Installation Manual

AudioCodes Voice.AI Solutions

Voca Conversational IVR

Version 9.1.0

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Related Documentation

Document Name
Voca Release Notes
Voca Administrator's Guide

Document Revision Record

LTRT	Description
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Software Revision Record

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Table of Contents

1 Introduction 1
2 Getting Started 2
Hardware Requirements and System Capacities 2
Hardware Requirements 2
On-premises Installation 2
Private Cloud Installations 3
System Capacities 3
Entries Support 3
Using Clean Windows Installation 3
Additional Software Installation 4
Disabling Virtual Memory Paging File 4
Using AudioCodes Mediant 800 Installation 7
Installing Windows Security Updates 7
Configuring the OSN IP Address 8
3 Installing Voca 15
Running Post-Installation 24
4 Voca Upgrade 25
Voca Versions that can be Upgraded 25
5 Configuring Enghouse Interactive Communication Portal (CP) 26
6 Installing the Voca License 29
7 Installing Third-Party Licenses 34
Installing Enghouse Interactive License 34
Installing Control Panel License 34
Installing CT Connect Media Gateway License 36
Installing Text-to-Speech Engine 36
Acapela non-Hebrew Text to Speech 36
8 Configuring SBC Settings for Voca 40
Coder Settings 40
Delayed Offer SDP Settings 40
Terminating SIP OPTIONS Requests 40
Alternative Routing Settings 41
SBC Configuration for Auto-attended Support 41
Configuring the SBC 41
Configuring Routing Rules 43
Sending DNIS Instead of Caller Number During Advanced Transfer 44
Configuring the SBC 44
Changing REFER with Replaces to Simple REFER Message 45
Configuring the SBC 45
9 Installing Signed Certificates on the IIS 46

Managing Certificates in the MMC Snap-in 46
Adding a Certificate 50
Selecting a Certificate in IIS Manager 50
10 Enabling .NET Framework 3.5 on Windows 52
11 Configuring WebRTC 57
12 Upgrading from Voca Version 8.0.2 to Voca Version 8.4.0. Enghouse CTIC (Media Gateway) Application 58
13 Upgrading from Voca Version 8.0.1 to Voca Version 8.4.0 61
14 Enabling Music on Hold on Enghouse Control Panel 66
15 Call Queue Configuration 70
16 Configuring Voca High Availability 71

1 Introduction

Voca provides a state-of-the-art voice recognition service for enterprises, enhancing day-to-day customer interface and employee productivity by making organizational contacts easily accessible from multiple user environments by voice.

Combining powerful speech recognition engine with a simple-to-use conversational interface, Voca introduces a reliable, 24x7 call routing solution that reduces costs, increases the employee's productivity and enhances caller experience and satisfaction. Voca easily integrates with any standard PBX based on analog, digital and IP network protocols and can be deployed as a secured cloud service or On-premises.

2 Getting Started

There are a number of ways to install the Voca system:

- **Clean Windows Installation:** A customer provides a clean-installed Windows 2016/2019 system with the latest security updates. The installation will be provided by AudioCodes as a downloadable URL.
- **AudioCodes Mediant 800 Installation:** AudioCodes provides a Mediant 800 with a pre-installed Windows 2016. The installation package will be located at C:\ACVoca_Installer.
- **Pre-installed:** AudioCodes offers Voca Software as a Service (SaaS) as a cloud deployment. Please contact your AudioCodes representative for more information on this option.

The default Administrator's password is "Pass123". It is highly recommended to change the password according to the Enterprise's policy. The updated password must be stored in a secure location, so that it is accessible to those that need to it.

Hardware Requirements and System Capacities

Voca is available either as a Cloud (AWS or Azure) deployment, or fully deployed On-Premises over virtual machines.

The following describes the hardware requirements and system capacities.

Hardware Requirements

On-premises Installation

To support up to 50 Concurrent voice recognition channels and 140 Concurrent DTMF channels, the Voca server requires the following minimum hardware configuration (not including SBC):

- **CPU:** Intel Core i7-5th Gen @ 2.7GHz with 4 cores or higher (HyperThreaded cores – total of 8 logical cores). The processor must at least support AVX2 and FMA features.
- **RAM:** 32 GB
- **SSD:** 256 GB
- **NIC:** 1GB Ethernet card with static MAC address (For Hyper-V installations, configure the MAC address using the **Advanced Features** option.)
- **Operating System:** Windows Server 2016 or 2019

To support up to 40 Concurrent voice recognition channels and 100 Concurrent DTMF channels, the Voca server requires the following minimum hardware configuration (not including SBC):

- **CPU:** Intel Atom® Processor C3758 16M Cache, up to 2.20 GHz
- **RAM:** 16 GB
- **SSD:** 256 GB

- **NIC:** 1GB Ethernet card with static MAC address (For Hyper-V installations, configure the MAC address using the **Advanced Features** option.)
- **Operating System:** Windows Server 2016 or 2019

Private Cloud Installations

Voca server requires the following minimum hardware configuration per the selected cloud environment:

- **AWS:** c5.2xlarge instance or higher
- **Azure:** Standard F8s instance or higher
- **For other configurations:** Contact your AudioCodes representative

To enable Voca to use speech recognition via Azure Cognitive Services, you must verify the Internet connectivity between the Voca server (On-premises or Cloud) to Azure Cognitive Services.

Self-installation is designed to support single-tenant deployments. For multi-tenant deployments, contact your AudioCodes Sales or Technical Support representative.

System Capacities

The Voca server supports the following channel capacities:

- For On-premises implementations based on Virtual Machine (VM):
  - 20 concurrent ASR sessions for Hebrew
  - 50 concurrent sessions for all other languages (via Microsoft Azure Cognitive Services)
- For Cloud implementations:
  - 30 concurrent ASR sessions for Hebrew
  - 50 concurrent sessions for all other languages (via Microsoft Azure Cognitive Services)

Entries Support

- Up to 20,000 entries

Using Clean Windows Installation

It is the customer's responsibility to provide a clean-installed licensed Windows 2016/2019 system with the following requirements:

- .NET Framework Features 3.5

If the server has Internet connectivity during installation, the framework will be installed automatically. Otherwise .NET 3.5 should be pre-installed (see Enabling .NET Framework 3.5 on Windows on page 52).

- Disabled Virtual Memory paging file
- Latest security updates
- Static IP address
- Disk Partitioning

The hard disk should be partitioned to the C:\ and D:\ drives.

- Chrome or Microsoft Edge (chromium-based)

Additional Software Installation

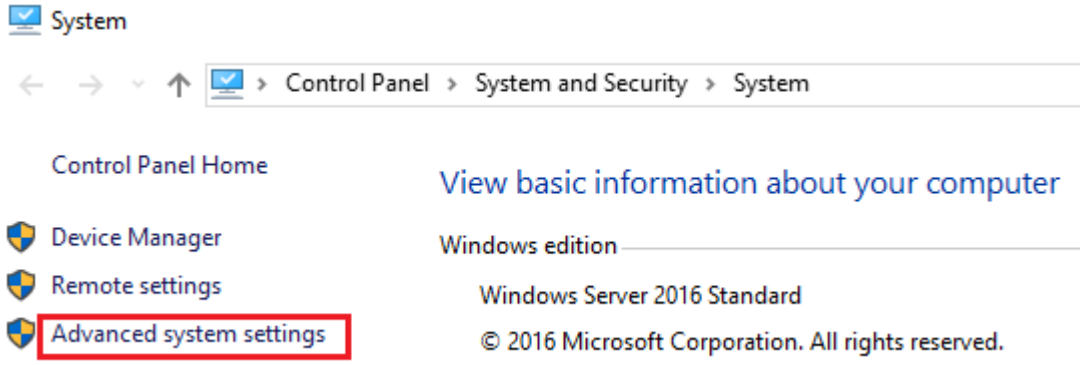
The user must not install any additional software on the server, including anti-virus or any real-time scanner. Installation of any third-party software may lead to performance issues, stability problems and may cause unpredictable results.

Disabling Virtual Memory Paging File

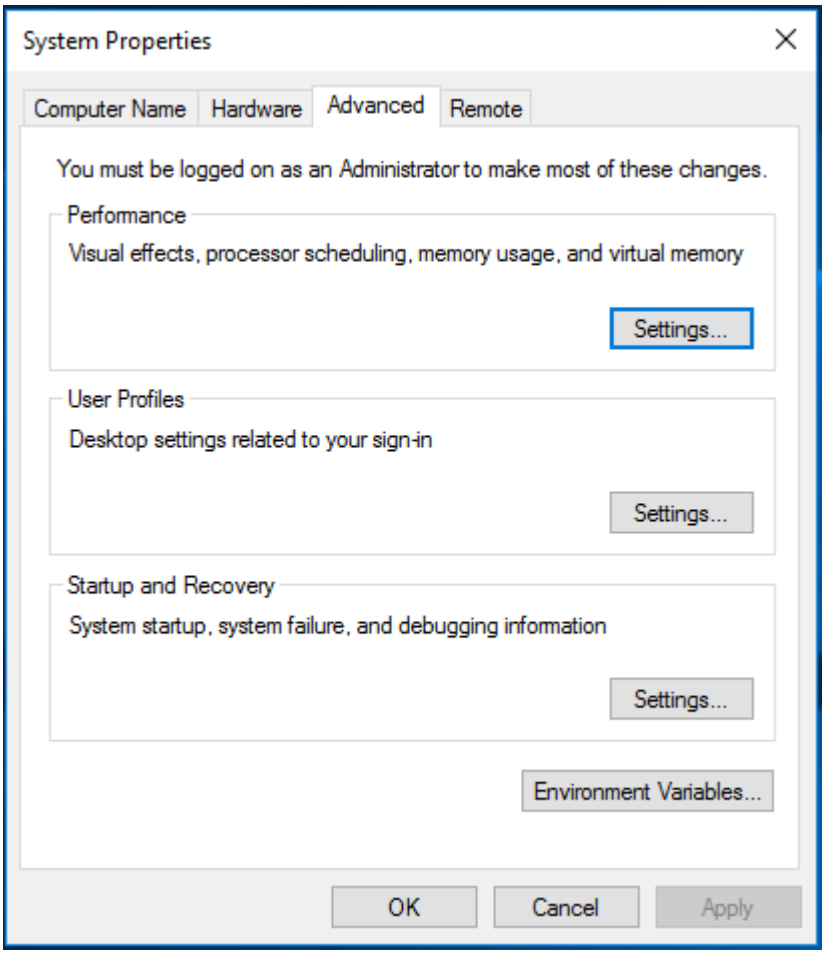
The procedure below describes how to disable the Virtual Memory Paging file.

➢ To disable Virtual Memory Paging File on a Windows System

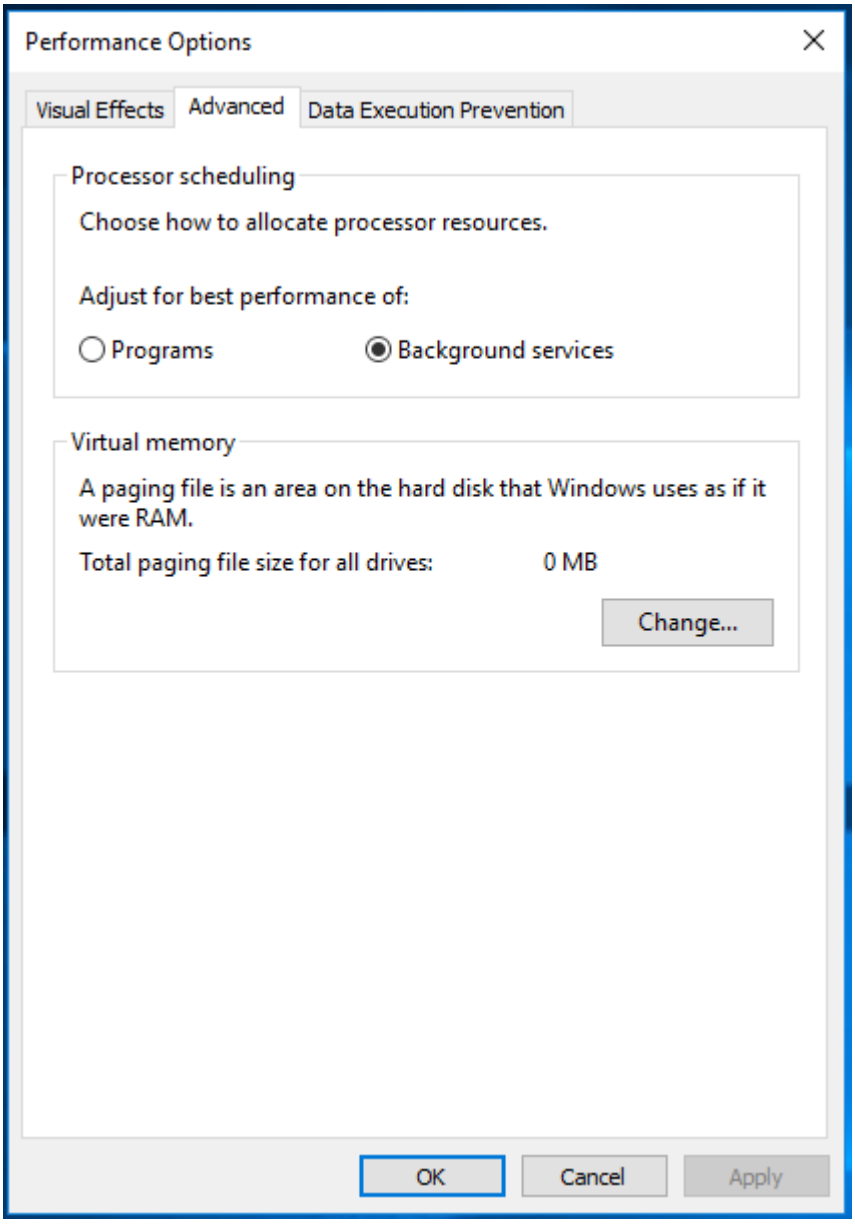
1. Press the Windows key and open **Control Panel**.
2. Navigate to **System and Security** > **System**, and then click **Advanced system settings** in the left pane.



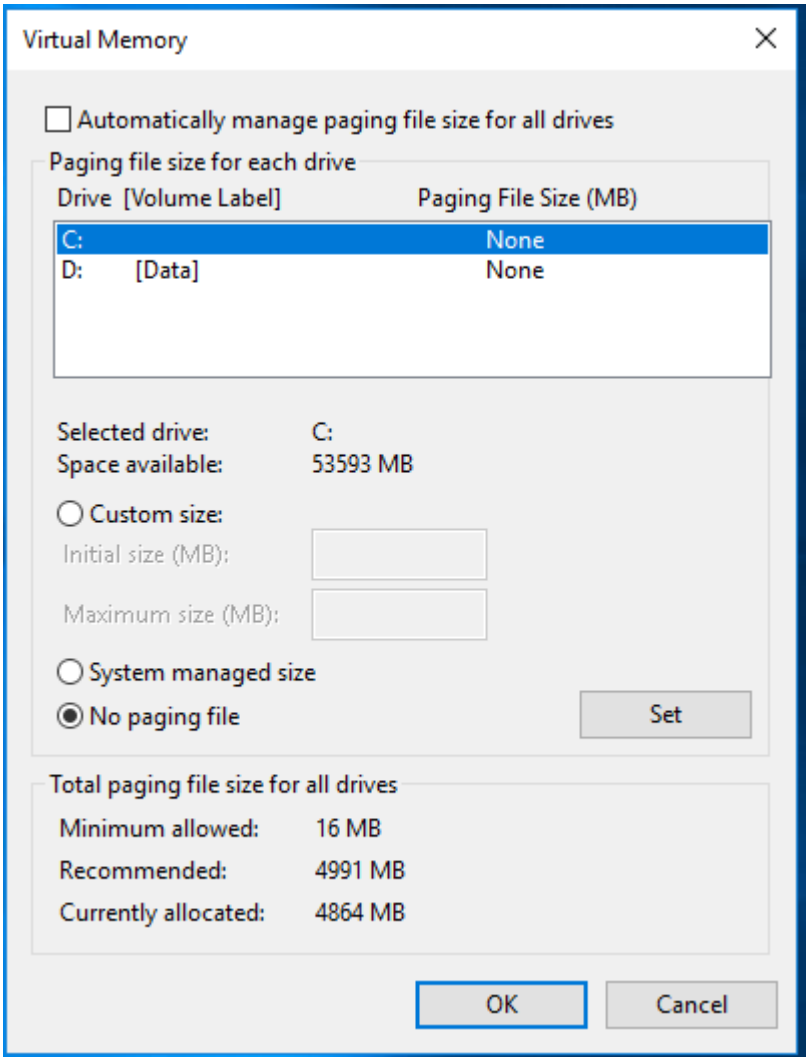
3. In the **System Properties** dialog box, click the **Advanced** tab, and then click **Settings…** under the 'Performance' group.



4. Click the **Advanced** tab, and then click the **Change…** button.



5. Clear the 'Automatically manage paging file size for all drives' check box.
6. Select the drive that it is on, and then click the **No paging file** option.



7. Click **Set**, and then click **OK**.
8. Select **Restart Now** to apply the changes.

Using AudioCodes Mediant 800 Installation

Before installing the Voca system on AudioCodes Mediant 800, do the following:

- Install Windows 2016/2019 Security Updates
- Configure the OSN IP address
- Configure the Server System Time Settings

Installing Windows Security Updates

Install Windows Security Updates to run the latest service patches and install all missing updates.

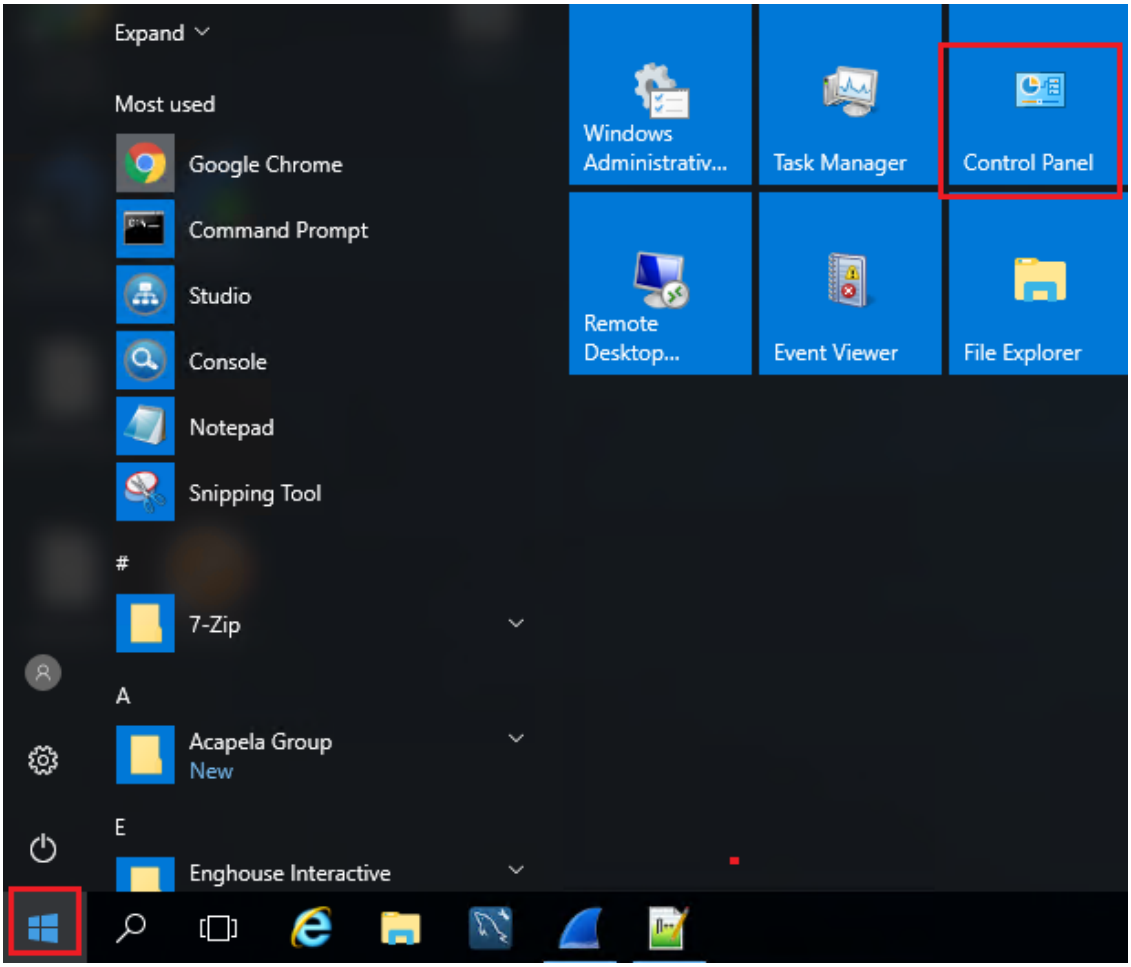
Configuring the OSN IP Address

The Voca system must have a static IP address. You can configure a static IP address for the OSN server on the Mediant 800.

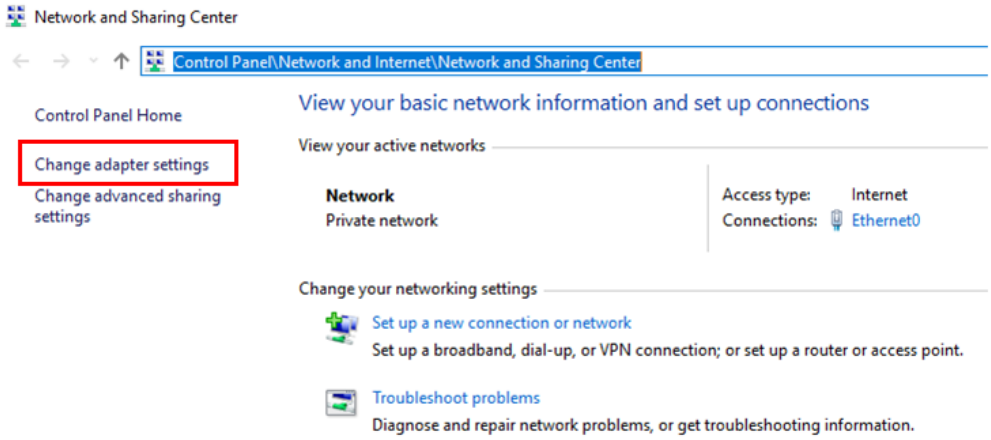
> If you are connected remotely, performing this step will disconnect you from the system. After performing this step, you can re-connect the system with its new location and IP address.

➢ **To configure a static IP address for OSN:**

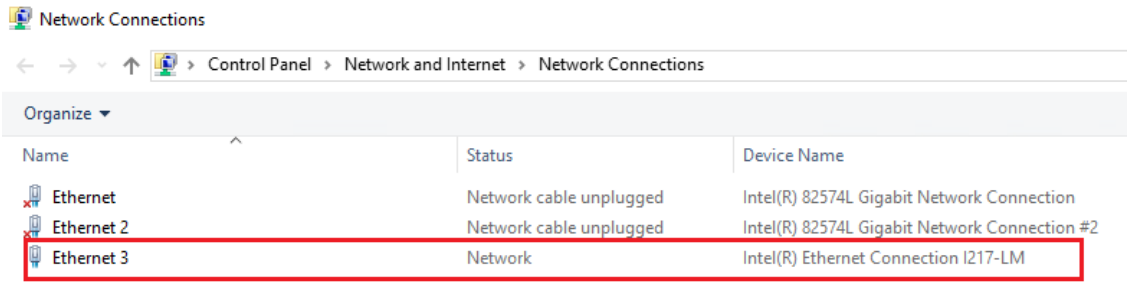
1. Press the Windows Start key.



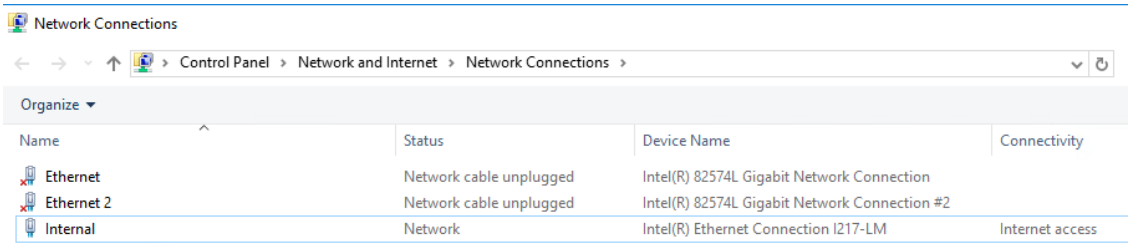
2. Open the **Network and Sharing Center** (**Control Panel** > **Network and Internet** > **Network and Sharing Center**).



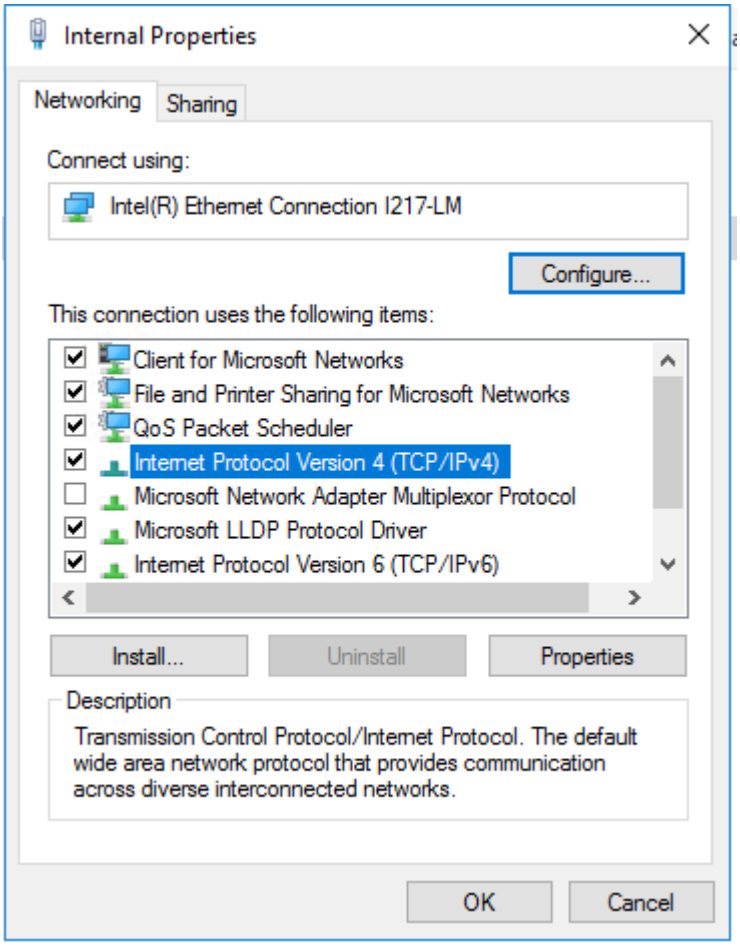
3. Right-click the *Intel(R) Ethernet Connection I217-LM* network connection, and then from the shortcut menu, select **Rename**.



