



CTIMUX for Panasonic TSP

Installation Manual

Version 1.0

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Overview

Main Features

- The Panasonic TSP and Client CTI Applications transparently connect through the CTIMUX and operate, as they would be connected directly to the PBX. The CTIMUX does not affect the normal PBX functionality over the CTI link. It only allows multiple CTI applications to share the same CTI link.
- The management of the PBX devices that can be controlled through CSTA is done by the applications themselves, this means that the applications are free to try to use any of these devices they want even if the device is in use by another application. In this case the PBX will respond with the appropriate busy message.
- Support for up to 8 (eight) CSTA Client CTI Applications, including Panasonic TSP, working concurrently with the same PBX.
- Send E-mail to user specified email address when the TSP cannot initialize or is disconnected from PBX.
- Automatic reconnect to the PBX when TSP to PBX connection is lost. The reconnection is transparent to Panasonic TSP.
- Connect to NS1000 failover CTI when master NS1000 fails.
- Implement automatic NS1000 CTI link reset in the case of REJECT answer from PBX is received for a user defined number of times and assuring that PBX changes are implemented.
- Run as a Windows service.

System Specifications

Supported PBXs

PBX Model	Required Software File Version
KX-NS1000	Firmware Versions 3 or later

Operating Systems

OS	32-bit	64-bit	Notes
Microsoft Windows 7 Professional	Yes	Yes	UAC disabled
Microsoft Windows 8	Yes	Yes	UAC disabled
Windows Server 2008 SP1	Yes	Yes	UAC disabled
Windows Server 2012	Yes	Yes	UAC disabled

Hardware Requirements

At the minimum, the host computer has to have the following configuration assuming that the only application running on that host is the CTIMUX Server.

CPU	Intel® Core™ i3-530 2.93 GHz or faster
RAM	2 GB
Network	100 Mbps
HDD	50 MB free disk space

The CTIMUX is able to run either on a separate host (see the above requirements) or it can be installed on the same host with the Panasonic TSP or 3rd-party CTI Applications in which case the system requirements are higher and depend on the resources used by the other applications running on the same host with CTIMUX.

Installing CTIMUX

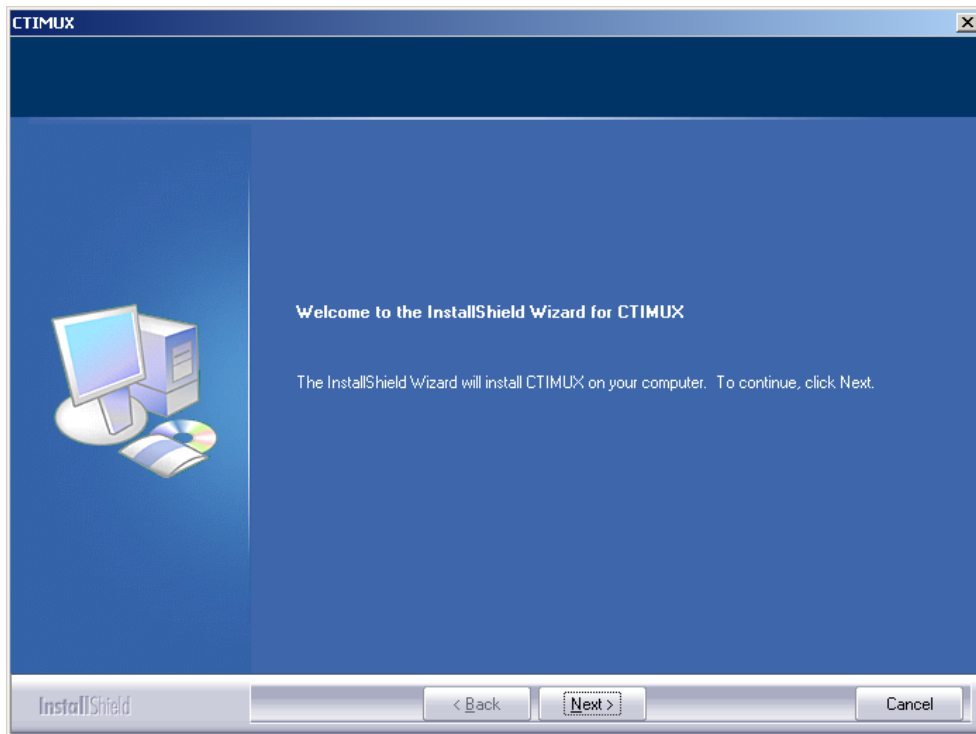
Software Installation

To install the CTIMUX software:

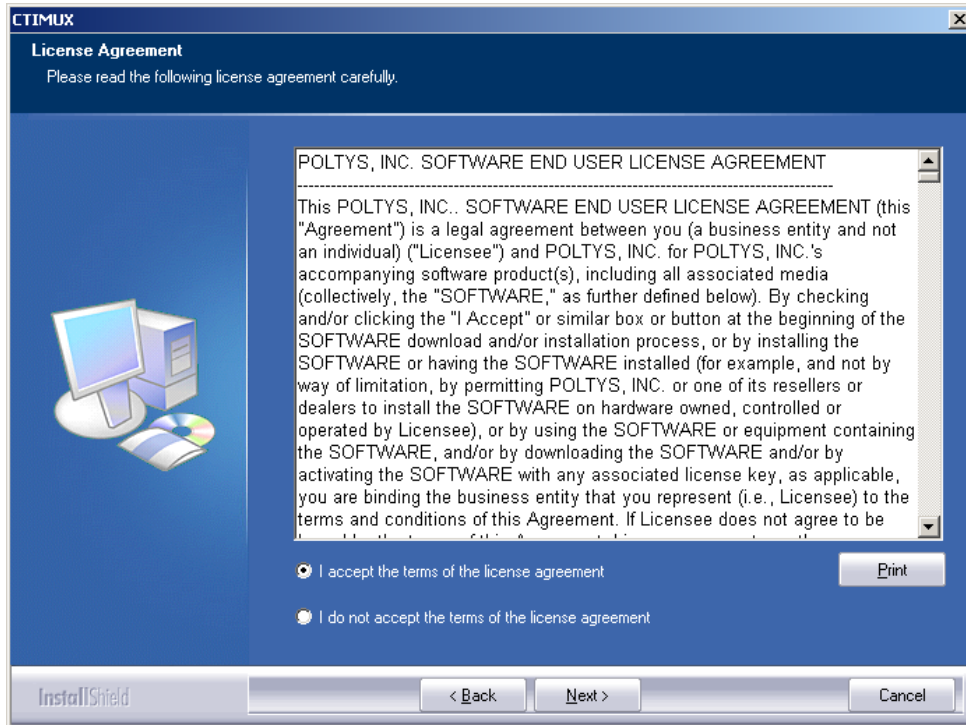
1. Double-click on **CTIMUX_Setup.exe** on the installation CD to start the CTIMUX installer application.



