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# Genesys Softphone Administrator's Guide

Deploying Genesys Softphone

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- Administrator

How to deploy and configure the Genesys Softphone in your environment, including both standard and Virtual Desktop Infrastructure (VDI) installations.

### Related documentation:

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### Important

You should receive access to the Genesys Softphone download when you purchase Softphone. Contact your Genesys representative if you did not receive access to the installation package.

## Environment prerequisites

Ensure that your environment meets the prerequisites described in this section.

### Supported operating systems

Refer to the Genesys Softphone and the Virtualization Platform Support topics in the *Genesys Supported Operating Environment Reference Manual* for a list of the latest supported operating systems.

### Prerequisites for deployment on a physical workstation

To work with Genesys Softphone, you must ensure that your system meets the software requirements established in the *Genesys Supported Operating Environment Reference Manual*, as well as meeting the following minimum software requirements:

- Visual C++ Redistributable Packages for Visual Studio 2013 (32 bits version): The Genesys Installation Package installs this redistributable package on the workstation where it is executed.
- .NET Framework 4.0 or higher: This is used at installation time only when the Administrator installs Genesys Softphone with HTTPS connector based on a *self-signed certificate*.
- QoS requirement for voice, either one-to-one or on a conference connection capability, require the following:
  - ≤ 150 ms of one-way latency from mouth to ear (per the ITU G.114 standard)
  - ≤ 30 ms jitter
  - ≤ 1 percent packet loss
  - 17 to 106 kbps of guaranteed priority bandwidth per call (depending on the sampling rate, codec, and Layer 2 overhead)

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- 150 bps (plus Layer 2 overhead) per phone of guaranteed bandwidth for voice control traffic

### Important

QoS policies are managed by the operating system. To configure a QoS policy in Windows, refer to Quality of Service (QoS) Policy in the Microsoft documentation.

- A headset or other microphone and speaker audio device that is supported by Windows OS installed on the workstation.

## Prerequisites for deployment in a VDI environment

To work with Genesys Softphone in a VDI environment, you must ensure that your system meets the software requirements established in the *Genesys Supported Operating Environment Reference Manual*, as well as meeting the following minimum software requirements:

1. On the workstation running Citrix Workspace (formerly Citrix Receiver):
  - Visual C++ Redistributable Packages for Visual Studio 2013 (32 bits version): The Genesys Installation Package installs this redistributable package on the workstation where it is executed.
  - QoS requirement for voice, either one-to-one or on a conference connection capability, require the following:
    - $\leq 150$  ms of one-way latency from mouth to ear (per the ITU G.114 standard)
    - $\leq 30$  ms jitter
    - $\leq 1$  percent packet loss
    - 17 to 106 kbps of guaranteed priority bandwidth per call (depending on the sampling rate, codec, and Layer 2 overhead)
    - 150 bps (plus Layer 2 overhead) per phone of guaranteed bandwidth for voice control traffic

### Important

QoS policies are managed by the operating system. To configure a QoS policy, refer to the documentation for your platform.

- A headset or other microphone and speaker audio device that is supported by the OS installed on either the client or host.
2. On the VDI environment (XenApp or XenDesktop server) that runs the application layer of the VDI runtime:
    - Visual C++ Redistributable Packages for Visual Studio 2013 (32 bits version): The Genesys Installation Package installs this redistributable package on the workstation where it is executed.
    - .NET Framework 4.0 or higher: This is used at installation time only when the Administrator installs Genesys Softphone with HTTPS connector based on a *self-signed certificate*.

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## Important

To use Workspace Web Edition and Genesys Screen Recording Service with Genesys Softphone in a VDI environment such as Citrix Xenapp, you must configure the **screen-recording.client.address** option to point to the SRS Loopback address.

## Installing Genesys Softphone for Windows

(For information on installing Genesys Softphone in a VDI environment see Installing the Genesys Softphone VDI Adapter)

To install Genesys Softphone, follow these steps:

1. Double-click the **setup.exe** file that is located in the **\windows\** directory to open the **Genesys Installation Wizard**.
2. In the **Welcome to the Installation** window, click **Next**.
3. In the **Choose Destination Location** window, click **Next** to accept the default destination folder, or click **Browse** to select another destination location.
4. In the **Deployment Type** window, click **Standard** or **Citrix** (for Virtualization deployments only), and then click **Next**.
5. In the **Startup and Secure Connection options** window, you may choose one or more of the following options, and then click **Next**:
  - Auto Startup: Specifies that Genesys Softphone launches when Windows starts up. This means that agents do not have to manually launch Genesys Softphone before they launch Agent Desktop.
  - Enable Dynamic Configuration Connector: Specifies that Agent Desktop is allowed to dynamically configure Genesys Softphone when it is launched.