4. Assign the new alias name as **Internal**.

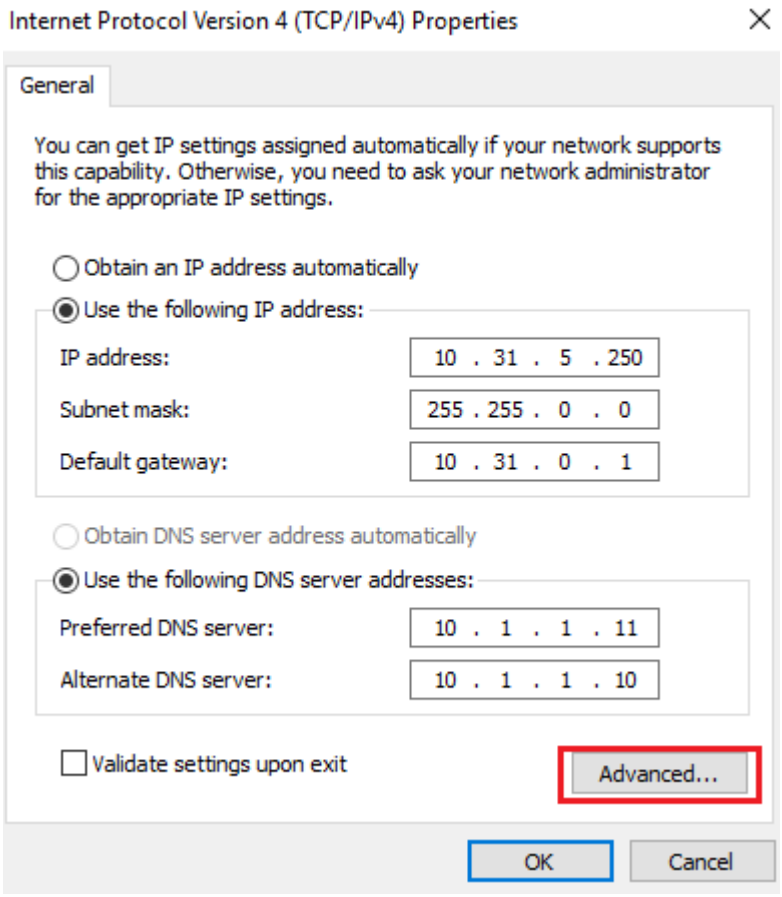


5. Right-click the **Internal** network connection, and then from the shortcut menu, choose **Properties**.

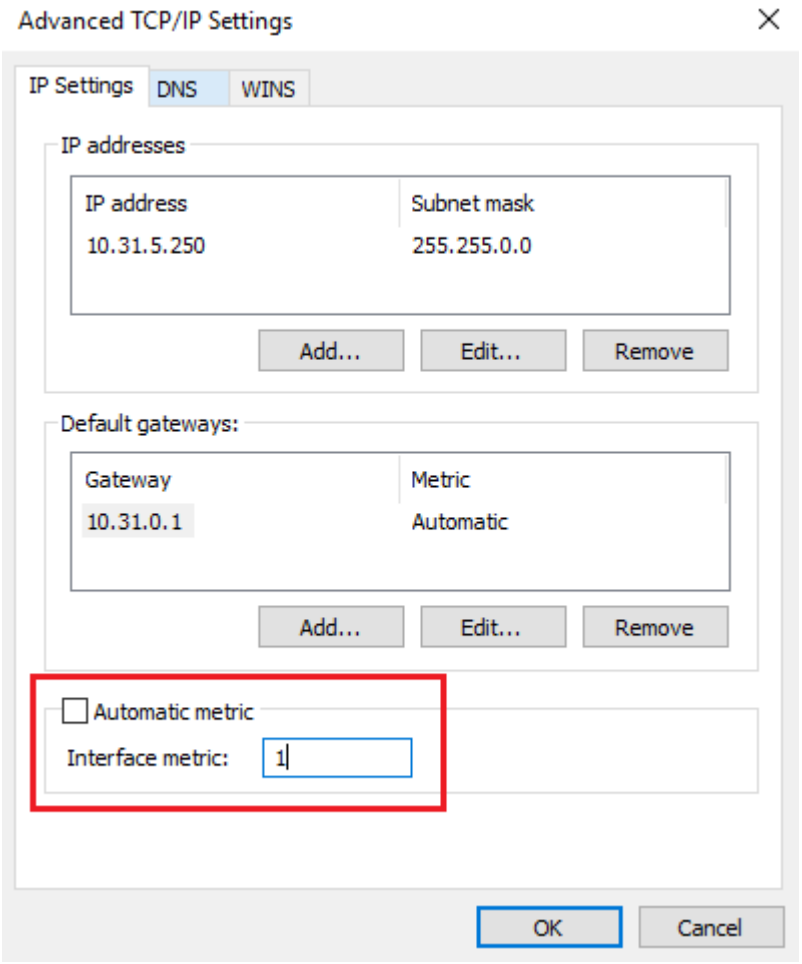


6. Double-click **Internet Protocol Version 4 (TCP/IPv4)**.

7. Enter the IP address and DNS server addresses.
8. Click **Advanced**.

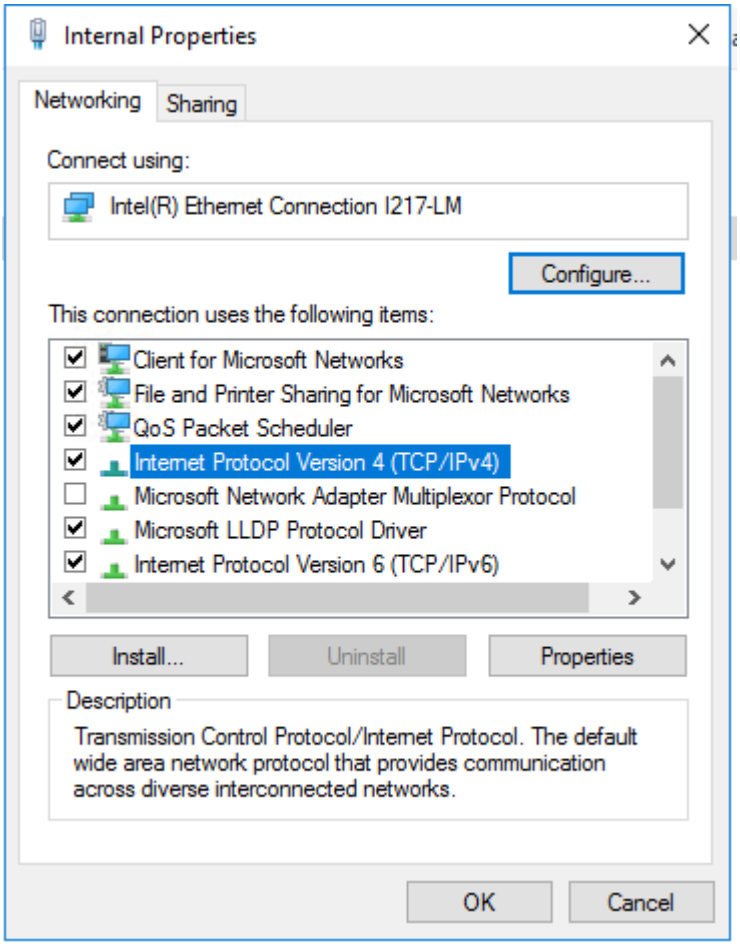


9. Clear the 'Automatic Metric' check box, and then in the 'Interface Metric' field enter "1".



A low metric number indicates higher priority. A high metric number indicates low priority.

10. Click **OK** to apply the configuration.

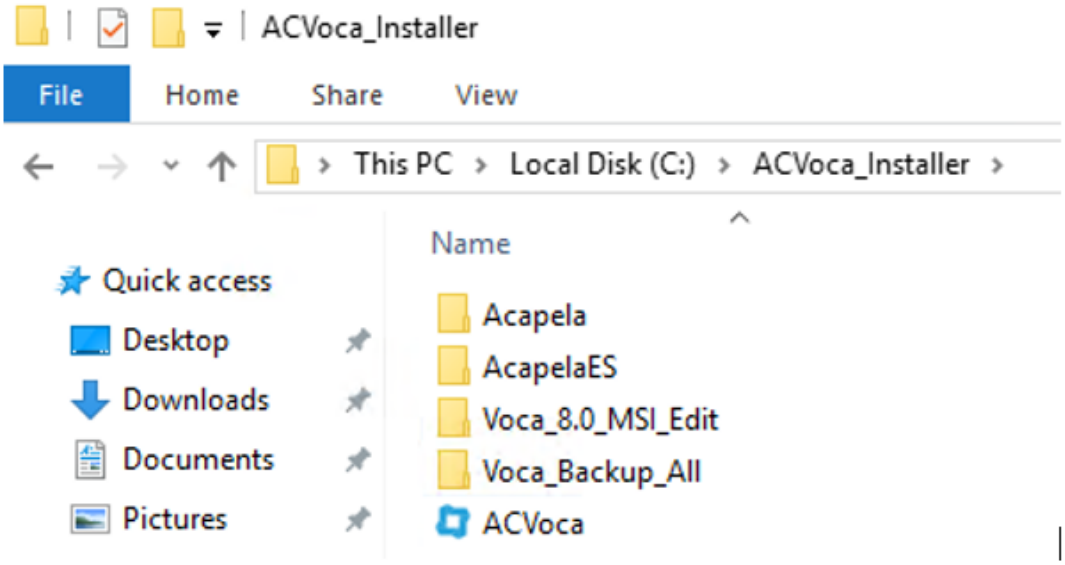

Internal Properties
Networking
Sharing
Connect using:
Intel(R) Ethernet Connection I217-LM
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol Version 4 (TCP/IPv4)
Microsoft Network Adapter Multiplexor Protocol
Microsoft LLDP Protocol Driver
Internet Protocol Version 6 (TCP/IPv6)
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK
Cancel

11. Click **OK** to close the Internal Properties window.
12. Close the **Network Connections** window.

3 Installing Voca

The procedure below describes how to install Voca. As noted in Getting Started on page 2, there are a number of ways to install the Voca system.

Copy the installation files to the C:\ACVoca_Installer directory.



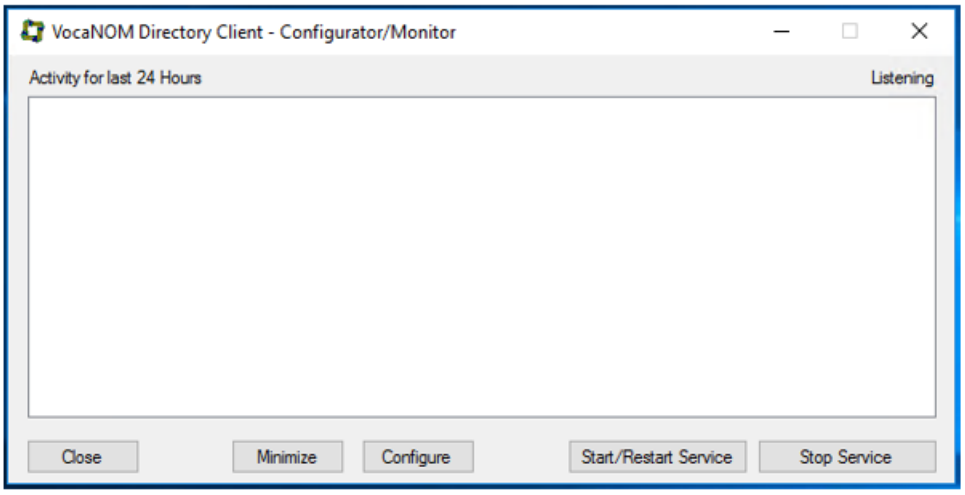
A restart may be required during installation. After the restart has completed, log in to the server and the installation process will continue automatically.

➢ **To run pre-installation in case of upgrade:**

1. Backup the recent systems data.
   a. The backup procedure will be performed automatically by the Voca installer. The backup directory is C:\NSC\Backup_<Time Stamp>\BackupFiles\.
   b. It is highly recommended to save the:
      - licenses files in C:\NSC\License\ directory
      - SBC configuration files in C:\NSC\SBCconfig directory

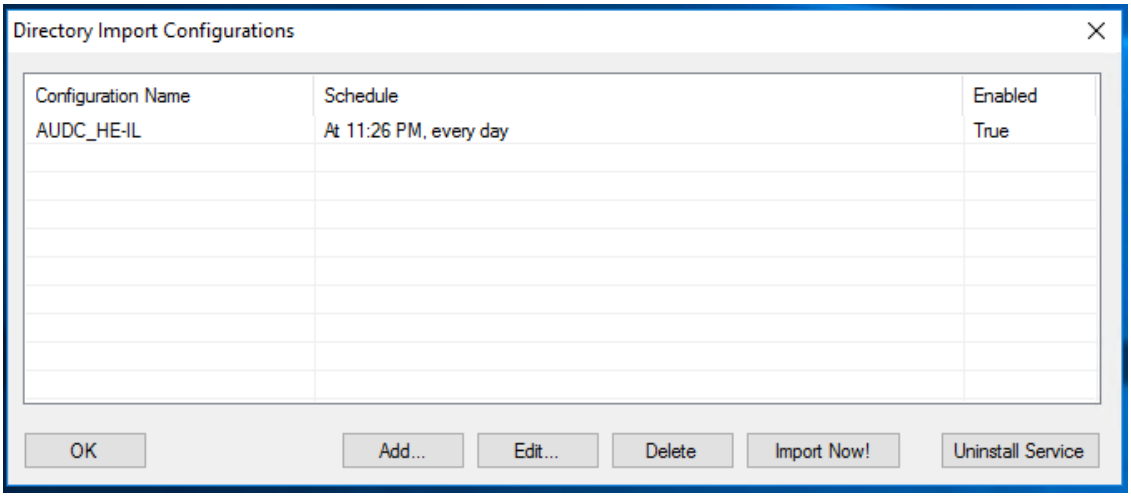
      These and other important Voca directories will be backed up during the upgrade or during the daily scheduler backup procedure.
2. If the LDAP standalone synchronization feature is used:
   a. Un-install the old **VocaEnterpriseDirectoryService**.
   b. Open the VocaNOM Directory Client **C:\NSC\LDAP\VocaLdapService\VocaLdapSetup.exe.**
   c. Click **Stop service**.

d. Click **Configure.**



e. Click **Configure**.

f. Click **Uninstall Service**.



g. Close the **VocaNom Directory Client.**

h. Rename the 'C:\ProgramData\VocaLdapService\Settings.xml' file to 'settings_bak.xml'.

3. If the CSV synchronization feature is used:

   a. Backup CSV synchronization files located under **C:\NSC\LDAP\Import_CSV_to_Cloud**

   b. Restore the feature after the upgrade.

4. Upgrade Voca Version 8.0.1.

   The upgrade procedure fails when you try to upgrade Voca Version 8.0.1 (primary or secondary) to Voca Version 8.4.0 (primary or secondary). This issue did not occur during upgrading Voca Version 8.0.1 (standalone) to Voca Version 8.4.0 (standalone). See Upgrading from Voca Version 8.0.1 to Voca Version 8.4.0.htm.

5. Upgrade Voca Version 8.0.2.

During the upgrade of Voca Version 8.0.2 to Voca Version 8.4.0, the Enghouse CTIC (Media Gateway) application is removed by installer.

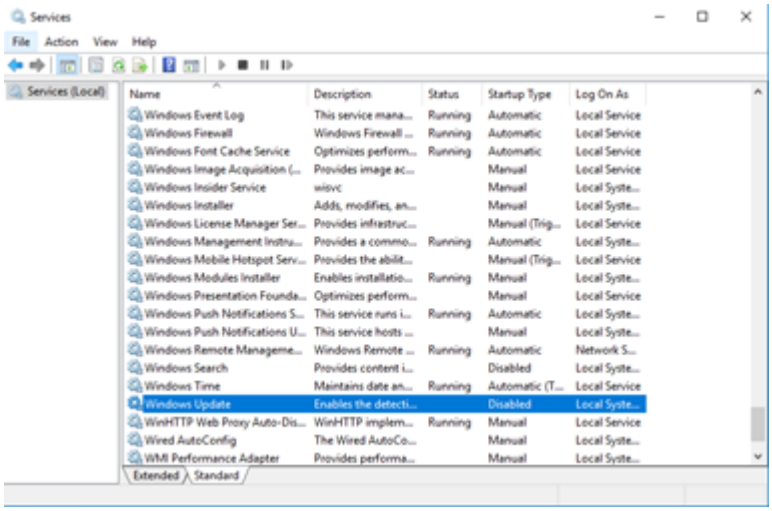
> Backup the CTIC (Media Gateway) license before you run the upgrade procedure. The license can be found in **C:\Program Files (x86)\Enghouse Interactive\CTI Connect\Licenses**.

See Installing Enghouse CTIC (Media Gateway) application in Enghouse CTIC directory.

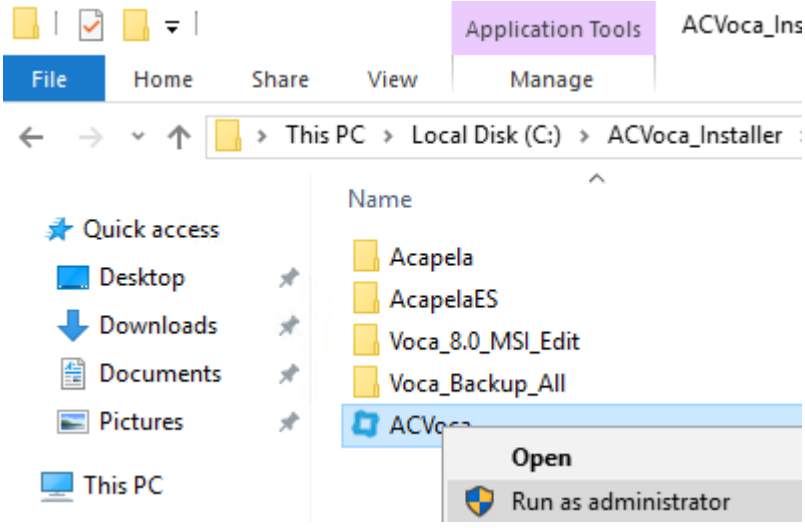
6. Restart the server.

➢ To install Voca:

1. The Windows Update service must be stopped and disabled during the Voca installation. It can be enabled once the Voca installation procedure has been completed.

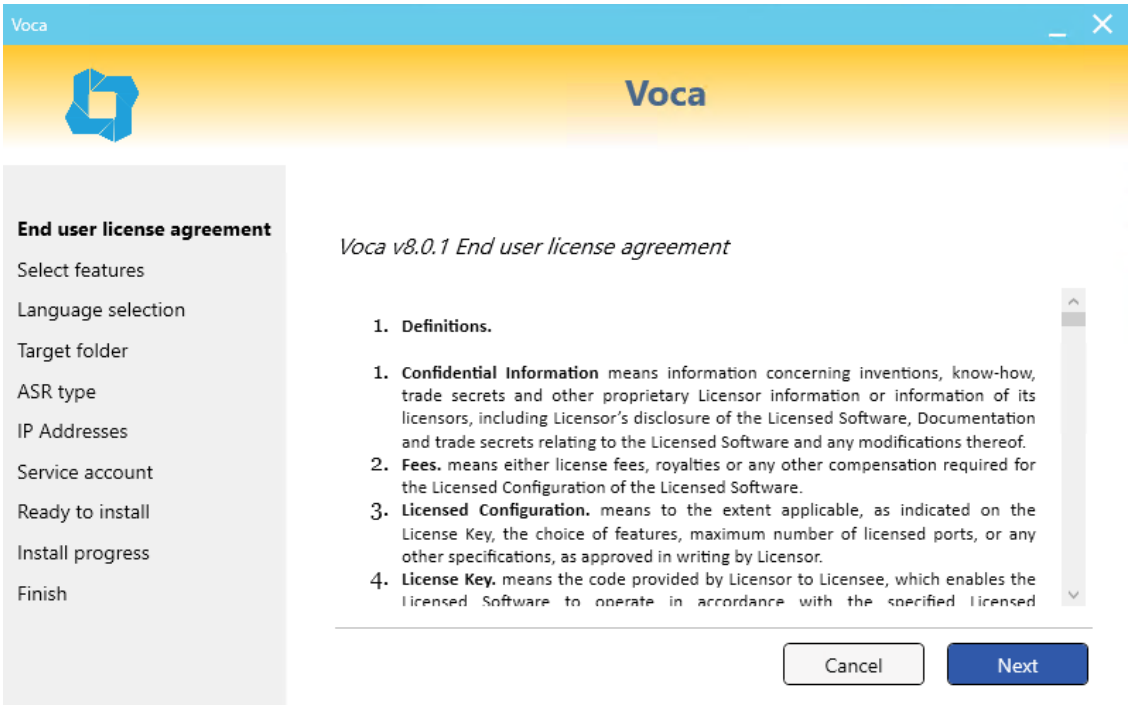


2. Right-click the ACVoca installation file, and then select **Run as Administrator**.

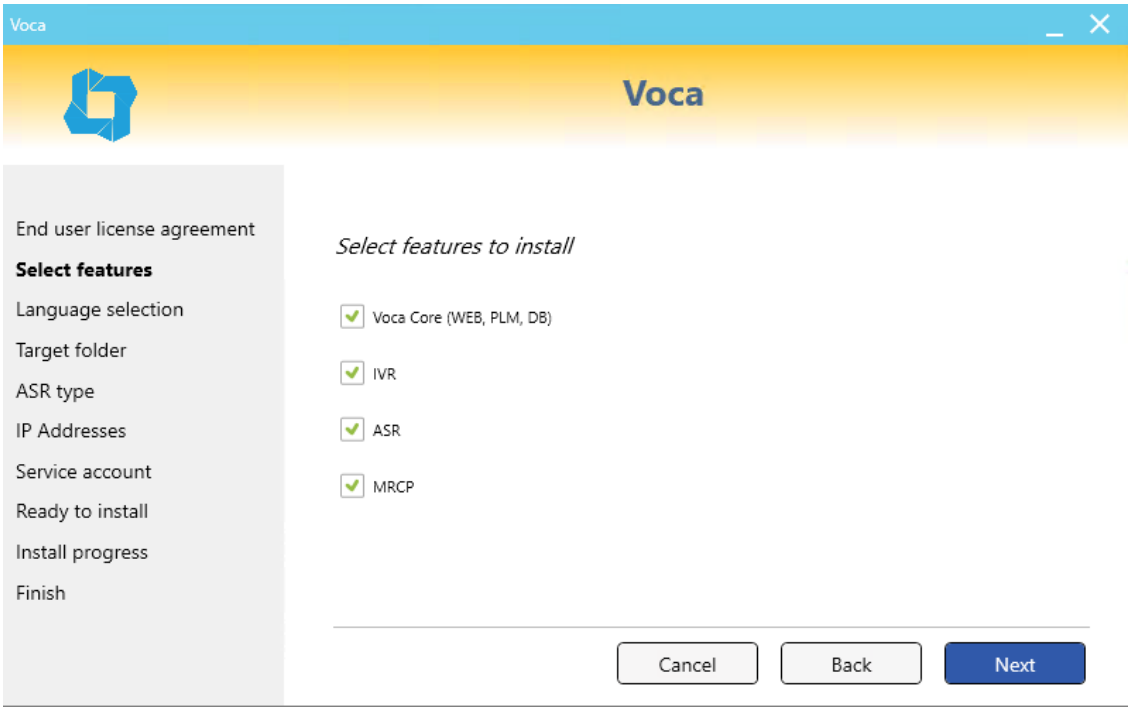


3. After launching the installer, the installer UI appears. You need to configure the installation process.

4. The **End user license agreement** appears; click **Next**.

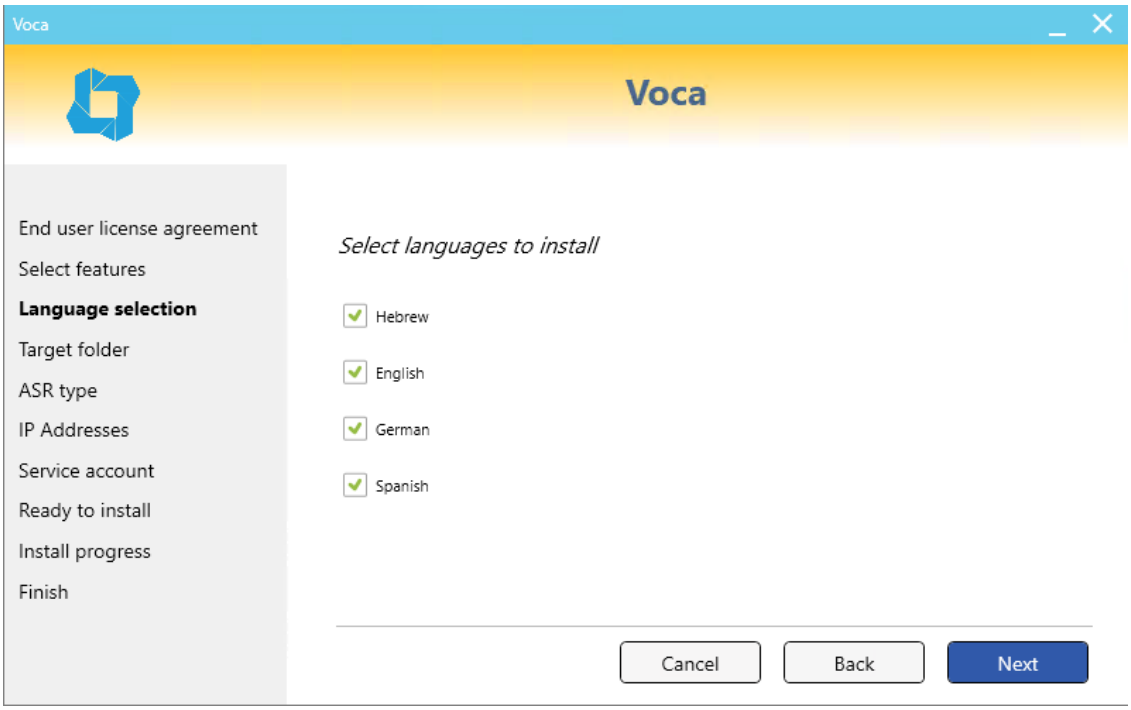


5. Select which features you want to include in the installation, and then click **Next**.

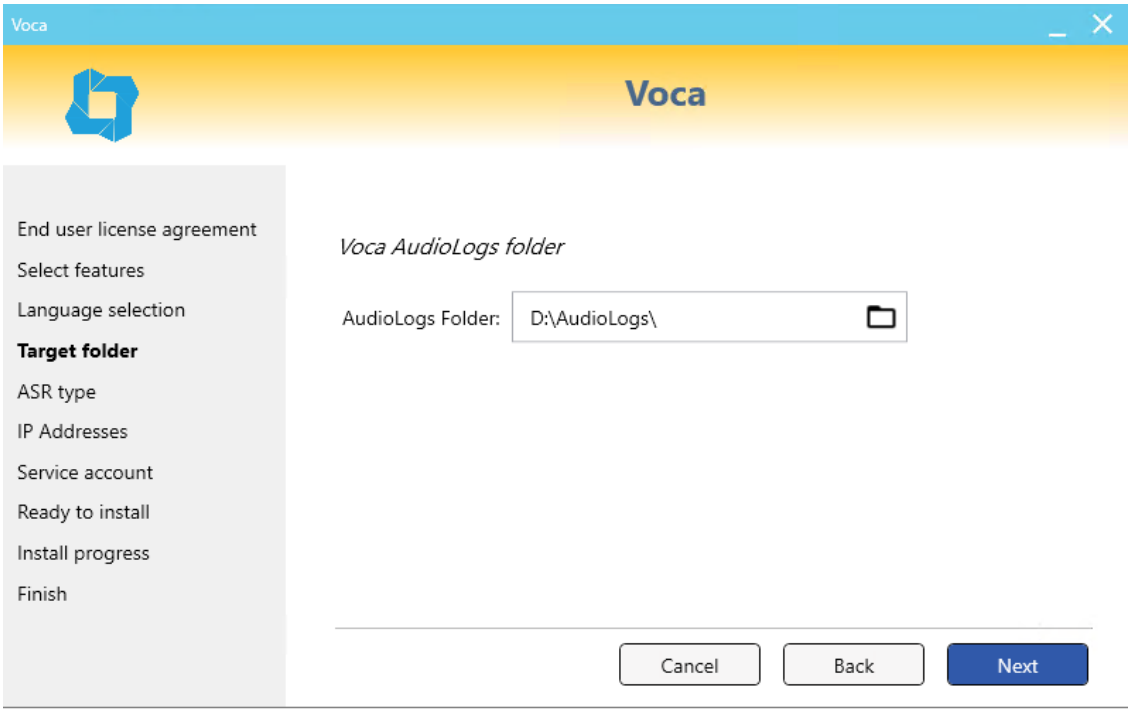


6. Select the languages you wish to install, and then click **Next**.

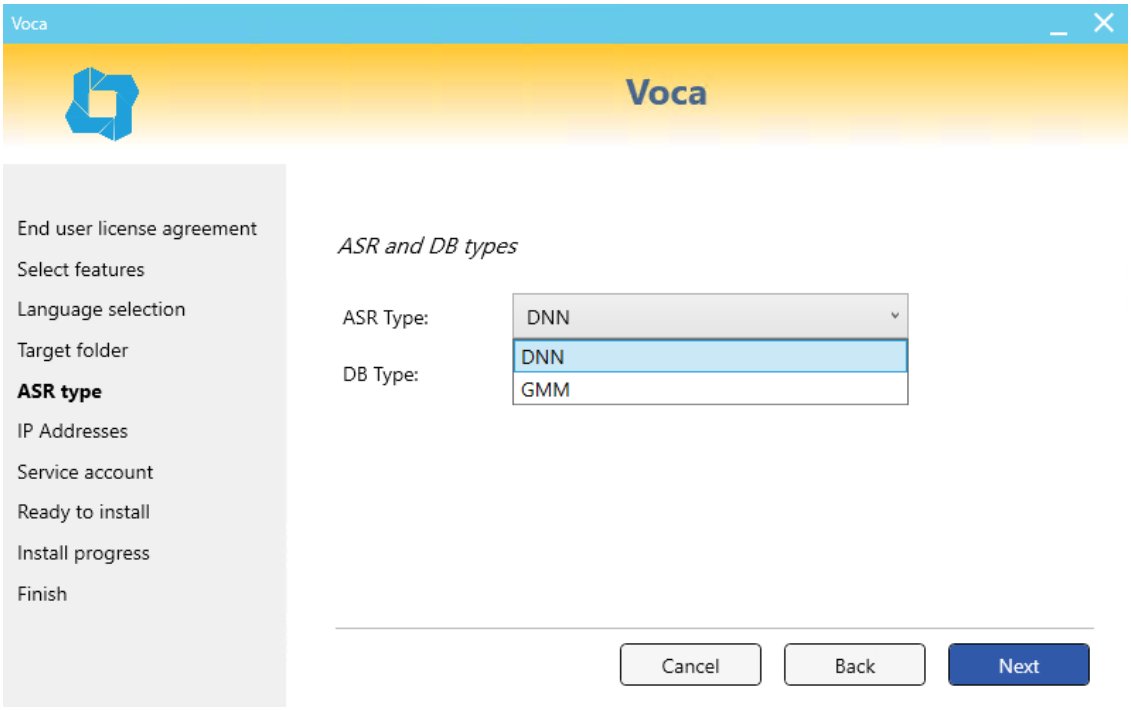
The Spanish dialect is supported in GMM mode only.