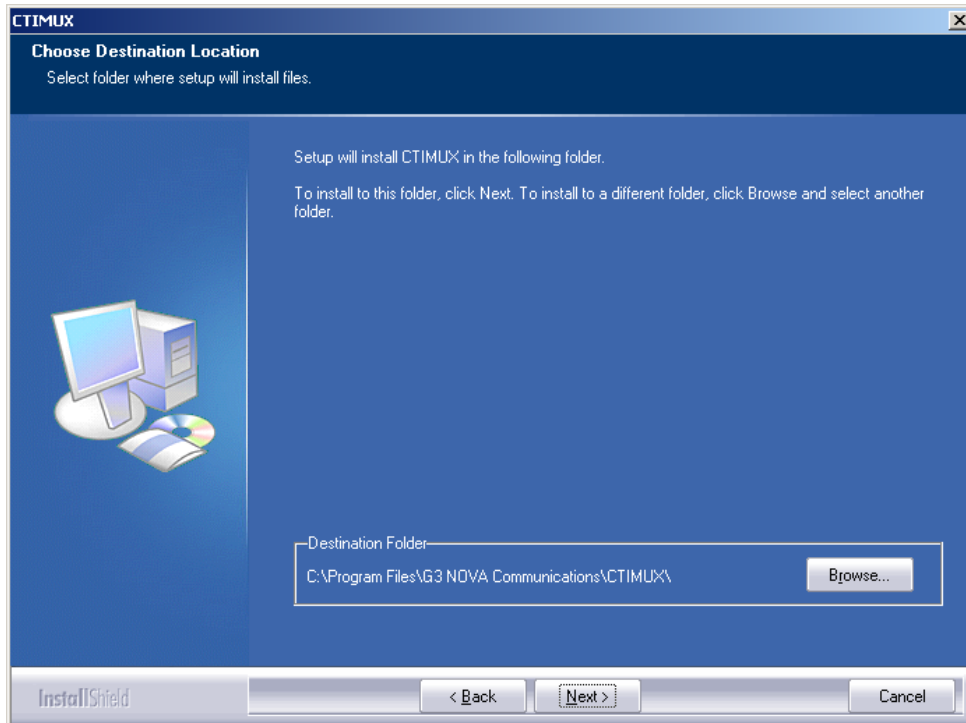
2. The *CTIMUX Setup Wizard* is displayed. Click the **Next** button.



- The *License Agreement* is displayed. If you agree with the terms and conditions presented, check the *I accept the terms of the license agreement* checkbox.

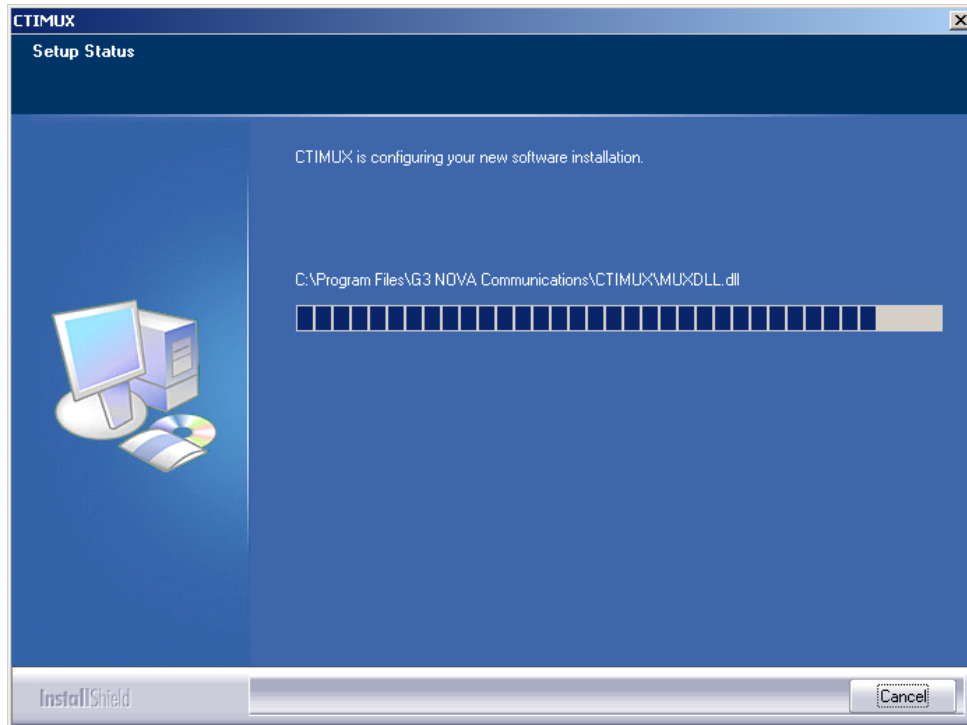


- Click the **Next** button. The *Choose Destination Location* screen appears.

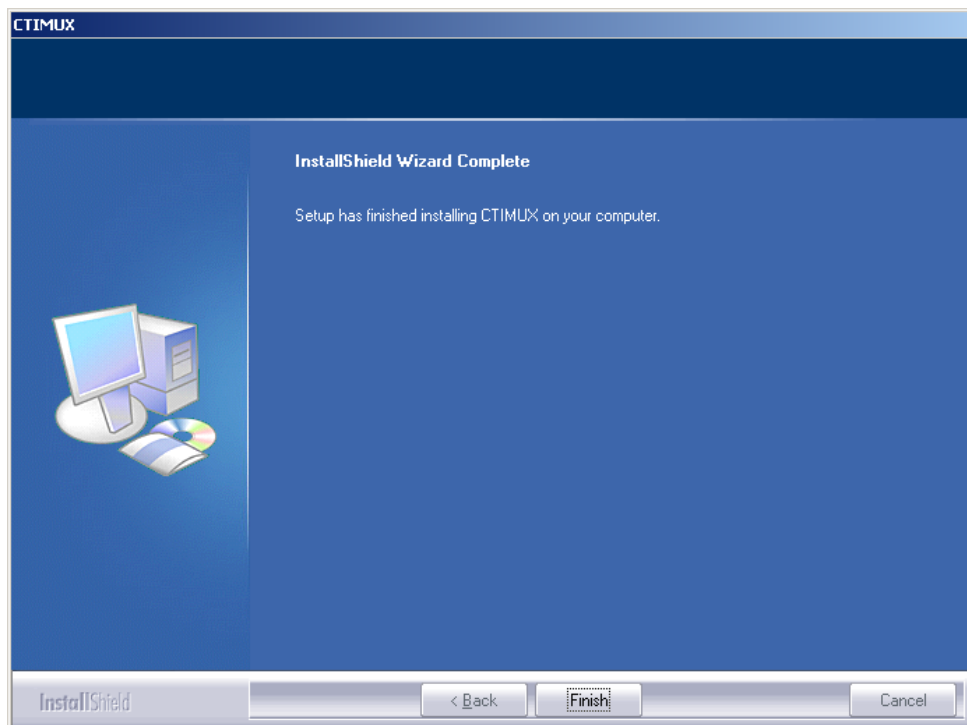


- Choose the installation directory for the CTIMUX by browsing for a folder and click the **Next** button.

