN and other Patton devices).

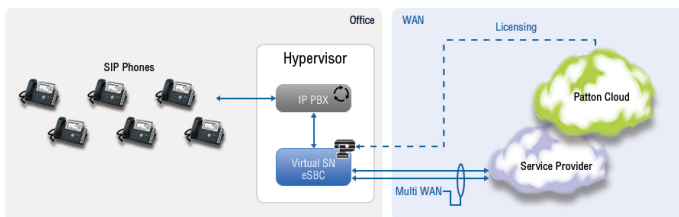
This enables you to easily scale up/down SBC services on Virtual SmartNodes but also on regular SmartNode devices.

Virtual SmartNode functional principle



Use Cases

Virtual SmartNode acting as SBC in SIP Trunking application



Application details:

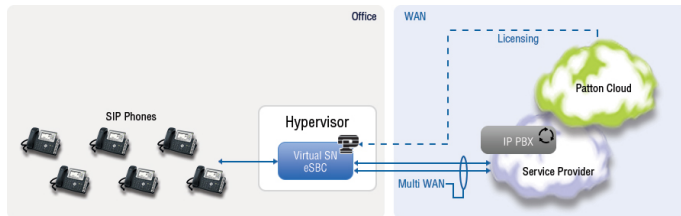
- Usual eSBC features delivered to SME
- LAN telephony protection
- Service demarcation
- SIP normalization
- Quality of service
- Survivability
- Conversion:
 - SIP IPv4 to IPv6
 - SIP UDP to TCP

- SIP TLS to UDP

Benefits:

- Harmonized installation
- No need for pCPE (purpose-built CPE)
- Simplified installation
- Scalable, flexible, reliable
- High availability through virtualized hardware

Virtual SmartNode acting as SBC in Hosted PBX application



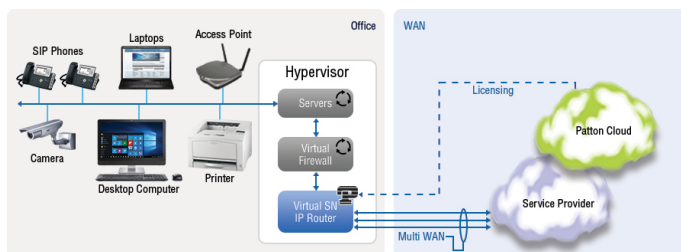
Application details:

- Service demarcation
- SIP normalization & Interop
- Quality of service
- Survivability—Multi WAN
- Station to station calling—WAN outage
- Conversion:
 - SIP IPv4 to IPv6
 - SIP UDP to TCP
 - SIP TLS to UDP

Benefits:

- Harmonized installation
- No need for pCPE (purpose-built CPE)
- Simplified installation
- Scalable, flexible, reliable
- High availability through virtualized hardware

Virtual SmartNode acting as IP Access Router



Application details:

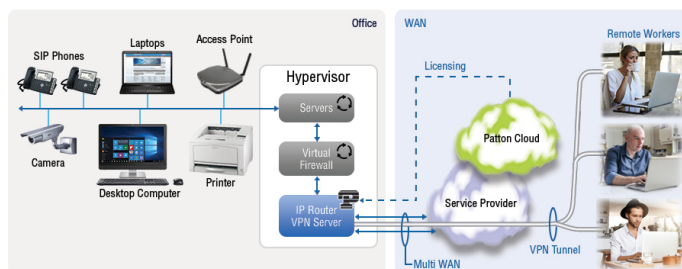
- Multi WAN link support & management
- Load balancing

- Survivability
- High availability (HA)
- Network address translation (NAT) & network address and port translation (NAPT)
- DHCP server
- Access control list (ACL)
- IPv6 support
- VRRP, GRE, RIP, BGP, etc.

