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September 2014

Remarks about the FW licence and FW update

Starting with FW-Version 00.06.07.00 every FW needs a licence file to enable the functionality of the target system. If the licence file is missing no calls can be made, only remote access is possible. The licence file is transmitted to the target system using the NovaTec configuration software or is already present in the target system if a new system is purchased. The following needs to be considered when updating a system:

For running systems or newly purchased systems using FW 00.07.00.55 (or higher) which are configured with NMP 6.5 (or higher):

Your system already has a valid licence file for the appropriate Firmware and NMP Version 6.5 or higher software allows the transmission of configuration data without loading a licence file. The licence file will stay in the target system. It will only be deleted if you overwrite it with another licence file or if you delete the target system's flash. You only need a new licence file if you update to FW version 00.07.01.00 or higher.

General remarks on FW updates:

In general a new licence is required whenever you update to a non bugfix FW version. A non bugfix version differs in more than just the last two numbers from the previous installed version.

Your release number consists of 8 digits in the following form: XX.XX.XX.YY

A new license is **not** required if only the last two digits of your current FW release differ from the release updated to. Meaning only the Y-variables in the release number change (e.g. update from 00.08.02.00 to 00.08.02.05).

All FW releases with changes to the X-variables require a new license (e.g. update from 00.08.01.00 to 00.08.02.00).



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NovaTec Release Information Firmware 00.08.02.13

1. Bug fixes included in this release

2. New features

3. Other changes

4. Known issues

5. Dependencies

6. System requirements

1. Below is a list of bugs that have been fixed in this release

Related to all systems:

- Incoming SIP calls with a suppressed caller number routed to an ISDN trunk were displayed with the caller IP address instead of caller number on the display of the called phone. The problem has been solved.

2. New features

None.

3. Other changes

None.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.



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5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

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NovaTec Release Information Firmware 00.08.02.12

7. Bug fixes included in this release

8. New features

9. Other changes

10. Known issues

11. Dependencies

12. System requirements

7. Below is a list of bugs that have been fixed in this release

Related to all systems:

- The OpenSSL stack included in the firmware had a MITM security problem (see “OpenSSL Security Advisory [05 Jun 2014]: SSL/TLS MITM vulnerability”. The problem has been solved. NovaTec recommends using only this firmware version for all security operations within the 00.08.02.xx firmware range.

8. New features

None.

9. Other changes

None.

10. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.



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11. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

12. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

June 2014

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We change the shape of the world

NovaTec Release Information Firmware 00.08.02.11

13. Bug fixes included in this release

14. New features

15. Other changes

16. Known issues

17. Dependencies

18. System requirements

13. Below is a list of bugs that have been fixed in this release

CCU4 related

- If fallback occurred on an outgoing SIP call (e.g. first SIP counter part e.g. CUCM is not available or out of order) then no ring back tone was heard by the calling user. The problem has been solved.

Related to all systems:

- It could happen that the target system performed a reset if a SIP trunk was closed. The problem has been solved.
- It could happen that the target system performed a reset if the distinguished subject name of the received TLS server certificate was longer than 200 signs. The distinguished subject name has the following format: "*subject name*:
/serialNumber=.../C=.../ST=.../L=.../O=.../OU=.../CN=...". The problem has been solved.
- It could happen that the target system performed a system reset if a response for an NTP request was received. The problem has been solved.
- If call take over was invoked on an analogue phone then a normal call was started parallel to the processing of the call take over feature. This lead to the problem, that if a user attempted to take over an already active call, the user heard a hang up tone and a ring back tone and the callee (destination of call take over) received a second, waiting call. The problem has been solved.
- If an analogue user tried to invoke call take over without having the permission to use the feature, then the internal dial tone was played out together with the hang up tone. The problem has been solved.



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- The line group number was not displayed on outgoing calls if the line group option “Number presentation” was set to “Line group”. Instead, the user number was displayed. The problem has been solved.

14. New features

None.

15. Other changes

None.

16. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

17. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

18. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

April 2014
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NovaTec Release Information Firmware 00.08.02.10

1. **Bug fixes included in this release**
2. **New features**
3. **Other changes**
4. **Known issues**
5. **Dependencies**
6. **System requirements**

1. **Below is a list of bugs that have been fixed in this release**

CCU4 related

- There was no audio connection after a blind transfer if the transferring and the transferred-to ringing user were connected to the same NovaTec gateway. The audio connection was fine if the two users were connected to different NovaTec gateways. The problem has been solved.