6. The installation begins and the *Setup Status* screen displays the current progress status.

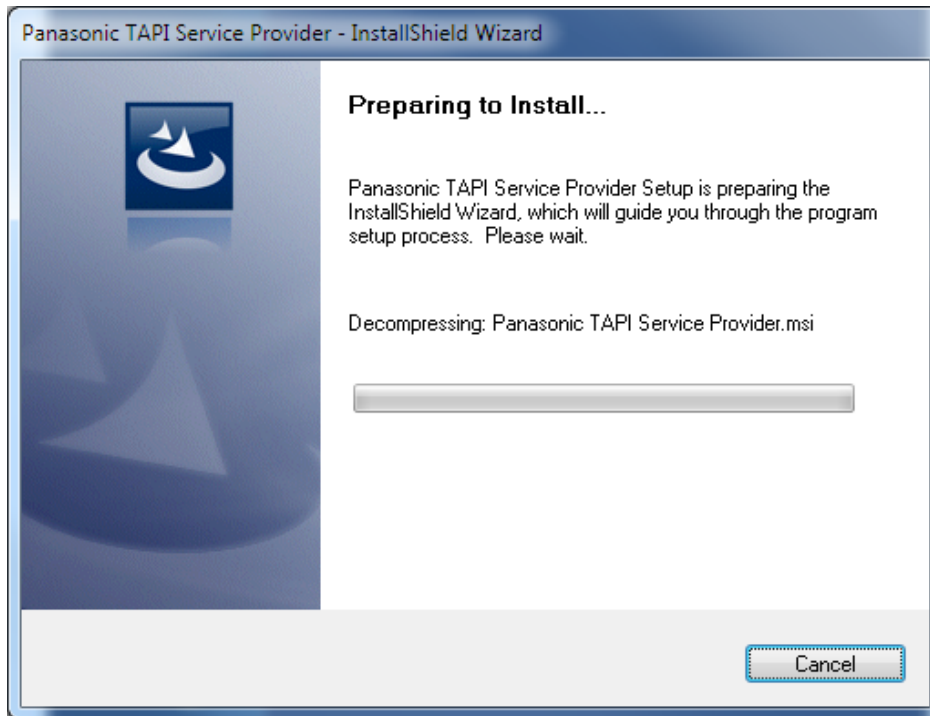


7. Finally, the wizard informs you that the installation is completed.

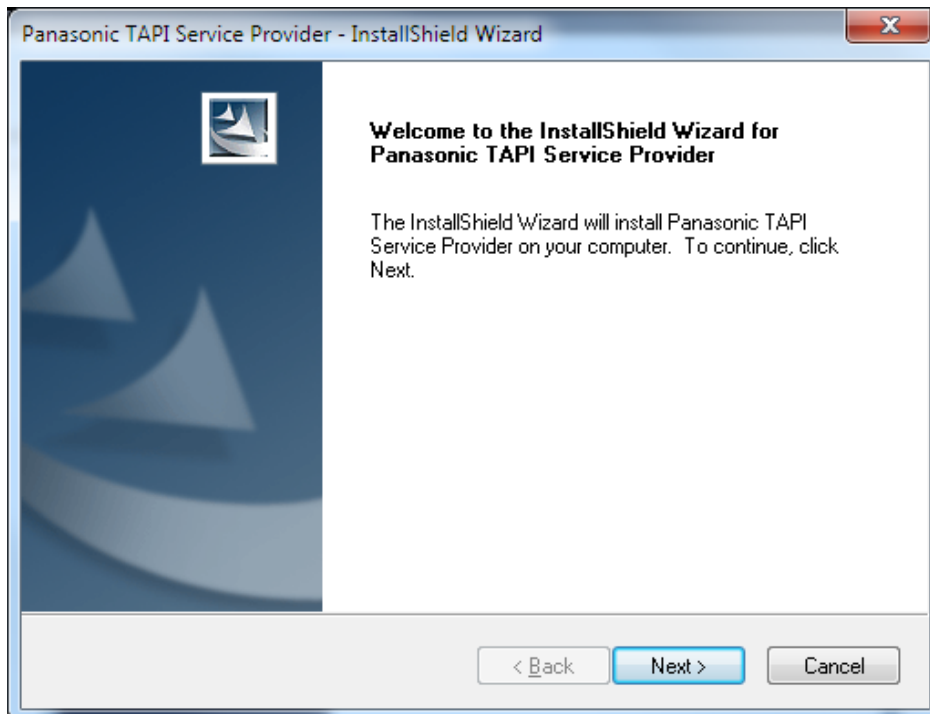


8. Press the **Finish** button to close the wizard. Now, the CTIMUX software has been successfully installed.

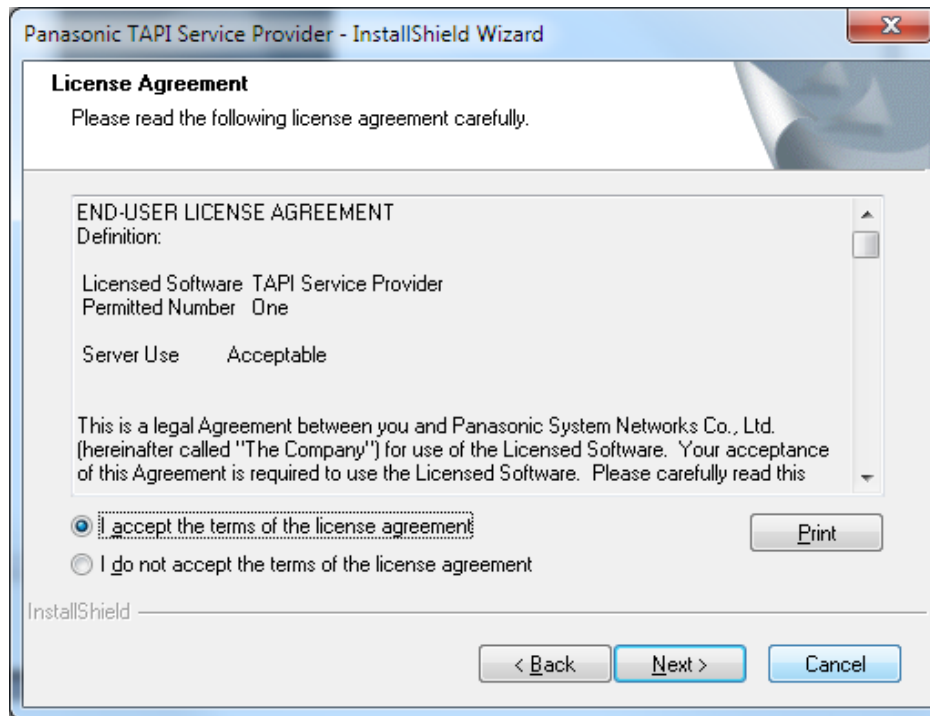
9. The installation continues with Panasonic TSP.