Benefits:

- Simple & automated setup
- Scalable—You define the CPU and memory
- Flexible—Adapts to customer needs
- Add/remove features as needed
- Central management through Patton Cloud

Virtual SmartNode acting as VPN Server



Application details:

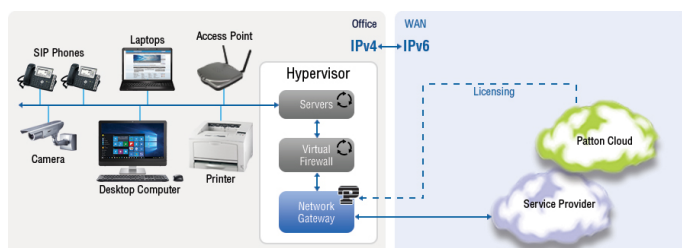
- Secure remote workers, remote offices integration
- VPN links termination & aggregation—IPsec (Client Side only*), OpenVPN
- Access to main office infrastructure (printers, servers, etc.)
- Multi WAN link support & management
- Access right management

Benefits:

- Simple setup
- Scalable—You define the CPU and memory
- Flexible—Adapts to customer needs
- Add/remove features as needed
- Central management through Patton Cloud

* IPsec Server Side on Roadmap

Virtual SmartNode acting as IPv4 to IPv6 Network Gateway



Application details:

- IPv4 to IPv6 interop
- WAN—LAN network separation
- Access control list (ACL)
- Multi access link management (IPv4 or IPv6)
- Dual Stack IPv4/IPv6
- DHCPv4 & v6
- Various routing protocol support

Benefits:

- Simple setup
- Scalable—You define the CPU and memory
- Flexible—Adapts to customer needs
- Add/remove features as needed
- Central management through Patton Cloud

Specifications

Voice Signaling

- SIPv2 & SIPv2 over TLS
- SIP over IPv4 & IPv6
- SIP call transfer, redirect
- Overlap or en-bloc dialing
- DTMF in-band, out-of-band
- G.722
- G.711m/A-law
- G.723.1 (6.4 kbps)
- G.729, 729a, 729ab (8 kbps)
- G.726 (16, 24, 32, 40 Kbps)
- Transparent Clearchannel (RFC 4040)
- iLBC at 13.33 & 15.2 kbps
- AMR-NB (4.75, 5.15, 5.9, 6.7, 7.4, 7.95, 10.2, 12.2 kbps)

Call Routing & Services

- Regular expression number matching
- Regular expression number manipulation
- Least Cost Routing
- Call load distribution
- Number blocking
- Short-Dialing
- Digit collection
- Distribution-Groups and Hunt-Groups
- Seamless call failover
- Detection of RTP loss
- SIP Back-to-Back User Agent
- SIP Registrar*

Security

- Network separation
- SIP back to back UA*
- TLS*
- Open VPN* / IPsec* / L2TP*
- DoS detection & prevention
- Intelligent ACL
- SIP Trusted Peer

IP Networking

- IPv4 & IPv6 Dual Stack
- Routing Protocol support GRE, VRRP, BGP, RIPv1&v2
- Policy, Packet and packet length Based Routing
- IP Multi-Netting, VLAN, Secondary IP
- Network Address and Port translation (NAT/NAPT)
- IPv4 & IPv6 DHCP Client & Server
- Trusted peer

Quality of Service

- PacketSmart™ Network Assessment & Monitoring*
- Voice priority, DownStreamQoS™
- Traffic Management, shaping policing
- IEEE 802.1p, IEEE 802.1Q, 4096 VLANs (Tag insertion/deletion), TOS, DiffServ Labeling

Management	• Dynamic resource licensing model (leased / floated) • Changeable MAC address • Web/HTTPs, CLI with Telnet and SSH access • WebWizard • Fully Documented CLI • Telnet and HTTPs access • TR-069, TFTP, HTTP, HTTPS configuration up- and download • TR-069, TFTP, HTTP, HTTPS firmware upgrade • SNMPv1-3 agent • Radius, Tacacs+ • Separate config domain (LAN side config and WAN side config) • MIB II and private MIB • Built-in diagnostic tools • Secure Auto-Provisioning with built in root CA
Licensing	• Each vSN instance requires 1 License • Software Feature Licenses are to be obtained from Patton Cloud • See patton.io (https://www.patton.io) for more details
Performance Requirement	500 Mhz per 250 calls
System Requirements	Virtualized Machine: • CPU: 64bit x86 architecture (single core or more) • Hypervisor (KVM, VMware, VirtualBox, Hyper-V) • RAM: a minimum of 1024 MB • HDD: min. 1024 MB • Network: at least 1 Ethernet adapter (virtual)
Weight	0g (0 oz)

* Depending on licensed feature (charges apply)

Ordering

Virtual SmartNode Use Cases

SIP Trunking

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-1B	Cloud Based Feature License (12 month) for 1 additional SIP Sessions (SIP back-to-back calls using 2 SIP Legs)
CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)
CBFL-REG	Cloud Based Feature License (12 month) to enable the SIP Registrar

