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Customer Deliverable Documentation
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SmartWare R6.11 Release Notes

Build Series 2019-07-02

SmartWare is the embedded application software of the SmartNode™ series of VoIP Gateways and Gateway Routers. SmartWare provides a full set of IP routing features, advanced Quality of Service and traffic management features plus industry leading Voice over IP functionality including SIP and H.323

Released Build Numbers

SmartNode 4110 Series R6.11 Build 2019-07-02
SmartNode 4110S Series R6.11 Build 2019-07-02
SmartNode 4120 Series R6.11 Build 2019-07-02
SmartNode 4300 Series R6.11 Build 2019-07-02
SmartNode 4400 Series R6.11 Build 2019-07-02
SmartNode 4520 Series R6.11 Build 2019-07-02
SmartNode 4600 Series R6.11 Build 2019-07-02
SmartNode 4600 Series R6.11 DSL Build 2019-07-02
SmartNode 4660 Series R6.11 Build 2019-07-02
SmartNode 4670 Series R6.11 Build 2019-07-02
SmartNode 4830 Series R6.11 Build 2019-07-02
SmartNode 4830 Series R6.11 DSL Build 2019-07-02
SmartNode 4900 Series R6.11 Build 2019-07-02
SmartNode 4940 Series R6.11 Build 2019-07-02
SmartNode 4950 Series R6.11 Build 2019-07-02
SmartNode 4960 Series R6.11 Build 2019-07-02
SmartNode 4970 Series R6.11 Build 2019-07-02
SmartNode 4980 Series R6.11 Build 2019-07-02
SmartNode 4990 Series R6.11 Build 2019-07-02
SmartNode 5200 Series R6.11 Build 2019-07-02
SmartNode 5400 Series R6.11 Build 2019-07-02
SmartNode 5480 Series R6.11 Build 2019-07-02
SmartNode 5490 Series R6.11 Build 2019-07-02
SmartNode DTA Series R6.11 Build 2019-07-02

About this Release

R6.11 is a SmartWare Maintenance Release. Please see the White Paper about SmartWare software releases <https://www.patton.com/whitepapers/SmartWare%20Release%20Strategy%20Whitepaper.pdf> for more information about this terminology.

R6.11 was spawned in August 2018. Bugs are fixed until further notice.

Supported Products

SmartNode 4110 Series (HW Version: 1.x, 2.x, 4.x, 5.x)
SmartNode 4110S Series (HW Version: 1.x, 2.x)
SmartNode 4120 Series (HW Version: 1.x, 2.x, 3.x)
SmartNode 4300 JS Series (HW Version: 2.x)
SmartNode 4300 JO Series (HW Version: 1.x)
SmartNode 4400 JS Series (HW Version: 2.x)
SmartNode 4400 JO Series (HW Version: 1.x)
SmartNode 4520 Series (HW Version: 1.x, 2.x, 4.x, 5.x)
SmartNode 4600 Series (HW Version: 1.x)
SmartNode 4600 Large Series (HW Version: 1.x, 2.x)
SmartNode 4660, 4670 Series (HW Version: 2.x, 3.x, 4.x)
SmartNode 4830 Series (HW Version: 1.x, 2.x, 4.x, 5.x)
SmartNode 4830 Large Series (HW Version: 1.x, 2.x, 3.x, 4.x)
SmartNode 4900 JS Series (HW Version: 1.x, 2.x)
SmartNode 4900 JO Series (HW Version: 1.x)
SmartNode 4940 Series (HW Version: 5.x)
SmartNode 4950 Series (HW Version: 5.x)
SmartNode 4960 Series (HW Version: 1.x, 2.x, 3.x, 4.x, 5.x)
SmartNode 4970, 4980, 4990 Series (HW Version: 1.x)
SmartNode 5200 Series (HW Version: 6.x)
SmartNode 5221 Series (HW Version: 4.x)
SmartNode 5400 Series (HW Version: 5.x)
SmartNode 5480, 5490 Series (HW Version: 1.x)
SmartNode DTA Series (HW Version: 2.x, 3.x)

History of Solved CTS Cases

The following list refers to open cases in the Change Tracking System 'CTS'.

This Build Series 2019-07-02

12714 Sending of ISDN Restart Message optional

On enabling an ISDN aware port (e1t1, bri), the SmartNode is sending an ISDN Restart message. That feature can now be disabled for ISDN Networks which do not expect a Restart message from a connected USER device. Upon that Restart message a certain behavior of the connected device can lead to an ISDN port being stuck in a non-working state. See the *New Configuration Commands* section for details on the command.

Build Series 2018-11-01

12693 LED on SN4300 and SN4400 series not blinking when reset button is pressed

When the reset button is pressed for 5 seconds, the Power LED did not start blinking as described in the User Manual. Even though the selection to restart with the factory default configuration was possible, there was no visual indication that this selection was active.