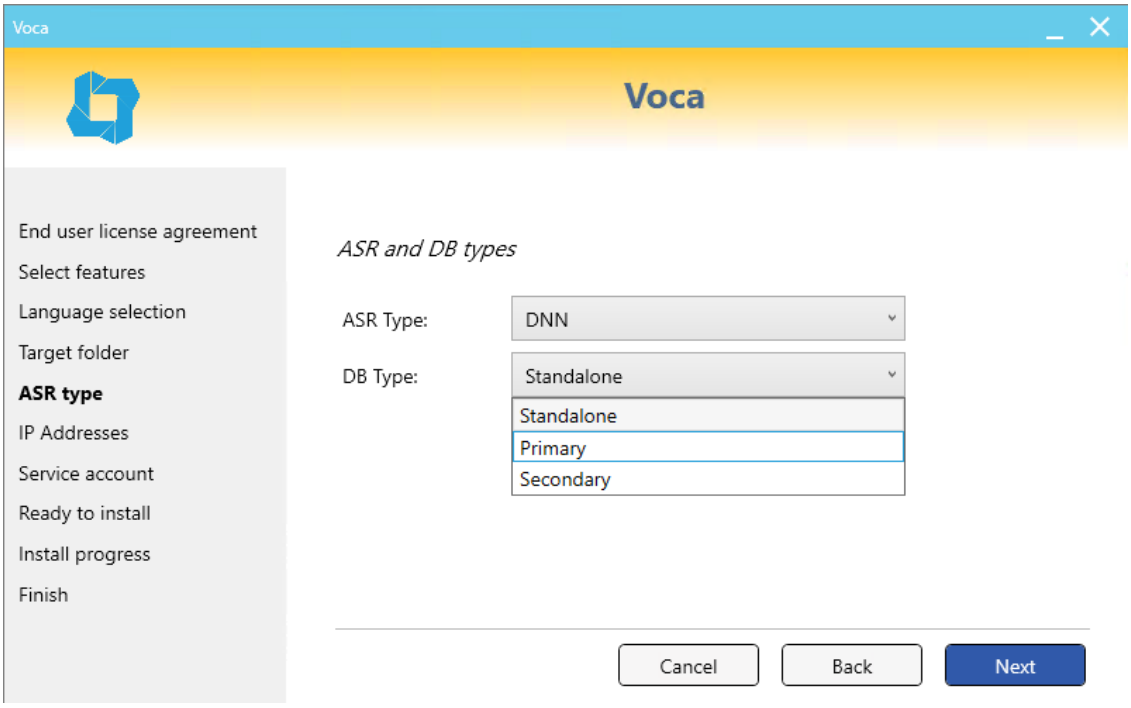
7. The AudioLogs directory window appears. The Voca system records and saves the speech request in an audio logs directory. Assign the **D:\AudioLogs** directory, and then click **Next**.



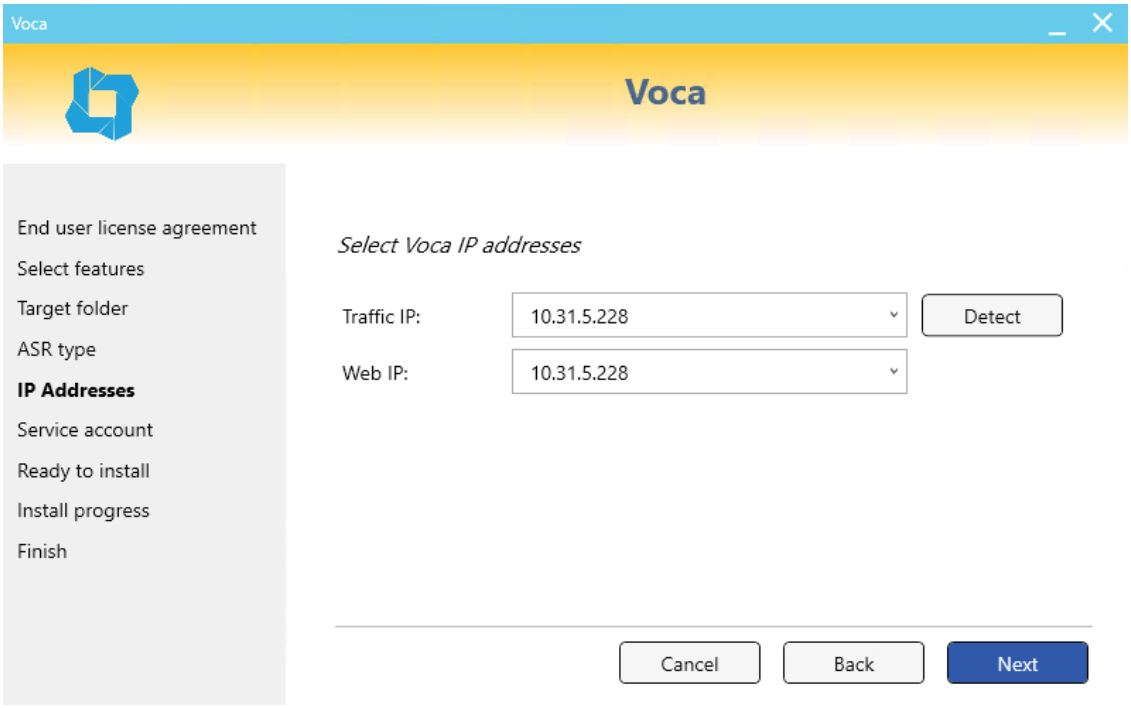
8. From the ASR drop-down list, select the ASR component. As noted above, the Spanish dialect is supported in GMM mode. Select your choice accordingly, and then click **Next**.



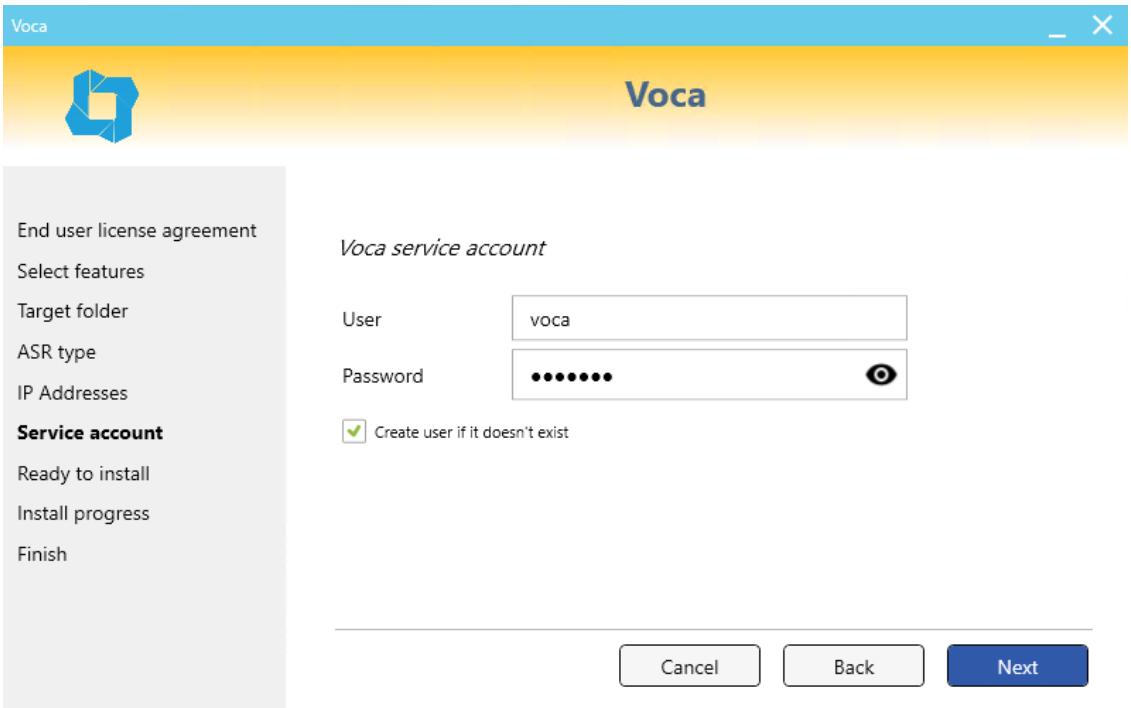
9. If Web Core was selected for installation, you need to select the type of DB:
   - Standalone
   - Primary
   - Secondary
10. Select **Primary** or **Secondary** if your installation is part of a High Availability setup.



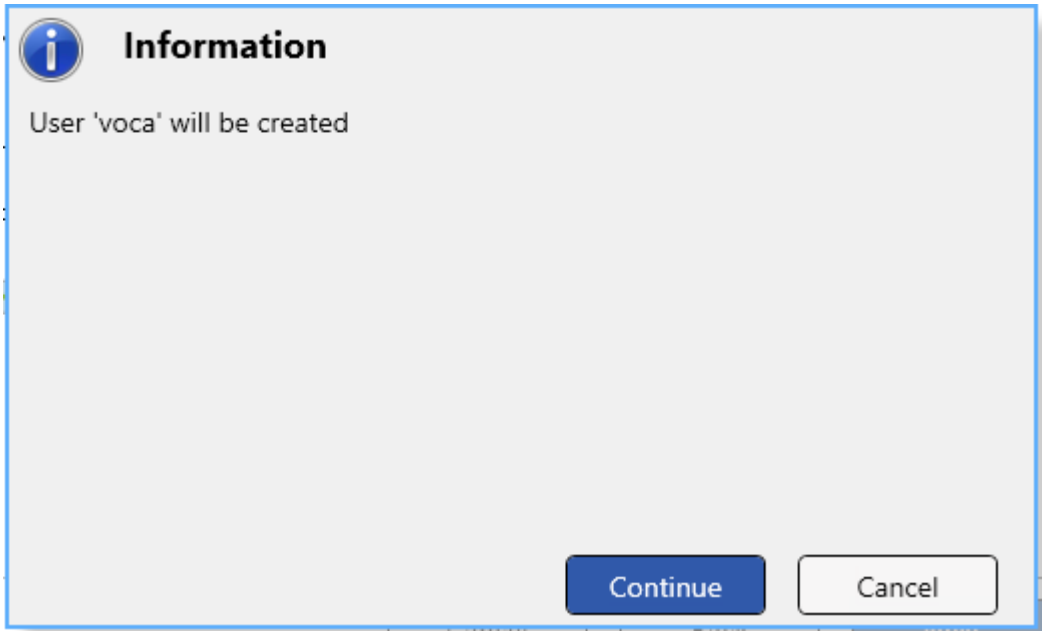
11. In the 'Traffic IP' field, enter the traffic IP used for SIP; in the 'Web IP' field, enter web IP used for admin management and the DB.



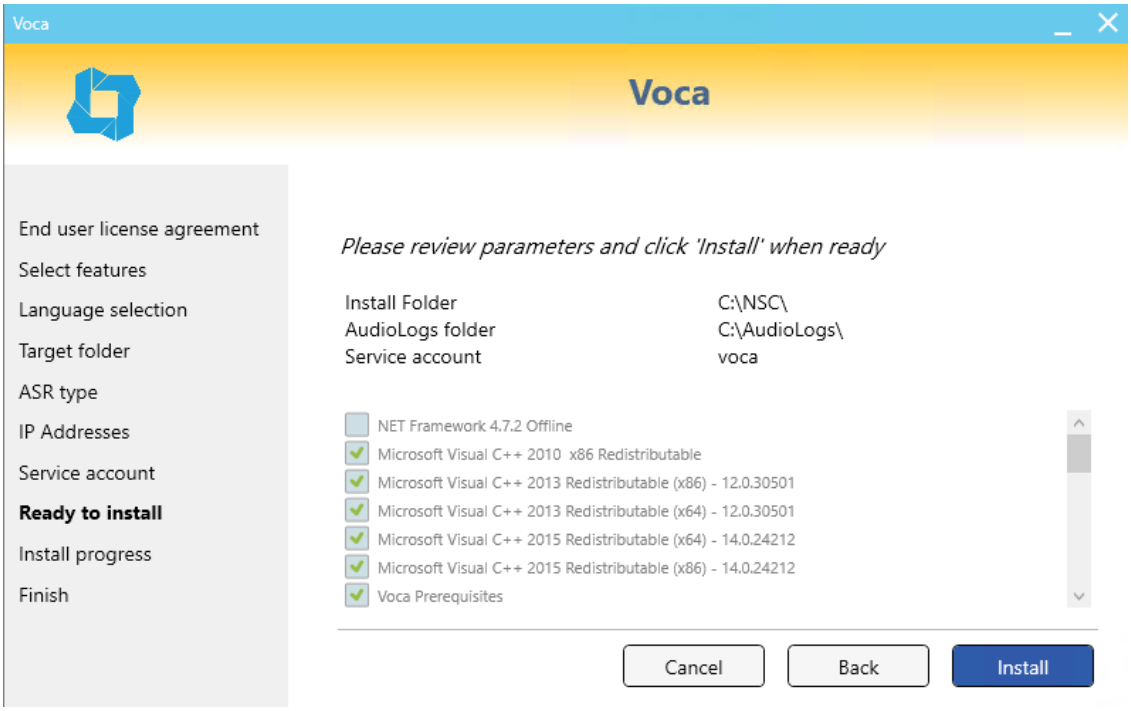
12. During the initial installation, enter a new password for the Voca User. In case of an upgrade, enter the existing password. Click **Next** to continue.



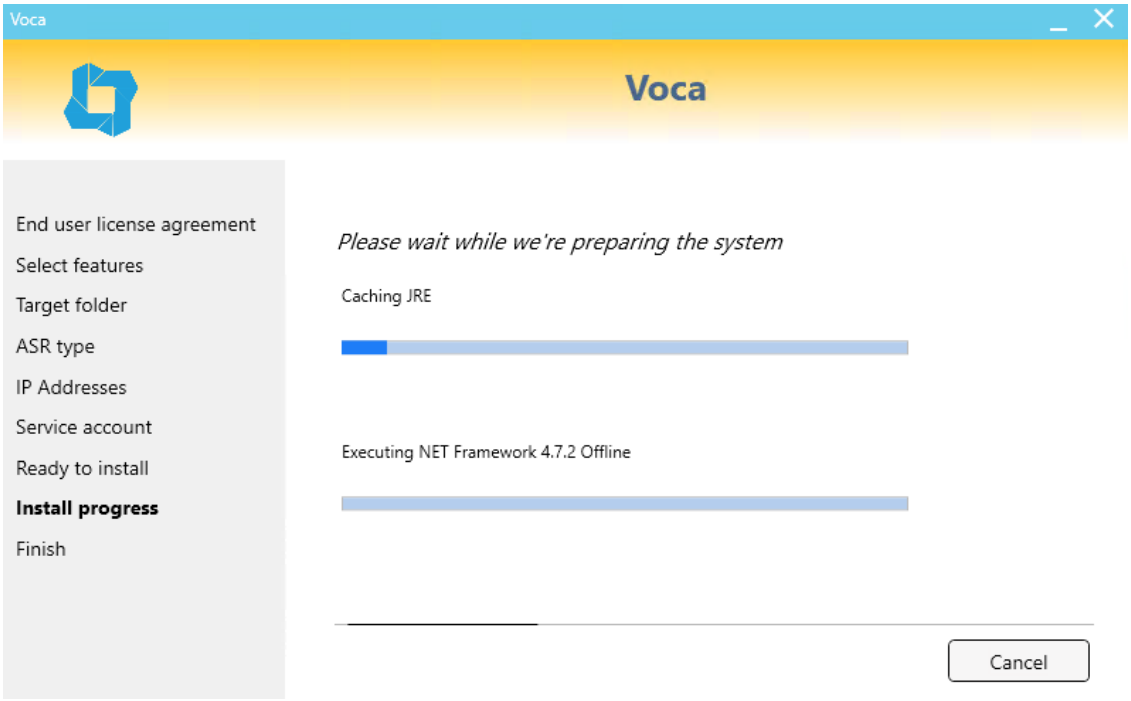
13. The Information page appears; click **Continue**.



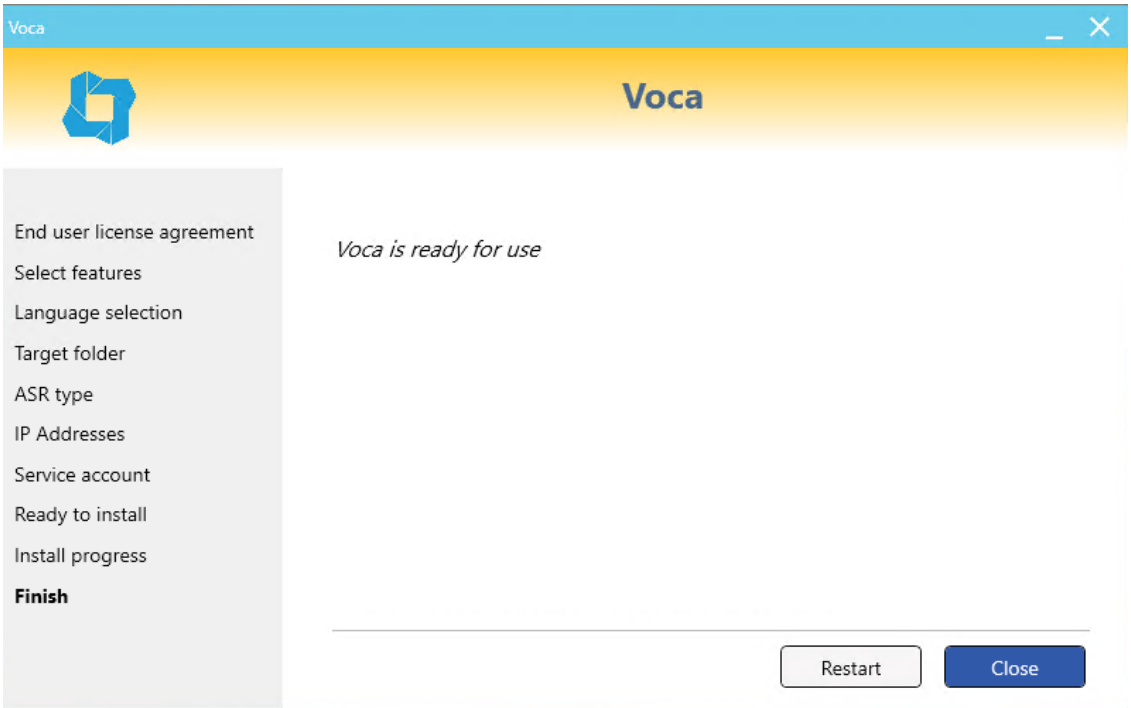
14. On the Ready to Install page, click **Install**. The installation process begins.



15. The installation progress bar appears.



16. When completed, the installer displays the following screen. Click **Restart** to restart the server.



17. Restart the server.

Changes will not take effect until you reboot the system.

Running Post-Installation

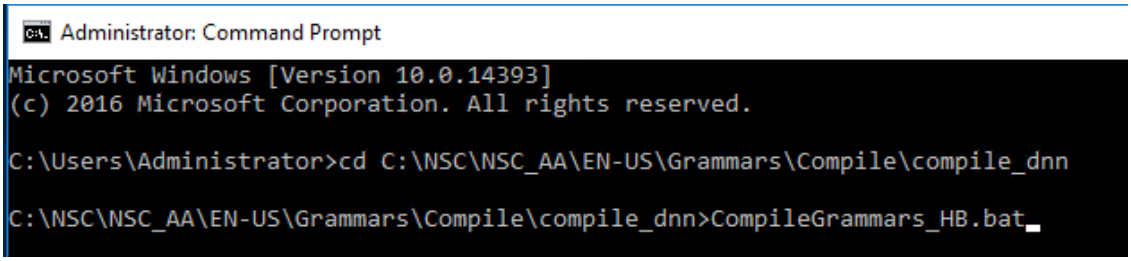
The procedure below describes how to run the post-installation procedure when performing an upgrade.

➢ **To run the post-installation when performing an upgrade:**

1. Recompile the grammars.
   a. Recompile contacts and departments grammars.
   b. Recompile the periphery's grammars.
      i. Open the command line as an Administrator.
      ii. Run the following commands:

```
>cd C:\NSC\NSC_AA\<dialect>\Grammars\Compile\compile_dnn\
```

```
>CompileGrammars_HB.bat
```



Version 8.0.1 or later is released with Amazon Corretto Java engine Version 11.0.9.12.1. In case of available security patches for Version 11.x, the installed java engine can be updated.

2. Reconfigure Music-On-Hold if required.

4 Voca Upgrade

When upgrading Voca, refer to the upgrade notes described in Installing Voca on page 15.

The following items should be addressed during system upgrade:

- System backup
- LDAP or CSV synchronization migration
- Installing new Voca licenses
- Grammar recompilation
- Setting up Music on Hold

Voca Versions that can be Upgraded

The following Voca versions can be upgraded:

- Version 8.0.2
- Version 8.4.0

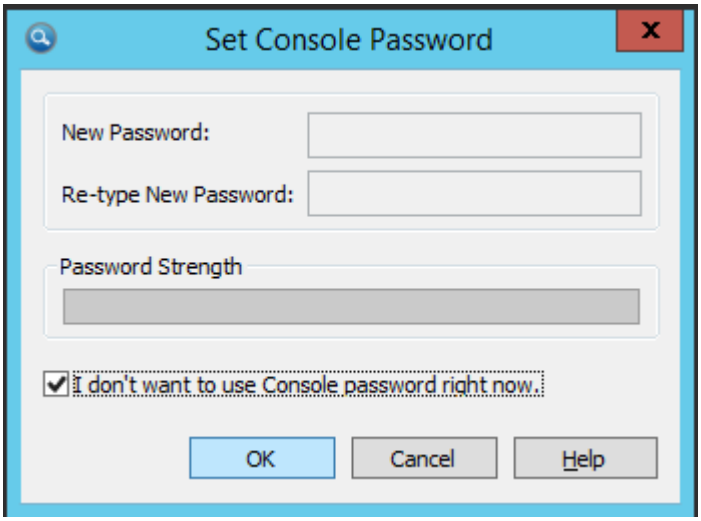
5 Configuring Enghouse Interactive Communication Portal (CP)

Enghouse Interactive (CP) is a third-party application responsible for SIP connectivity between a customer's PBX and the Voca speech recognition agent.