Optional

CBFL-SIP-TLS	Cloud Based Feature License (12 month) to enable SIP-TLS
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Hosted PBX

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-1B	Cloud Based Feature License (12 month) for 1 additional SIP Sessions (SIP back-to-back calls using 2 SIP Legs)

CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)
CBFL-REG	Cloud Based Feature License (12 month) to enable the SIP Registrar

Optional

CBFL-SIP-TLS	Cloud Based Feature License (12 month) to enable SIP-TLS
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IP Router

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)

Optional

CBFL-VPN-TUN1	Cloud Based Feature License (12 month) to enable 1 VPN Session (OpenVPN, IPSec and L2TP)
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VPN Server

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)
CBFL-VPN-TUN1	Cloud Based Feature License (12 month) to enable 1 VPN Session (OpenVPN, IPSec and L2TP)

IPv4 to IPv6 Network Gateway

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)

Virtual SmartNode All Licenses

Minimum Cloud Service Plan

CSP-C2E/STANDARD Standard Plan, single organization, 12 months, 10 managed devices included

Feature Licenses

CBFL-VSN	Cloud Based Feature License (12 month) for running Trinity on one virtual machine (VM)
CBFL-1B	Cloud Based Feature License (12 month) for 1 additional SIP Sessions (SIP back-to-back calls using 2 SIP Legs)
CBFL-IPR	Cloud Based Feature License (12 month) to enable IP Packet Forwarding (routing)
CBFL-REG	Cloud Based Feature License (12 month) to enable the SIP Registrar
CBFL-SIP-FAILOVER	Cloud Based Feature License (12 month) to enable seamless outbound SIP call hunting
CBFL-SIP-TLS	Cloud Based Feature License (12 month) to enable SIP-TLS
CBFL-VPN-TUN1	Cloud Based Feature License (12 month) to enable 1 VPN Session (OpenVPN, IPSec and L2TP)

vSN Install Images

Virtualization System Hypervisor Virtual SmartNode Images

VMWare ESXi	ESXi	VMDK (/support/upgrades/loginscreen.asp?model=vsan&path=vmdk)
VirtualBox	VirtualBox	VMDK (/support/upgrades/loginscreen.asp?model=vsan&path=vmdk), VDI (/support/upgrades/loginscreen.asp?model=vsan&path=vdi)
Xen	Xen	VMDK (/support/upgrades/loginscreen.asp?model=vsan&path=vmdk)
Proxmox	KVM	QEMU (qcow (/support/upgrades/loginscreen.asp?model=vsan&path=qcow) / qcow2 (/support/upgrades/loginscreen.asp?model=vsan&path=qcow2)), RAW (/support/upgrades/loginscreen.asp?model=vsan&path=raw)
Hyper-V	Hyper-V	VHD (/support/upgrades/loginscreen.asp?model=vsan&path=vhd), VHDX (/support/upgrades/loginscreen.asp?model=vsan&path=vhdx)

Item Number	Item Description	Price
SVC-SmartCare-BH (/support/support.asp)	Premium Support for Business Hours	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartCare-24/7 (/support/support.asp)	Premium Support, 24 x 7 Coverage	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartAssist-BH (/support/support-professional.asp)	Business Hour Support Services	Contact us (/howtobuy/) for availability and pricing.
SVC-SmartAssist-AH (/support/support-professional.asp)	After Hours Support Services	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR1 (/support/support-warranty.asp)	1 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR2 (/support/support-warranty.asp)	2 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.

SVC-ENHWAR3 (/support/support-warranty.asp)	3 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR4 (/support/support-warranty.asp)	4 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-ENHWAR5 (/support/support-warranty.asp)	5 Year Enhanced Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR2 (/support/support-warranty.asp)	2 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR3 (/support/support-warranty.asp)	3 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR4 (/support/support-warranty.asp)	4 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-EXTWAR5 (/support/support-warranty.asp)	5 Year Extended Warranty	Contact us (/howtobuy/) for availability and pricing.
SVC-NETENG-HOUR (/support/support-professional.asp)	Network technician hour rate for pre-config services, after hours support, etc.	Contact us (/howtobuy/) for availability and pricing.