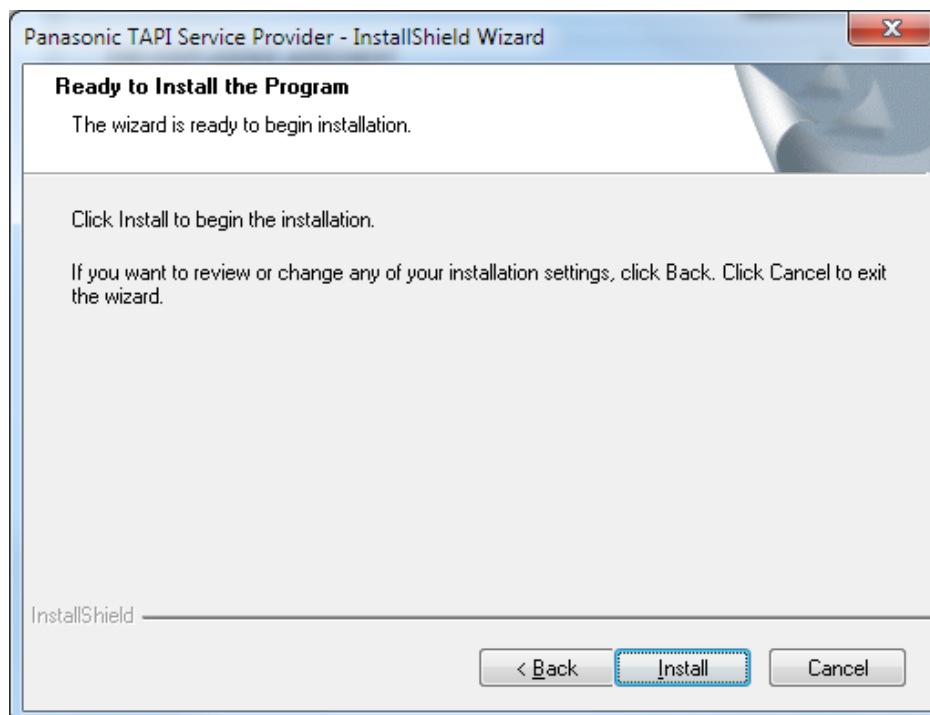
10. Click on **Next >** button.



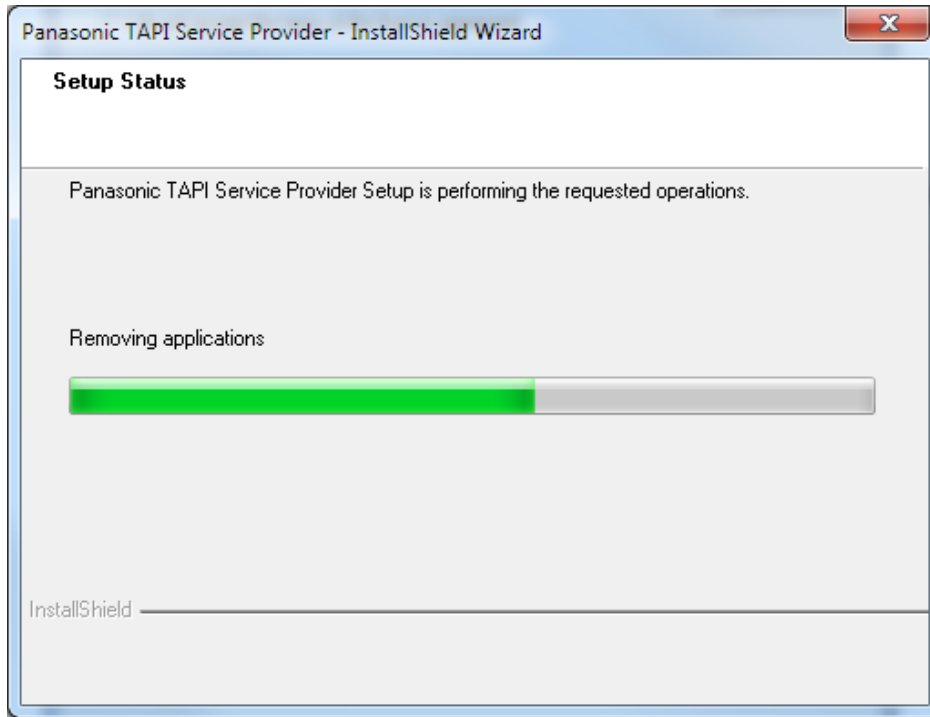
11. The License Agreement window displays. Click on **Next >** button.



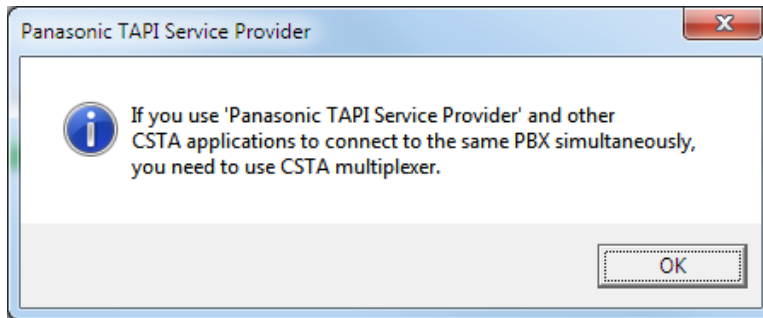
12. The final step window before the Panasonic TSP installation displays. Click on **Install** button.



