

AC Voca

Version 7.8



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Related Documentation

Document Name
AC Voca Release Notes
AC Voca Administrator's Guide

Document Revision Record

LTRT	Description
23722	Updated document for Version 7.8.0

LTRT	Description
23723	<p>Updated document for Version 7.8.1.</p> <ul style="list-style-type: none">■ New sections: Hardware Requirements; System Capacity; AC Voca Scheduler Tasks; Configuring AC Voca DNN Speech Recognition Mode■ Updated sections: Using Clean Windows Installation; Configuring the OSN IP Address; Configuring the OSN IP Address; Installing AC Voca; Configuring Enghouse Interactive's Communication Portal (CP); Configuring Enghouse CP Additional Language Support; Installing the AC Voca License; Installing CT Connect Media Gateway License; Acapela non-Hebrew Text to Speech; Running the LDAP Client Setup in AC Voca Cloud Mode; Running the LDAP Client Setup in AC Voca On-premises Mode; Entering Fields under LDAP Connection Tab; Setting up LDAP Client Synchronization; Troubleshooting LDAP Client Connectivity; Installing LDAP Client Service; Configuring the LDAP Client File (removed)
23724	<p>Updated document for Version 7.8.2.</p> <ul style="list-style-type: none">■ Updated sections: Getting Started; Installing AC Voca; Configuring Enghouse CP Additional Language Support (Optional); Installing Text to Speech Engine; Updated screens for LDAP synchronization

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1 Introduction

AC 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, AC Voca introduces a reliable, 24x7 call routing solution that reduces costs, increases the employee's productivity and enhances caller experience and satisfaction. AC 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 AC Voca system:

- **Clean Windows Installation:** A customer provides a clean-installed Windows 2016 (or Windows 2012 R2) 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

The AC Voca server requires the following minimal hardware configuration for On-premises installation:

- **CPU:** Intel Core i7-5th Gen @ 2.7GHz with 4 cores or higher - dedicate all cores; enable hyper-threading.
- **RAM:** 32 GB
- **SSD:** 256 GB
- **NIC:** 1GB Ethernet card
- **Operating System:** Windows Server 2016

For private cloud installations, the minimal hardware configuration is:

- **For AWS:** Use c5.2xlarge instances or higher
- **For other configurations:** Contact your AudioCodes representative

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

System Capacity

The system supports the following channels capacity:

- For Hebrew and German, up to 6 concurrent channels are supported
- For English, up to 2 concurrent channels are supported
- For Spanish (United States, Spain, Central and South America), up to 30 concurrent channels are supported



In cases of mixed languages under a single tenant, the service is limited to the lowest number of supported channels per language.

Entries Support

- Up to 17,000 entries

Using Clean Windows Installation

It is the customer's responsibility to provide a clean-installed licensed Windows 2016 (or Windows 2012 R2) 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 70).

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

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.

System

← → ▾ ⬆  > Control Panel > System and Security > System

Control Panel Home


View basic information about your computer

 Device Manager

Windows edition _____

 Remote settings

Windows Server 2016 Standard

 **Advanced system settings**




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

Network Connections

← → ▾ ⬆  > Control Panel > Network and Internet > Network Connections

Organize ▾

Name	Status	Device Name
 Ethernet	Network cable unplugged	Intel(R) 82574L Gigabit Network Connection
 Ethernet 2	Network cable unplugged	Intel(R) 82574L Gigabit Network Connection #2
 Ethernet 3	Network	Intel(R) Ethernet Connection I217-LM

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

5. Select the drive that it is on, and then click the **No paging file** option.
6. Clear the 'Automatically manage paging file size for all drives' check box.
7. Click **Set**, and then click **OK**.
8. Select **Restart Now** to apply the changes, and then disable virtual memory.