Related Products

Multi-Service IP (/products/product_detail.asp?id=247)	
SIP Session Border Controllers (/products/product_detail.asp?id=419)	
SmartNode 5300 eSBC (/products/product_detail.asp?id=502)	Session Border Controller + Router + EFM IAD Up to 60 SIP Sessions
SmartNode 5500 Series eSBC (/products/product_detail.asp?id=549)	Session Border Controller + Router 2 Ethernet ports for up to 200 SIP to SIP calls

Backgrounders

FiberPlex Capabilities Guide (/backgrounders/FiberPlex_Capabilities_Statement.pdf)

October 6, 2017

Certifications

Patton Devices Not Vulnerable to Meltdown and Spectre Side-Channels Attacks (/certifications/Patton-Meltdown-Spectre-Statement.pdf)	January 4, 2018
Telenor Certificate of Compliance - SmartNode Enterprise Session Border Controllers (/certifications/Telenor-Certificate-of-Compliance-Patton-SN5530.pdf)	November 30, 2015
Metaswitch Interoperability Partner Certificate (/certifications/metaswitch-interop-partner-cert.pdf)	September 18, 2015
Unify OpenScape Technology Connectivity Certification for SmartNode Products (/certifications/Unify-OpenScape-Technology_Connectivity_Certification_1.pdf)	August 13, 2015
Letter of Validation - SmartNode Trinity 3.X & BroadWorks 20.0 / 20.sp1 (/certifications/BroadSoftValidationAnnouncement-Patton-SmartNode-Trinity.pdf)	April 16, 2015

Data Sheets

Virtual SmartNode (VSN) Datasheet (/datasheet/Virtual_SmartNode_datasheet_50000017.pdf)	August 19, 2019
Virtual SmartNode (VSN) Datasheet (A4 page size) (/datasheet/Virtual_SmartNode-A4_datasheet_50000017.pdf)	August 19, 2019
Patton Product Life Cycle Color Codes (/datasheet/Life-Cycle-Availability-Codes.pdf)	April 24, 2015

Product & Solution Guides

SmartNode Product Line Overview (/guides/07SNPLO-OV_50000010.pdf)	September 2, 2020
Products & Solutions for Microsoft-Based Communications Services (/guides/07SFB-PG.pdf)	December 6, 2019
Vodia IP Solutions Overview (/guides/50000024_VODIA-SOV.pdf)	June 25, 2019
How to migrate voice services smoothly over NBN (/guides/07MVSNNB-SOL.pdf)	October 31, 2018
CPE Products & Solutions for BroadSoft-Based Communications Services (/guides/07CPSB-PG.pdf)	June 29, 2018
SmartNode Integrated Access Device Product and Solutions Guide (/guides/SmartNode-Integrated-Access-Device-Product-and-Solutions-Guide.PDF)	April 2, 2018
Gartner Group Market Guide for Enterprise SBC (/guides/gartner-esbc-market-guide.pdf)	December 29, 2017
VoIP Glossary - VoIP Terms and Definitions (/guides/07VOIPGLOSS-REF.pdf)	August 15, 2017
Barracuda Quick Reference Guide for SmartNode Gateways (/guides/Barracuda-Patton-Gateways-Quick-Reference.pdf)	August 28, 2015
3CX IP Solutions Overview (/guides/073CX-SOV.pdf)	January 23, 2013
IP Paging/Intercom/Access Control with Microsoft Lync Solution Overview (/guides/07IPP-SOV.pdf)	December 18, 2012
The Gateway to Microsoft Lync (/guides/07GTML-SOV.pdf)	December 18, 2012
Seamless Internet Access and Survivability for Remote and Maritime Networking Applications (/guides/07BODI_RS_MARNET-SOL.pdf)	November 8, 2012
The Gateway to BroadWorks (/guides/07GTBW-SOV.pdf)	October 12, 2012

User Manuals & Configuration Guides

SmartNode Virtual SmartNode User Manual (/manuals/50000018.pdf)	September 27, 2019
Time Warner Cable Configuration Guide for Patton SmartNode (/manuals/TimeWarnerCableSmartNodeConfigurationGuide.pdf)	April 23, 2015

White Papers & Success Stories

Who Needs an Enterprise Session Border Controller? (/whitepapers/who-needs-an-esbc.pdf)	June 12, 2019
Voice Network Pathways with Patton SBC/Gateways over Australia's NBN Infrastructure (/whitepapers/07VNPBNB-OV.pdf)	October 31, 2018
Enterprise Survivability for Subscribers of BroadSoft-Based Services (/whitepapers/07M-ENTSURVBS-WP.pdf)	April 27, 2018
A cost-saving All-IP communication solution for Falcone Bauchemie AG (/whitepapers/unify-falcone-success-story.pdf)	October 5, 2017
Die kostensparende All-IP Kommunikationslösung für Falcone Bauchemie AG (/whitepapers/unify-falcone-success-story-DE.pdf)	October 5, 2017