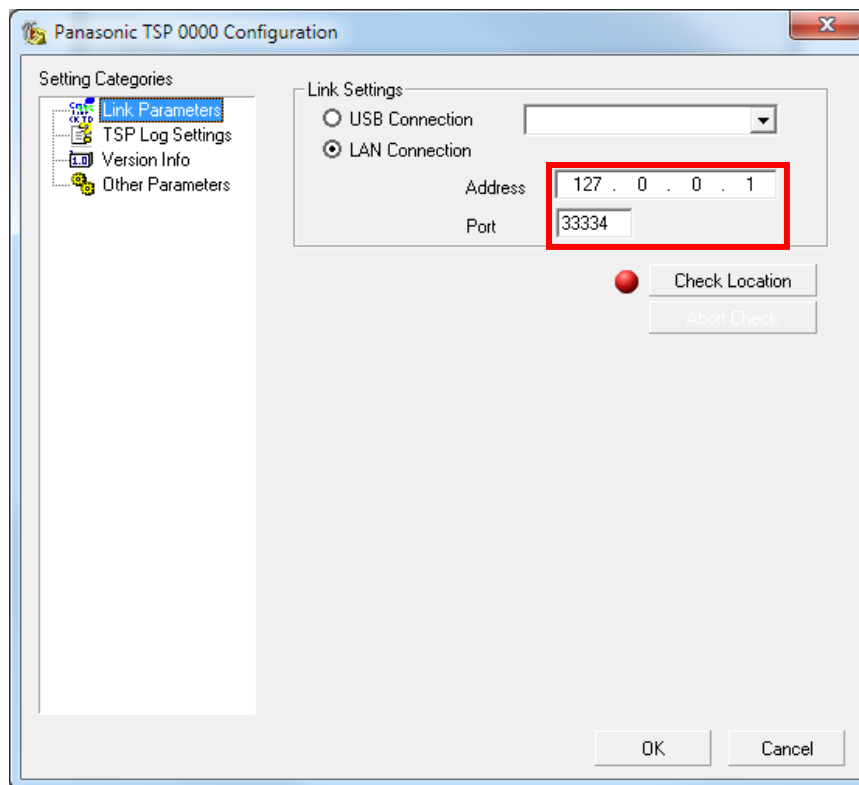
13. The installation begins.



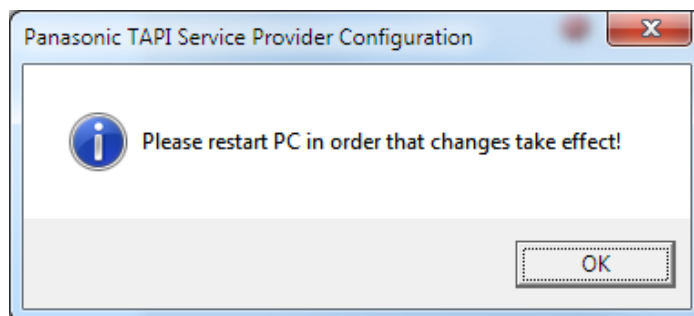
14. A warning message displays regarding the CSTA multiplexer. Click on **OK** button.



- The TSP configuration window displays. Select *LAN Connection* option and set the Address field to the localhost IP Address (i.e. 127.0.0.1) and the *Port* field to 33334 (i.e. the default CTIMUX listening port).



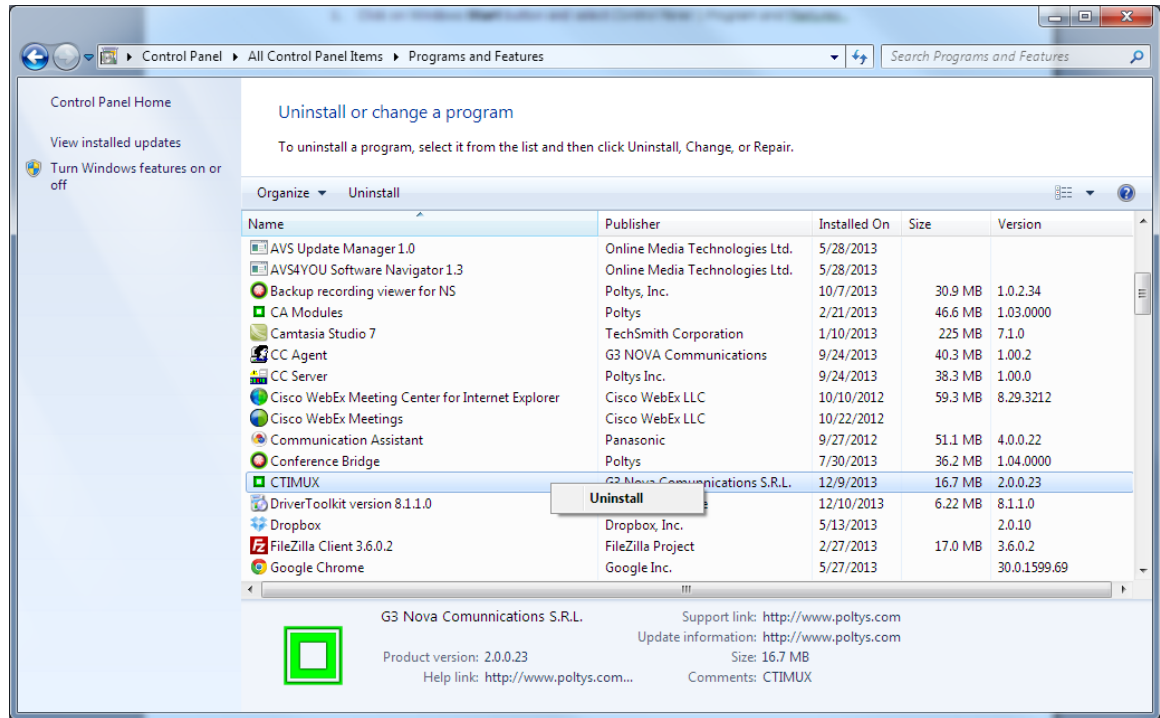
- A warning message displays. Click on **OK** button.



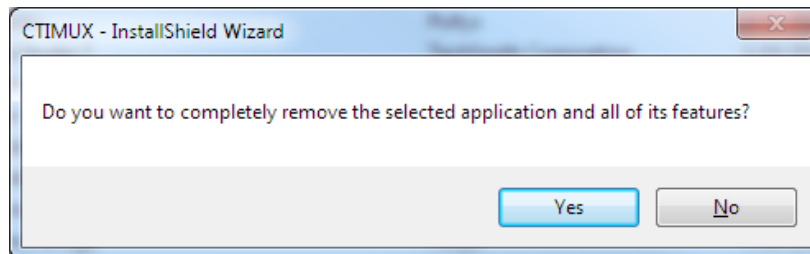
- The Panasonic TSP has been successfully installed and configured to connect via CTIMUX. Click on **Finish** button and restart the PC for changes to take effect.

To uninstall the CTIMUX software:

1. Click on Windows **Start** button and select *Control Panel | Program and Features*.
2. Right click on CTIMUX item and select *Uninstall* option.



3. Confirm that you want to uninstall CTIMUX by clicking on **Yes** button.



4. Please restart the PC after the uninstall process is completed.

Getting Started with CTIMUX

Starting CTIMUX

To run CTIMUX

1. Go to *Start menu -> Programs -> G3 NOVA Communications -> CTIMUX* and click on *CTIMUX* shortcut, or
2. Click on the *CTIMUX* shortcut from the Windows Desktop.