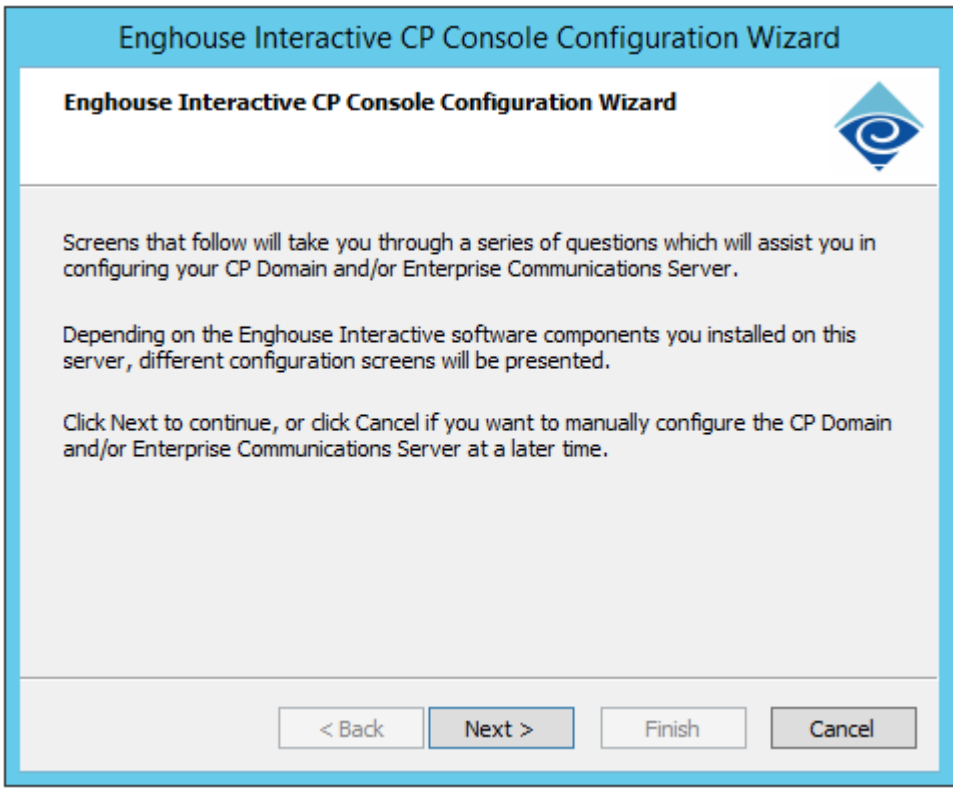
➢ **To configure Enghouse Interactive's CP:**

1. Launch the CP Console 10.3.

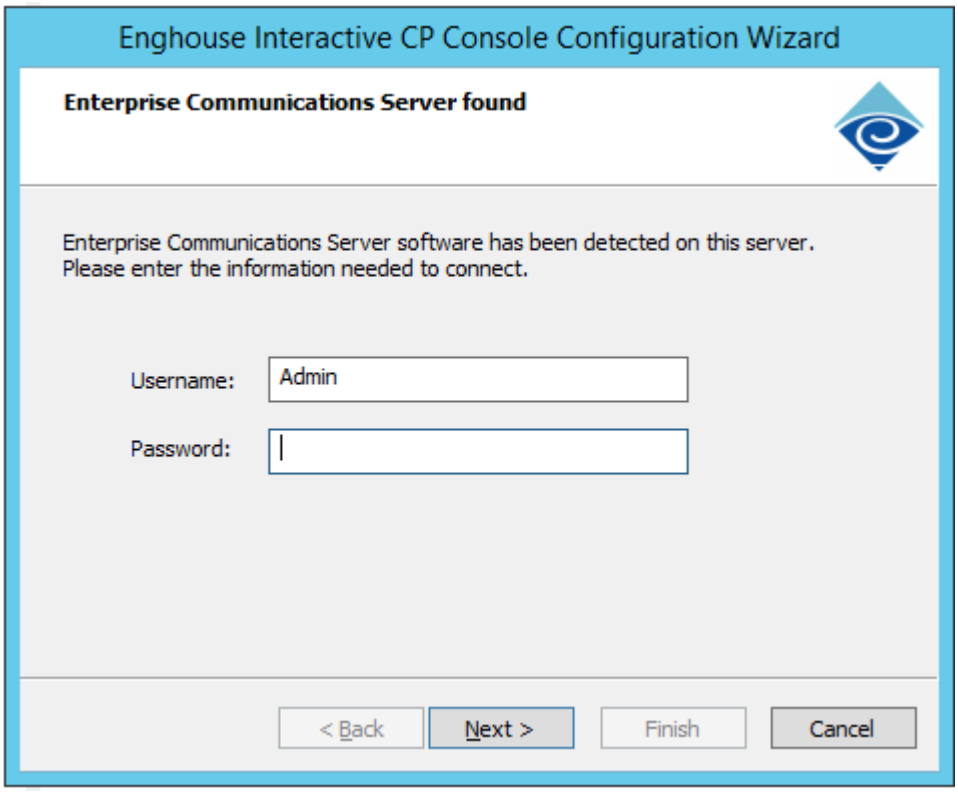
2. When prompted to set a password, select the 'I don't want to use…' check box, and then click **OK**.



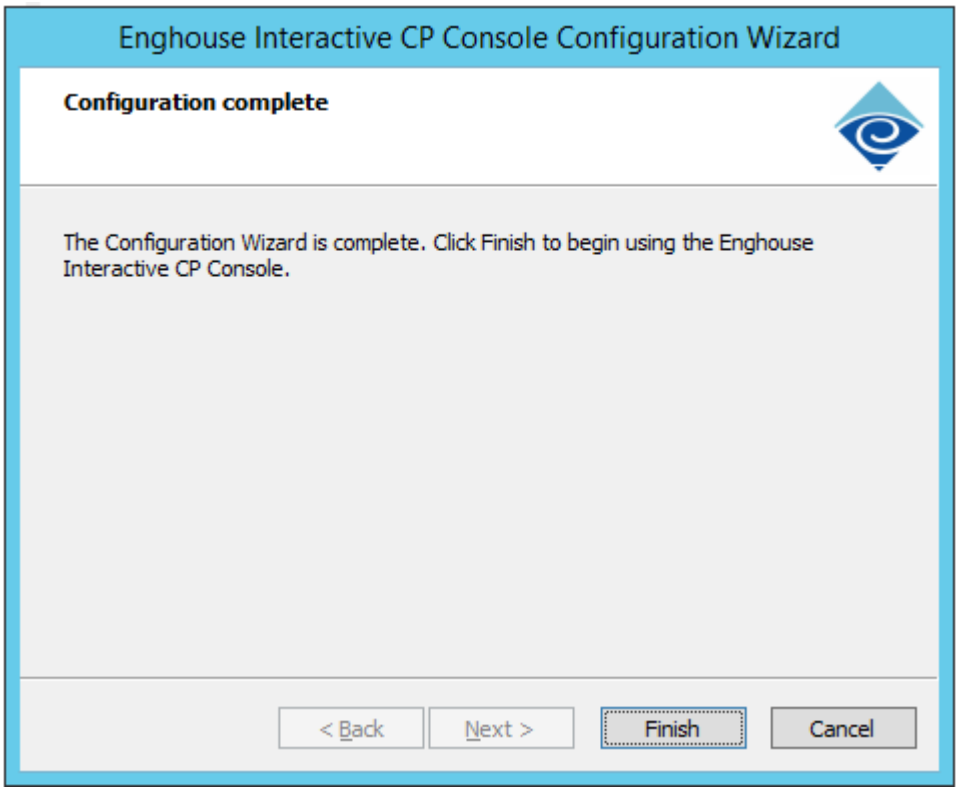
3. When the configuration wizard starts, click **Next**.



4. When prompted, enter the password **AC123456**.



5. Click **Finish** when the configuration completes.


Enghouse Interactive CP Console Configuration Wizard
Configuration complete
The Configuration Wizard is complete. Click Finish to begin using the Enghouse Interactive CP Console.
< Back
Next >
Finish
Cancel

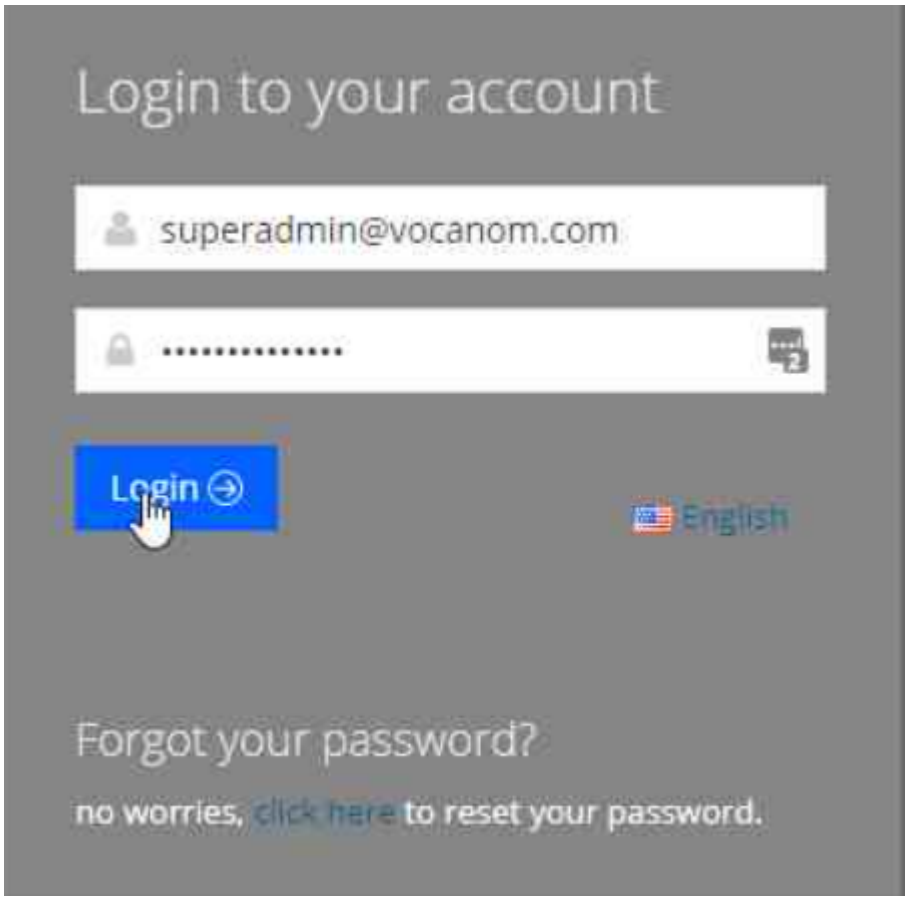
6 Installing the Voca License

AudioCodes provides a license to use Voca. You can obtain a "finger print" file from the server that you want to install Voca on. This file is sent to AudioCodes so that a license file can be created and sent back to the customer.

- All licenses have virtual machine clone protection. If there is any change inthe Virtual MAC address, CPU characteristics or UUID, the license protection procedure is enabled and you will need to repeat the licensing process.
- After you upgrade to Version 8.0.1 or later, you need to issue and re-install the Voca new license. Enghouse and TTS software licenses are not affected by the upgrade.

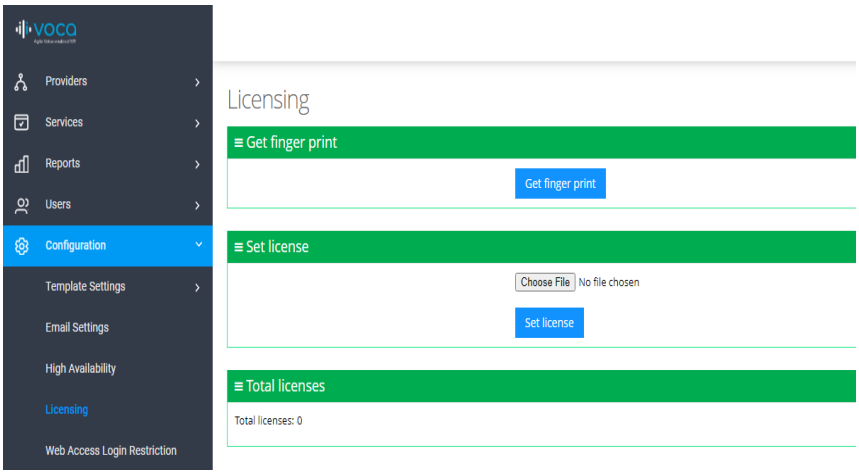
➢ **To install the Voca License:**

1. Log in to Voca by navigating to **https://<IP Address>** in your Chrome browser.
2. To get the Administrator credentials, please contact your AudioCodes representative.



The default Administrator credentials should be modified after installation.

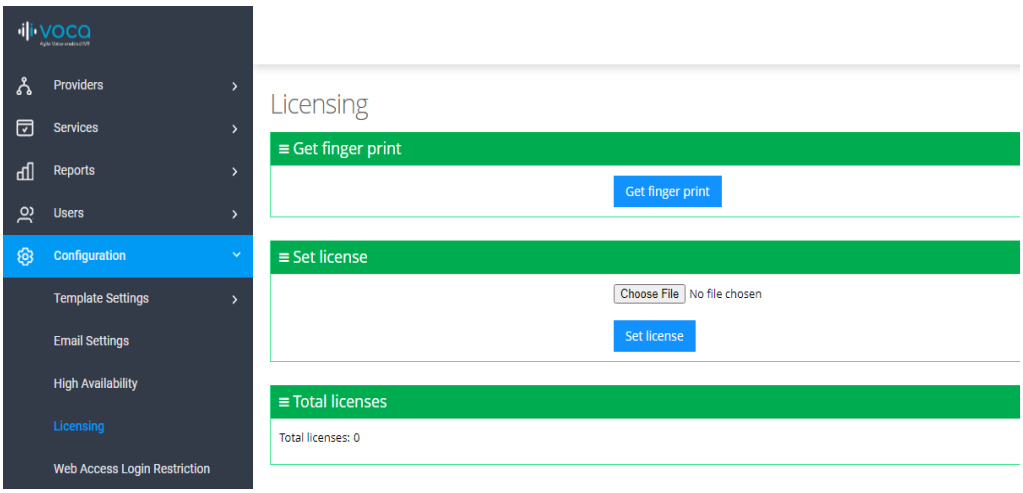
3. On the Licensing page (**Configuration** > **Licensing**), click **Get finger print**. A finger print file is created on your server.



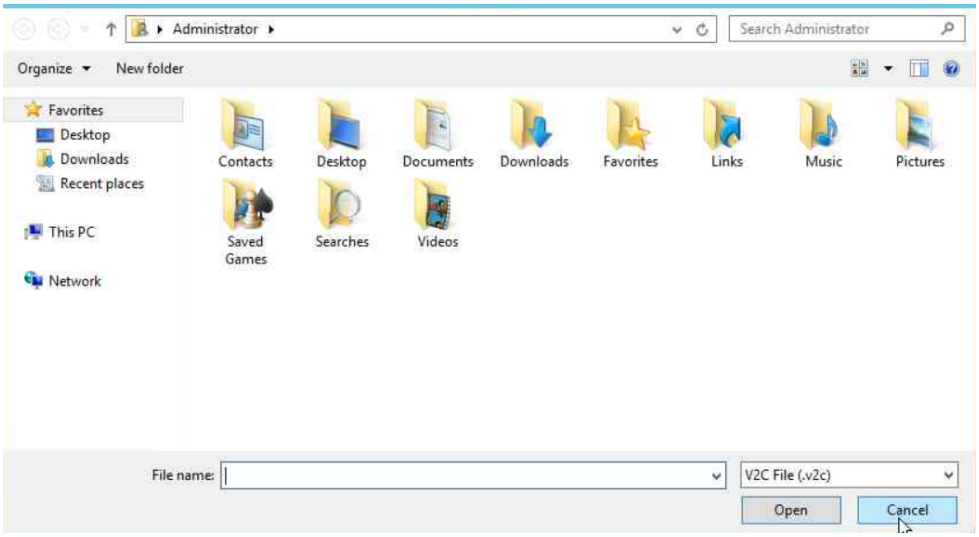
This is a sample finger print file:

```
<?xml version="1.0" encoding="UTF-8" ?>
<hasp_info>
  <host_fingerprint type="SL-AdminMode" crc="3221380611">
MXhJSQFckT56GhQoANLK9xg1ZSSoakVMDiHoBmr2ABIUbcKJmYANwKUqfIJVoG
7hBFIKSQCE2nY9aApcMhzQatAAGFuWbUB3ZTIkuwShGCArcBTwqhGEqAyIMqMB
jPBhiRdQoGtCRJoaA0BiFkaBgApcu1NYDAmAG+kwliU=</host_fingerprint
>
  <host_fingerprint type="SL-UserMode" vendorid="94011"
crc="1655718058">
MnhJSYGMDFU0IJUYDWCElcOgmkFxJpCSbWgMAIlpzmeGADUJR6O2DBIAN7J4W7
EqcMWQyFFgoABIKyAV5ubKfMjgCpgdQtANuKcUuRGUqBwIGYYNwKWaQwGvKpA1
OQEknSQAQi0IAwygAtbOEaB6NADGltYNAgCuRJ8M14AVB2QFAHpcEA==</host
_fingerprint>
</hasp_info>
```

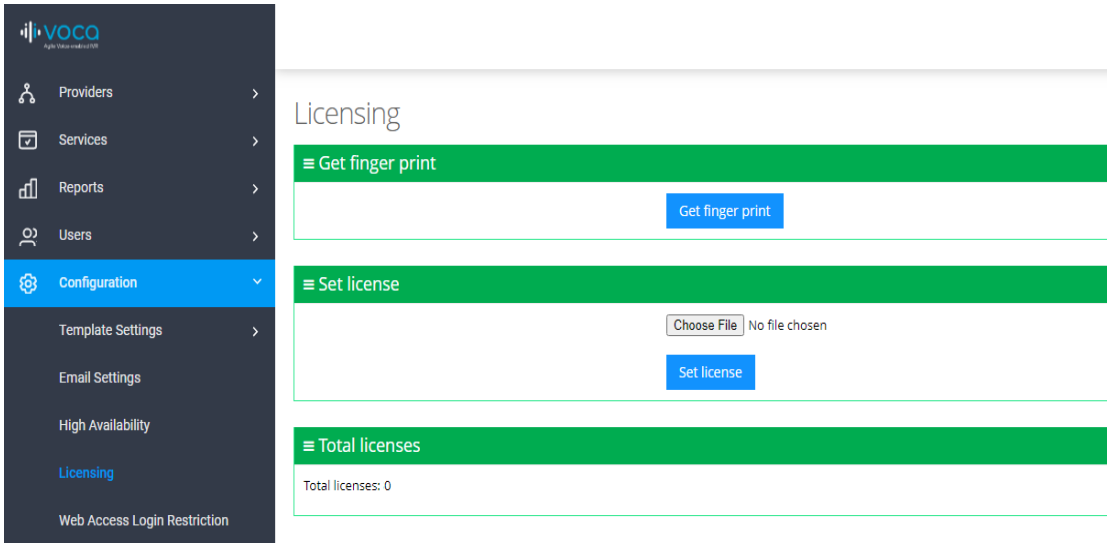
4. Send the finger print file to AudioCodes.
5. When you have received your License file from AudioCodes, copy it to your server.
6. Click **Choose File** to select your license.



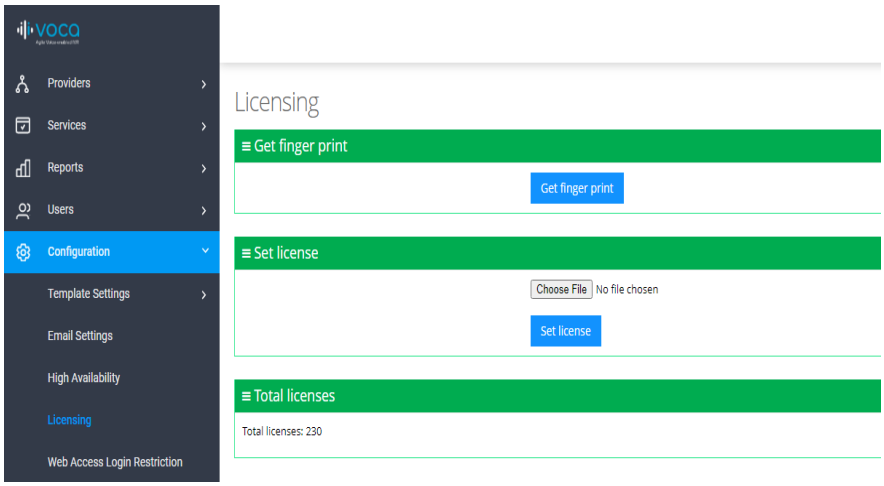
7. Select the license file name, and then click **Open**.



8. In the Set License window, click **Set license** to activate your Voca license.



9. After you have set the license, the total number of licenses should be displayed on the screen.



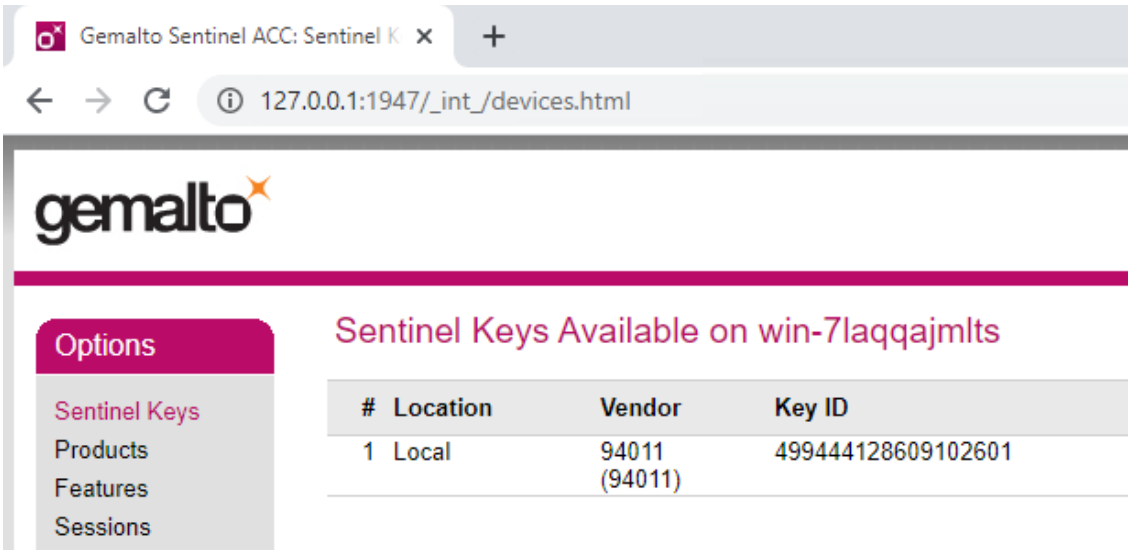
This is an example of what a license file looks like.


```
k?xml version="1.0" encoding="utf-8"?><hasp_info>  <haspscope>    <vendor id="94011">      <hasp id="182762873689409811"/>
 </vendor>  </haspscope>  <v2c>YoIHRKCCBzuABHZ0YzKBggImRi86Bgv++cAwteDkd0CYnYgqM4ABqIKP87D0BLVWoM1UzGwndJ2Q
SEmXMm9UgjTYAN4x/1c1xRLxeCO2UBHWC3SBkRf9Y1ha9dvT5bZbQYj83JAby/BZSgaDDRhiyWbFWLeM4hs4y
+EkGAAauXZuthOeumpzS04YyvY7GcVMYsXHUYSj/YqHiEYXptnIsksfnFsE01MITBAvwYu4hwHve3jFT95dPUH3gXI+7riQfQx0cNSY9HwZk4Jh8kQI9gUhorW
+YZkGPqxatOWHn5/vf8OiT+snpZ3/Mss+hwfWeBaYaEl3z2Xe9BcEVcRH8CeT2aJk+y55QViTMn/HLJjFZiOgmxbgmSR551c5
j6EYFBmI3gzIQXQpK9BE1F7dAHtkefChgWZR+IOSKsre0a2YbhMqW+npfx0ycgmR07nFebEfMFbi
bMVr29Mx9YVuS8LXFoK/fvdCXBHEOwGGhunNuICsD3MY7weS9WZuxnBxIq7+onlR11n91YfCgKeK
immlKpIyQaKBVtaeUHDA4mx/wVJbekB5p2DpA/o3EVRTzLW1QGOB1FekPggG4p20Tw3QdUjaSZ7lJ6sPsAYnsWkmSu
+u6soPLO5tfdPKkQT2NAK8ACqaP5+prw4ZXQseb+r88BrUDauggr9eAgWdn/r1
Tmi4KuQF1KItsoK4hueoWn145hXcmzhuEFaOa7MvpvI4FQv3sbqRjRa35oUZ0niB4Bd5PSMf1oIB
AIUBAYYDAW87pIIE/IAIAo1N3YRjCROBAQSmggSVgAgCiU3dhGMJE6KBhIABAaF/gH0xeE1JAVyR
PnoaFCgA0sr3GDVlJKhqRUwOIegGavYAEhRtwomZgA3ApSp8glWgbuEEUgpJAITadj1oClwyHNBq
0AAYW5ZtQHd1MiS7BKEYICtwFPCqEYSoDIgyowGM8GGJF1Cga0JEmhoDQGIWRoGACly7U1gMCYAb6TCWJaOCAvaAEIfPk1MnD5joqV9aZ
+YTqfuBggLgmEvtD5KvE+vsLashEwgW/K13tOScY4l/nwkdXiPydHWSPioWCkzL/+5Hz5ahFQEgztVK2rN6iecNzUQzBGs181fj+XNKoz8I4vFJ8NLZEHLZEh1I
7rhN3j1VZPne8Q4xIW8nu+yjBF6k2nkB4IuCsUgCAuIR2pYC6fVG1DH1dZx5vkVALir7Xyn+sWwpxraus
+u41vsvCpqq26HDD2LdEC2MRRQOk1OxYFaqMnOYR2SVqtnqlPxIwtc+SQnplfwog8NoCDwe3BSBuHjYtobfVWB2F0R24pcMiGE851Bd05uRd6RGC8LBE
+eyj7ofPqQfiZ9jThuZ805poUbZSsG8tHm9joiMwoYYJ0dRS87zaHsI3Mi1neeo159F1PMArUQWJgSKrZ+kO0GHaEdGt2KyLgjBTU/wIjDd
rqA9XZ1+ZuxNHKAVChTBQmUFLWwqehLFME1iNN7methdlb/FAwtjqWgZUmxQptg59CA2niNV0CKdDyL8nc
+py8/UsHf3md7DXQUtcn/fPOMEpfBqBWqrnNjhPn9IcY0YHgg1gcUxr7ecoFB6uqKYVaD3
tztnpOqIisXAZUmGgiHdjn/hV16QUopF7K7EYfQCKMtzQ/xV8panjUVpMscR6gNqj8SaP99fZG1v
COffKPFnuaA2iPGkACMPws/gw1HSXiWFMCx6YTEhr0y2I6+LB2gb43cO/sY0wxWrVRuide5+2w4rfQzH7/+czHfr8v2h0xv+OQt1YTexyyr8ydhgFhWi8zpM
+ieDyCHPvwcCIjFrceYMfqYsC1HtRgpiygKxXeaQFV/HceYOUbbnTI6Z7dYSmkMfiz6Mtg8xKEA5MG615GyUAZuXHvel/YJYneDPKGgS+FLC
588M7JiAeMz1BSX/ZPjL1OqPwo2zu2l3ZOT8kJiiunZoiXW2yqMAs6+G4jLGtBL0sc+0w+KcI+Mf
queLGZDFOjBKX0WFqmPwAPFGowBBDj1JHocBAYgBAIqCAQCsv7fMTqC5LmEGzMkdu6gsnNPcT6sRbNe8s6AtUTHgKrTCbttLtS0vMGvNsDmvo
+mLAf34HyHIWgrUWHWKW2An9oSX5b91fagJUBfWVIneGMx3sizt2IBbj+9V1YEUypqRcgpVwSErsMeDVh7PlWjC+iQxhs245LpW7rHEAs1cxm4Kn0de/S1M
NrKOR/GjCD1MHTPm5IxuFSYor6MTYQ4dIW9JFBFh90471Q5p0JLRWFx+J/kxgmq5r17IKacwrgB/
VfMeb9t2z4YKGb7+CHBf0D8E2HoO2VX0pzFygMUbbodKpFd3Olb1BanZMw5seFAXUuu9t/AL2t6m
SBeO/FX2hAEIpVGgBYADAW87oRSAAQSBD0dyYW1tYXIgVGVzdGVyAKIDgAEAoxuAAQKBFkVuZ21u
ZSBHcmFtbWFyIFRlc3RlcgCjEIABAYELQVNSIEVuZ2luZQChA4ABAA==</v2c></hasp_info>
```


> After you upgrade to Version 8.0.1 or later, you need to issue and re-install the new Voca license.