S3/CCU3 related

- It could happen, that one VoIP channel became un-accessible after a call transfer from an ISDN or analogue subscriber to two IP phones. The VoIP channel only came back to operational mode if the system was reset. The problem has existed since firmware release 00.07.03.01. The problem has been solved.
- It could happen that a calling ISDN or analogue subscriber had no audio connection after the called IP phone answered the call. The problem was only detected with unsecure calls going out to the SIP network and only if the first SDP answer was received in the OK for the INVITE. Because the problem was caused by a race condition it did not always happen in this call flow. The problem has been solved.
- After a blind transfer of two IP phones on the S3 line no audio connection was established between the two remaining users/IP phones. The problem did not occur on the SIP trunk. The problem has existed since firmware release 00.07.03.00. The problem has been solved.

2. **New features**

None.

3. **Other changes**

- A transferred call was cleared (blind transfer) if the transferring user was connected to a NovaTec gateway and one of the transferred user was using a Cisco 6961 phone. The



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clearing occurred when the ringing user answered the call. The problem has been solved.

- To accelerate the session establishment for encrypted data calls, the ANSAM settings for VoIP ports are not changed once again on OK/Connect. The change was originally introduced in version 00.08.02.08 but was lost due to a fault in the release process. Therefore it had to be re-integrated in this release.

4. Known issues

- This firmware is not released for CCU3. Therefore do not use this release for CCU3!
- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

January 2014

NovaTec Kommunikationstechnik GmbH



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NovaTec Release Information Firmware 00.08.02.09

1. Bug fixes included in this release

2. New features

3. Other changes

4. Known issues

5. Dependencies

6. System requirements

1. Below is a list of bugs that have been fixed in this release

CCU4 related

- A call transfer over SIP using the REFER method was cleared in an unexpected way if at least 10 "ICMP port unreachable" messages were received for sent RTP packets. In such cases the call was cleared to the ISDN side by sending a DISCONNECT message which did not include a positive or negative confirmation for the call transfer. This could "confuse" some ISDN devices (the transferring device). The transfer itself was successful anyway, means the transferred parties had a working two-way audio connection. The problem has been solved.

CCU3 and S3 related

- It was not possible to establish a call with the call flow "CCU3 → Cisco UCM → Cisco ISR → PSTN". The call was abandoned as soon as the called user answered the call. The problem has been solved. The problem existed since firmware release 00.08.02.07.

2. New features

None.

3. Other changes

None.

4. Known issues

- This firmware is not released for CCU3. Therefore do not use this release for CCU3!
- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.



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- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

November 2013
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NovaTec Release Information Firmware 00.08.02.08

1. **Bug fixes included in this release**
2. **New features**
3. **Other changes**
4. **Known issues**
5. **Dependencies**
6. **System requirements**

1. **Below is a list of bug fixes that have been resolved in this release**

CCU4 related

- The RMCS synchronization function has been improved.
- To accelerate the session establishment for encrypted data calls, the ANSAM settings for VoIP ports are not changed once again on OK/Connect.

CCU3 and S3 related

None.

2. **New features**

None.

3. **Other changes**

None.

4. **Known issues**

- This firmware is not released for CCU3. Therefore do not use this release for CCU3!
- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.



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- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

November 2013
NovaTec Kommunikationstechnik GmbH



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NovaTec Release Information Firmware 00.08.02.07

1. Bug fixes included in this release

2. New features

3. Other changes

4. Known issues

5. Dependencies

6. System requirements

1. Below is a list of bug fixes that have been resolved in this release

CCU4 related:

- One sided or missing audio connections which existed since the implementation of ANSAM telephone events on the CCU4 have been fixed. This includes fixes for the following call flows:
 - Missing audio connection on calls from an IP phone to an ISDN trunk behind a CCU4
 - One sided audio connection after a blind transfer. The transferred parties were located in different clusters.
 - One sided audio connection after the end of a 3 party conference. The conference was established between A and C in the same cluster and B in a different cluster. The one sided audio connection occurred if the conference was ended by call clearing from B.
- MLPP calls failed, if the call came in over SIP and required to pre-empt a VoIP channel (codec) used by a lower-priority call. In this case both calls were cleared. The problem has been solved.
- Channels reserved for RMCS calls were used by normal SIP calls too. This led to failed data calls if all channels were busy and MLPP was used to pre-empt a lower-priority call. The problem has been solved.
- If a Telnet connection over IP was established and terminated with the command "exit", the CCU4 performed a system reset. The problem has been solved.
- In case of calls from an ISDN subscriber going out over an ISDN trunk a busy tone was not played if an alerting message had been received before call clearing. This happened e. g. if two NovaTec-GWs were connected over an ISDN trunk and the called GW sent a fake alerting before the called subscriber was considered busy. The problem has been solved.
- The CCU4 did not use the clock from the RMCS server but its own internal clock when a data call was established and a RMCS connection was established for synchronisation. The problem has been solved.



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- If a CCU4 received its reference clock for synchronisation from a SUP4 card (ordering number: 1F5020-8, 1F5020-9) and U lines based on ULU boards were also installed in the system, it could happen that noise was heard on the phones connected to the ULU lines or bit errors occurred during a connection. The problem has been solved.

CCU3 and S3 related:

None.

Related to all systems:

- It could happen that a system running with an invalid SIP TLS configuration (e. g. certificate of the NovaTec-GW did not match the certificate of the SIP counterpart) performed a reset after some minutes uptime. The problem has been solved.
- The attempt of an analogue subscriber to transfer two calls during an active 3 party conference was not rejected. The transfer failed and resulted in a missing audio connection. The problem has been solved. A transfer attempt during an active 3 party conference is now rejected. The rejection does not lead to a clearing of the 3 party conference. It will remain active.
- Call-Take-Over was not possible if an ISDN subscriber used overlap dialling to dial “*14*Number” and if MLPP was allowed for that subscriber. The problem has been solved.
- After a call transfer in the SIP network the number of the new counterpart was shown in the display of the subscriber even if it was suppressed. The problem occurred if the transferred subscriber was connected to a NovaTec-GW. The problem has been solved.
- If a call to an analogue subscriber was not cleared before four minutes the analogue phone kept on ringing even if the call was cleared by the caller. The analogue phone only stopped ringing after a system reset. The problem has been solved.
- Depending of the timing and delay in the network, it could happen that TLS connections with NAMES were interrupted and therefore the corresponding job failed. The problem has been solved.

2. New features

None.

3. Other changes

None.

4. Known issues

- This firmware is not released for CCU3. Therefore do not use this release for CCU3!
(added Nov 6, 2013)
- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.



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- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

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NovaTec Release Information Firmware 00.08.02.06

Important notice for CCU4 based systems:

In case that the CCU4 needs to be updated from version 00.08.02.05 or older it has to be send to NovaTec first to update the Codec hardware. If you update your CCU4 without sending it to NovaTec no calls will be possible with this firmware version.

1. **Bug fixes included in this release**
2. **New features**
3. **Other changes**
4. **Known issues**
5. **Dependencies**
6. **System requirements**

1. **Below is a list of bug fixes that have been resolved in this release**

CCU4 related:

- Sporadically restarts happened on synchronisation requests of the gateways, but only when CCU4 was in RMCS mode. These restarts had been detected in the lab environment only in conjunction with gigabit switches. The problem has been solved.
- The detection of modem or fax tones (ANS, ANSAM) and conversion of these tones into telephone events was not supported by the CCU4 in previous firmware versions. This could lead to problems with modem or fax connections if the far side SIP gateway was relying on these events to disable its own echo canceller (e.g. Cisco VGs). The problem has been solved.
- The configuration setting of the DSCP and TOS values had no influence on the RTP stream generated from a CCU4. The problem has been solved.
- It could happen that the establishment of many simultaneous calls failed. The problem has been solved. So far the problem was only detected in the NovaTec labs when a call was looped over 128 channels repeatedly.
- The CCU4 entered a continuous reset state if a configuration with 128 configured BRI interfaces was transmitted to the target system. The problem has been solved.
- An incoming SIP MLPP call failed if the destination was an analogue phone or if the destination was an ISDN phone and both b-channels were busy in the moment in which the call arrived. The call could not be established and was cleared in the moment in which the destination picked up the handset. The problem has been solved.