3. The *CTIMUX Configuration* window displays.

A screenshot of the CTIMUX Configuration window. The window title is 'CTIMUX Configuration'. It features the 'g3NOVA COMMUNICATIONS' logo at the top. Below the logo are two tabs: 'PBX Settings' (selected) and 'Email Settings'. The 'PBX Settings' tab contains the following fields:

- PBX Connection**
- Master PBX**
- PBX IP: 192.168.0.101
- PBX Port: 33333
- CTI Link Reset Port: 33321
- CTI Link Password: [masked]
- Failover PBX**
- PBX IP: [empty]
- Failover Timeout: 5 minute(s)
- Logging Level:**
- Transport Layer
- Processing Layer
- CTIMUX Listening Port: 33334

At the bottom right, there are 'OK' and 'Cancel' buttons.

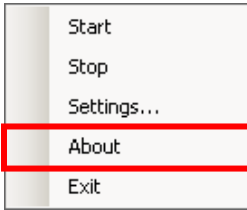
Licensing CTIMUX

To license CTIMUX software

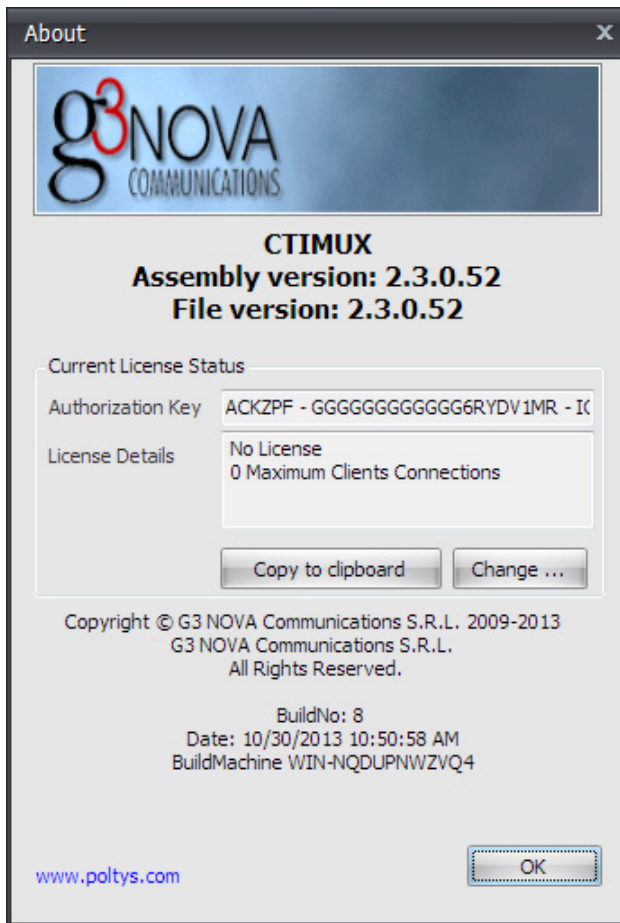
1. Right click on the *CTIMUX* icon in Windows icon tray.



2. Select the *About* option in the pop-up menu.

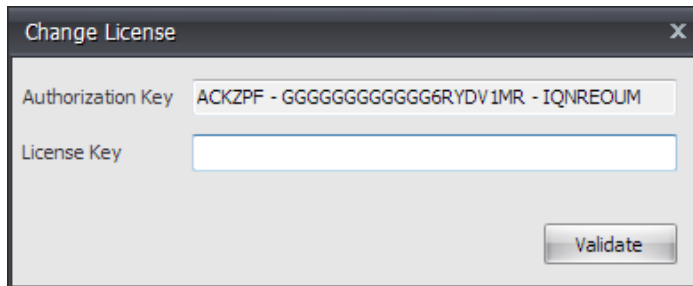


3. The *About* dialog displays.



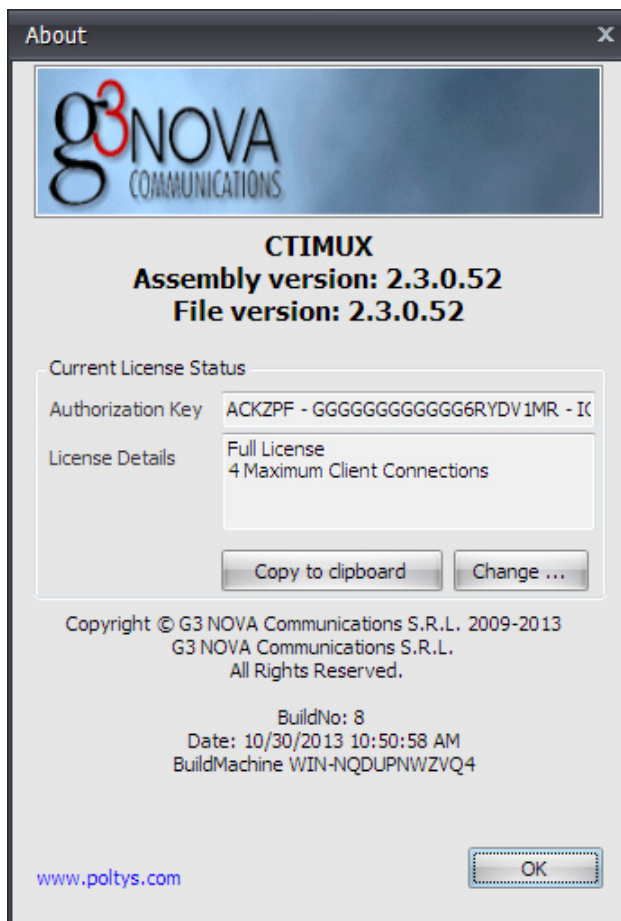
NOTE: The Authorization Key is tightly linked to both the Operating System and the hardware devices installed on the CTIMUX host PC.

- Copy the serial that appears in *Authorization Key* field by clicking on the **Copy to clipboard** button, and then send it to the Dealer from whom you purchased the CTIMUX product or, directly, to support@poltys.com.
- After you have received the *License Key*, click on the **Change** button, enter it in *License Key* field and then press the **Validate** button.



The 'Change License' dialog box contains two text input fields. The first field, labeled 'Authorization Key', contains the text 'ACKZPF - GGGGGGGGGGG6RYDV1MR - IQNREOUM'. The second field, labeled 'License Key', is currently empty. A 'Validate' button is located at the bottom right of the dialog.

- You now have a fully functional system.



The 'About' dialog box displays the G3 NOVA COMMUNICATIONS logo at the top. Below the logo, it shows 'CTIMUX Assembly version: 2.3.0.52' and 'File version: 2.3.0.52'. A section titled 'Current License Status' contains an 'Authorization Key' field with the text 'ACKZPF - GGGGGGGGGGG6RYDV1MR - IQNREOUM' and a 'License Details' field with the text 'Full License' and '4 Maximum Client Connections'. Below these fields are 'Copy to clipboard' and 'Change ...' buttons. At the bottom, it displays copyright information: 'Copyright © G3 NOVA Communications S.R.L. 2009-2013 G3 NOVA Communications S.R.L. All Rights Reserved.', build information: 'BuildNo: 8 Date: 10/30/2013 10:50:58 AM BuildMachine WIN-NQDUPNWZVQ4', and the website 'www.poltys.com'. An 'OK' button is located at the bottom right.

