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Customer Deliverable Documentation  
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# SmartWare R6.9 Release Notes

## Build Series 2017-05-04

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 R6.9 Build 2017-05-04  
SmartNode 4110S Series R6.9 Build 2017-05-04  
SmartNode 4120 Series R6.9 Build 2017-05-04  
SmartNode 4300 Series R6.9 Build 2017-05-04  
SmartNode 4400 Series R6.9 Build 2017-05-04  
SmartNode 4520 Series R6.9 Build 2017-05-04  
SmartNode 4600 Series R6.9 Build 2017-05-04  
SmartNode 4600 Series R6.9 DSL Build 2017-05-04  
SmartNode 4660 Series R6.9 Build 2017-05-04  
SmartNode 4670 Series R6.9 Build 2017-05-04  
SmartNode 4830 Series R6.9 Build 2017-05-04  
SmartNode 4830 Series R6.9 DSL Build 2017-05-04  
SmartNode 4900 Series R6.9 Build 2017-05-04  
SmartNode 4940 Series R6.9 Build 2017-05-04  
SmartNode 4950 Series R6.9 Build 2017-05-04  
SmartNode 4960 Series R6.9 Build 2017-05-04  
SmartNode 4970 Series R6.9 Build 2017-05-04  
SmartNode 4980 Series R6.9 Build 2017-05-04  
SmartNode 4990 Series R6.9 Build 2017-05-04  
SmartNode 5200 Series R6.9 Build 2017-05-04  
SmartNode 5400 Series R6.9 Build 2017-05-04  
SmartNode 5480 Series R6.9 Build 2017-05-04  
SmartNode 5490 Series R6.9 Build 2017-05-04  
SmartNode DTA Series R6.9 Build 2017-05-04

## About this Release

R6.9 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.

R6.9 was spawned in August 2016. Bugs are fixed until June 2017. End of customer support is in December 2017.

## 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 2017-05-04

#### 12585 Increased Number of Retries for HTTP Provisioning

For provisioning locations using the HTTP protocol, the files and resources are downloaded by issuing an HTTP request to the server. When this initial request is not answered by the server within 3 seconds, the request is repeated. This could happen up to 3 times with a maximum time of 12 seconds until the HTTP connection is terminated. Because this time is too short for certain applications providing dynamic resources, the number of retries has been increased to 9 for a total time of up to 30 seconds until the connection is terminated.

#### 12605 Web GUI - Spelling errors in the SIP Interface 'call-transfer' section

Corrected spelling errors in 'Telephony > Call-Router > Interface > SIP > (choose any SIP interface) > Configuration > Call-Transfer':

1. "Accept" with description 'Accepts REFER messagss from the connected user agent', should be "messages" instead of "messagss".
2. "Pull-In" with description 'Detects external call loops and connects intern through', should be "internally" instead of "intern".

#### 12615 Wrong Codec negotiated for SIP to SIP Call

When receiving an INVITE with twice the same codec type inside the SDP, the intersection logic let slip a wrong codec from the local configured voip profile into the resulting list, breaking codec negotiation for SIP to SIP calls.

### Build Series 2017-03-13

#### 12590 Crash at bootup due to 'exit' command in the configuration

The device crashed if, while parsing a hand-crafted startup-config at bootup, an 'exit' command was parsed which tried to exit from the configuration mode. This could happen if the configuration contains an invalid mode command, in which case the consecutive 'exit' command is not executed inside that mode, but in the next higher level mode.

Now a warning message is printed into the event log if this case arises.

#### 12597 Error on command low-bitrate-codec

Due to recent changes in hardware and software the command 'low-bitrate-codec' has become obsolete on certain products because the DSP supports both low bitrate codecs (g723 and g729) at the same time. For these products the command had been removed from the software. This caused CLI parsing errors for existing configurations containing the command. These errors did not have an impact on the proper functioning of the device.

In order to avoid any false errors reports, the command 'low-bitrate-codec' is again accepted on these products. It is simply ignored where not needed and it does not appear in the running-config either.

## **12601 Memory-leak when sending CANCEL message over SIP**

For every CANCEL request sent over SIP, SmartWare lost a small part of its memory. Due to the small size of the memory leak, there was no immediate impact. Over time the memory fragmented and caused the memory manager to slow down. This could have a negative impact on the call performance and ultimately lead the device into an unresponsive state where no calls would be processed anymore.

## **Build Series 2016-12-27**

### **12435 Quoted SIP diversion-header parameters were ignored**

Quoted parameters of received SIP diversion headers were ignored and the device's default parameters were used instead. The SIP stack now properly parses and processes SIP diversion-headers parameters, whether they are quoted or not.

### **12574 Ignored the recorded-units parameter in a SIP INFO AOC header**

Fixed an issue where the device ignored the 'recorded-units' parameter of a received SIP INFO message with an AOC header.

### **12576 SmartNode sent wrong response after a SIP ReINVITE with unsupported codecs**

When the SmartNode received a SIP ReINVITE with unsupported codecs, it responded correctly with a '488 Not Acceptable' message. However, if the device received another SIP ReINVITE later with supported codecs, it failed and responded with a '100 Trying' message. Now, the device correctly responds with a '200 OK' message to a SIP ReINVITE with supported codecs after a ReINVITE with unsupported codecs.

## **Build Series 2016-09-01**

### **12549 Improve feedback for invalid provisioning locations**

The provisioning profile allowed specifying archive files as provisioning locations. These led then to failures in the provisioning with misleading error descriptions. Now the configuration of these locations itself is denied to make it clear that these are not supported at all.

## 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 R6.9, available from [www.patton.com](http://www.patton.com).

[https://www.patton.com/manuals/SmartWare\\_SCG\\_r69.pdf](https://www.patton.com/manuals/SmartWare_SCG_r69.pdf)

### Current Revision:

Part Number: *07MSWR69\_SCG, Rev. A*



## Documentation

Please refer to the following online resources:

- Software Configuration Guide SmartWare Release R6.9:  
[https://www.patton.com/manuals/SmartWare\\_SCG\\_r69.pdf](https://www.patton.com/manuals/SmartWare_SCG_r69.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 R6.9 with or without the GUI functionality.

To upgrade to R6.9 without the GUI functionality, enter the following command (telnet, console):

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

To upgrade to R6.9 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 R6.9 **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](http://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.

<b>Problem Description:</b>
Add a description of the problem. If possible and applicable, include a diagram of the network setup (with Microsoft tools).
<b>Product Description:</b>
When reporting a problem, always submit the product name, release and build number. Example: SmartNode 4960 V1 R6.9 Build 2017-05-04 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.
<b>Running Configuration:</b>
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.
<b>Logs and Protocol Monitors:</b>
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). <b>N.B.:</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.
<b>Network Traffic Traces:</b>
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; <a href="http://www.ethereal.com">www.ethereal.com</a> )
<b>Your Coordinates:</b>
For further enquiries please add your email address and phone number.