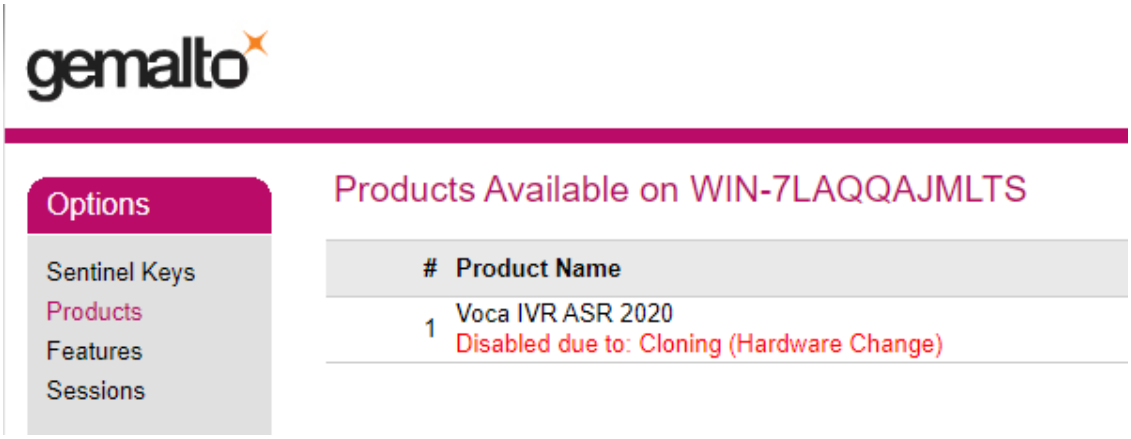
➢ To install the Voca License after upgrade:

1. Navigate to http://127.0.0.1:1947 on your Chrome browser.
2. Click **Sentinel Keys**.



3. Send the **Key ID** number for the local server to AudioCodes.
4. When you have received your License file from AudioCodes, copy it to your server and apply the Voca license using the Voca Web interface (License.htm).

➢ **To install the Voca License after virtual machine cloning:**



1. Clean the cloned license by removing the old V2C file.
   a. Stop Sentinel LDK License Manager service.
   b. Open **C:\Program Files (x86)\Common Files\SafeNet Sentinel\Sentinel LDK\installed\94011** and remove all V2C files.
   c. Start the Sentinel LDK License Manager service.
2. Repeat the license procedure (see Installing the AC Voca License.htm)

7 Installing Third-Party Licenses

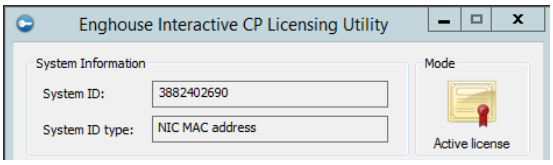
In addition to the previous section that explains how to install the Voca license, you must also install the Enghouse Interactive license and a relevant Text to Speech license. This section first describes how to install Enghouse Interactive licenses. Once you have completed this installation, you must then install and configure an appropriate Text to Speech license.

Installing Enghouse Interactive License

You can install the Enghouse Interactive license. Once this has been installed, you must also install the Control Panel and CT Connect Media Gateway licenses.

➢ **To install the Enghouse Interactive License:**

1. Run the Envox License Utility application from *C:\Program Files (x86)\Enghouse Interactive\CP\CPLicensingUtility.exe.*
2. Verify your System ID number and send it to AudioCodes.



Enghouse Interactive has two licenses that you need to install:

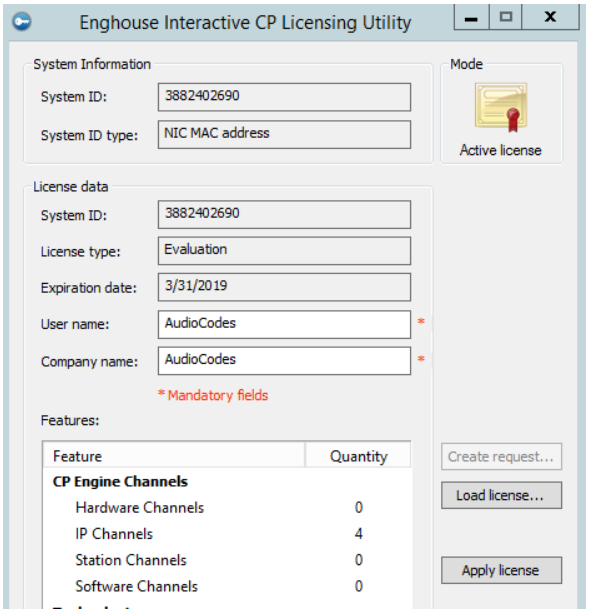
- Control Panel License
- CT Connect Media Gateway License

Installing Control Panel License

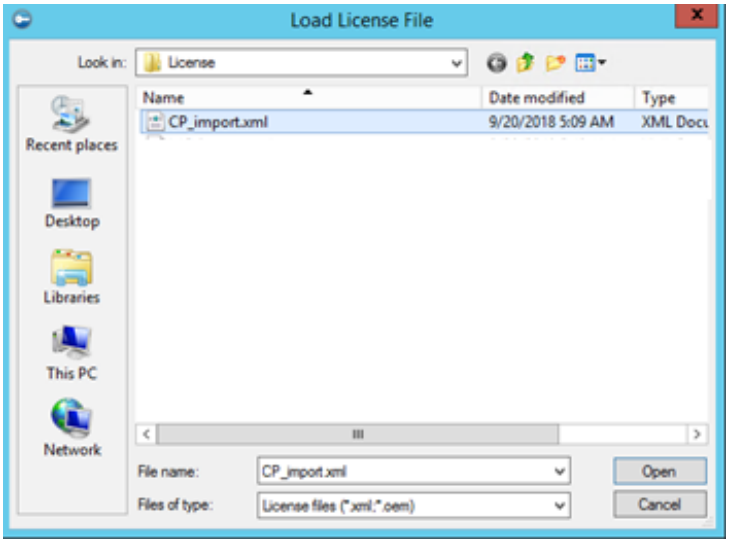
Once you have received your Control Panel license back from AudioCodes, see Installing Enghouse Interactive License above Paragraph Verify your System ID number and send it to AudioCodes. above , and continue with the following procedure.

➢ **To install the Control Panel License:**

1. Copy the licenses to C:\NSC\License\.
2. Run the Envox License Utility application from *C:\Program Files (x86) \Enghouse Interactive\CP\CPLicensingUtility.exe*.
3. On the Enghouse Interactive CP Licensing Utility screen, click **Load license**.

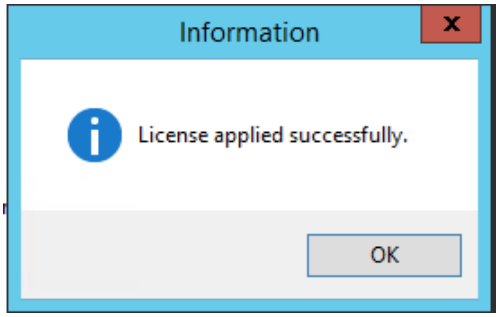


4. Browse to the license file location, and then select the *CP_import.XML* license file.



5. Click **Open**.

6. On the Enghouse Interactive System Information screen, click **Apply License**; a confirmation message box appears informing you that the license has been applied successfully.



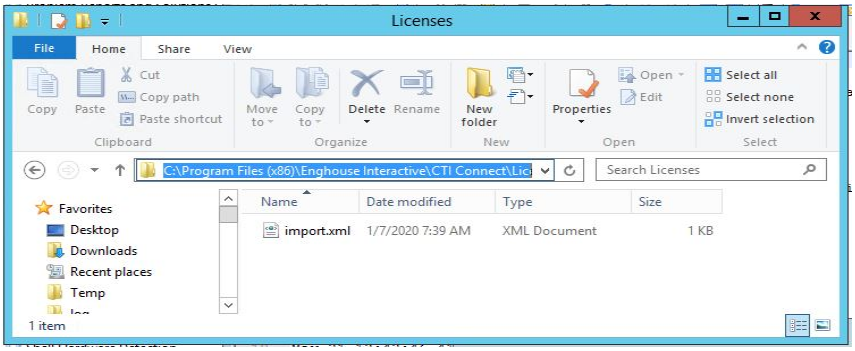
7. Click **OK**.

Installing CT Connect Media Gateway License

Once you have received your CT Connect Media Gateway license back from AudioCodes (see Installing Enghouse Interactive License), verify your System ID number, and then send it to your AudioCodes representative. Continue with the following procedure.

➢ **To install the CT Connect Media Gateway License:**

1. Copy the *Enghouse CT Connect Media Gateway License XML* file to *C:\Program Files (x86)\Enghouse Interactive\CTI Connect\Licenses.*



> The filename must be named **import.xml**.

2. Restart the server to complete the license installation.

Installing Text-to-Speech Engine

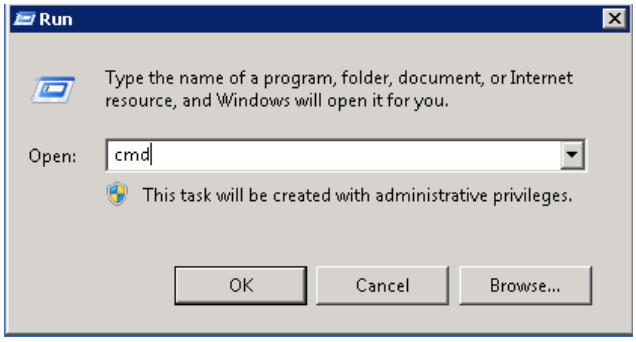
The following describes how to install the Acapela Text to Speech engine.

Acapela non-Hebrew Text to Speech

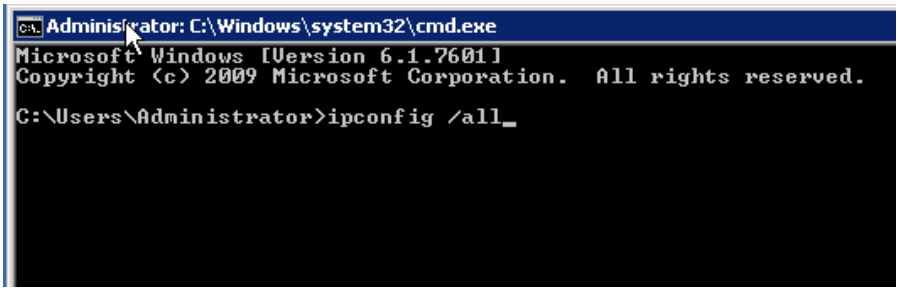
> - This installation is only applicable for non-Hebrew text to speech.
> - The license key is dependent on your server's MAC address.

➢ **To install the Acapela Text-to-Speech license:**

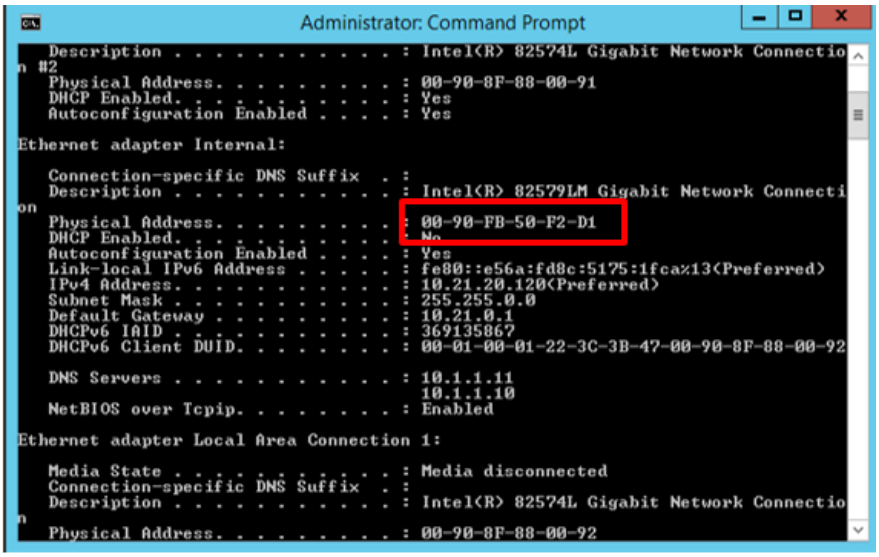
1. Verify the server MAC address.
   a. Enter "cmd" in the Run dialog box, and then click **OK**.



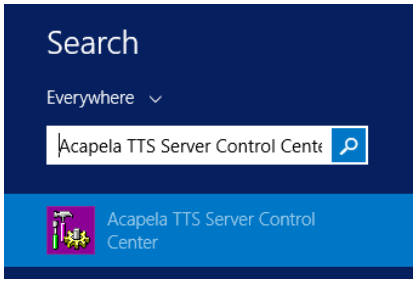
b. Enter "ipconfig/all".



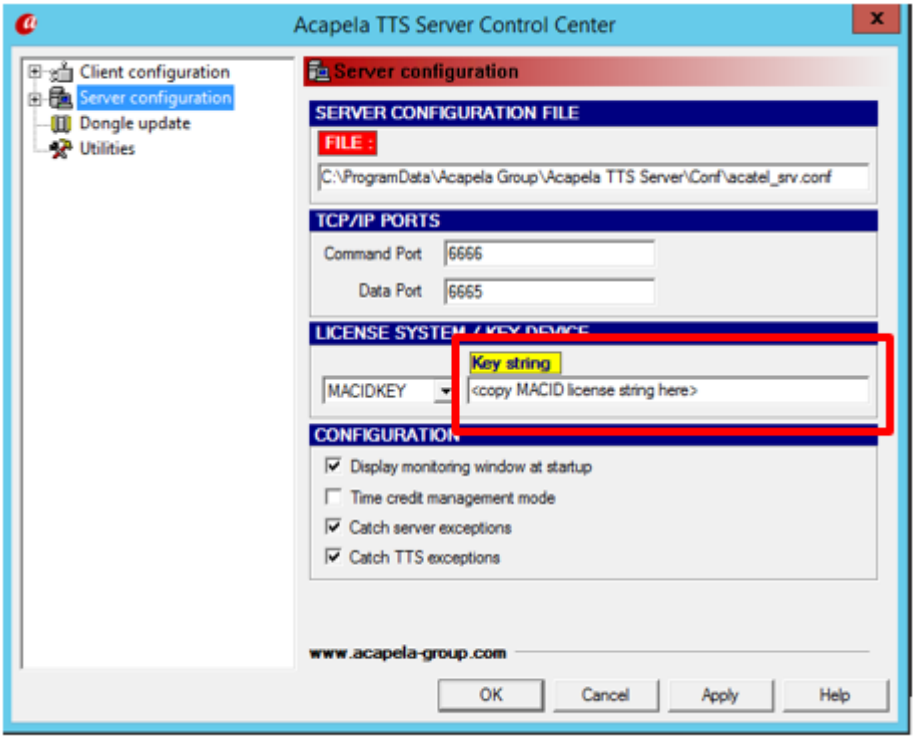
2. Find the **Intel<R> 82579LM Gigabit Network Adapter**, and then send the MAC address ("Physical Address") to AudioCodes.



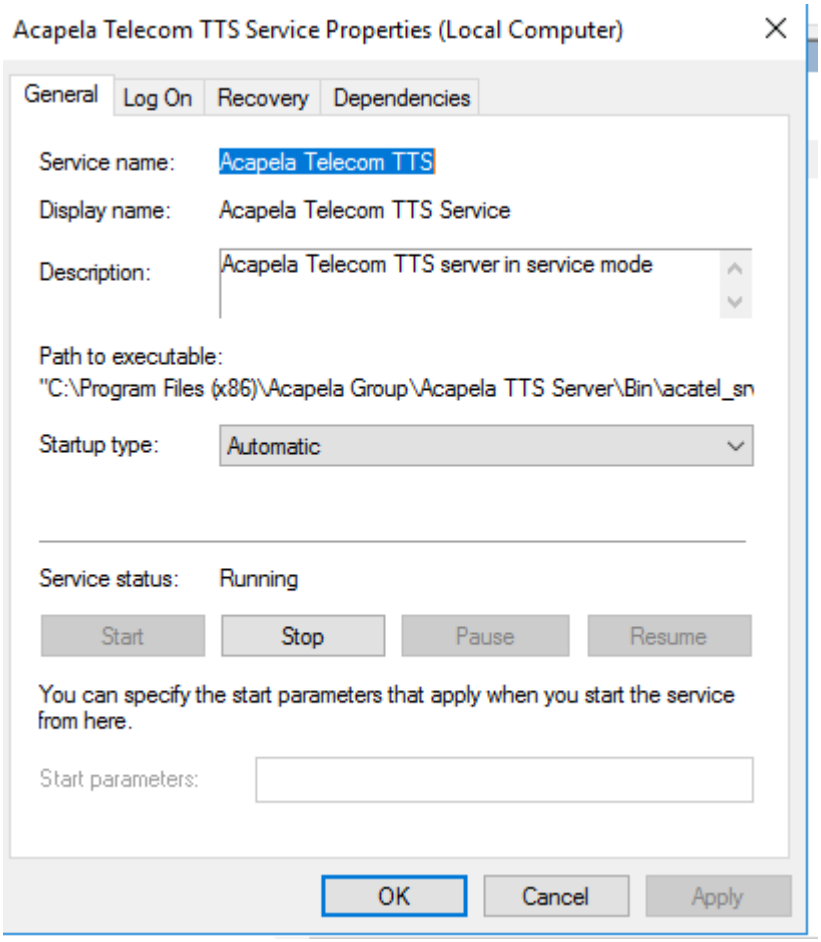
3. AudioCodes will send you the license key.
4. Open the Windows Start menu, and then in the 'Search' field, enter "Acapela TTS Server Control Center".
5. Select it in the Search results.



6. On the Acapela TTS Server Control Center screen, click **Server configuration.**



7. Under the **License System/Key Device** group, select **MACIDKEY**.
8. Copy the received license key into the key string field.
9. Click **Apply**, and then **OK.**
10. Configure the **Acapela Telecom TTS Service**:
    a. **Open Administrative Tools > Services**.
    b. Open **Acapela Telecom TTS Service Properties**.
    c. From the 'Startup type' drop-down list, select **Automatic**.
    d. Click **Start**.
    e. Click **OK**.


Acapela Telecom TTS Service Properties (Local Computer)
General
Log On
Recovery
Dependencies
Service name:
Acapela Telecom TTS
Display name:
Acapela Telecom TTS Service
Description:
Acapela Telecom TTS server in service mode
Path to executable:
"C:\Program Files (x86)\Acapela Group\Acapela TTS Server\Bin\acatel_sn
Startup type:
Automatic
Service status:
Running
Start
Stop
Pause
Resume
You can specify the start parameters that apply when you start the service from here.
Start parameters:
OK
Cancel
Apply

8 Configuring SBC Settings for Voca

This section describes how to configure the Voca, on the SBC side.

- Coder settings
- Delayed offer SDP settings
- Terminate OPTIONS request
- Alternate routing settings
- SBC configuration for auto-attended support

Coder Settings

Voca only supports **G.711U-law** and **G.711A-law** coders.

These coders should be configured in the **Allowed Audio Coder Group** in the IP Profile of the Voca SIP entity on the SBC.

If the PBX system doesn't support **G.711U-law** and/or **G.711A-law** coders, i.e., the coders do not exist in the SDP offer of the incoming SIP message, the coders should be configured in **Extension Coders Group** in the IP Profile of the Voca SIP entity.

Delayed Offer SDP Settings

Voca doesn't support incoming SIP messages without the SDP offer.

If an incoming SIP message doesn't have the SDP offer, the 'Remote Delayed Offer Support' field should be set as **Not Supported** in the IP Profile of the Voca SIP entity.

For the Remote Delayed Offer Support function, you need to assign extension coders in the IP Profile of the Voca SIP entity as discussed above.

Terminating SIP OPTIONS Requests

To terminate SIP OPTIONS messages at the SBC device (i.e., to handle them locally), create a routing rule with the following settings:

Source IP Group:	ANY
Request Type:	OPTIONS
Destination Type:	Dest Address
Destination Address:	Internal

Alternative Routing Settings

When Voca does not respond, or responds with a SIP error, create the alternative routing settings and redirect the call to customer's extension.

SBC Configuration for Auto-attended Support

The following describes two types of SBC configuration for Auto-attended Support:

- **Voca to One Node Routing Scenario:** In this scenario, the system has only one Group ID node of the customer's side and one Voca server. You need to create two-way routing between the customer and Voca nodes.

NAME	ROUTING POLICY	ALTERNATIVE ROUTE OPTIONS	SOURCE IP GROUP	REQUEST TYPE	SOURCE USERNAME PATTERN	DESTINATION USERNAME PATTERN	DESTINATION TYPE	DESTINATION IP GROUP
From PBX	Default_SBCRoutingP	Route Row	FreePBX	INVITE	*	*	IP Group	Voca_Server
From Voca	Default_SBCRoutingP	Route Row	Voca_Server	INVITE	*	*	IP Group	FreePBX

- **Voca to Many Nodes Routing Scenario**

  Feature Descriptions

  - The system has many Group ID nodes of the customer's side and one Voca server.
  - Voca performs Advanced Transfers - i.e., the new call is established on the SBC.
  - The SBC routes the call to its proper destination using the SIP Header with the Group ID

  Typical Scenario

  - The call from customer's infrastructure arrives at the SBC.
  - The SBC adds the SIP Header with the customer's Group ID **<X-SBCGroupID: <IP Group ID>**. The call is then routed to the Voca server .
  - After recognition, Voca puts the caller on hold and starts hunting (Advanced Transfer).
  - Voca sends an INVITE containing the SIP Header with the routing **Group ID < X-TargetSBCGroupID: 0>**.
  - The SBC checks the header and routes the call from Voca to the requested Group ID (in this scenario IP Group 0).
  - The SBC has only one dynamic routing rule, that is routed to the Group ID using the SIP Header with the Group ID.

Configuring the SBC

The procedure below describes how to configure the SBC for this feature.

➢ **To configure the SBC:**

1. Create a Call Setup Rule (**SIP Definitions** > **Call Setup Rules**).

#1[Add IP Group ID]

GENERAL	
Name	• Add IP Group ID
Rules Set ID	0
Request Type	None
Request Target	
Request Key	
Attributes To Get	
Row Role	Use Current Condition
Condition	

ACTION	
Action Subject	• Header.X-SBCGroupID
Action Type	Add
Action Value	• Param.IPG.Src.ID

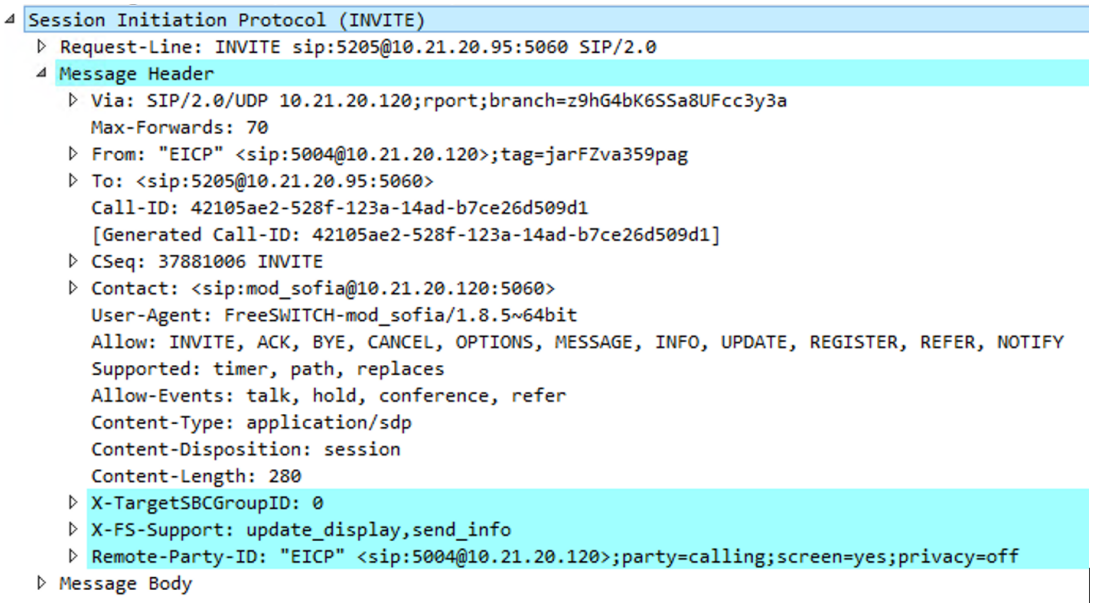
2. Add a Call Setup Rule, and then set the ID in the customer's IP Group (not the Voca IP Group).

SBC ADVANCED	
Source URI Input	
Destination URI Input	
SIP Connect	No
SBC PSAP Mode	Disable
Route Using Request URI Port	Disable
Media TLS Context	• default
Keep Original Call-ID	No
Dial Plan	--
Call Setup Rules Set ID	• 1

a. The SIP INVITE to Voca has the **<X-SBCGroupID>** header.

```
Session Initiation Protocol (INVITE)
  Request-Line: INVITE sip:4795@10.21.20.120 SIP/2.0
  Message Header
    Via: SIP/2.0/UDP 10.21.20.95:5060;branch=z9hG4bKac1581310010
    Max-Forwards: 69
    From: <sip:5004@10.21.20.90>;tag=1c1285271967
    To: <sip:4795@10.21.20.120>
    Call-ID: 135885734520320201930320@10.21.20.95
    [Generated Call-ID: 135885734520320201930320@10.21.20.95]
    CSeq: 1 INVITE
    Contact: <sip:asterisk@10.21.20.95:5060>
    Supported: norefersub,100rel,timer,replaces,sdp-anat
    Allow: OPTIONS, SUBSCRIBE, NOTIFY, PUBLISH, INVITE, ACK, BYE, CANCEL, UPDATE, PRACK, REGISTER, MESSAGE, REFER
    Session-Expires: 1800
    Min-SE: 90
    User-Agent: M800B/v.7.20A.258.367
    Content-Type: application/sdp
    Content-Length: 258
    X-SBCGroupID: 0
  Message Body
```

b. The SIP INVITE message from Voca has the **<X-TargetSBCGroupID>** header.

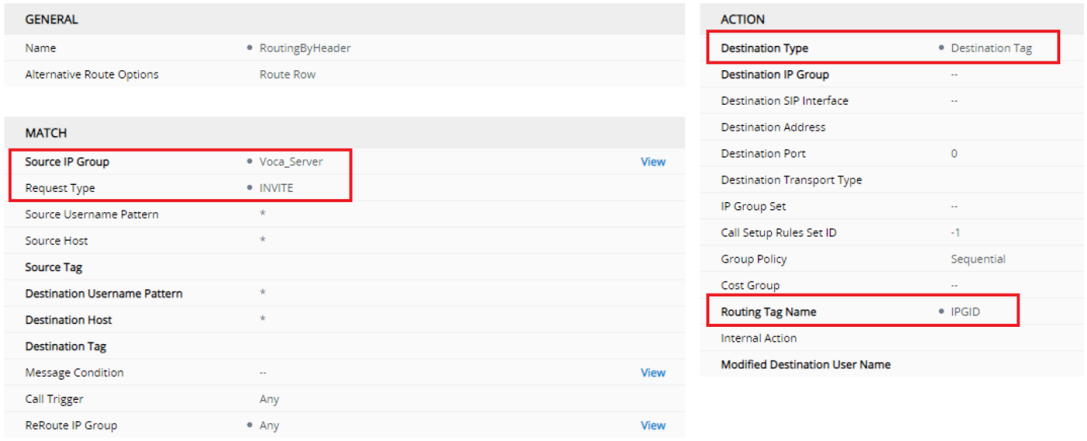


Configuring Routing Rules

The following describes how routing rules are configured on the SBC in the IP-to-IP Routing table.