If you choose the Enable Dynamic Configuration Connector option, the **Dynamic Configuration Connector Parameters** window is displayed.

- a. Specify the Connector Port for Genesys Softphone. This port must be compliant with the value specified by the `sipendpoint.uri` option.
- b. Enable HTTPS secure connections (optional). If you choose a secure connection, you must choose the type of security certificate that you use:
  - Self-signed Certificate: In this mode, the IP creates a self-signed certificate, installs it in the Personal Certificate section of the workstation where **setup.exe** is executed and also installs it as a root certificate authority at Machine level in the workstation where **setup.exe** is executed.
  - Certificate Authorities from the Windows Certificate Store

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## Important

To properly install the self-signed certificate, .NET Framework 4.0 or higher is mandatory.

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6. In the **Ready to Install** window, select **Install**. The wizard installs Genesys Softphone and all associated files in the selected directory and displays the **Installation Status** window. The installation might take several minutes.
  7. In the **Installation Complete** window, select **Finish**.

### Important

For more information about Genesys Softphone deployment for Agent Desktop, see Single sign on with Agent Desktop.

## Installing Genesys Softphone in Silent mode for Windows

To install Genesys Softphone in Silent mode, use the Installation Wizard **Silent** arguments as follows:

1. Update the **genesys\_silent.ini** file by making the following modifications:
  - Add the path to the Genesys Softphone directory. For example, **InstallPath=C:\GCTI\Genesys Softphone**.
  - Specify if Genesys Softphone is a physical workstation ("Std") or a Citrix environment ("Citrix") by using the **DeploymentType=** parameter.
  - Specify whether Genesys Softphone starts automatically when Windows starts up by using the **Startup=** parameter.
  - Specify whether Agent Desktop can dynamically modify the Genesys Softphone configuration by using the **Connector=** parameter.
  - If you are *deploying* Softphone for Agent Desktop dynamic configuration:
    - If the Connector is enabled, specify the Connector Port by using the **ConnectorPort=** parameter.
    - Specify whether the connector uses HTTPS secure connection by using the **HTTPS=** parameter.
    - If you are using a secure connection, specify the certificate type to be used by using the **CertificateType=** parameter.
    - If you assign the value **WindowsStore** to the **CertificateType** option, specify the certificate thumbprint by using the **CertThumbPrint=** parameter.
  - If you are *upgrading* Genesys Softphone, specify:
    - **IPVersion=**
    - **IPBuildNumber=**
2. Execute the following command:

```
setup.exe /s /z"-s 'FullPathToGenesysSilentConfigurationFile' -sl  
'FullPathToGenesysSilentResultFile'" where:
```

  - **/s** specifies that the installation is running in InstallShield Silent Mode.
  - **/z** passes the Genesys Silent mode silent parameters to the installation.
  - **-s** specifies the full path to the silent configuration file. This is optional. If the parameter is not specified, the installation uses the **genesys\_silent.ini** file in the same directory where the **setup.exe** is located.

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## Important

Enclose the value of the parameter by apostrophes (') if the parameter contains white symbols.

- `-sl` specifies the full path to the installation results file. If the parameter is not specified, the installation creates the **genesys\_install\_result.log** file in the directory.

## Important

Enclose the value of the parameter in apostrophes (') if the parameter contains white space characters.

The **InstallShield setup.exe** installation starter requires that:

- There is *no* space between the `/z` argument and quotation mark. For example, `/z"-s"` is valid, while `/z "-s"` is not valid.
  - There *is* a space between the `-s,-sl` parameters and quotation mark. For example, `/z"-s c:\temp\genesys_silent.ini"` is valid, while `/z "-sc:\temp\genesys_silent.ini"` is not valid. For example, `setup.exe /s /z"-s 'C:\8.5.000.05\windows\b1\ip\genesys_silent.ini' -sl 'C:\GSP\silent_setup.log'"`.
3. After executing this command, verify that Genesys Softphone is installed in the **C:\**, and that the **silent\_setup.log** file has been created in the **C:\GSP\** directory.