Using AudioCodes Mediant 800 Installation

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

- Install Windows 2012 R2 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

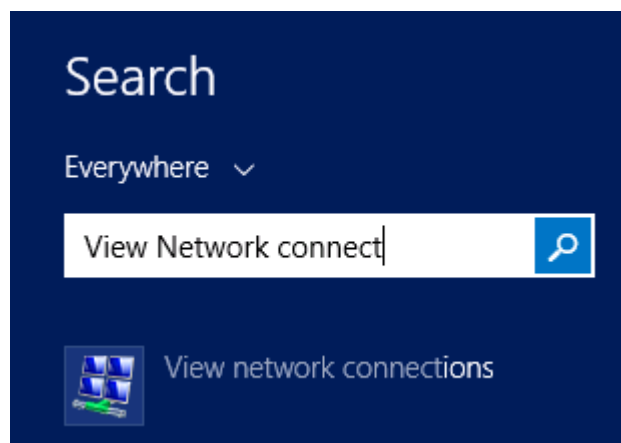
The AC Voca system must have a static IP address. You can configure a static IP address for the OSN server on the Mediant 800.



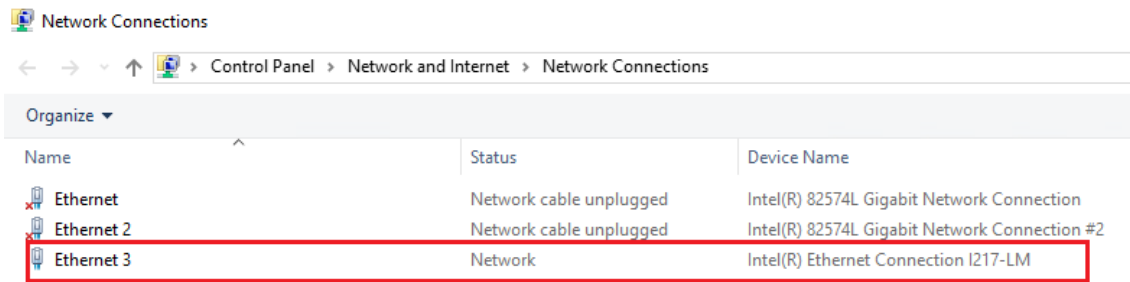
If you are connected remotely, performing this step will disconnect you from the system. After performing this step, you can re-connect the system with its new location and IP address.

➤ To configure a static IP address for OSN:

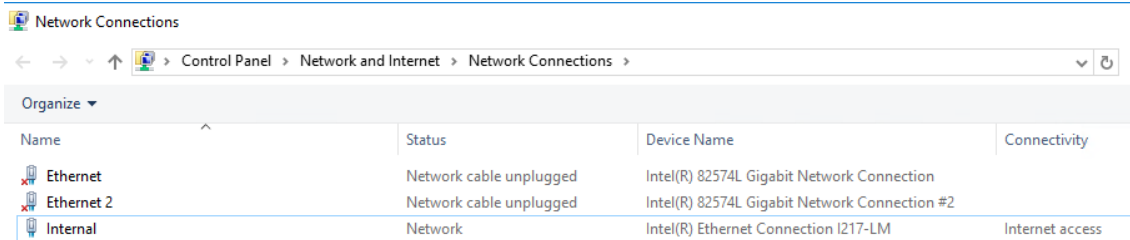
1. Press the Windows key.
2. In the 'Search' text box, enter "View Network connections", and then press **Enter**.



