Customer Deliverable Documentation
Revision 1.00, June 6, 2013

SmartWare R6.2 Release Notes

Build Series 2013-05-01

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 R6.2 Build 2013-05-01
SmartNode 4120 Series R6.2 Build 2013-05-01
SmartNode 4300 Series R6.2 Build 2013-05-01
SmartNode 4400 Series R6.2 Build 2013-05-01
SmartNode 4520 Series R6.2 Build 2013-05-01
SmartNode 4600 Series R6.2 Build 2013-05-01
SmartNode 4600 Series R6.2 DSL Build 2013-05-01
SmartNode 4660 Series R6.2 Build 2013-05-01
SmartNode 4670 Series R6.2 Build 2013-05-01
SmartNode 4830 Series R6.2 Build 2013-05-01
SmartNode 4830 Series R6.2 DSL Build 2013-05-01
SmartNode 4900 Series R6.2 Build 2013-05-01
SmartNode 4940 Series R6.2 Build 2013-05-01
SmartNode 4950 Series R6.2 Build 2013-05-01
SmartNode 4960 Series R6.2 Build 2013-05-01
SmartNode 4970 Series R6.2 Build 2013-05-01
SmartNode 4980 Series R6.2 Build 2013-05-01
SmartNode 4990 Series R6.2 Build 2013-05-01
SmartNode 5200 Series R6.2 Build 2013-05-01
SmartNode 5400 Series R6.2 Build 2013-05-01
SmartNode 5480 Series R6.2 Build 2013-05-01
SmartNode 5490 Series R6.2 Build 2013-05-01
SmartNode DTA Series R6.2 Build 2013-05-01

About this Release

R6.2 is a SmartWare Maintenance Release. Please see the White Paper about SmartWare software releases http://www.patton.com/solutions/SmartWare%20Release%20Strategy%20White%20Paper.pdf for more information about this terminology.

R6.2 was spawned in August 2012. Bugs are fixed until June 2013. End of customer support is in December 2013.

Supported Products

SmartNode 4110 Series (HW Version: 1.x, 2.x, 4.x)
SmartNode 4120 Series (HW Version: 1.x, 2.x)
SmartNode 4300 Series (HW Version: 2.x)
SmartNode 4400 Series (HW Version: 2.x)
SmartNode 4520 Series (HW Version: 1.x, 2.x, 4.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)
SmartNode 4830 Large Series (HW Version: 1.x, 2.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 5400 Series (HW Version: 5.x)
SmartNode 5480, 5490 Series (HW Version: 1.x)
SmartNode DTA Series (HW Version: 1.x, 2.x)

History of Solved CTS Cases

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

This Build Series 2013-05-01

12016 PSTN configuration on a R2 interface was cleared after a few calls

PSTN configuration on a R2 interface was correctly set to the DSP channels, however after a call this configuration was cleared on the DSP channel, resulting in the next call on this DSP channel using the default PSTN configuration instead of what is configured. This has been fixed and the DSP is reconfigured with the correct PSTN configuration after each call.

12190 Display error of ISDN binding

When executing the command *show call-control provider ISDN* the Binding would be displayed with garbage characters. This was due to an incorrect memory access which has been corrected now.

12211 Logging error when a WAN card is detected but unknown

The SN4970, SN4980, SN4990, SN5480 and SN5490 did not log anything if a WAN card was detected but could not be recognized and initialized. This has been fixed and now an error message will be logged if a WAN card is present but cannot be recognized for any reason.

Build Series 2013-03-04

12136 Crash during startup with large configurations
(also fixes 12113, 12085, 12132)

Two issues have been fixed that could cause a crash during startup of the SmartNode. Both cases are configuration related and are depending on the number of entries which have been configured in the specified configuration section.

- authentication-service / location-service
  The problem occurred if these two modes together contained the critical amount of configuration entries.

- dialplan-file
  The problem occurred if such a pre-configured and downloaded call routing file contained the critical amount of lookup entries.

12153 SIP overlap dialing causing unexpected reboot

The overlap dialing feature contained a bug causing unexpected reboot when receiving duplicated SIP offers. This bug has been fixed and overlap dialing is working properly now.

12178 SIP register not working in combination with loopback interface

It is now possible to register with loopback interface. Software changes reverted for 11872 and another solution applied in 11973. See full details above.

Build Series 2013-01-08

12120 Support for short delay re-INVITE in SBC scenario

The SIP state machine has been enhanced to support an SDP renegotiation happening very quickly in an SBC scenario. When receiving a new offer (re-INVITE) before the call status switches to the connected state on the calling side, the SIP state machine got into an error state.