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CCU3 and S3 related:

None.

Related to all systems:

- The layer 3 CLI commands for call forwarding were case sensitive. Meaning, the commands were only executed if the whole command was typed in lower case letters. The problem has been solved.
- It could happen that the codec selection (codec negotiation) in the NovaTec-GW was unsuccessful if the codec G.729 had a higher priority than the codec G.711 μ -law. In this case the call was rejected by the NovaTec-GW and failed. The problem has been solved
- The target system entered a continuous reset state if a configuration was transmitted to the target system which included a certain short code dial plan content. The problem has been solved. The problem only occurred if a short code dial plan included at least one number with an even length. If the short code dial plan was empty or included only numbers with an odd length no problems occurred.
- Ever since the flag "Negotiate telephone-events 32-35 (ANS, ANSAM tones)" was implemented it could happen that during codec negotiation only data codecs were offered for voice calls by the NovaTec-GW. The problem has been solved.
- If a subscriber tried to take over a ringing call without the permission to use the service "call take over" the call failed. The failed call was not visible in the NovaTec Call Server Tool if the subscriber used en-bloc dialling. The problem has been solved. The failed call is now visible in the Call Server.

2. New features

None.

3. Other changes

None.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the called partner behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the called partner is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from an ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in



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the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

April 2013

NovaTec Kommunikationstechnik GmbH



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NovaTec Release Information Firmware 00.08.02.05

1. Bug fixes included in this release

2. New features

3. Other changes

4. Known issues

5. Dependencies

6. System requirements

1. Below is a list of bug fixes that have been resolved in this release

CCU4 related:

- A call transfer was not successful if the CCU4 received a REFER message from a SIP device. After the failed transfer the held party still heard music on hold and the other transferred party heard nothing. The problem has been solved.
- It could happen that layer 1 on a BRI in slave mode did not come back up to active state after a system reset. The problem has been solved. The problem did only occur if an old BRI card was used on the CCU4 (article numbers 1F5020-2, 1F5020-P, 1F5021-2).
- Call forwarding failed if a call, which should have been forwarded, came in over an ISDN trunk or cross connection. The problem has been solved. The problem did not occur if the call came in over SIP or an analogue or ISDN subscriber line.

CCU3 and S3 related:

- A three way audio connection could not be established in a certain scenario. The problem has been solved. The problem did not occur if, in the call flow below, B was not using an analogue phone or if the call was established in the other direction (B called A). The problem only occurred on the following call flow:
 1. A called B (analogue phone)
 2. B answered the call
 3. B put A on hold
 4. A heard music on hold
 5. B called C
 6. C answered the call
 7. B and C had a 2 way audio connection
 8. B attempted to establish a 3 party call
 9. The attempt failed
 10. B was talking to C whilst A still heard music on hold



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Related to all systems:

- The call home event “DHCP-Application NMS/NAMES” was never reported. The problem has been solved.
- It could happen that a DHCP request for a new IP address was not successful. The problem did only occur sporadically. The problem has been solved.
- The command “dhcpconf” was not executed if used in the Trace Info Client CLI. The problem has been solved. The problem did not occur using telnet.
- It could happen that calls routed over the LCR module led to problems if the calls were not answered. The result was that after some days of operation ISDN→SIP calls were not established end-to-end. The problem has been solved.
- On interworking scenarios between S3 line and CUCM a calling user heard a ring back tone on calls to the S3 line even if the called phone was busy or not attached to the basic rate interface. The problem has been solved by introducing a new flag called “Do not send 183 Session Progress”. The problem can be avoided by activating the flag. Starting with NMP 7.2.0.1 the flag is labelled “Do not send 183 Session Progress”. In older NMP versions the flag is labelled “Reserved [7]” but it is also fully functional.
- It was not possible to establish more than 128 calls on a RMCS server, even if more VoIP channels were available. The problem has been solved.
- It was not possible to transmit a new configuration to a target system if a previous configuration upload process had been interrupted or disconnected during the transmission. A system reset was required to make the system accept a new configuration. The problem has been solved. An inactivity timer now monitors whether new packets arrive at the target system or not. If no new packets arrive because the connection has been interrupted or the NMP was closed etc. the timer will run out after 30 seconds and the connection is cleared. After the timeout the target system will accept a new configuration attempt.
- The command “dhcpconf” was not executed again, if it was entered repeatedly with the same parameters. The problem has been solved. Now the command will always be executed again and a new DHCP request will be performed by the target system. Please keep in mind that even if the target system sends a new DHCP request it may receive the same IP address as before from the DHCP server.
- If a SIP trunk in the NovaTec configuration had been configured to drop an incoming call to a unknown number to a configured subscriber the call still failed. The problem has been solved. Now, if configured, a call to an unknown number coming in on a SIP trunk will be dropped to the configured subscriber/terminal.
- The time via NTP was only queried once after a system reset. The problem has been solved. Now a request to the NTP server will be sent in the configured intervals.
- The information elements Bearer-Capability, Low-Layer-Compatibility, High-Layer-Compatibility and Subaddress (calling and called) were not passed through transparently between two NovaTec-GWs even if SIP+ was configured. The problem has been solved.