## Installing the Genesys Softphone VDI Adapter (Windows)

If you installed Genesys Softphone in a VDI environment, you must install the Genesys Softphone VDI Adapter on each workstation by following these steps:

1. Double-click the **setup.exe** file that is located in the **\windows\** directory to open the **Genesys Installation Wizard**.
2. In the **Welcome to the Installation** window, click **Next**.
3. In the **Select Operating System** window, select **Windows** and click **Next**.
4. In the **Ready to Install** window, select **Install**. The wizard installs Genesys Softphone VDI Adapter and displays the **Installation Status** window.
5. In the **Installation Complete** window, select **Finish**.

## Installing the Genesys Softphone VDI Adapter (eLux)

If you installed Genesys Softphone in a VDI environment, you must install the Genesys Softphone VDI Adapter on each eLux workstation by following these steps:

1. Double-click the **setup.exe** file located in the **\windows\** directory to open the **Genesys Installation Wizard**.

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2. In the **Welcome to the Installation** window, click **Next**.
  3. In the **Select Operating System** window, select **eLux**, specify the destination to install the installation package, and click **Next**.
  4. In the **Ready to Install** window, select **Install**. The wizard installs Genesys Softphone VDI Adapter and displays the **Installation Status** window.
  5. In the **Installation Complete** window, select **Finish**.  
The installation package installs the following items:
    - a Virtual Driver for Citrix shared object
    - a **libgsecurity** module
    - a startup script to update the Citrix **module.ini** config file.  
  
These files are packaged into an EPM/FPM pair, each with a separate signature file with four files for the VD package and three files with certificates used for signing:
      - **genesys\_vd-.UC\_RP5-1.0.fpm**
      - **genesysvd-.UC\_RP5-1.0.epm**
      - **genesys\_vd-.UC\_RP5-1.0.fpm.sig**
      - **genesysvd-.UC\_RP5-1.0.epm.sig**
    - **0-VeriSign-RootCA.cer**: VeriSign Universal Root Certification Authority
    - **1-Symantec-intermediate.cer**: Symantec Class 3 SHA256 Code Signing CA
    - **2-Genesys-codesign.cer**: Genesys certificate used for signing packages
  6. Import the package files to the existing container and add them to the client image using the Unicon Scout Enterprise ELIAS tool:
    1. Using the **Security / Manage certificates** menu option, import the certificates as trusted.
    2. If the client is configured with **signature check**, the VeriSign Root CA certificate must be installed on each client in the **/setup/cacerts** folder.
    3. To add packages to the container, in ELIAS select the **Container / Import Package** menu option, and then select the files with the **.epm** extension.
    4. To update the image definition file (IDF), open it in ELIAS, then add the new package by selecting **Genesys VD for Citrix**, in the right pane and press the **button**.
    5. Update the client workstation using the Scout Enterprise Console and perform these steps:
      - Check the firmware configuration of the relevant Thin Clients by selecting **Device configuration** and then choosing **Firmware**.
      - Update the device by selecting the **Commands / Update** option to initiate the update and force a device restart.

## Installing the Genesys Softphone VDI Adapter in Silent mode

To install Genesys Softphone VDI Adapter in Silent mode, use the Installation Wizard **Silent** arguments as follows:



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1. Update the **genesys\_silent.ini** file by making the following modifications:

- Specify if Genesys Softphone VDI Adapter should be installed for Windows ("citrix\_windows") or eLux5 ("citrix\_elux\_5") by using the **DeploymentType** parameter. For example, **DeploymentType=citrix\_windows**.
- In case of installation on eLux5, add the path to the Genesys Softphone VDI Adapter directory using the **InstallPath** parameter. For example, **InstallPath=C:\GCT\Genesys SoftphoneVDIAdapter**.

2. If you are *upgrading* Genesys Softphone VDI Adapter, specify:

- **IPVersion=**
- **IPBuildNumber=**

3. Execute the following command:

```
setup.exe /s /z"-s 'FullPathToGenesysSilentConfigurationFile' -sl  
'FullPathToGenesysSilentResultFile'" where:
```

- /s specifies that the installation is running in InstallShield Silent Mode.
- /z passes the Genesys Silent mode silent parameters to the installation.
- -s specifies the full path to the silent configuration file. This is optional. If the parameter is not specified, the installation uses the **genesys\_silent.ini** file in the same directory where the **setup.exe** is located.