12131 Spelling error corrected on BGP configuration web page

It now says "Border" instead of "Boader"

Build Series 2012-11-12

12062 G.SHDSL software upgrade progress indication updated

G.SHDSL software upgrade can sometimes last up to 10 minutes. The upgrade progress indication has been updated with this information as follow:

```
DO NOT UNPLUG THE DEVICE!
Subsystem is being upgraded, please be patient this may take up to 10 MINUTES!
```

12097 DSL supervisor log notifies wrong DSL line state

If the DSL supervisor is enabled (with the command **[node](port-dsl)[0/0]# supervisor [always | observe]**) and the modem is not answering for 1 minute, then the supervisor will notify a DSL link down followed by a DSL link up event instead of notifying that the modem is busy. This has been fixed in this release build.

Build Series 2012-09-11

11999 New Patton corporate style applied to web interface

New Patton look and feel has been applied to the SmartWare web interface. This transition is one way and the old look and feel is not reachable anymore. Custom web interfaces can be ordered with an OEM build.

12014 Wrong help text for blink command

A wrong help text was shown for the *blink* command. Now the help text has been changed in order to show the proper explanation.

12040 SIP *register back-to-back* command removed

The *register back-to-back* command has been removed from the *registration outbound* face in the location service since it did not have any effect.

12055 Flash hook on FXO interface broken

The flash hook behavior was broken on FXO interfaces. In fact the interface would hang in the flash hook state and ignore any subsequent events on that interface. This has been corrected.

Build Series 2012-07-13

11811 ISDN status errors on Web UI

All the ISDN capable network ports (BRI, E1T1) showed a DISPLAY_CMD error on their status page on the Web UI. This problem has been fixed and the related ISDN information is appearing again.

11835 MWI on FXS not working

On 6.T releases the Message-Waiting-Indication on FXS ports was not working anymore. This has been fixed.

11937 MWI Subscription failing

Caused by a software bug the contact address in SIP Subscription messages was containing an unnecessary trailing comma character. This has been fixed in the current software release.

11955 Dial tone played a second time

On SN4630 and SN4650 devices the dial tone was played a second time. This happened when an ISDN phone was connected to the SmartNode and the digit collection was done with a routing table in SmartWare. When the user picks up the phone the dial tone was played the first time to indicate that a number can be dialed. The tone stopped playing after the first dialed digit. But after completion of the number the dial tone was played again. This has been corrected and the dial tone is played only the first time.

11989 FXO dial-tone detection

On the SN4660/70 platforms the 'interface fxo' command 'dial-after dial-tone' didn't have any effect due to missing dial-tone detection. It could be worked around by configuring 'dial-after timeout' or by enabling any other call-progress tone detection feature like 'disconnect-signal busy-tone'.

12019 Invalid SDP offer in SIP provisional response

If the SmartNode receives an SIP INVITE without SDP information, forwards the call to an ISDN interface and later receives an ALERTING message with inband info from the ISDN peer, it would then create an SDP offer in the 180 RINGING provisional response. This works but goes against the SIP standard. Such a scenario later failed in the call setup process when the SmartNode finally realized that this was going against the standard's definition. This has now

been corrected and SmartWare does no longer create any SDP offer in a provisional response in such a scenario.

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.

CTS11214

SmartWare supports on Ethernet ports only the full functionality when the remote device does auto negotiation for link speed and duplex mode. Even when there is a setting configured auto negotiation is proceeded, but only with the configured capabilities. If connected switches do not auto negotiation there can be limited speed or even no link.

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.

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
```

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 R6.2, available from www.patton.com .

http://www.patton.com/manuals/SCG-r62.pdf

Current Revision:

Part Number: *07MSWR62_SCG, Rev. A*
Revised: July 25, 2012

Documentation

CD-ROM

The CD-ROM that is delivered with SmartNodes includes user documentation and tools for SmartWare R6.2:

- Software Configuration Guide SmartWare Release R6.2

- SmartNode Hardware Installation Guide

- TFTP Server

- Telnet

- Acrobat Reader

WWW

Please refer to the following online resources:

- Software Configuration Guide SmartWare Release R6.2:
  http://www.patton.com/manuals/SCG-r62.pdf

- SmartWare Configuration Library:
  http://www.patton.com/voip/confignotes.asp

How to Upgrade

1. You have the choice to upgrade to R6.2 with or without the GUI functionality.

To upgrade to R6.2 without the GUI functionality, enter the following command (telnet, console):

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

To upgrade to R6.2 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 R6.2 **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 R6.2 Build 2013-05-01* 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.