1. The routing rule tells the SBC where to send (route to a destination) calls (SIP INVITE messages) that it receives from Voca.
2. The SBC determines the destination based on the Dial Plan tags.
3. When the call arrives, the SBC searches the specific Dial Plan associated with these calls in the Dial Plan table for a Dial Plan rule, whose prefix number matches the incoming call from Voca.
4. Once the Dial Plan rule has been found, the SBC searches the IP-to-IP Routing table for the routing rule for calls coming from Voca and whose Destination Type is set to Destination Tag.
5. It takes the tag entered in the 'Routing Tag Name' field and looks again in the Dial Plan rule for that tag, and obtains its tag value.
6. The device then searches the IP Groups table for an IP Group whose 'Tags' parameter is configured with the same tag name-value and sends the call to this IP Group (Destination).

#5[RoutingByHeader]



Sending DNIS Instead of Caller Number During Advanced Transfer

By default, Voca sends Caller CLI numbers during Advanced Transfer in from the header of the INVITE message. Sometimes, the remote customer's side does not accept this number (e.g., SIP trunk Twilio). The remote customer's side accepts any number that belongs to the SIP trunk DNIS pool.

Typical Scenario

- The call from customer's infrastructure arrives at the SBC.
- The SBC adds the <X-SendDNIS:1> SIP header.
- After recognition, Voca puts the caller on hold and starts the Advanced Transfer.
- Voca recognizes the header value and sends the DNIS number in the From Header of the INVITE message.

If the **<X-SendDNIS>** header does not exist or is empty, then Voca sends the Caller CLI number. If the **<X-SendDNIS>** header has any value, then Voca sends the DNIS number.

Configuring the SBC

The procedure below describes how to configure the SBC for this feature.

➢ **To configure the SBC:**

1. Add the **<X-SendDNIS:1>** Message Manipulation (**Message Manipulation** > **Message**) header.

#10[Add SendDNIS Header]

GENERAL	
Name	Add SendDNIS Header
Manipulation Set ID	10
Row Role	Use Current Condition

ACTION	
Action Subject	Header.X-SendDNIS
Action Type	Add
Action Value	'1'

MATCH	
Message Type	Invite.Request
Condition	

2. In the Inbound Message Manipulation of the Twilio SIP IP Group, add the 'Manipulation Set ID'.

MESSAGE MANIPULATION	
Inbound Message Manipulation ...	10
Outbound Message Manipulatio...	-1
Message Manipulation User-Defi...	
Message Manipulation User-Defi...	
Proxy Keep-Alive using IP Group ...	Disable

Changing REFER with Replaces to Simple REFER Message

By default, Voca sends 'REFER with Replaces' during Advanced Transfer. If customer's side doesn't support 'REFER with Replaces', you need to manipulate it to asimple REFER message.

Configuring the SBC

The procedure below describes how to configure the SBC for this feature.

➢ **To configure the SBC:**

1. Create the Message Manipulation (**Message Manipulation** > **Message Manipulation**).

   Header.Refer-To regex (.*)(Replaces)(.*)

   Header.X-AC-Action 'use-config;refer-behavior=handle-locally'

#5[Refer_Replacement] Edit

GENERAL	
Name	Refer_Replacement
Manipulation Set ID	7
Row Role	Use Current Condition

ACTION	
Action Subject	Header.X-AC-Action
Action Type	Add
Action Value	'use-config;refer-behavior=handle-locally'

MATCH	
Message Type	Refer.Request
Condition	Header.Refer-To regex (.*)(Replaces)(.*)

2. Assign this manipulation set as an Inbound Message Manipulation Set in the Voca IP Group.

9 Installing Signed Certificates on the IIS

To configure Voca to work with HTTPS, you must first install a valid signed certificate.

Use the following procedures to install the certificate on the Internet Information Server (IIS).

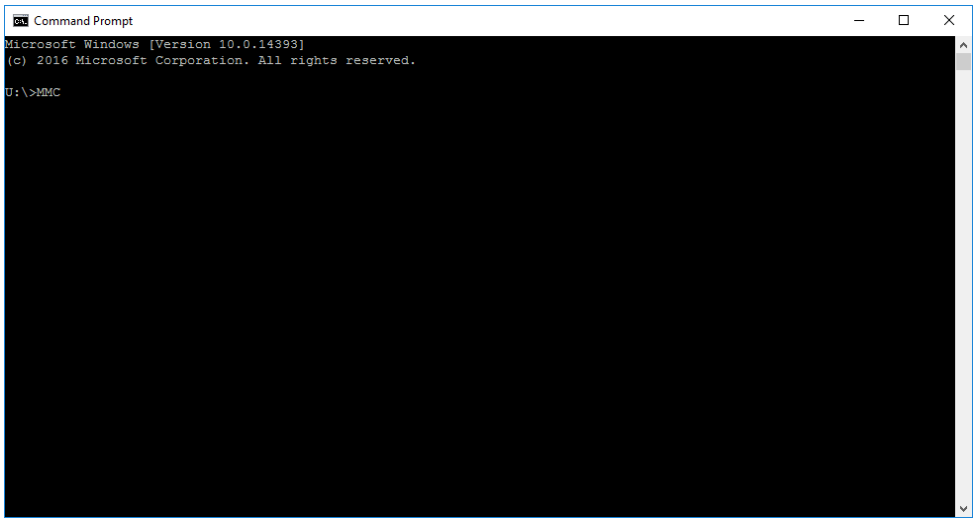
Managing Certificates in the MMC Snap-in

You can manage certificates in the MMC Snap-in.

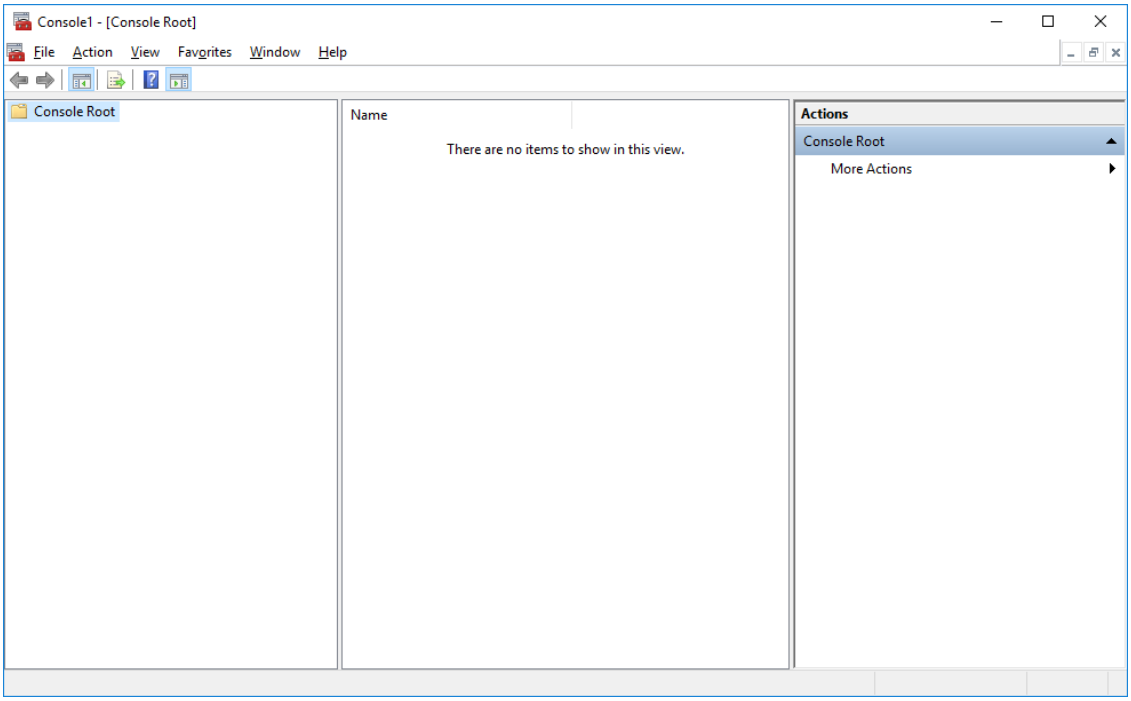
➢ **To manage certificates in the MMC Snap-in:**

1. Open the Command Prompt window.
2. Enter **MMC** and then press ENTER.

To view certificates in the local machine store, you must be set up as an Administrator.

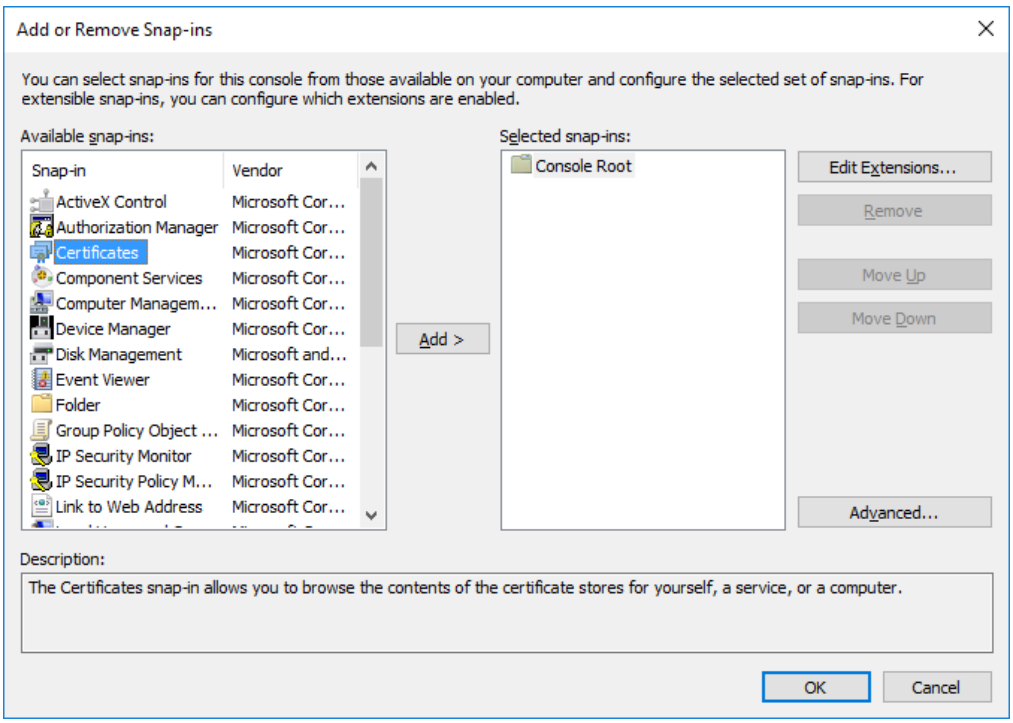


3. On the Console Root, click **File** > **Add/Remove Snap**.


Console1 - [Console Root]
File Action View Favorites Window Help
Console Root
Name
There are no items to show in this view.
Actions
Console Root
More Actions

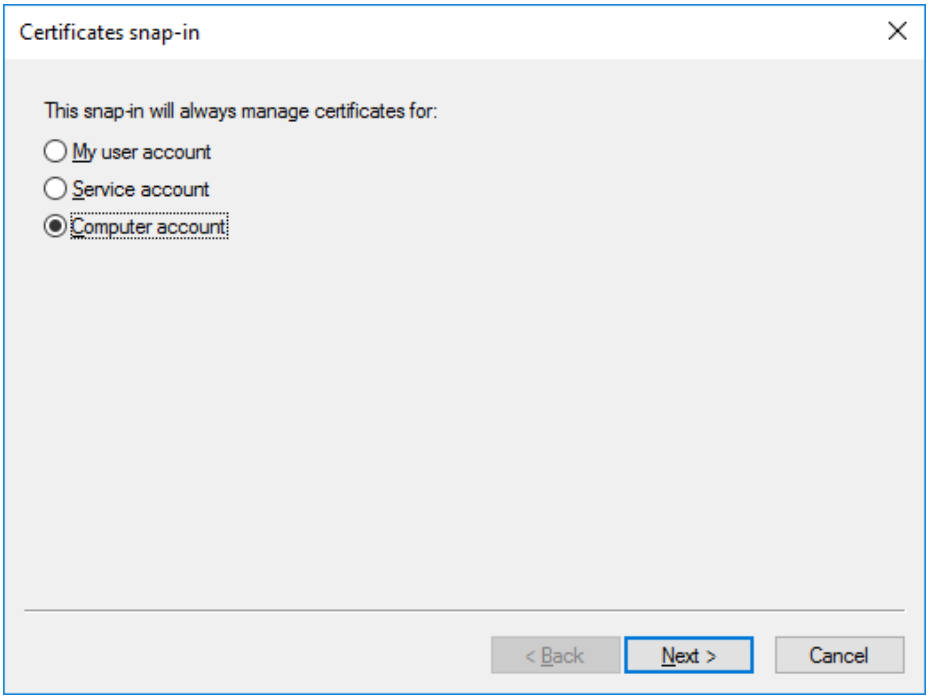
4. From the File menu, choose **Add/Remove Snap In**.

5. In the 'Available snap-ins', select **Certificates**.



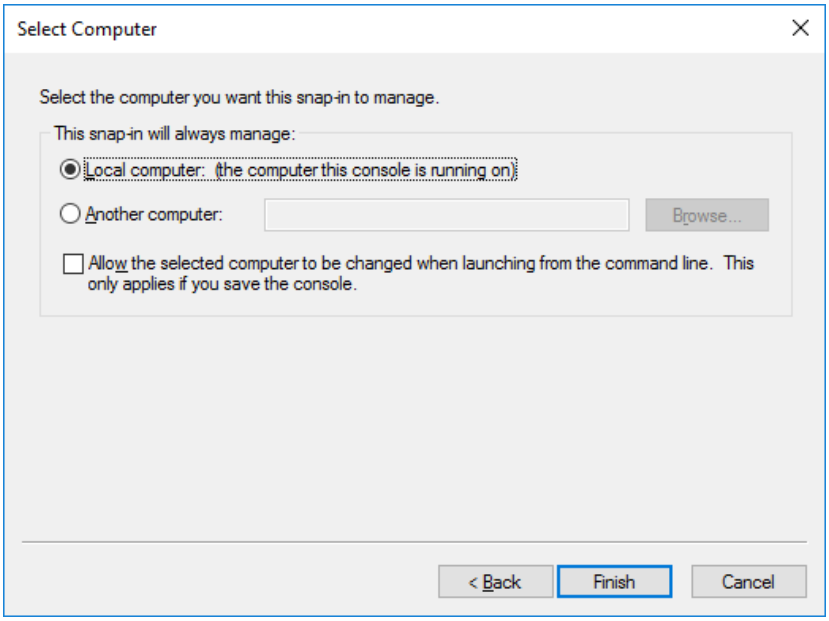
6. Click **Add >** to add snap-ins.

7. In the Certificates snap-in group, click the **Computer Account** option, and then click **Next**.



You can select either **My user account** or **Service account** options. If you are not an Administrator of the computer, you can manage certificates only for your user account.

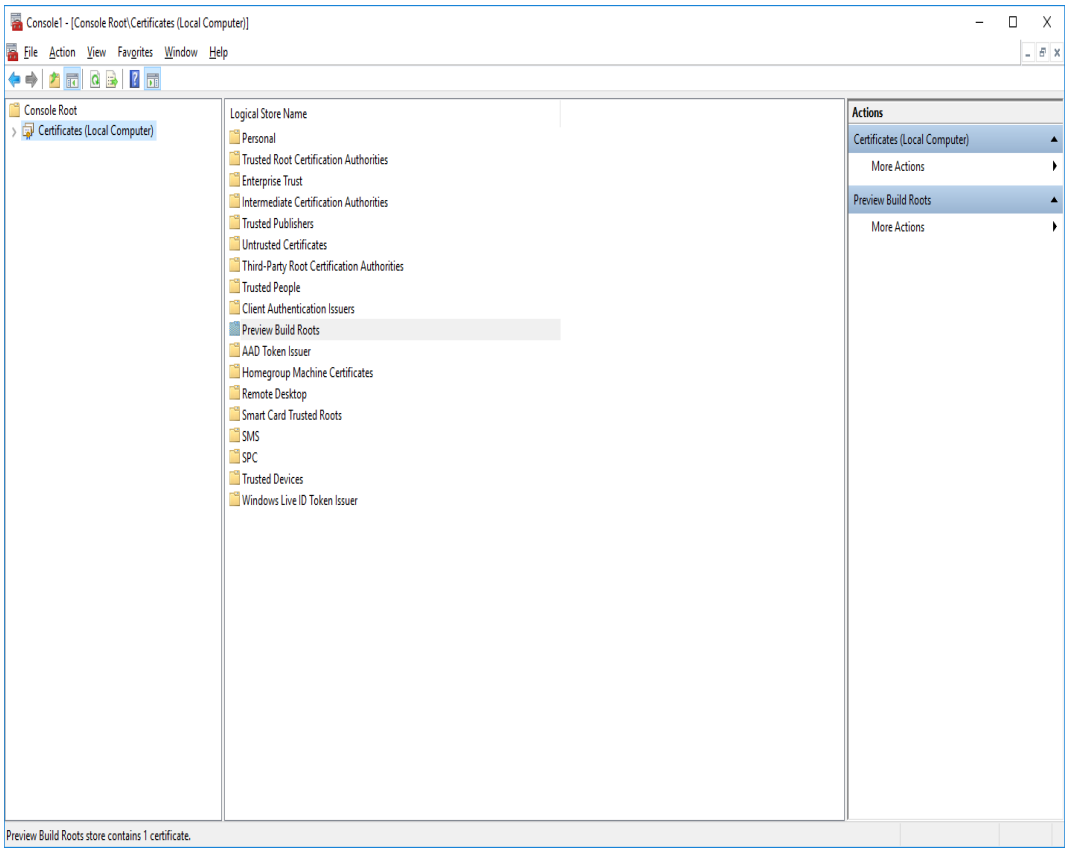
8. Click the **Local computer** option.



9. In the Select Computer dialog box, click **Finish**.

10. In the Add/Remove Snap-in dialog box, click **OK**.

11. In the Console Root window, click **Certificates (Local Computer)** to view the certificate stores for the computer.



12. To view certificates for your account, repeat steps 3 to 6. In step 7, instead of selecting **Computer account**, click **My User account** and repeat steps 8 to 10 **(Optional step).**

13. From the **File** menu, choose **Save** or **Save As**. Save the console file for later reuse (**Optional step**).

Adding a Certificate

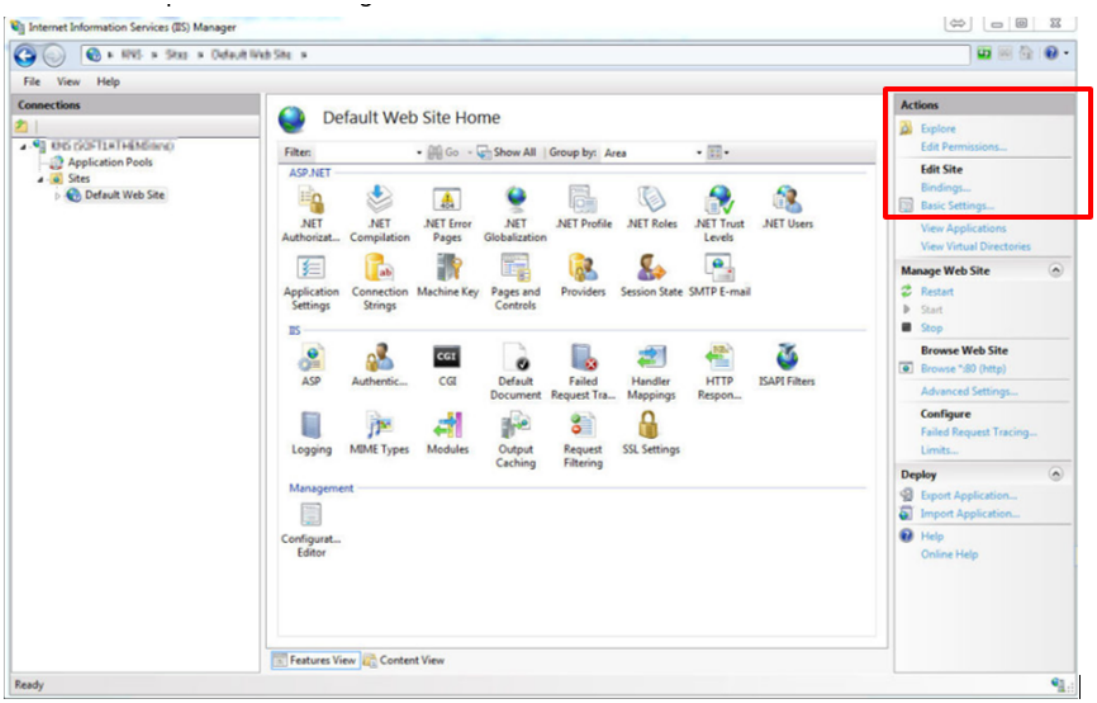
1. Navigate to **Console Root** > **Certificates (Local Computer)** > **Personal** > **Certificates**.
2. On right pane, select **All Tasks > Import.**
3. Follow the dialog to install the certificate.

Selecting a Certificate in IIS Manager

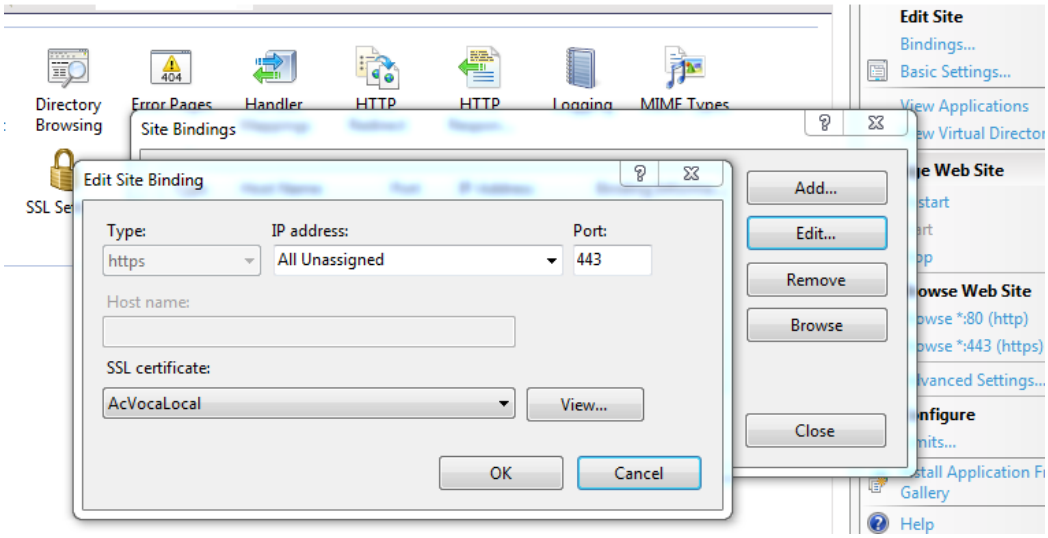
You can select a certificate in the Internet Information Services (IIS) Manager.

➢ **To select a certificate in IIS Manager:**

1. Open the IIS Manager.



2. Right-click the default site, and then choose **Edit Site – Bindings**.
3. Select HTTPS binding (Port 443), and then click **Edit**.



4. From the 'SSL certificate' drop-down list, select the new certificate, and then click **OK**.

10 Enabling .NET Framework 3.5 on Windows

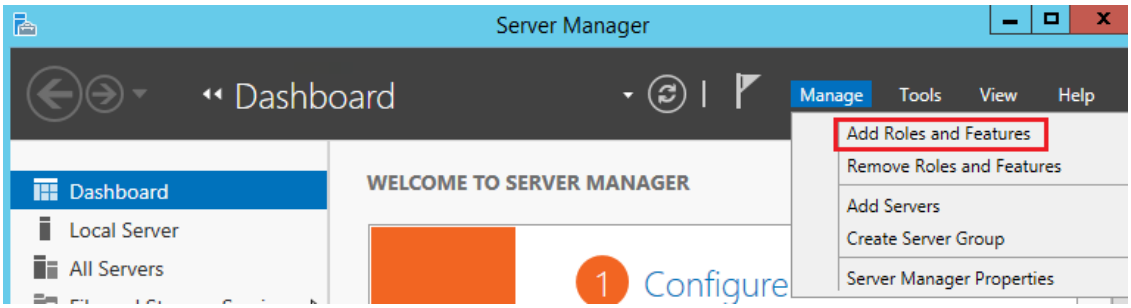
You can use Server Manager to enable .NET Framework 3.5. For more information, see Microsoft's guidelines here.

Before enabling .NET Framework 3.5, ensure that you have the following:

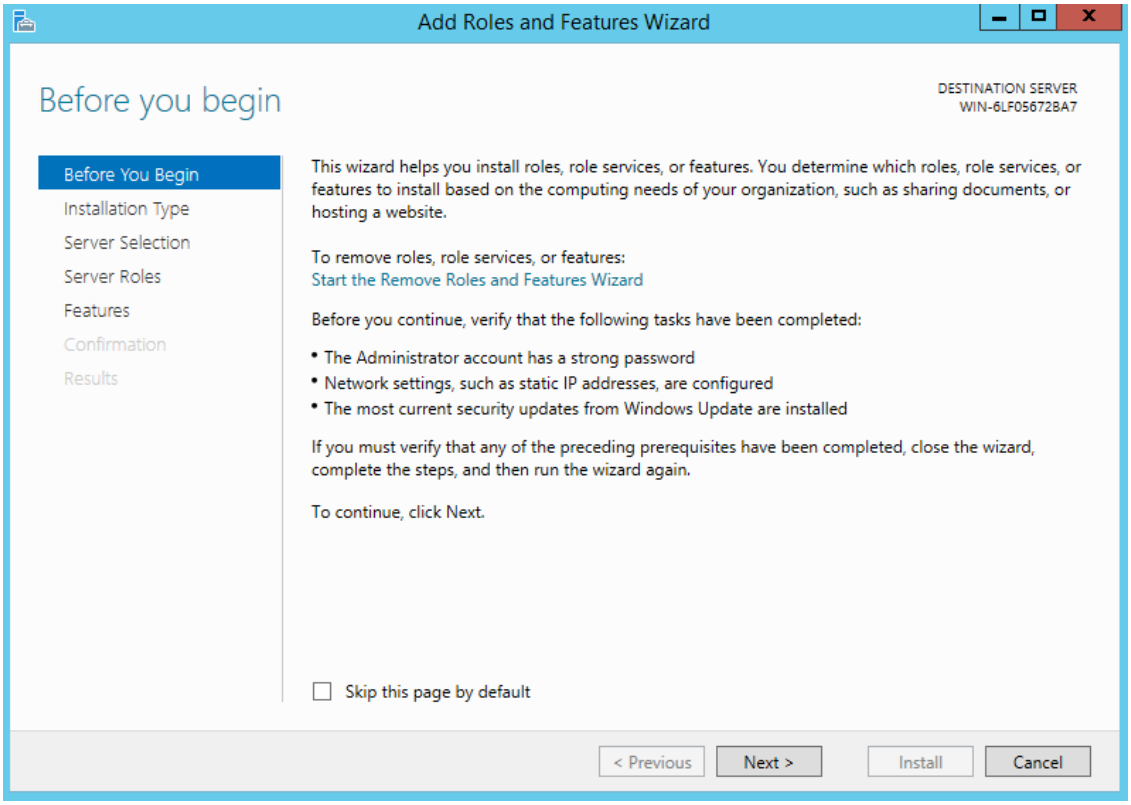
- Windows Server 2016
- Administrator user rights. The current user must be a member of the local Administrators group to add or remove Windows features.
- Target computers might need network access and rights to use either alternate sources or an Internet connection to use Windows Update.
- Installation media (only if you have no Internet connection to use Windows Update)

➢ To enable .NET Framework 3.5 on a Windows System:

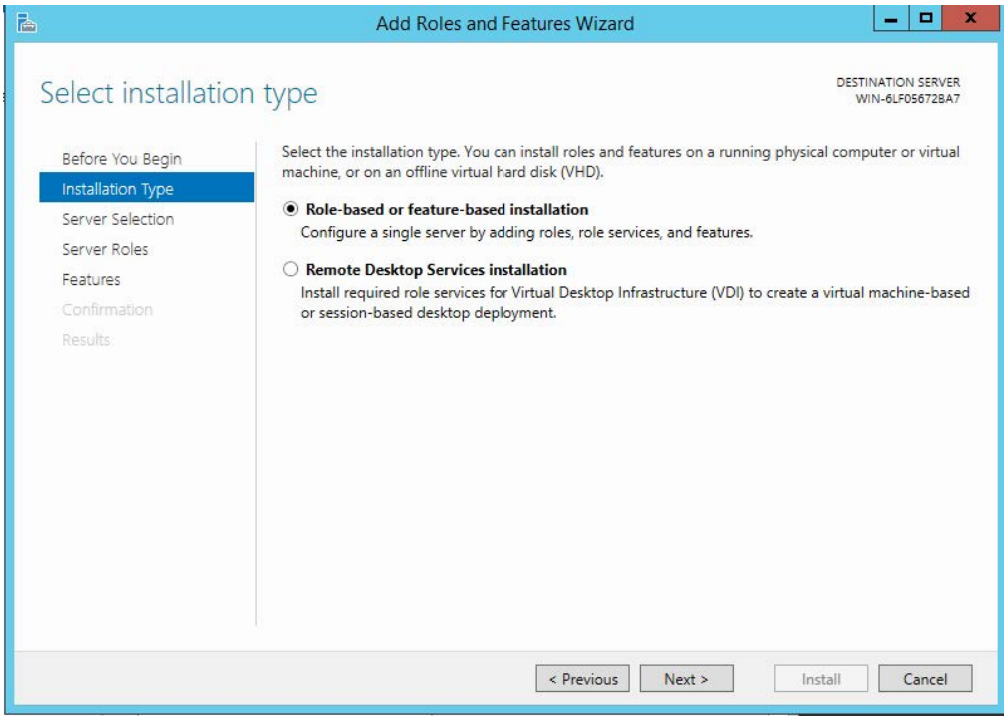
1. On the Server Manager page, click **Manage**, and then select **Add Roles and Features** to start the Add Roles and Features Wizard.