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2. New features

None.

3. Other changes

- The CCU4 did not accept an SSRC change in the SRTP stream like the BCU and S3. This lead to one way audio connections after the SSRC change. Usually an SSRC change should not occur in the SRTP stream because it conflicts with the RFC for SRTP. A workaround allows now such a change. SRTP connections with devices who act conforming to the RFC are not influenced by this workaround.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.
- Sporadically, restarts may happen on synchronisation requests of the gateways, but only when CCU4 is in RMCS mode. These restarts have been recognized in the lab environment only in conjunction with gigabit switches. This problem is actually under analysis.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

February 2013

NovaTec Kommunikationstechnik GmbH



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NovaTec Release Information Firmware 00.08.02.04

- 1. Bug fixes included in this release**
- 2. New features**
- 3. Other changes**
- 4. Known issues**
- 5. Dependencies**
- 6. System requirements**

- 1. Below is a list of bug fixes that have been resolved in this release**

CCU4 related:

- A call transfer was not successful if the CCU4 received a REFER message from a SIP device. After the failed transfer, the held party still heard music on hold and the other transferred party heard nothing. The problem has been solved.
- If a user who already was a member of a 3 party conference call established a second 3 party conference for the same user/msn on the same CCU4, then the first conference was disturbed. The problem has been solved. Now, the attempt to establish the second 3 party conference will be rejected. This restriction has no influence on the maximum number of separate 3 party calls. It is still possible to establish 42 simultaneous three party calls on the CCU4.
- It was not possible to transfer a call to a 3 party conference. Example call flow:
 1. A established a call to B.
 2. A established a call to C.
 3. A starts a 3 party call.
 4. A, B and C could talk to each other.
 5. B put the conference call on hold.
 6. B established a call to D.
 7. B transferred D to the conference call.
 8. B's call was cleared.
 9. D was part of the conference but could only talk to A.
 10. C could neither talk to A nor to D.The problem has been solved.
- The LEDs on the Ethernet socket did not indicate a duplicate IP address. The problem has been solved.
- On calls from an ISDN phone to an ISDN trunk (no VoIP) it could happen that no ring back tone or no busy tone was heard. The problem has been solved.



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CCU3 and S3 related:

- The timer for the detection of the fax tones is now set to 400 ms. This change solves interworking problems between Cisco and NovaTec regarding the sending of ANSAM telephone events. The result was that the echo canceller was not disabled on the Cisco side on calls coming from the PSTN to a NovaTec GW. This caused a lower baud rate on super G3 Fax calls. The problem has been solved.

Related to all systems:

- The call home event "DHCP-Application NMS/NAMES" was never reported. The problem has been solved.
- It could happen that a DHCP request for a new IP address was not successful. The problem did only occur sporadically. The problem has been solved.
- The command "dhcpconf" was not executed if used in the Trace Info Client CLI. The problem has been solved. The problem did not occur using telnet.
- It could happen that calls routed over the LCR module led to problems if the calls were not answered. The result was that after some days of operation ISDN→SIP calls were not established end-to-end. The problem has been solved.
- On interworking scenarios between S3 line and CUCM, a calling user heard a ring back tone on calls to the S3 line even if the called phone was busy or not attached to the basic rate interface. The problem has been solved by introducing a new flag called "Do not send 183 Session Progress". The problem can be avoided by activating the flag. Starting with NMP 7.2.0.1 the flag is labelled "Do not send 183 Session Progress". In older NMP versions the flag is labelled "Reserved [7]" but it is also fully functional.
- If the REFER method was used to perform a transfer in the CUCM the transfer failed when the second call was an incoming call. To be more precise the transfer failed, if the call which was active at the time of the transfer was an incoming call. This means the call transfer was successful if B called A, A called C, A transferred the call. In the same scenario, if A switched between the calls and the call B – A was active at the time of the transfer the transfer failed. The problem has been solved.
- If the time was set using NTP or call home the resolution of the time setting was 1 minute. The problem has been solved. The time setting is now done with a resolution of one second.
- The determination of a few basic services was wrong. The service fax group 4 was determined as fax group 2/3. The services eurofile, file transfer and access management, audio graphic conference, videoconference and videotelephony were determined as unrestricted digital information (data). The problem has been solved. It only had influence on the feature call forwarding. E.g. if a call forwarding had been activated for fax group 2/3 then a fax group 4 call would have also been forwarded because it was determined as fax group 2/3.
- The field "Dest. IP" and "Dest Port" was always 0 in the SIP leg of the CDRs. The problem has been solved. The fields now show the IP address and port of the direct SIP signalling counterpart (remark: for a NovaTec ↔ CUCM ↔ IP phone call it would be the address of the CUCM).



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- If a configuration with deactivated TLS was transmitted to the target system already existing TLS certificates were deleted except the TLS certificates for SIP. The problem has been solved.
- NAMES could not access the target system if the TLS option “Client authentication” was inactive. The reason was that in this case the target system did not transmit its certificate list and therefore the TLS connection could not be established. The problem has been solved.
- It could happen that modem connections are not successful if the calling SIP-GW did not support the playback of ANS and ANSAM tones to the ISDN. The problem has been solved by introducing a new configuration option “Negotiate telephone-events 32-35 (ANS, ANSAM tones)”. Please see the online help of NMP 7.2.0.1 or higher for more information.

2. New features

None.

3. Other changes

CCU4 related:

- The allocation of the Ethernet interfaces has been changed. Previously if only one interface was activated the left interface was always used for SIP, RTP and maintenance and the right one was out of order. If both interfaces were activated the left interface was used for RTP and the right one for SIP and maintenance. Now the left interface is always used for SIP and maintenance no matter whether one interface or both interfaces are active. RTP will run additionally on the left interface if only one interface is active or alone on the right interface if both interfaces are active. If the CCU4 is used in an S20 chassis the left interface is the upper and the right the lower one.

Related to all systems:

- The information shown in the field “service” has been changed. Previously it showed the content of byte 4 of the high layer compatibility information element (see ETSI ETS 300 102-1 or Q.931). Because this information was not sufficient to distinguish between the different basic services the content of the field has been changed. It now shows the basic service of the call. The basic service is determined by the content of the bearer capability and high layer compatibility information element according to table D.5 of ETSI EN 300 196-1. The values identifying the different basic services are described in table D.6 of ETSI EN 300 196-1.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller is informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.



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- Call forwarding busy on the S3 line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with “Busy here”. But the destination of the call has no active call. The problem is caused by the “Busy trigger” in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

November 2012

NovaTec Kommunikationstechnik GmbH



We change the shape of the world

NovaTec Release Information Firmware 00.08.02.03

1. Bug fixes included in this release
2. New features
3. Other changes
4. Known issues
5. Dependencies
6. System requirements

1. Below is a list of bug fixes that have been resolved in this release

CCU4 related:

- It could happen that calls on the CCU4 using a line group had no audio connection. The problem has been solved.
- If a member of a 3 party call on the CCU4 left the conference to establish a second call, then the 3 party audio connection was not re-established after that member cleared his second call and re-entered the conference. Depending on the call state which that members call had before the conference was started, it could happen that he heard nothing or music on hold or that the communication between the other two parties was interrupted. The problem has been solved.
- If a ULU board was taken out and put back (hot plug) in a CCU4 driven system, then layer 1 on the U lines could not be re-established. Layer 1 was only re-established when the system was restarted after putting back the ULU. The problem has been solved.
- If a CCU4 was configured to use VLAN, then the setting did have no influence on the packets of the RTP stream. The RTP stream was encoded in the same way as if VLAN was not activated. The problem has been solved.