Managing CTIMUX

This section presents the following topics:

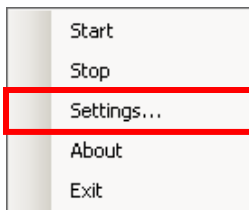
- [Configuring CTIMUX](#)
- [Configuring CTIMUX for sending Email notifications](#)
- [Stopping the CTIMUX Service](#)
- [Starting the CTIMUX Service](#)
- [Verifying the clients connected to CTIMUX](#)

To configure CTIMUX

1. Connect the CTIMUX host via UTP cable to the company LAN.
2. Make sure that the NS1000 PBX and the Panasonic TSP host are connected to the same network.
3. Double click the *CTIMUX* icon from the Windows icon tray, or



4. Right-click it and choose the *Settings...* option.



5. The *CTIMUX Configuration* dialog displays.



6. Enter the *PBX IP* and the *PBX Port* fields according to the current Master NS1000 PBX settings. This port is used for normal CSTA communication with the Master PBX. The default port is 33333.

CTIMUX Configuration

g3NOVA COMMUNICATIONS

PBX Settings | Email Settings

PBX Connection

Master PBX

PBX IP: 192.168.0.101 PBX Port: 33333 CTI Link Reset Port: 33321
CTI Link Password: ●●●●

Failover PBX

PBX IP:
Failover Timeout: 5 minute(s)

Logging Level:

Transport Layer
 Processing Layer

CTIMUX Listening Port: 33334

OK Cancel

7. Enter the *CTI Link Reset Port* and *CTI Link Password* fields according to the current Master NS1000 PBX settings. This information is used to reset the CTI connection when the PBX rejects the normal connection via main CTI port. Set the *CTI Link Password* with the same INSTALLER password of the PBX.

CTIMUX Configuration

g3NOVA COMMUNICATIONS

PBX Settings | Email Settings

PBX Connection

Master PBX

PBX IP: 192.168.0.101 PBX Port: 33333 CTI Link Reset Port: 33321
CTI Link Password: ●●●●

Failover PBX

PBX IP:
Failover Timeout: 5 minute(s)

Logging Level:

Transport Layer
 Processing Layer

CTIMUX Listening Port: 33334

OK Cancel

- Enter the *PBX IP* and the according to the Failover NS1000 PBX settings. This connection is used when normal CSTA communication with the Master NS1000 PBX cannot be accomplished.




NOTE: The *CTI Link Reset Port* and *CTI Link Password* as configured above are used for Failover PBX as well.

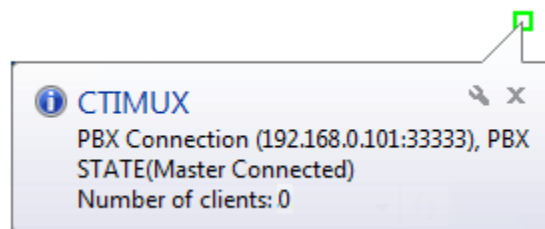
- Enter the failover timeout value after which CTIMUX abandons the attempts to connect to Master NS1000 PBX and starts connecting to the Failover NS1000 PBX. The default value is 5 minutes.



10. Click the **OK** button to apply the settings.



11. Verify if the *CTIMUX* icon from the Windows icon tray becomes green  in a few seconds and the tooltip indicates the message below.



12. The CTIMUX is running and it's properly connected to the Master PBX.

NOTES:

When normal CTI communication with the Master NS1000 PBX cannot be accomplished, CTIMUX tries to connect to the Failover NS1000 PBX. If CTIMUX gets connected to the Failover NS1000 PBX, the PBX STATE message displays *Failover Connected*.

Please restart CTIMUX service (Stop/Start) to switch back from failover mode to normal mode.

To configure CTIMUX for sending Email notifications

NOTE: CTIMUX provides automatic Email notifications for the following events:

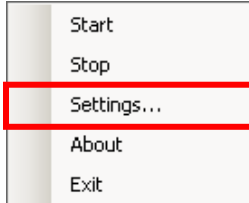
- **CTIMUX – connection lost: The TCP/IP connection to either Master or Failover PBX was lost**
- **CTIMUX – connection rejected: The TCP/IP connection to either Master or Failover PBX was rejected. Needs CTI link reset.**

- **CTIMUX – stopped: The CTIMUX service was stopped upon user request.**

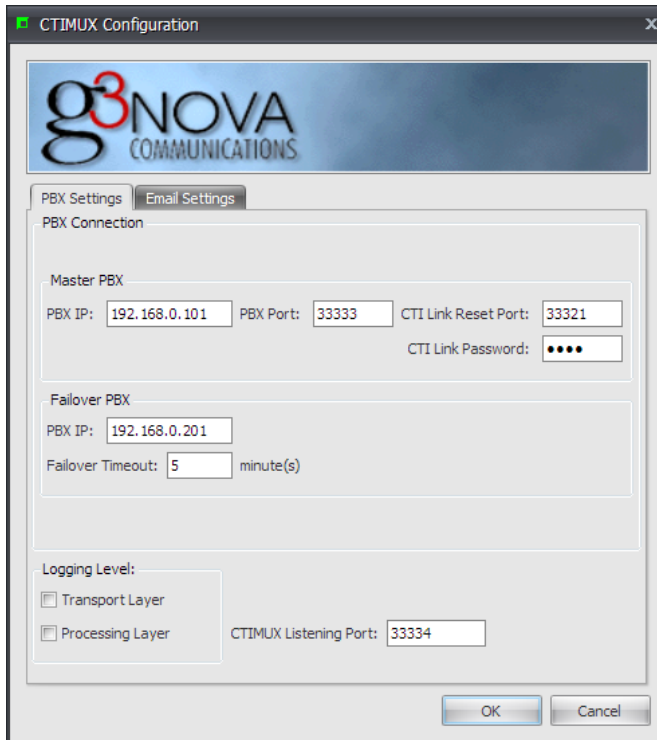
1. Double click the *CTIMUX* icon from the Windows icon tray, or



2. Right-click it and choose the *Settings...* option.



3. The *CTIMUX Configuration* dialog displays.



- Click on *Email Settings* tab. The *Email Settings* tab displays.