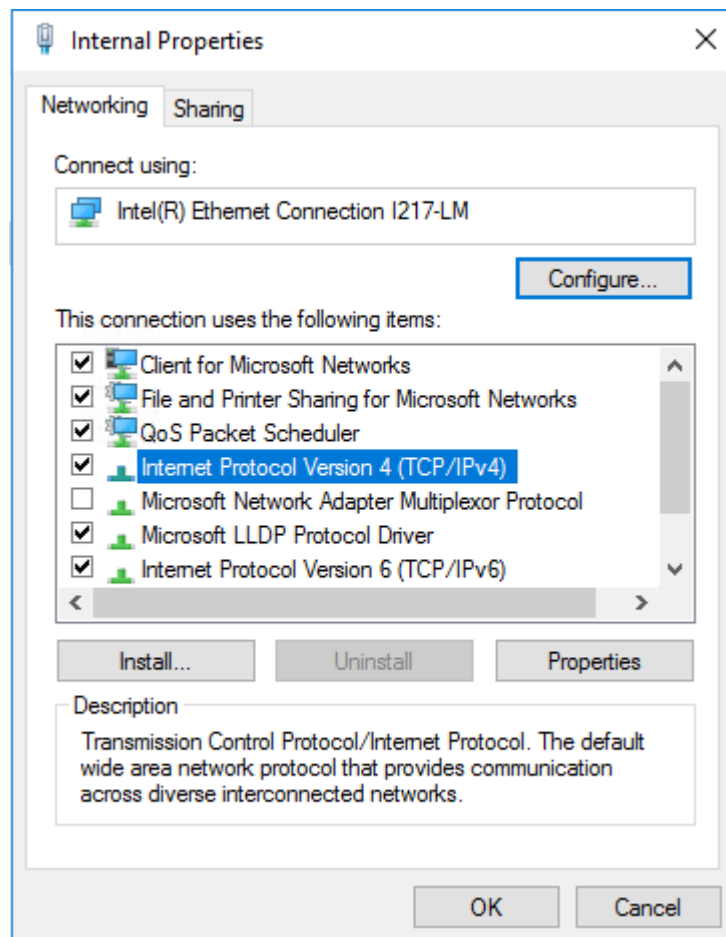
3. Right-click the *Intel(R) Ethernet Connection I217-LM* network connection, and then from the shortcut menu, select **Rename**.



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**.

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 10 . 31 . 5 . 250

Subnet mask: 255 . 255 . 0 . 0

Default gateway: 10 . 31 . 0 . 1

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server: 10 . 1 . 1 . 11

Alternate DNS server: 10 . 1 . 1 . 10

☐ Validate settings upon exit

Advanced...

OK Cancel

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

Advanced TCP/IP Settings

IP Settings DNS WINS

IP addresses

IP address	Subnet mask
10.31.5.250	255.255.0.0

Add... Edit... Remove

Default gateways:

Gateway	Metric
10.31.0.1	Automatic

Add... Edit... Remove

☐ Automatic metric

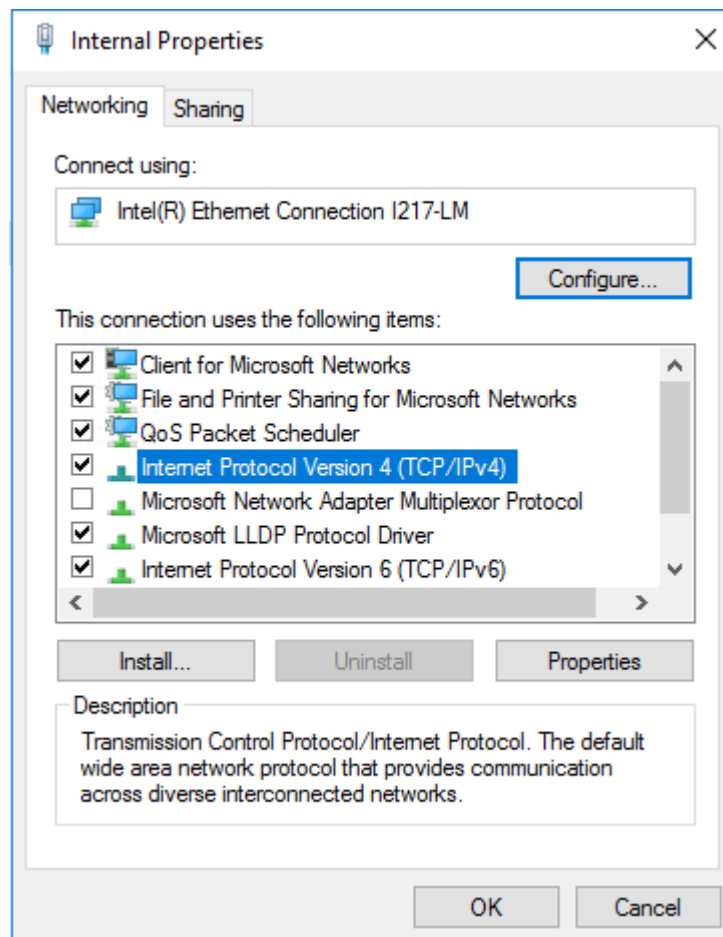
Interface metric: 1

OK Cancel



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

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



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

Configuring the Server System Time Settings

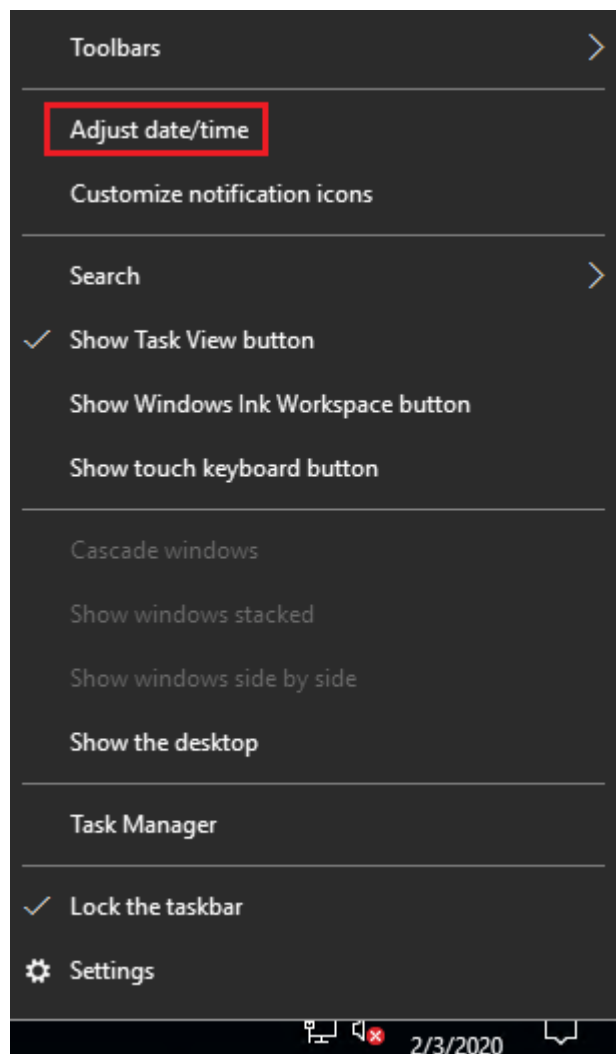
For AC Voca system multi-time zone support, Windows 2012 R2 must be configured in the UTC system time zone. The procedure below describes how to configure your server system time settings.



Verify that your server time is correctly set to UTC time. Otherwise, perform the following procedure.

➤ **To configure the server system time settings:**

1. Right-click the server time and select **Adjust date/time**.



2. Assign the correct UTC time zone, date and time and then save the settings.

7:30 AM, Monday, February 3, 2020

Set time automatically



Set time zone automatically



Change date and time

Change

Time zone

(UTC) Coordinated Universal Time



Adjust for daylight saving time automatically



3 Installing AC Voca

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



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 install AC Voca:**


1. Double-click the AC Voca file to start the installation.

	Acapela	7/8/2019 6:52 AM	File folder	
	AcapelaES	7/8/2019 6:53 AM	File folder	
	ACVoca	7/8/2019 1:19 PM	Application	23,406 KB
	AudioCodes-packages	7/8/2019 1:19 PM	Cabinet File	876,102 KB
	Enghouse-Interactive-packages	7/8/2019 1:17 PM	Cabinet File	785,516 KB
	MySQL-packages	7/8/2019 1:16 PM	Cabinet File	55,387 KB
	Prerequisites	7/8/2019 1:16 PM	Cabinet File	106,943 KB
	Sivan2-packages	7/8/2019 1:16 PM	Cabinet File	74,997 KB
	WebPI-packages	7/8/2019 1:17 PM	Cabinet File	82,299 KB