12698 Upgraded DSP firmware for SN494x/5x/6x/7x/8x/9x, SN548x/9x and SN466x/7x devices

For SN494x/5x/6x/7x/8x/9x, SN548x/9x and SN466x/7x devices the VoIP-stream processing DSP has been upgraded to version 700.43. Under rare circumstances it could happen that the VoIP-stream processing DSP became unresponsive and the device needed to be rebooted. This issue was typically reported by a *QUEUE FULL* error.

12699 SIP Stack upgraded to version 4.2.26

The SmartWare SIP stack has been upgraded to version 4.2.26.

Build Series 2018-09-06

12687 IP-IP codec negotiation answer is not negotiated

In a SIP-to-SIP call scenario the SmartNode did not take the codec negotiation answer from the called side into account.

Example: The SmartNode received a SIP INVITE request with three codecs and sent a SIP INVITE with its two supported codecs to the called side. In the SIP 200OK answer of the called side only one matching codec was present. At this point the SmartNode did not take care of the negotiated codec and forwarded the SIP 200OK answer to the calling side with its two supported codecs.

12689 MWI Subscription on FXS - SIP NOTIFY message not routed

In a SIP-to-FXS call scenario the SmartNode sent a SIP SUBSCRIBE request to a message-server that eventually sent back a SIP NOTIFY request. This SIP NOTIFY message was not routed to the FXS side by the SmartNode. As a consequence, no light indication or stutter tone was audible to the user who is on the phone connected to the FXS port.

Caveat - Known Limitations

The following list refers to open cases in the Change Tracking System 'CTS'

CTS2236

Only G.723 high rate (6.3kbps) supported by H.323 (receive and transmit).

CTS2702

TFTP may not work with certain TFTP servers, namely the ones that change the port number in the reply. When using the SolarWinds TFTP server on the CD-ROM this problem will not occur.

CTS2980

With 10bT Ethernet ports, only the half duplex mode works. (With 10/100bT Ethernet ports, all combinations work.)

CTS3233

The SolarWinds TFTP server version 2.2.0 (1999) does not correctly handle file sizes of $n * 512$ Bytes. Use version 3.0.9 (2000) or higher.

CTS3760

The SIP penalty-box feature does not work with TCP. When the penalty box feature is enabled, the TCP transport protocol must be disabled using the 'no transport tcp' command in the SIP gateway configuration mode.

CTS3924

Changing a call-progress tone has no effect. Adding a new call-progress tone and using it from the tone set profile works however.

CTS4031

The Caller-ID message length on FXS hardware with Chip Revision numbers below V1.5 is restricted to 32 bytes. If the message is longer the message will be truncated. The FXS Chip Revision can be displayed using the 'show port fxs detail 5' CLI command.

CTS4038

When doing 'shutdown' and then 'no shutdown' on an ethernet port that is bound to an IP interface that receives its IP address over DHCP, the IP interface does not renew the lease.

CTS4077

Using the command 'terminal monitor-filter' with regular expressions on systems under heavy load can cause a reboot.

CTS4335

The duration of an on-hook pulse declared as flash-hook has been raised from 20ms to 1000ms, to cover the most country specific flash hook durations. Existing installations should not be affected, as all on-hook pulses *lower than 1000ms* are declared as flash-hook, including the previous default of 20ms. However, care should be taken in analog line extension applications, to make sure that the flash-hook

event is allowed to be relayed over SIP or H.323. This can be achieved by disabling all local call features in the fxs interface on context cs: no call-waiting, no additional-call-offering, no call-hold.

CTS10392

The internal timer configuration command is only able to execute commands that produce an immediate result. Some commands that execute asynchronously cannot be executed by the timer. The following commands (among others) cannot be executed by the timer:

- **ping**
- **traceroute**
- **dns-lookup**
- **copy** any kind of files from or to a TFTP server
- **reload** without the **forced** option

CTS10553

The command “no debug all” does not fully disable the ISDN debug logs. As soon as any other ISDN debug monitor is enabled, all the ISDN monitors that were disabled by “no debug all” are re-enabled.

CTS10586

The codecs G.723 and G.729 cannot be used at the same time on all platforms, except on the SmartNode 4960.

CTS10610

SmartNode 4960 Gigabit Ethernet does not properly work with Dell 2708 Gigabit Ethernet Switch. A work-around is to configure 100Mbit.

CTS10730

Due to memory limitations it is not possible to download a software image to the SN4552 when two SIP gateways are active.

CTS11114

On SN46xx units it can happen that there are more open phone calls requiring a DSP channel than DSP channels are available. This leads to the situation where a phone connected on a bri port rings and has no voice after the user picks it up. To limit the number of calls using DSP channels it is suggested to create a limiter service where each call from and to a bri port has to pass. When the total number of calls on the bri ports is limited to the number of DSP channels each call is going to have audio on picking up.

CTS11786

On older SmartNodes the two debug monitors *debug media-gateway rtp* and *debug call-control* print out incorrect RTCP jitter values.

CTS11816

The command ‘call-control call drop <call>’ is not behaving as expected. It drops all calls but does not completely teardown all internal structures. Consequently the call numbers of the dropped call cannot

be used anymore for further calls after executing this command. The same is true for the “Drop all” button on the web interface on the “Active Calls” tab of the Call-Router section.