Related to all systems:

- The RTP stream of a NovaTec gateway was always used as a clock source even if the corresponding call was a voice call. The problem has been solved.
Now, the RTP stream will only be used as the clock source if the call is a data call (...and if the clock priority of the RTP stream is higher than the priority of the currently selected clock source).

2. New features

None.



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3. Other changes

None.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller will be informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.
- If the REFER method is used to perform a transfer in the CUCM the transfer will fail when the second call is an incoming call. The transfer will be successful if both calls are outgoing or if at least the second call is outgoing.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

September 2012

NovaTec Kommunikationstechnik GmbH



We change the shape of the world

NovaTec Release Information Firmware 00.08.02.02

1. **Bug fixes included in this release**
2. **New features**
3. **Other changes**
4. **Known issues**
5. **Dependencies**

1. **Below is a list of bug fixes that have been resolved in this release**

CCU3 and S3 related:

- It could happen that the S3 or CCU3 went into an “all VoIP channels busy” state. This lead to the problem that no VoIP calls were possible. The problem has existed since firmware version 00.08.02.01 and has now been solved.

CCU4 related:

- In some situations it could happen that the switching in the CCU4 stopped working. In such a situation it was possible to establish calls but after answering the call no audio connection was established and the caller and callee did not hear the other party. The problem was encountered on calls which did go out using SIP and were routed back to the same CCU4 (e. g. CCU4 internal call over CUCM) and on calls that were forwarded multiple times to destinations on the same CCU4 and finally forwarded to an IP phone. The problem has been solved.
- On the CCU4 it could happen that no ringtone was heard if an analogue subscriber was called multiple times in a row. The problem has been solved.

2. **New features**

None.

3. **Other changes**

None.

4. **Known issues**

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller will be informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because



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of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.

- Call forwarding busy on the S3 line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.
- If the REFER method is used to perform a transfer in the CUCM the transfer will fail when the second call is an incoming call. The transfer will be successful if both calls are outgoing or if at least the second call is outgoing.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

September 2012
NovaTec Kommunikationstechnik GmbH



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NovaTec Release Information Firmware 00.08.02.01

- 1. Bug fixes included in this release**
- 2. New features**
- 3. Other changes**
- 4. Known issues**
- 5. Dependencies**

1. Below is a list of bug fixes that have been resolved in this release

CCU4 related:

- If a CCU4 was configured to use DHCP (setting "DHCP on (Default)"), then the CCU4 did perform a continuous reset after the configuration was transmitted to the target system. The problem has been solved.
- On the CCU4 a SIP call was not disconnected if no RTP packets had been received within 10 seconds after the call had been answered. The problem has been solved.
- A CCU4 could not be used as a RMCS-Server. The CCU4 did not accept any incoming RMCS calls. The problem has been solved.
- The auto negotiation on the Ethernet interfaces of the CCU4 did not work with some IP switches (e. g. with the vendor TP LINK). The result was that the Ethernet interface did not come up if it was connected to a gigabit switch. As mentioned before the problem did only occur with certain switches. The problem has been solved.
- A possible system reset on CCU4 based systems has been fixed. The problem could occur if many simultaneous calls were cleared at the same time.
- It was not possible to sign NMS certificates on the CCU4 using SCEP. The problem has been solved.
- If DTMF was used on the CCU4, then the call lost its audio connection after the first DTMF digit was played. Also, all subsequent calls had no tones and no audio connection. A system reset was required to bring the CCU4 back to work properly. The problem has been solved.
- The following switching problems on the CCU4 have been solved:
 - Sporadically no audio connection after a call transfer
 - Call was cleared 10 seconds after a call transfer
 - No audio connection on IP to ISDN calls if the ISDN interface was configured as cross connection subscriber line or trunk line



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Related to all systems:

- The connected party number received from the SIP side (e. g. from CUCM) was not properly forwarded to the ISDN phone if the number was suppressed. Instead of seeing that the number is suppressed the caller saw an IP address in the display of his phone. The problem has been solved. The suppressed connected party number from the SIP side is now forwarded to the ISDN side with the indication "presentation restricted".
- It could happen that a RMCS call was not cleared by the RMCS client after the last data call had ended. The problem has been solved.
- If TLS was used the setting "Connect channel before a connect message has been received..." in the trunk group settings did not work correctly. The NovaTec gateway always created an own ring tone regardless of the setting. The problem did not occur on systems not using TLS. The problem has been solved.
- It could happen that a target system booted in default mode after transmitting a configuration with a music on hold file. The problem has been solved.
- A RMCS client performed a system reset if the connection to the RMCS server could not be established due to a mismatch in the SRTP configuration of both systems. The reset occurred if the client was setup to allow SRTP only but the server did not allow SRTP. The problem has been solved. With such a faulty configuration it is still not possible to establish a RMCS call but the client will not perform a system reset anymore.
- If the NovaTec gateway did not receive a ring tone from the SIP side it could happen that no ring tone was send to the ISDN side. The problem did only occur if the ISDN interface was configured as cross connection subscriber line or trunk line. The problem has been solved.

2. New features

None.

3. Other changes

None.

4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller will be informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in



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the CUCM configuration.

- If the REFER method is used to perform a transfer in the CUCM the transfer will fail when the second call is an incoming call. The transfer will be successful if both calls are outgoing or if at least the second call is outgoing.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

August 2012

NovaTec Kommunikationstechnik GmbH



We change the shape of the world

NovaTec Release Information Firmware 00.08.02.00

- 1. Bug fixes included in this release**
- 2. New features**
- 3. Other changes**
- 4. Known issues**
- 5. Dependencies**
- 6. System requirements**

- 1. Below is a list of bug fixes that have been resolved in this release**

CCU4 related:

- Data calls on the CCU4 were rejected if the caller and callee both were destinations on the same CCU4. The problem did not occur on all call flows and depended on the behaviour of the called device. The problem is solved.

- 2. New features**

Related to all systems:

- The firmware supports a new configuration option which controls the behaviour on ISDN trunk line and cross connection. If the option is activated the NovaTec gateway will always connect through the B-channel when the call is alerting even if the called PBX does not signal/indicate the presence of a ring back tone. If the option is deactivated the NovaTec gateway will play its own ring back tone when the call is alerting and the PBX does not signal/indicate the presence of a ring back tone. This feature requires NMP 7.2.0.0. The new option can be found under "NovaTec-System/Trunk Group". Detailed information on the interworking of the current and previous NMP and firmware versions can be found in the NMP 7.2.0.0 online help.
- The firmware is now able to establish unsecure call home calls if TLS is activated but the certificates have not yet been signed. Before this change no call home calls were possible in that state because the system tried to establish secure calls but without signed certificates all secure calls failed, of course. To have successful call homes in this state an unsecure NMS or NAME Server must be configured in the target system. This feature enables NAMES to perform the call home job "Cert Sign Job" (sign certificate on incoming call home).

- 3. Other changes**

None.



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4. Known issues

- With a S3 connected to a CUCM as a line device it can happen that a calling IP phone receives a ring back tone even when the callee behind the S3 is busy or not plugged in.
- In case an ISDN phone behind a NovaTec gateway is busy it will take three seconds until the caller will be informed that the callee is busy. This behaviour is mandatory for the ISDN bus and is specified in European and international ISDN standards. This is not a bug but because of this ISDN behaviour the user experience is different compared to SIP to SIP or SIP to analogue calls.
- Call forwarding busy on the S3 Line is not working if it is activated from the ISDN or analogue phone. The locally forwarded call from the S3 is rejected from CUCM with "Busy here". But the destination of the call has no active call. The problem is caused by the "Busy trigger" in the CUCM configuration for the S3. As a workaround call forwarding busy can be activated in the CUCM configuration.
- If the REFER method is used to perform a transfer in the CUCM the transfer will fail when the second call is an incoming call. The transfer will be successful if both calls are outgoing or if at least the second call is outgoing.

5. Dependencies

A list of dependencies for the different features can be found on our website <http://www.novatec.de>.

6. System requirements

This firmware supports Cisco Unified Call Manager version 8.6 to 9.1.

July 2012
NovaTec Kommunikationstechnik GmbH