CPE Architecture: When Does All-IP Equal All-in-One? (/info/CPE-Architecture-When-Does-ALL-IP-Equal-All-in-One)	August 23, 2017
eSBCs: Required for Secure, Interoperable Real Time Unified Communications (/articles/eSBCs-Required-for-Secure-Interoperable-Real-Time-Unified-Communications)	July 12, 2017
PATTON Software Release Strategy for Trinity™ OS (/whitepapers/07M-TRINITY-REL-WP.pdf)	September 11, 2015
ISKON Reports Faster Deployment, Troubleshooting, and Lower OpEx with Patton Element Management System (/whitepapers/reality_check_iskon.pdf)	February 9, 2015
Reaching SMBs with IP Telephony and Unified Communications (/articles/Reaching-SMBs-with-IP-Telephony-and-Unified-Communications/)	January 26, 2015
Patton-BroadSoft Auto-Provisioning Solution for SIP Trunks Serving Customer-Chosen IP PBX (/whitepapers/BSFT-auto-prov.pdf)	October 1, 2014
Powered by Patton, ZEOP Launches Business-Class VoIP Service for Reunion Island (/whitepapers/reality_check_zeop.pdf)	May 21, 2014
SBCs - Key Part of the UC Ecosystem (/articles/SBCs-Key-Part-of-the-UC-Ecosystem)	April 29, 2014
What VARs Need to Migrate Customers to UC Telephony ()	April 29, 2014
Patton and SmartConnect Deliver High-Availability Multi-Access Customer Care Solution for Eureka (/whitepapers/reality_check_eureka.pdf)	June 25, 2012
How Patton and Techlan Reti Transported Norbert Dentressangle to Converged IP-Communication (/whitepapers/reality_check_norbertdentressangle.pdf)	May 7, 2012
Patton Deploys Broadvox SIP Trunks Resulting in Partnership and VoIPReady™ Solution (/whitepapers/voipready_case_study.pdf)	January 3, 2012
3CX Phone System Provides the Gas for Leading Turbine Engineering Specialist (/whitepapers/3CX_Agilis_Case_Study.pdf)	February 28, 2011

SmartNode™ Awards

- **2016 COMMUNICATIONS SOLUTIONS Product of Year** (/company/newsrelease.asp?id=2770): SmartNode 5540 Series FXS eSBC-IAD (/products/product_detail.asp?id=541)
- **2015 INTERNET TELEPHONY Excellence Award** (/company/newsrelease.asp?id=2684): Patton Element Management System (/products/product_detail.asp?id=495)
- **2015 COMMUNICATIONS SOLUTIONS Product of Year** (/company/newsrelease.asp?id=2673): SmartNode 5300 eSBC (/products/product_detail.asp?id=502)
- **2015 INTERNET TELEPHONY Product of the Year** (/company/newsrelease.asp?id=2612): SmartNode Open Gateway Appliance (SNOGA) (/products/product_detail.asp?id=512)
- **2013 Unified Communications Excellence Award** (/company/newsrelease.asp?id=2555): SmartNode 4940 VoIP Gateway (/products/product_detail.asp?id=437)
- **2012 Internet Telephony Product of the Year** (/company/newsrelease.asp?id=2376): SmartNode 4670 Hybrid VoIP IAD (/products/product_detail.asp?id=458)
- **2012 Internet Telephony Excellence Award** (/company/newsrelease.asp?id=2341): VoIP Gateways & Routers (/products/product_detail.asp?id=5)
- **2011 Internet Telephony Product of the Year** (/company/newsrelease.asp?id=2047): SmartNode 5400 eSBC (/products/product_detail.asp?id=417)
- **2010 Internet Telephony Product of the Year** (/company/newsrelease.asp?id=1938): SmartNode 5400 eSBC (/products/product_detail.asp?id=417)
- **2009 Internet Telephony Product of the Year** (/company/newsrelease.asp?id=1804): SmartNode 4400 IpChannelBank Analog VoIP Router (/products/product_detail.asp?id=406)
- **2009 Internet Telephony Excellence Award** (/company/newsrelease.asp?id=1736): SmartNode 4630 BRI So Digital VoIP Router (/products/product_detail.asp?id=329)
- **2008 Internet Telephony Product of the Year** (/company/newsrelease.asp?id=1453): SmartNode 4960 eSBC (/products/product_detail.asp?id=354)
- **2007 Unified Communications Product of the Year** (/company/newsrelease.asp?id=1268): SmartNode 4650 Digital G.SHDSL VoIP IAD (/products/product_detail.asp?id=358)