CTS12027

The following configuration may create duplicate packets: If one physical ethernet port is bound to two IP interfaces with different IP addresses and on both IP interfaces a SIP gateway is bound and some static routes are configured, then the SIP gateways may receive duplicate UDP packets.

New Configuration Commands

The commands documented in the Release Notes only cover new additions which are not yet included in the Software Configuration Guide for R6.11, available from www.patton.com.

https://www.patton.com/manuals/SmartWare_SCG_r611.pdf

Current Revision:

Part Number: 07MSWR611_SCG, Rev. A

Sending of ISDN Restart Message optional

First appeared in build series: 2019-07-02

On enabling an ISDN aware port (e1t1, bri), the SmartNode is sending an ISDN Restart message. That feature can now be disabled for ISDN Networks which do not expect a Restart message from a connected USER device. Upon that Restart message a certain behavior of the connected device can lead to the ISDN port being stuck in a non-working state.

Mode: port bri/e1t1 / q921 / q931

	Command	Purpose
Step 1	<code>node(q931)[<slot/port>]# [no] send-restart</code>	Enables/Disables sending of an ISDN Restart message on enabling the underlying port. Default: enabled.

Documentation

Please refer to the following online resources:

- Software Configuration Guide SmartWare Release R6.11:
https://www.patton.com/manuals/SmartWare_SCG_r611.pdf
- SmartWare Configuration Library:
<http://www.patton.com/voip/confignotes.asp>
- Web Wizard Platform for Configuration generation:
<http://www.patton.com/wizard/>
- SmartNode Utilities:
<https://www.patton.com/support/upgrades/index.asp?um=SmartNode%20Utilities>

General Notes

Factory Configuration and Default Startup Configuration

The SmartNodes as delivered from the factory contain both a **factory configuration** and a default **startup configuration**. While the factory configuration contains only basic IP connectivity settings, the default startup configuration includes settings for most SmartWare functions. Note that if you press and hold the system button (Reset) for 5 seconds the factory configuration is copied onto the startup configuration (overwrite). The default startup config is then lost.

IP Addresses in the Factory Configuration

The factory configuration contains the following IP interfaces and address configurations bound by the Ethernet ports 0/0 and 0/1.

```
interface eth0
    ipaddress dhcp
    mtu 1500
interface eth1
    ipaddress 192.168.1.1 255.255.255.0
    mtu 1500
```

How to Upgrade

1. You have the choice to upgrade to R6.11 with or without the GUI functionality.

To upgrade to R6.11 without the GUI functionality, enter the following command (telnet, console):

```
copy tftp://<tftp_server_address>/<server path>/b flash:
```

To upgrade to R6.11 with the GUI functionality, enter the following command (telnet, console):

```
copy tftp://<tftp_server_address>/<server path>/bw flash:
```

2. Load Patton-specific settings (preferences), if available:

Extract the files 'b_Patton_prefs' and 'Patton_prefs' into the same directory on the TFTP-server.

```
copy tftp://<tftp_server_address>/<server path>/ b_Patton_prefs flash:
```

3. Reboot the SmartNode afterwards:

```
reload
```

Notes about Upgrading from Earlier Releases

Note that SmartWare Release R6.11 **introduces some changes in the configuration** compared to Release R5.x, especially in the domain of FXO and ISDN.

Please refer to the SmartWare Migration Notes R5 to R6 available at upgrades.patton.com.

How to submit Trouble Reports

Patton makes every effort to ensure that the products achieve a supreme level of quality. However due to the wealth of functionality and complexity of the products there remains a certain number of problems, either pertaining to the Patton product or the interoperability with other vendor's products. The following set of guidelines will help us in pinpointing the problem and accordingly find a solution to cure it.

Problem Description:
Add a description of the problem. If possible and applicable, include a diagram of the network setup (with Microsoft tools).
Product Description:
When reporting a problem, always submit the product name, release and build number. Example: SmartNode 4960 V1 R6.11 Build 2019-07-02 This will help us in identifying the correct software version. In the unlikely case of a suspected hardware problem also submit the serial number of the SmartNode (s) and/or interface cards.
Running Configuration:
With the Command Line Interface command 'show running-configuration' you can display the currently active configuration of the system (in a telnet and/or console session). When added to the submitted trouble report, this will help us analyze the configuration and preclude possible configuration problems.
Logs and Protocol Monitors:
Protocol traces contain a wealth of additional information, which may be very helpful in finding or at least pinpointing the problem. Various protocol monitors with different levels of detail are an integral part of SmartWare and can be started (in a telnet and/or console session) individually ('debug' command). N.B.: In order to correlate the protocol monitors at the different levels in SmartWare (e.g. ISDN layer3 and Session-Router monitors) run the monitors concurrently.
Network Traffic Traces:
In certain cases it may be helpful to have a trace of the traffic on the IP network in order to inspect packet contents. Please use one of the following tools (supporting trace file formats which our tools can read): Ethereal (freeware; www.ethereal.com)
Your Coordinates:
For further enquiries please add your email address and phone number.