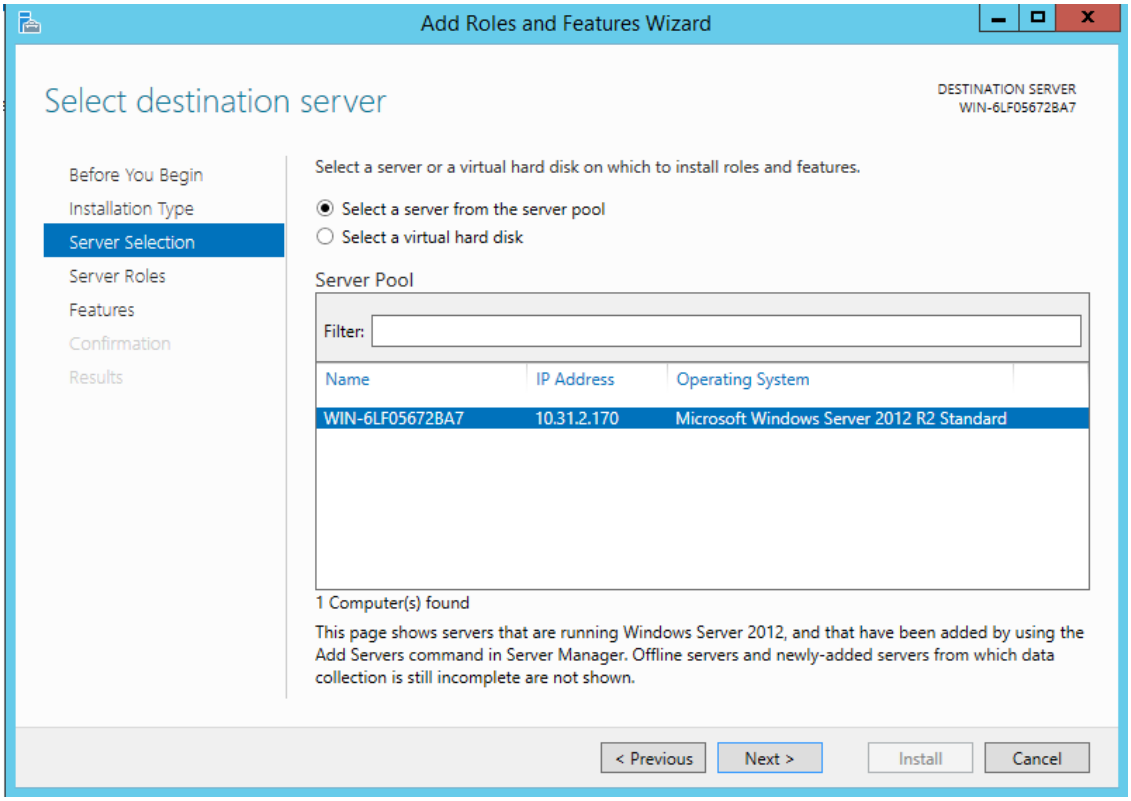
2. On the **Before you Begin** page, click **Next**.



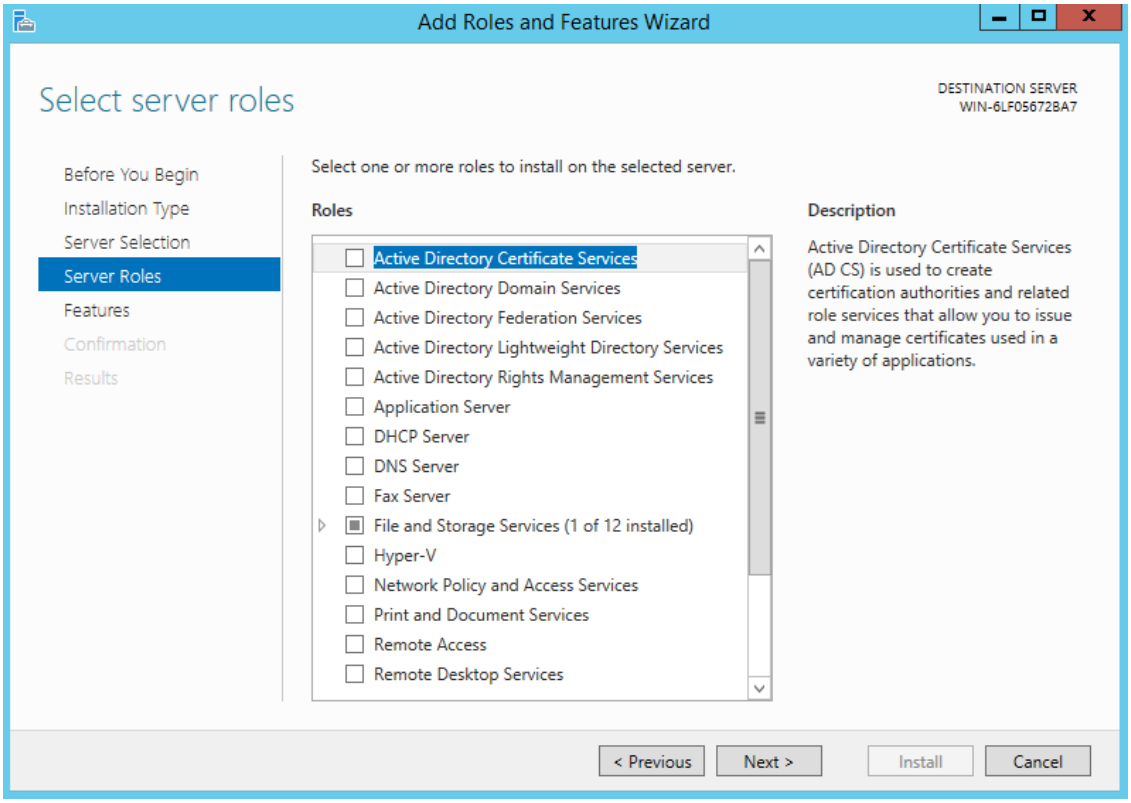
3. On the **Select Installation Type** page, click the **Role-based or feature-based installation** option, and then click **Next**.



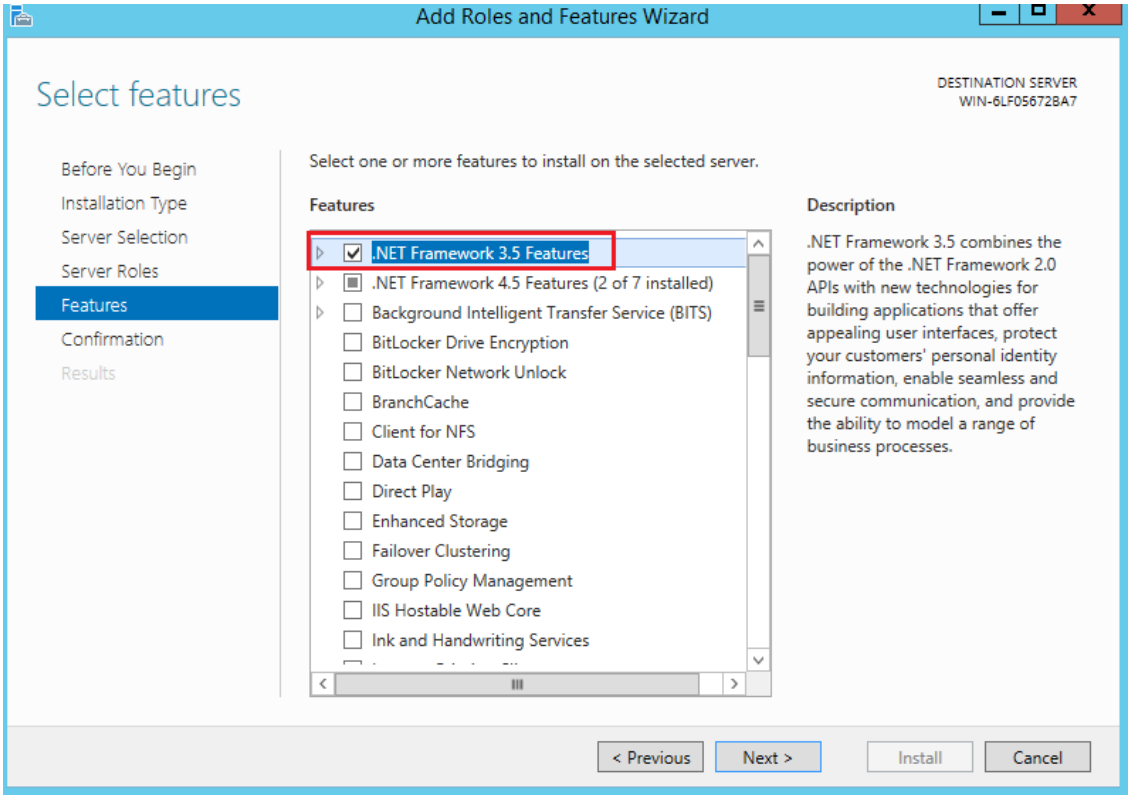
4. On the **Selection Destination Server** page, select the target server, and then click **Next**.



5. On the **Select Server Roles** page, click **Next**.

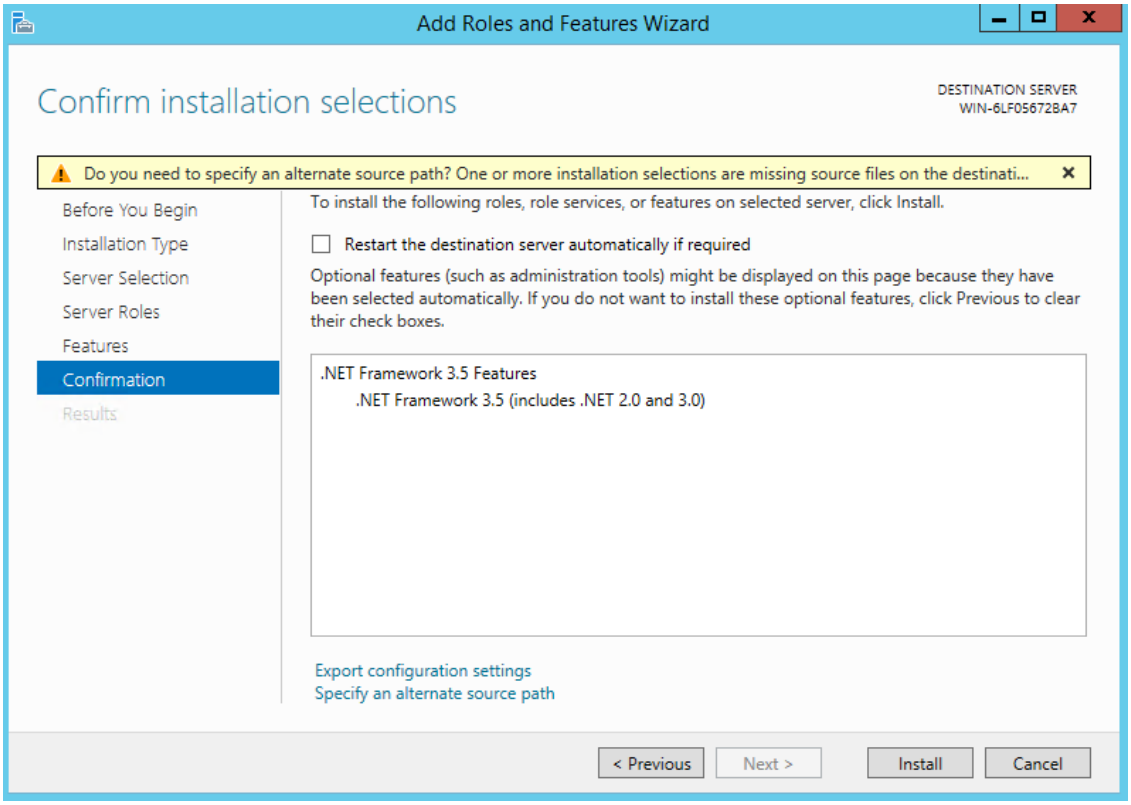


6. On the Select Features page, select the '.Net Framework 3.5 Features' check box, and then click **Next**.



7. On the Confirm Installation Selections page, click **Install**.

On the Confirm Installation Selections page, a warning is displayed asking *Do you need to specify an alternate source path?*. If the target computer does not have access to Windows Update, click the **Specify an alternate source path** link to specify the path to the *\sources\sxs* folder on the installation media and then click **OK**. After you have specified the alternate source, or if the target computer has access to Windows Update, click the **X** next to the warning, and then click **Install**.


Add Roles and Features Wizard
Confirm installation selections
DESTINATION SERVER
WIN-6LF05672BA7
Do you need to specify an alternate source path? One or more installation selections are missing source files on the destinati...
Before You Begin
Installation Type
Server Selection
Server Roles
Features
Confirmation
Results
To install the following roles, role services, or features on selected server, click Install.
Restart the destination server automatically if required
Optional features (such as administration tools) might be displayed on this page because they have been selected automatically. If you do not want to install these optional features, click Previous to clear their check boxes.
.NET Framework 3.5 Features
.NET Framework 3.5 (includes .NET 2.0 and 3.0)
Export configuration settings
Specify an alternate source path
< Previous
Next >
Install
Cancel

11 Configuring WebRTC

WebRTC is an AudioCodes SBC feature and allows up to three concurrent WebRTC sessions, as part of the AudioCodes SBC license.
For support of more sessions, contact your AudioCodes representative.

For more information, you can download the following:

- *Mediant Software SBC User's Manual*
- Adding Click-to-Call Widget to an Existing Web Page (video)

12 Upgrading from Voca Version 8.0.2 to Voca Version 8.4.0. Enghouse CTIC (Media Gateway) Application

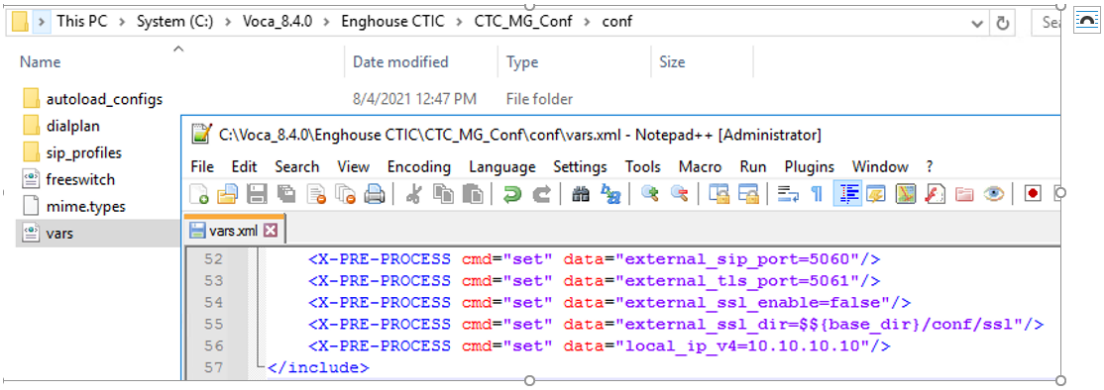
The Enghouse CTIC (Media Gateway) application is removed by the installer during the upgrade procedure from Voca Version 8.0.2 to Voca Version 8.4.0.

The procedure below describes how to install and configure the Enghouse CTIC (Media Gateway) application.

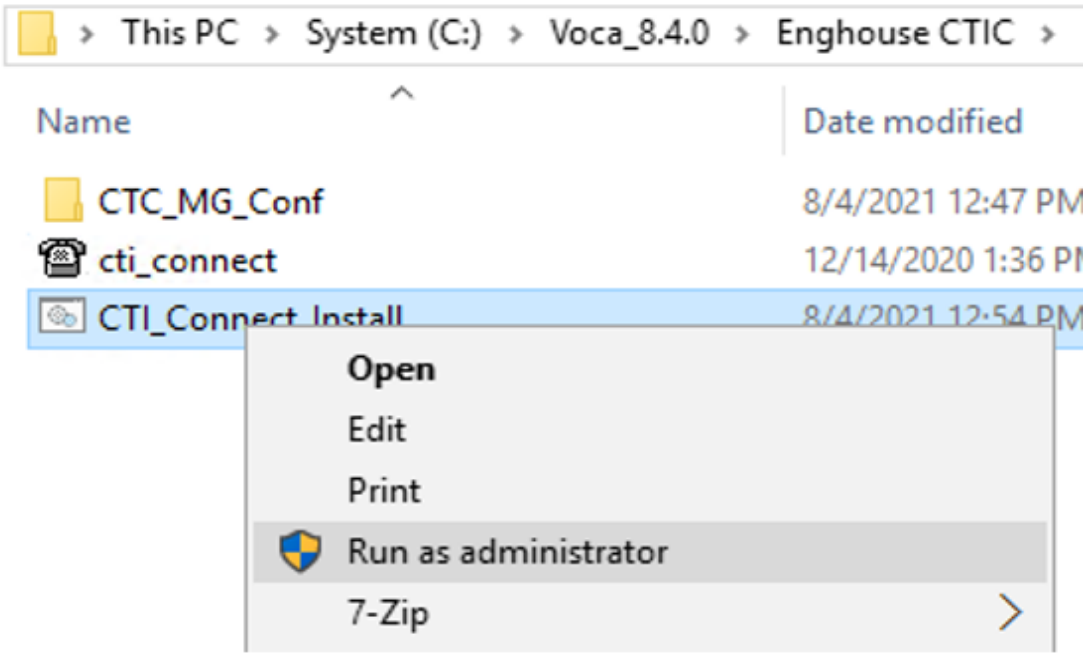
➢ **To install and configure the Enghouse CTIC (Media Gateway) application:**

Backup the CTIC (Media Gateway) license before running the upgrade procedure. The license can be found in C:\Program Files (x86)\Enghouse Interactive\CTI Connect\Licenses.

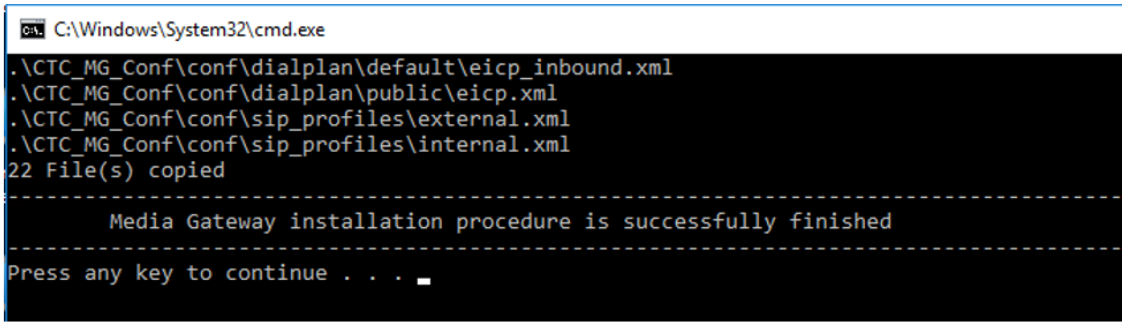
1. Assign the IP address of the Voca server in the MG configuration file template. The *C:\Voca_8.4.0\Enghouse CTIC\CTC_MG_Conf\conf\vars.xml* file is copied by the script in the MG directory after the installation procedure.



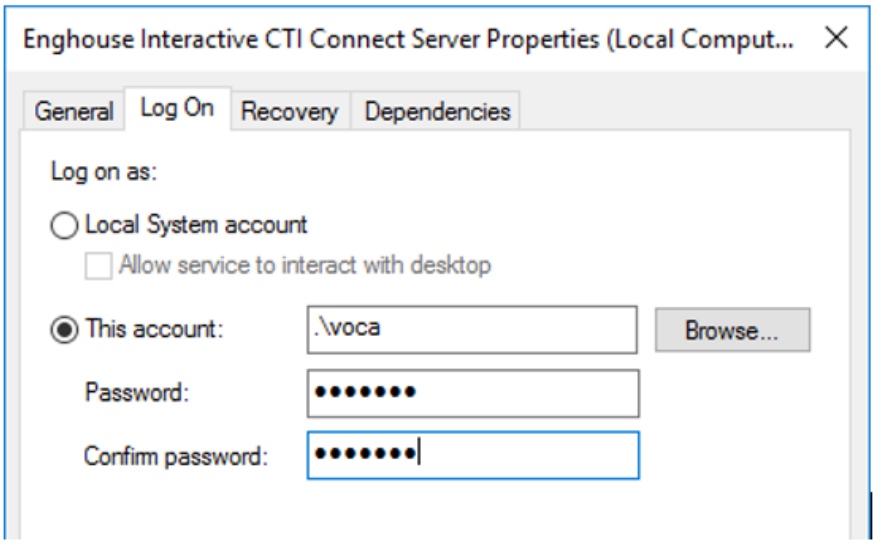
2. Right-click on the C:\Voca_8.4.0\Enghouse CTIC\CTI_Connect_Install.bat file and then select **Run as Administrator**.



3. Wait for the installation to finish.



4. Assign the Voca user credential to the following services:
   - Enghouse Interactive CTI Connect Server
   - Enghouse Interactive Media Gateway



5. Copy the license file to C:\Program Files (x86)\Enghouse Interactive\CTI Connect\Licenses.
6. Restart the server.

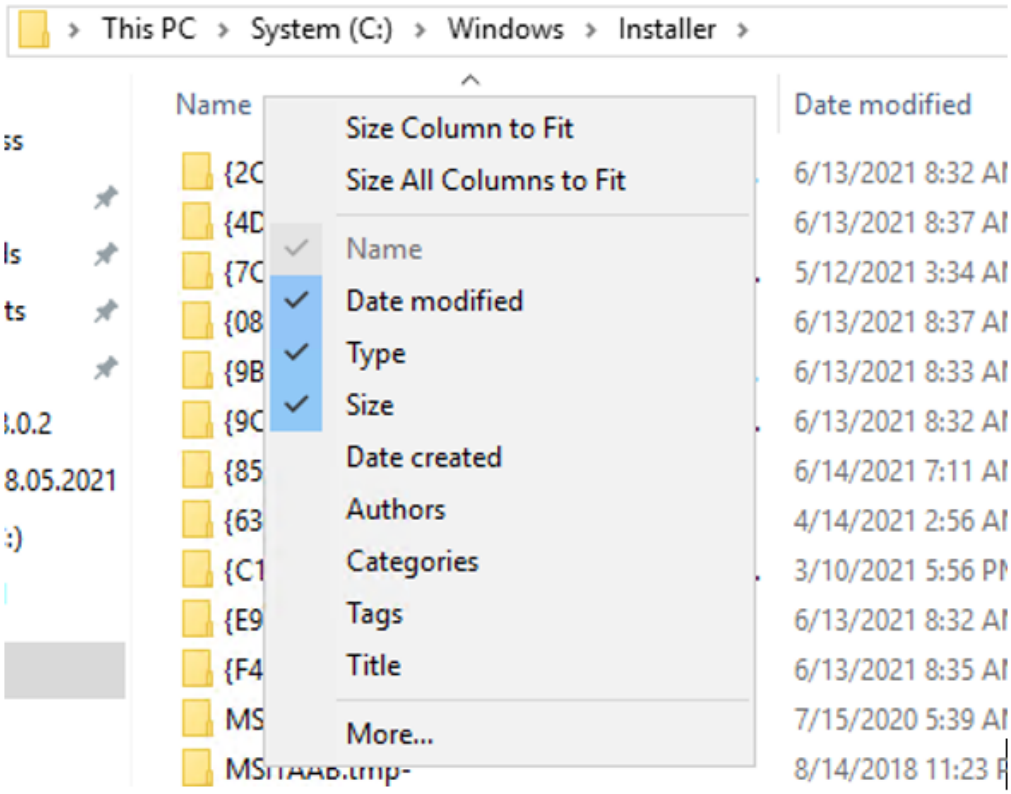
13 Upgrading from Voca Version 8.0.1 to Voca Version 8.4.0

The upgrade procedure fails when you try to upgrade Voca Version 8.0.1 (primary or secondary) to Voca Version 8.4.0 (primary or secondary).

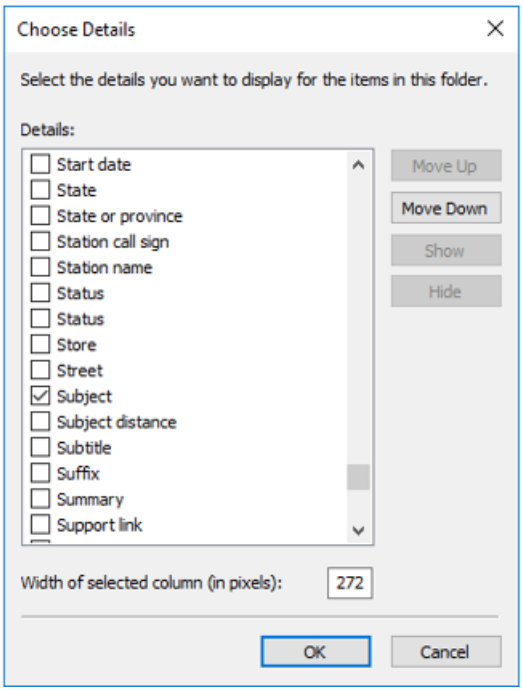
This does not occur when upgrading from Voca Version 8.0.1 (standalone) to Voca Version 8.4.0 (standalone).