### Important

Enclose the value of the parameter by apostrophes (') if the parameter contains white symbols.

- -sl specifies the full path to the installation results file. If the parameter is not specified, the installation creates the **genesys\_install\_result.log** file in the directory.

### Important

Enclose the value of the parameter in apostrophes (') if the parameter contains white space characters.

The **InstallShield setup.exe** installation starter requires that:

- There is *no* space between the /z argument and quotation mark. For example, /z"-s" is valid, while /z "-s" is not valid.
- There *is* a space between the -s,-sl parameters and quotation mark. For example, /z"-s c:\temp\genesys\_silent.ini" is valid, while /z "-sc:\temp\genesys\_silent.ini" is not valid. For example, `setup.exe /s /z"-s 'C:\9.0.007.03\windows\b1\ip\genesys_silent.ini' -sl 'C:\GSP\silent_setup.log'`.

4. After executing this command, verify that Genesys Softphone VDI Adapter is installed in the expected directory, and that the **silent\_setup.log** file has been created in the **C:\GSP\** directory.

## Installing Genesys Softphone for macOS

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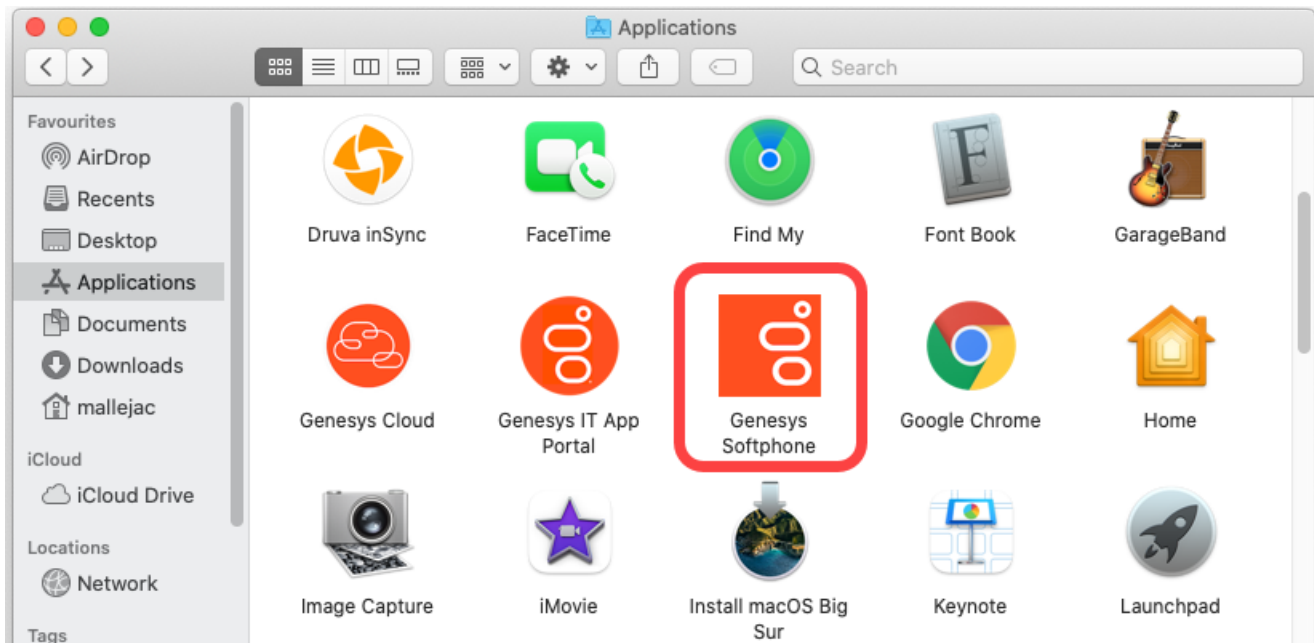
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To install the Genesys Softphone for macOS:

1. Download the Genesys Softphone installation package.
2. Open a Terminal session. From the **/mac/bX/ip** directory path, run the **install.sh** script using administrator privileges:  

```
sudo ./install.sh
```
3. At the **Launch Genesys Softphone on MacOS startup** prompt, enter **y** to enable Softphone to run automatically when the agent is opening the OS session or **n** for Softphone to be started manually by agent.
4. At the **Enable connector to allow dynamic configuration by Workspace Web Edition** prompt, enter **n** to select standalone mode or **y** to enable the connector.
  - If you are upgrading Genesys Softphone in standalone mode, you can then enter **n** to overwrite the existing configuration file (**Softphone.config**) or **y** to continue using the existing configuration file.
  - If you choose to enable the connector, confirm the default connector port number (8000), or enter the port number you want to use. You can then enter **y** to enable a secure connection (HTTPS) or **n** to use a non-secure connection (HTTP).
5. Enter **y** to accept the destination directory for the installation and continue.
6. After the installation process completes, the script displays messages to confirm the following:
  - The **Tuning** file attributes are automatically tuned.
  - If you enabled the connector with a secure connection (HTTPS), the RSA private key certificate is automatically created and installed.

You can launch Genesys Softphone from the **Applications** folder:



## Installing Genesys Softphone in Silent mode for macOS

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To install the Genesys Softphone in Silent mode:

1. Update the **genesys\_silent.ini** file by making the following modifications:
  - Add the absolute path to the Genesys Softphone directory. For example, **InstallPath=/Applications/Genesys Softphone.app**.
  - Specify whether Genesys Softphone starts automatically when MacOS starts by setting the **AutoStart=** parameter.
  - Specify whether Workspace Web Edition can dynamically modify the Genesys Softphone configuration by setting the **EnableConnector=** parameter.
  - If you are *deploying* Genesys Softphone for Workspace Web Edition dynamic configuration:
    - If the Connector is enabled, specify the Connector Port by setting the **ConnectorPort=** parameter.
    - Specify whether the connector uses HTTPS secure connection by setting the **SecuredCommunication=** parameter.
  - Specify whether to keep the existing configuration file during upgrades by setting the **PreserveConfigFile=** parameter. If you enter `no` for this value, the configuration file is overwritten during the upgrade. (This parameter is ignored if the Connector is enabled.)
2. Enter the following command using administrator privileges:

```
sudo ./install.sh -s -fr ///mac/bX/ip/genesys_silent.ini -fl ///mac/bX/ip/  
genesys_install_result.log
```

where

- is the path to the installation package.
- is the version of the installation package version you are installing. For example, `9.0.014.12`.

## Configuring Genesys Softphone

Genesys Softphone installation includes a configuration file (**/Softphone.config**) with configuration settings that are applied to the Softphone when it starts.

### Important

You can make changes to the configuration file, but you must restart the Softphone before any of the changes take effect.

The configuration file is organized into *containers*. Each container is divided into *domains* that are further divided into *sections* that hold the *settings* for a group of parameters. The following configuration file examples describe the settings in each container:

For the description and valid values of each parameter, see Configuration Options Reference.

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## Basic container

The Basic container sets the Genesys Softphone user's DNs and the protocol used.

### Important

If Single sign on is used with Agent Desktop, these parameters in configuration file are not taken in account.

## Genesys container

The Genesys container sets the policy, endpoint, session, device, connector, codecs, proxy, mailbox, system, and security parameters.

## Configuring the agent's DN

Set the following `TServer` section option for the DNs of the Place to which the agent is logging in:

- `sip-cti-control = talk,hold,dtmf`

### Important

This option is mandatory to use third-party call control on the SIP device.

For information about configuring DN objects, see DNs in the Agent Setup documentation.

## Configuring SIP Server

Genesys recommends setting the following SIP Server options:

- `dual-dialog-enabled=true` (default value)
- `make-call-rfc3725-flow=1` (allows for better and/or simpler codec negotiation)
- `ring-tone-on-make-call=true` (default value)
- `use-register-for-service-state=true`

For more information about these options, see the SIP Server Deployment Guide.

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## Suppressing the ringtone

The ringtone is generated for all incoming calls to Genesys Softphone. To suppress the ringtone for third-party call control for the originating DN, configure the following SIP Server option:

- `make-call-alert-info=`

or

- `make-call-alert-info=;service=3pcc`

### Important

If at least one Genesys Softphone in the contact center is configured with the `ringing_enabled` option set to 1, the SIP Server `make-call-alert-info` option should be set to one of the values specified above.