- *2007 Internet Telephony Product of the Year* (/company/newsrelease.asp?id=1148): Model S-DTA (/products/product_detail.asp?id=359)
- *2007 Internet Telephony Excellence Award* (/company/newsrelease.asp?id=1082): Model 4562 (/products/product_detail.asp?id=353)
- *2006 Internet Telephony Product of the Year* (/company/newsrelease.asp?id=996): SmartNode 4960 eSBC (/products/product_detail.asp?id=354)
- *2005 Internet Telephony Product of the Year* (/company/newsrelease.asp?id=850): SmartNode 4630 BRI So Digital VoIP Router (/products/product_detail.asp?id=329)

Company (/company/)

- > Contact Us (/company/contact-us.asp)
- > About Patton (/company/about.asp)
- > Jobs (/company/careers/)
- > Capabilities (/products/special/services.asp)
- > Quality & Responsibility (/company/environment/)
- > Legal (/legal/)
- News & Events
- > Press Room/Releases (/press/)
- > Training & Events (/training/)
- > Library/Downloads (/resources/)

Partners & Resources (/partners/)

- > Partner Programs (/partners/)
- > Resources (/resources/)
- > Blog (https://blog.patton.com)

Products

(/products/)

Unified Communications

- > VoIP Gateways (/voip-gateway/#products)
- > VoIP Routers (/voip-router/#products)
- > VoIP IADs (/voip-iad/#products)
- > SIP eSBCs (/session-border-controller/#products)
- > VoIP Appliances (/ip-pbx/#products)
- > SS7 Media Gateways (/ss7-gateway/#products)

Software and Cloud

- > Virtual SBC (/virtual-sbc/#products)
- > Virtual Access Router (/virtual-access-router/#products)
- > VPN Server (/vpn-server/#products)
- > IPv6 to IPv4 Network Gateway (/network-gateway/#products)
- > Intelligent Edge Orchestration (/intelligent-edge-orchestration/#products)
- > NFV & SDN (/nfv/#products)

Network Access

- > Ethernet Extenders (/ethernet-

Connectivity

- > Line Drivers / Short Range Modems (/products/network-connectivity/#11)
- > Fiber Serial DataCom (RS-232/422/530/188C) (/products/network-connectivity/#27)
- > Ethernet Over Fiber (/products/network-connectivity/#23)
- > Multiplexers & Sharing Devices (/products/network-connectivity/#12)
- > Fiber Telecom (T1/E1/PRI, Analog and ISDN) (/products/network-connectivity/#28)
- > Pro AV Live and Media Broadcast Fiber Systems (/products/network-connectivity/#29)
- > SFP (Small Form Pluggable) Modules and Kits (/products/network-connectivity/#30)
- > Fiber Alarming, Notification, Relay and Control (/products/network-connectivity/#24)

extender/#products)
> PoE Products
(/poe/#products)
> xDSL Products
(/xdsl/#products)
> Routers
(/router/#products)
> Dial-Up Access (/dial-up/#products)

Sunset Products
(/products/sunset-products.asp).

> Other Network
Extenders
(/products/network-connectivity/#13)
> Defense/Security
Fiber Communications
(/products/network-connectivity/#22)
> Baluns
(/products/network-connectivity/#3)
> Surge Protectors &
Opto-Isolators
(/products/network-connectivity/#15)
> DataTaps, Testers,
Adapters, Rack Kits
(/products/network-connectivity/#7)
> Interface Converters
(/products/network-connectivity/#10)
> Fiber Rack and
Enclosure Systems
(/products/network-connectivity/#25)
> Fiber Repeaters and
Wavelength Division
Multiplexers (WDM)
(/products/network-connectivity/#26)
> Waveguide RF Filters
(/products/network-connectivity/#31)

Support & Services (/support/)

> Support Home (/support/)
> Support Portal (/support/#portal)
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> Software Upgrades (/support/upgrades/)
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