➢ **To fix this upgrade problem:**

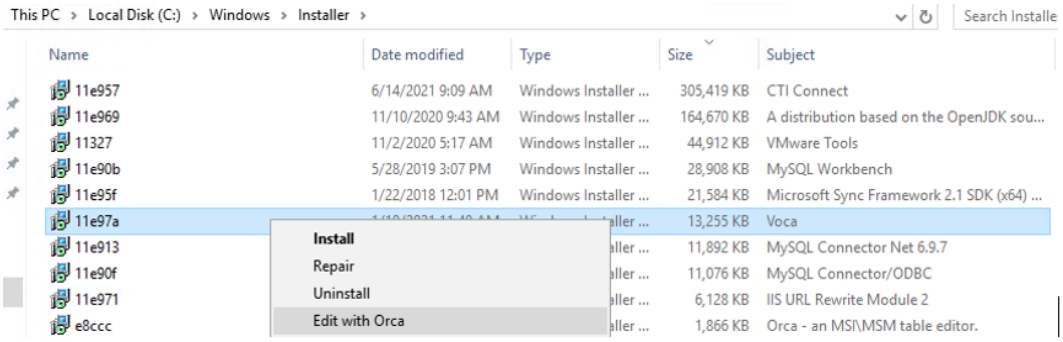
1. Unzip and install Orca MSI editor C:\Voca_8.4.0\DLL Fix - 8.0.2\.
2. Open C:\Windows\Installer\.
3. Right-click on the **Name** column, and then click **More**.



4. Select the 'Subject' check box, and then click **OK**.

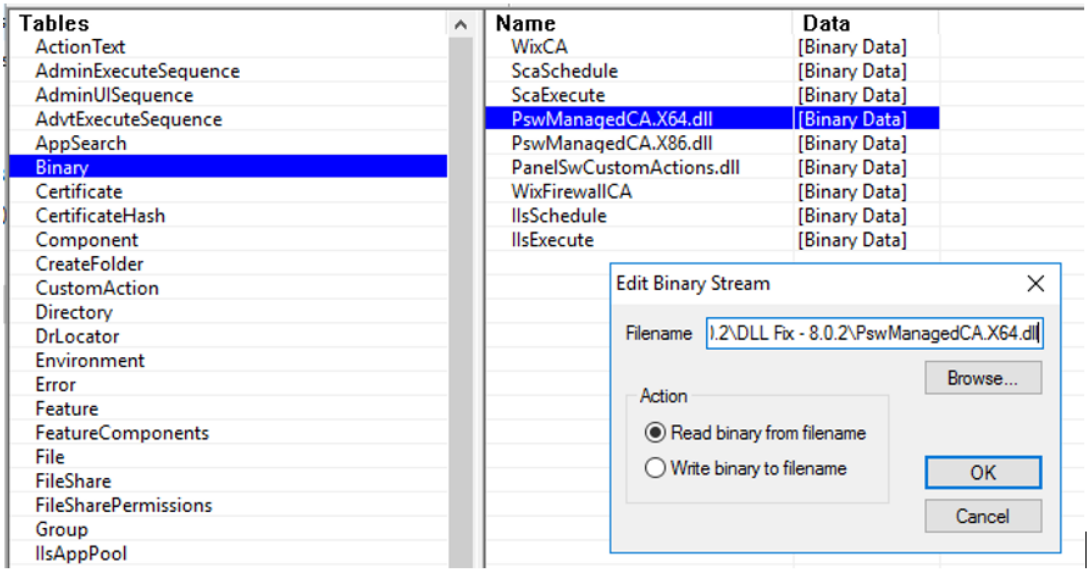


5. Arrange the files by size, and then find the file with the Voca subject name.
6. Right-click on this file, and then select **Edit with Orca**.

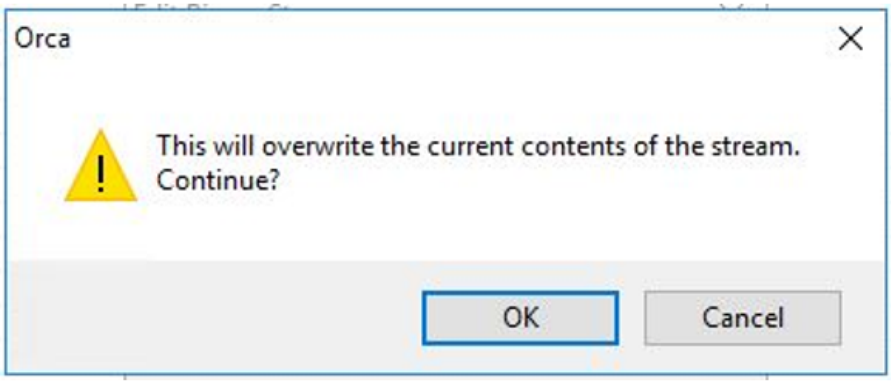


Note: The filename may be different than the one on the screen.

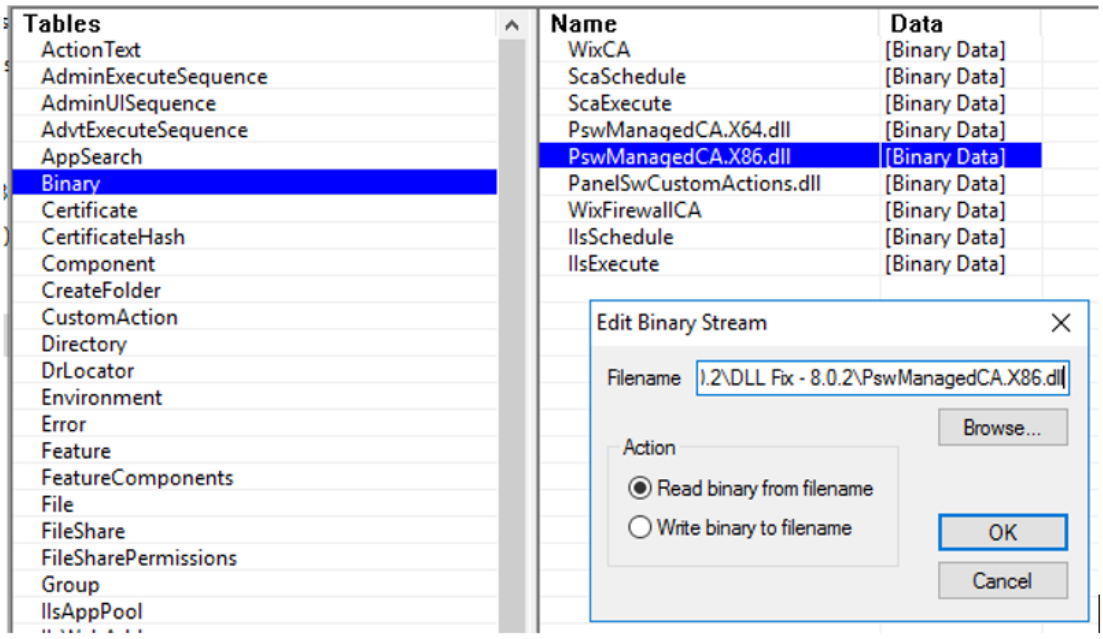
7. Find the Binary table.
8. Find **PswManagedCA.X64.dll**, and then double-click **Binary Data**.

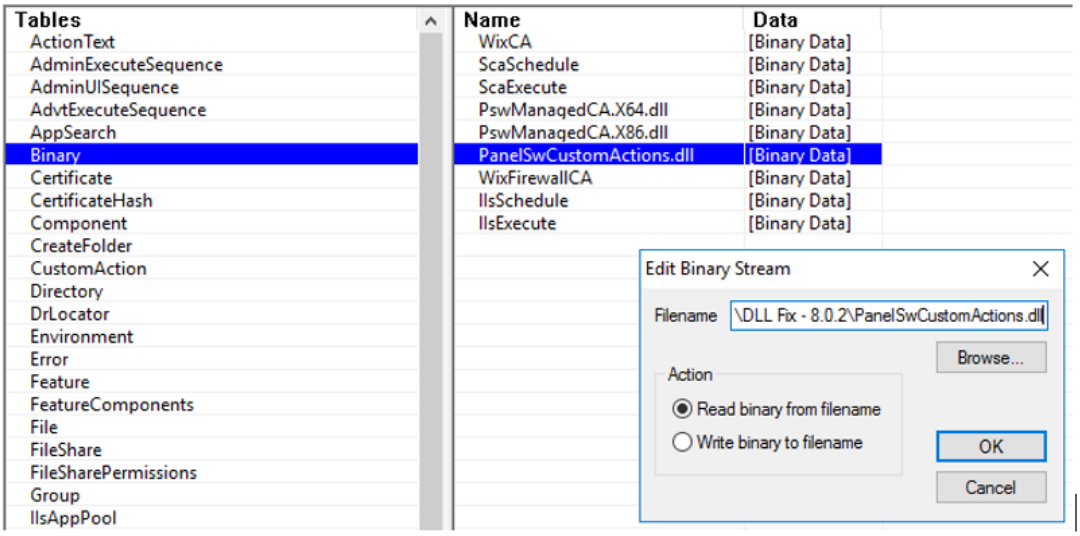


9. Select the **Choose Read binary from filename** option.
10. Browse to the **C:\Voca_8.4.0\DLL Fix - 8.0.2/PswManagedCA.X64.dll**, and then click **OK**.
11. Click **OK** to overwrite the contents of the stream.

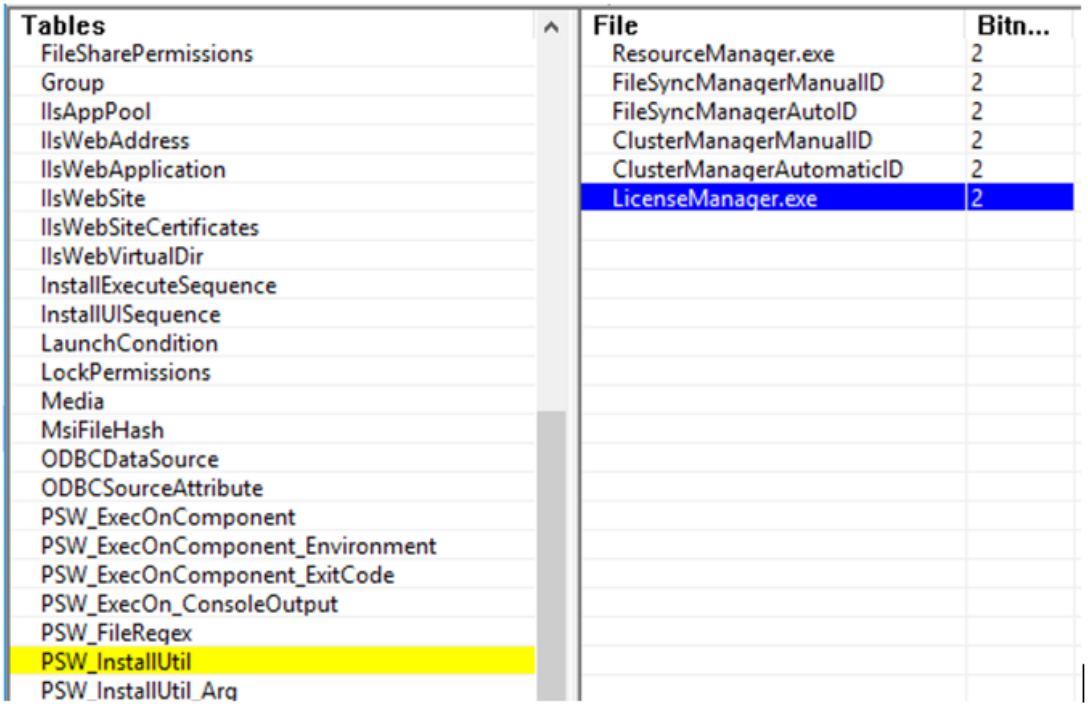


12. Do the same editing for **PswManagedCA.X86.dll** and **PanelSwCustomActions.dll**.

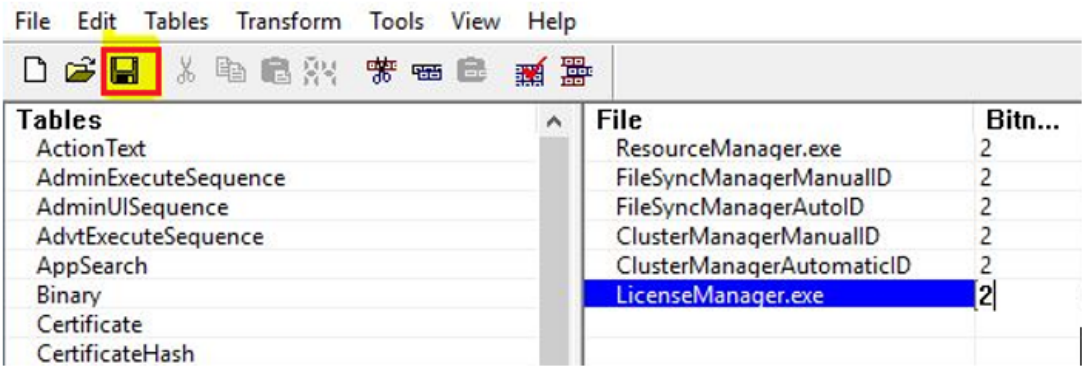




13. Find the **PSW_InstallUtil** table, and then set 'Bitness' to "**2**" for all services.



14. Save and close the Orca editor.



15. Run the Voca Version 8.4.0 upgrade procedure.

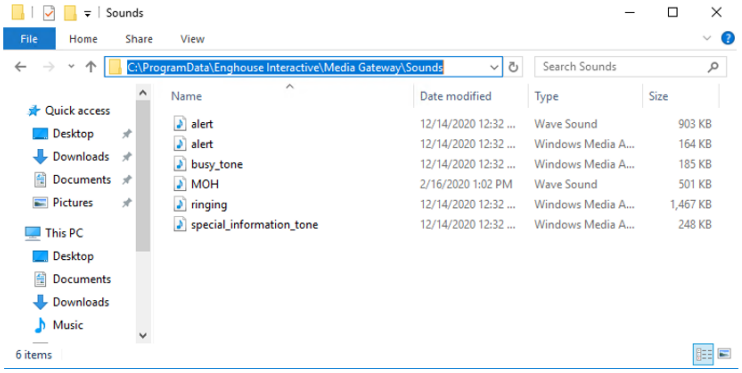
14 Enabling Music on Hold on Enghouse Control Panel

Music On Hold (MOH) is a feature that plays a recording of music when consultation transfers take place.

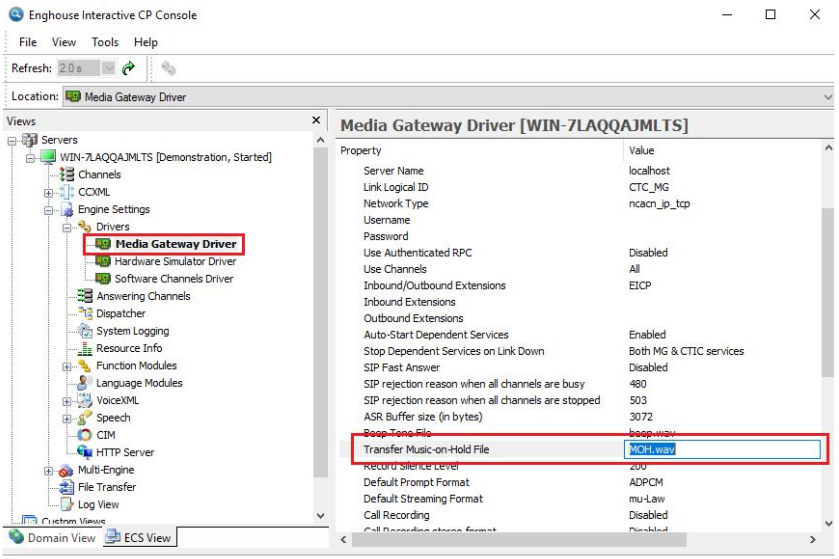
➢ **To enable Music on Hold:**

1. Verify the **Enghouse Communication Portal** version.
2. Open the **Enghouse Control Panel**.
3. Click **Help,** and then click **About Enghouse Interactive CP Console**. The following appears:

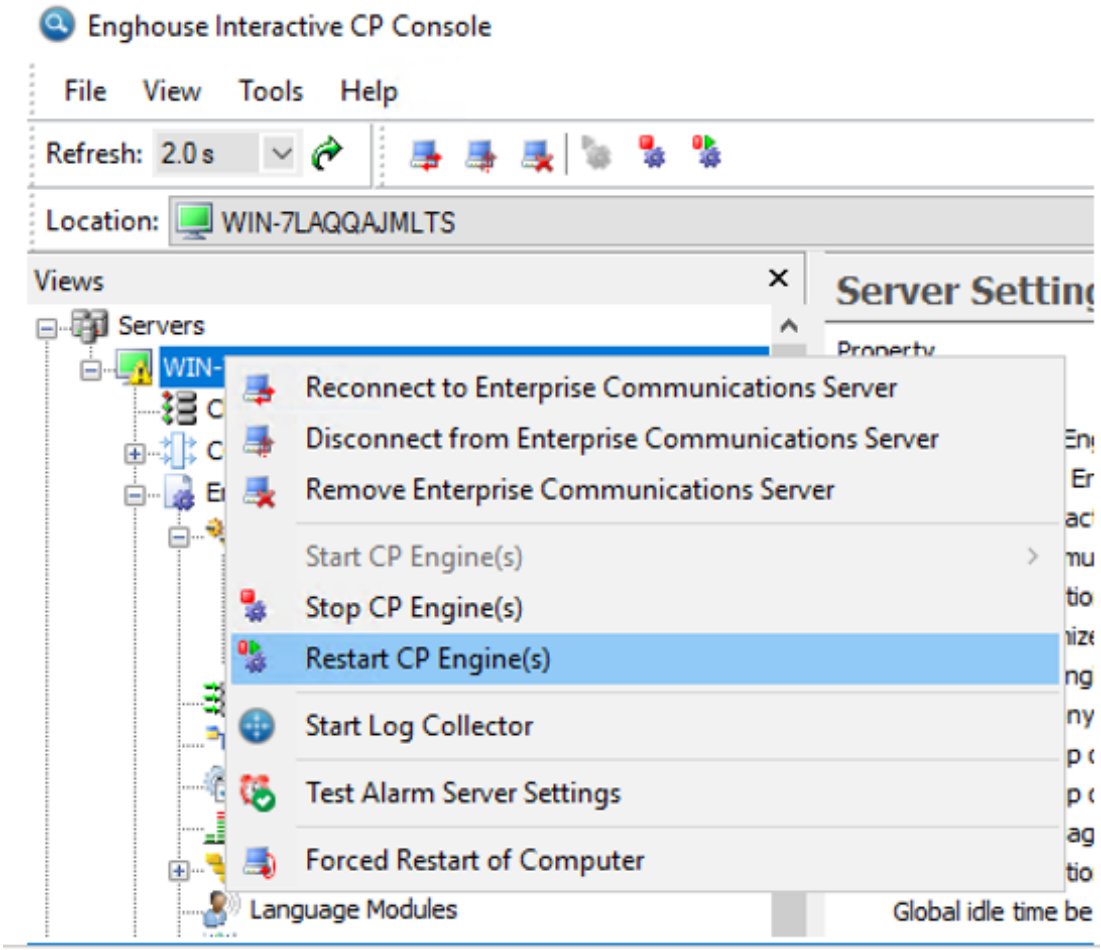
4. From the Enghouse Communication Portal 10.4, copy the MOH.wav file to the *C:\ProgramData\Enghouse Interactive\Media Gateway\Sounds* folder.
5. From the Enghouse Communication Portal 10.6, copy the MOH.wav file to the *C:\Program Files (x86)\Enghouse Interactive\CP\Data* folder.



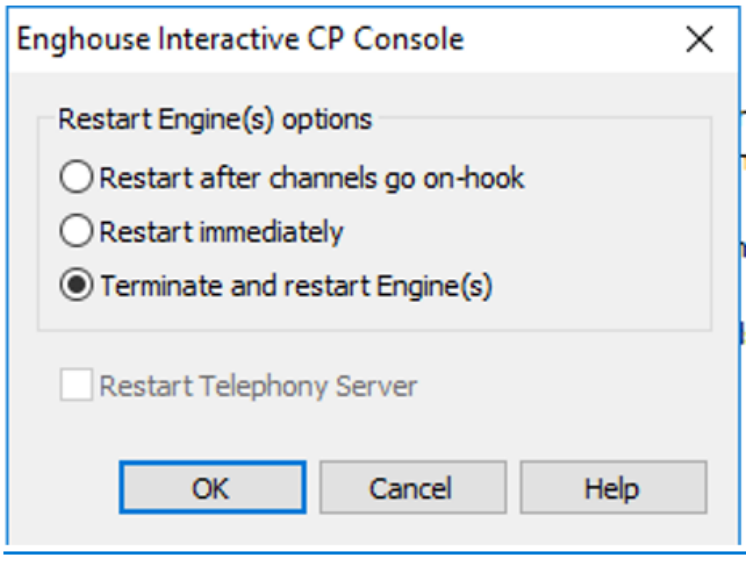
6. On the right-pane of the Enghouse Control Panel, open the **Media Gateway Driver** properties and then, in the 'Transfer Music-on-Hold' field, enter the filename.



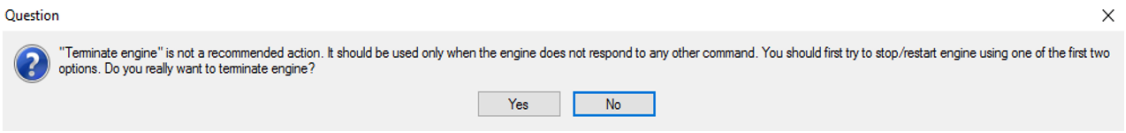
7. Right-click the server's name, and then click **Restart CP Engine(s)**.



4. From the Restart Engine(s) options, select **Terminate and restart Engine(s)**, and then click **OK**.



8. In response to the following question, click **Yes**.


Question
"Terminate engine" is not a recommended action. It should be used only when the engine does not respond to any other command. You should first try to stop/restart engine using one of the first two options. Do you really want to terminate engine?
Yes
No

15 Call Queue Configuration

The procedure below describes how to configure Call Queues.

➢ **To configure Call Queues:**

1. Enable Music on Hold on the Enghouse Control Panel.
2. Configure the SBC to support call queues.
3. Create a dummy call to a '99999' number during the call queue procedure.
4. Terminate this dummy call on the SBC.

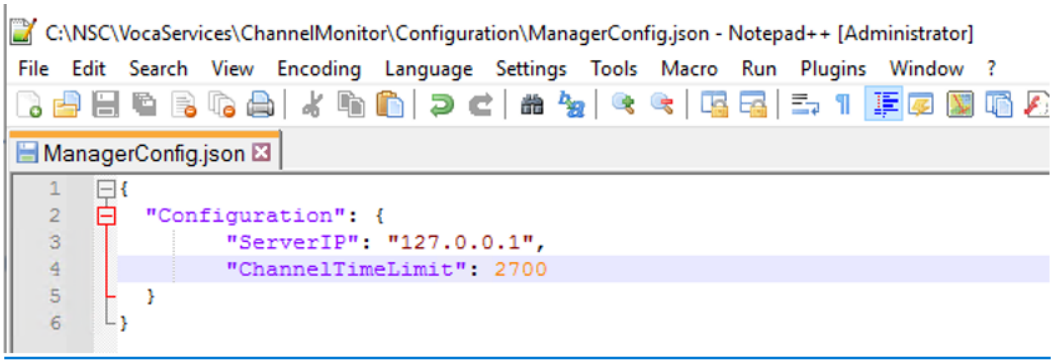
SOURCE IP GROUP	REQUEST TYPE	SOURCE USERNAME PATTERN	DESTINATION USERNAME PATTERN	DESTINATION TYPE	DESTINATION IP GROUP	DESTINATION SIP INTERFACE	DESTINATION ADDRESS
Voca_Server	INVITE	*	99999	Dest Address	--	--	internal

If you need to use another number for the dummy call:

- Assign the number in the SBC termination rule.
- Assign the number in Voca Data Base by running the following query:

```
UPDATE `seda`.`main_configuration` SET `Value`='787878787'
WHERE `Name` = 'CallQueueDummyNum';
```

5. Change the Channel Monitor time by assigning the 'Max Wait Time' of the call queue in the Channel Monitor configuration file.
   - The default value is 300 (5 minutes). Assign the new value in seconds.
   - The location of configuration file is *C:\NSC\VocaServices\ChannelMonitor\Configuration\ManagerConfig.json.*



16 Configuring Voca High Availability

The procedure below describes how to configure Voca High Availability.

➢ **To configure Voca High Availability:**

1. Stop PLM and Enghouse services.
2. Stop MySQL service on both servers.
3. Copy *C:\NSC\MYSQLServer\data* from the Primary node to the Secondary node.
4. On the Secondary node, remove the*data**auto.cnf* file.
5. Copy the following, and paste at the end of *C:\NSC\MYSQLServer\my.ini* on the Primary node.

```
server-id=1
log-bin=mysql-bin
relay-log=mysql-relay-log
auto-increment-increment=2
auto-increment-offset=1
binlog-do-db=seda
binlog-do-db=seda_logs
replicate-do-db=seda
replicate-do-db=seda_logs
replicate-ignore-table=seda.vn_cluster_node_parameters
binlog-format = MIXED
expire_logs_days = 30
sync_binlog = 1
max_binlog_size = 52428800
```

6. Copy the following and paste at the end of *C:\NSC\MYSQLServer\my.ini* on the Secondary node.

```
server-id=2
log-bin=mysql-bin
relay-log=mysql-relay-log
auto-increment-increment=2
auto-increment-offset=2
binlog-do-db=seda
binlog-do-db=seda_logs
replicate-do-db=seda
replicate-do-db=seda_logs
replicate-ignore-table=seda.vn_cluster_node_parameters
binlog-format = MIXED
```

```
expire_logs_days = 30
sync_binlog = 1
max_binlog_size = 52428800
```

7. Start MySQL service on both servers.
8. Open MySQL Workbench and connect as ROOT in both servers.
9. Run the following on both servers:

```
create user 'replicator'@'%' identified by '1q2w3e$r';
grant replication slave on *.* to 'replicator'@'%' identified
by '1q2w3e$r';
GRANT REPLICATION CLIENT ON *.* to 'seda'@'localhost';
```

10. Run the following on the Primary server:

```
show master status;
use output value master_log_file and position in the next step
```

For example:

```
master_log_file='mysql-bin.000001'
master_log_pos=704
```

11. Run the following on the Secondary node:

```
stop slave;
```

Assign the IP address of the Primary node and output information in the next command:

```
change master to master_host='10.31.5.240',master_
user='replicator',master_password='1q2w3e$r',master_log_
file='mysql-bin.000001',master_log_pos=704;
show master status;
```

Use output value master_log_file and position in the next step

For example:

```
master_log_file='mysql-bin.000001'
master_log_pos=704
```

12. Run the following on the Primary node:

```
stop slave;
```

Assign the IP address of the Secondary node and output information in the next command:

```
change master to master_host='10.31.5.245',master_
user='replicator',master_password='1q2w3e$r',master_log_
file='mysql-bin.000001',master_log_pos=704;
```

13. Run the following on both nodes:

```
start slave;
```

14. Start PLM and Enghouse services.

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