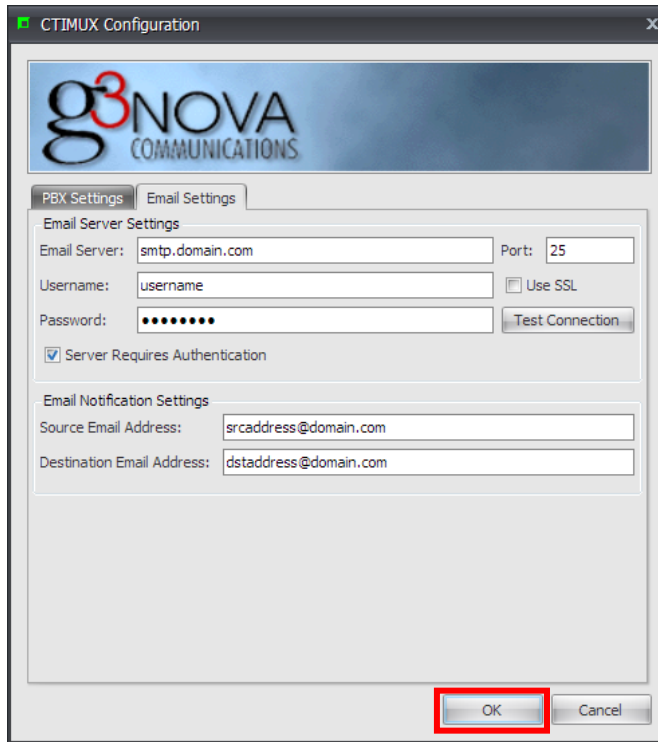


The screenshot shows the 'CTIMUX Configuration' dialog box with the 'Email Settings' tab selected. The dialog features the 'g3NOVA COMMUNICATIONS' logo at the top. Below the logo, there are two tabs: 'PBX Settings' and 'Email Settings'. The 'Email Settings' tab is active and contains two sections: 'Email Server Settings' and 'Email Notification Settings'. In the 'Email Server Settings' section, there are input fields for 'Email Server' (containing 'smtp.domain.com'), 'Port' (containing '25'), 'Username' (containing 'username'), and 'Password' (masked with dots). There is a 'Test Connection' button and a checkbox for 'Use SSL'. A checked checkbox labeled 'Server Requires Authentication' is also present. The 'Email Notification Settings' section has input fields for 'Source Email Address' (containing 'srcaddress@domain.com') and 'Destination Email Address' (containing 'dstaddress@domain.com'). At the bottom of the dialog are 'OK' and 'Cancel' buttons.

- Enter the following parameters for CTIMUX to send Email notifications to specific recipient:
 - Email Server* – the SMTP server address
 - Email Server Port* – the SMTP server port
 - Username* – the user name of the Email account
 - Password* – the user password of the Email account
 - Use SSL* – toggle ON/OFF encrypted Email transmission
 - Server Requires Authentication* – toggle ON/OFF the user authentication before sending the Email
 - Source Email Address* – the Email address of the notification sender
 - Destination Email Address* – the Email address of the destination recipient

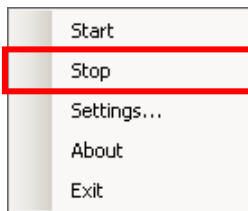
NOTE: You can test Email communication to the appropriate destination by clicking on Test Connection button.

6. Click the **OK** button to apply the settings.

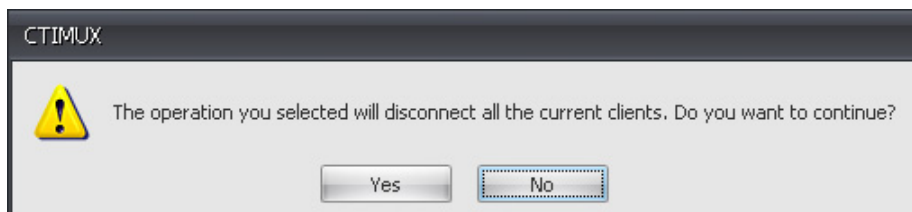


To manually stop the CTIMUX Service

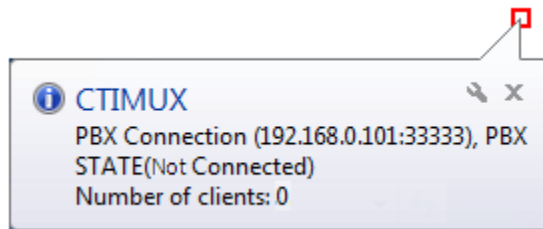
1. Right click on the *CTIMUX* icon in Windows icon tray.
2. Select *Stop* menu option.



3. If there are CTI Client Applications connected to CTIMUX, the following warning message is displayed:

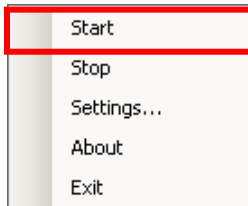




4. Check the *CTIMUX* icon in the Windows icon tray  and the displayed tooltip message.

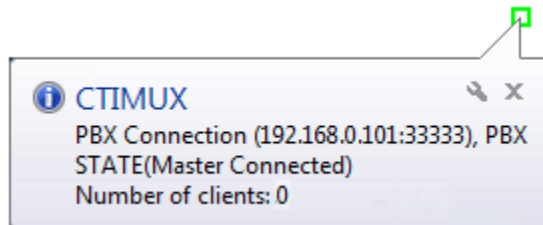


To manually start the CTIMUX Service

1. Right click on the *CTIMUX* icon in Windows icon tray.



2. Select *Start* menu option.
3. Check that the *CTIMUX* icon in the Windows icon tray goes from  *Waiting for PBX Response...* to  *Connected*, and the tooltip message displays:




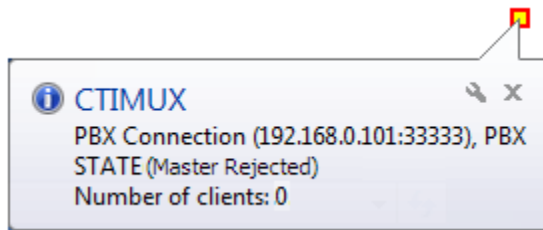
NOTE:

CTIMUX starts connecting to Master NS1000 PBX initially.

If the CTIMUX gets connected to the Failover NS1000 PBX, the PBX STATE message displays *Failover Connected*.

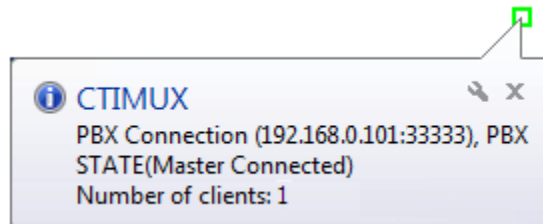
4. If there is another Application already connected to the PBX via CTI Link, the *CTIMUX* icon goes to

 *Master Rejected* and the tooltip message displays:

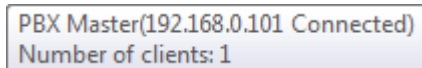


To verify the clients connected to CTIMUX

1. You can inspect anytime the number of Client Applications, including Panasonic TSP, connected to CTIMUX by checking the tooltip message, or



2. Drag the mouse cursor over the CTIMUX icon in the Windows icon tray.



Product Support

Poltys tech support engineers are always available to answer your questions at:

- US Phone number: +1 864 642 6103
- Support: support@poltys.com