2. After launching the installer, the AudioCodes logo appears:



3. The AC Voca EULA information page appears. You must accept the conditions to continue.



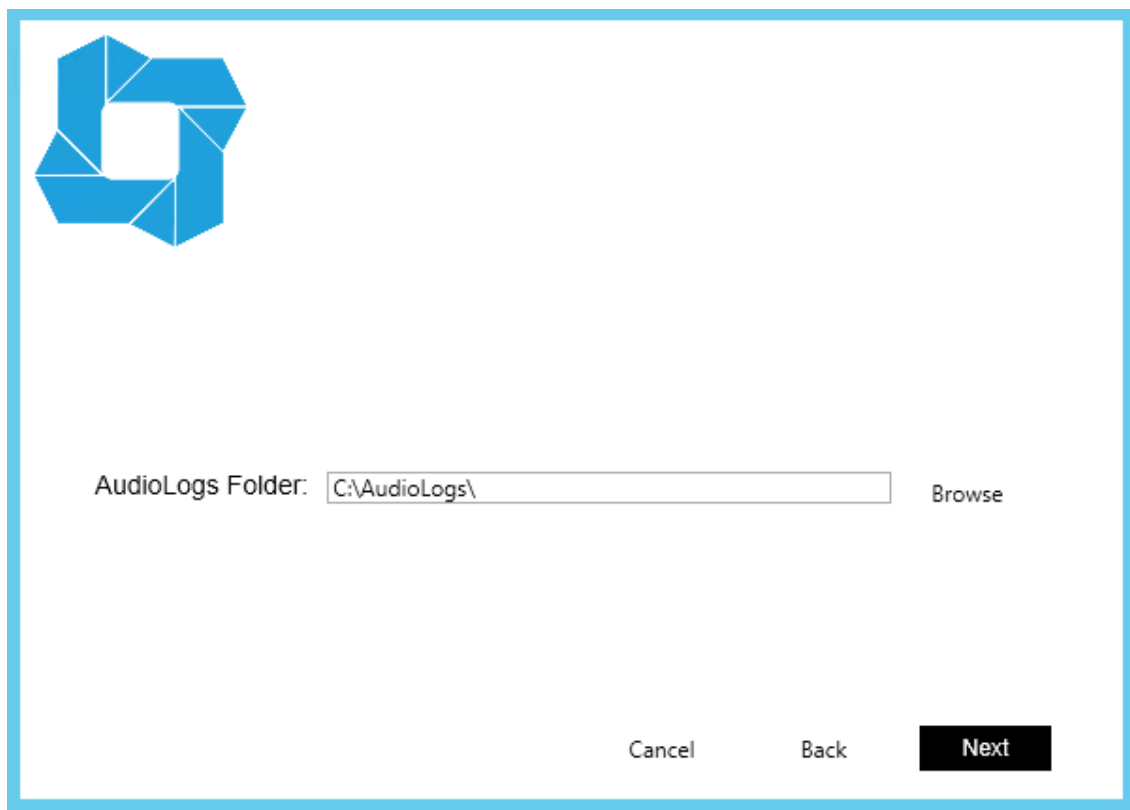
1. Definitions.

1. **Confidential Information** means information concerning inventions, know-how, trade secrets and other proprietary Licensor information or information of its licensors, including Licensor's disclosure of the Licensed Software, Documentation and trade secrets relating to the Licensed Software and any modifications thereof.
2. **Fees.** means either license fees, royalties or any other compensation required for the Licensed Configuration of the Licensed Software.
3. **Licensed Configuration.** means to the extent applicable, as indicated on the License Key, the choice of features, maximum number of licensed ports, or any other specifications, as approved in writing by Licensor.
4. **License Key.** means the code provided by Licensor to Licensee, which enables the Licensed Software to operate in accordance with the specified Licensed Configuration.

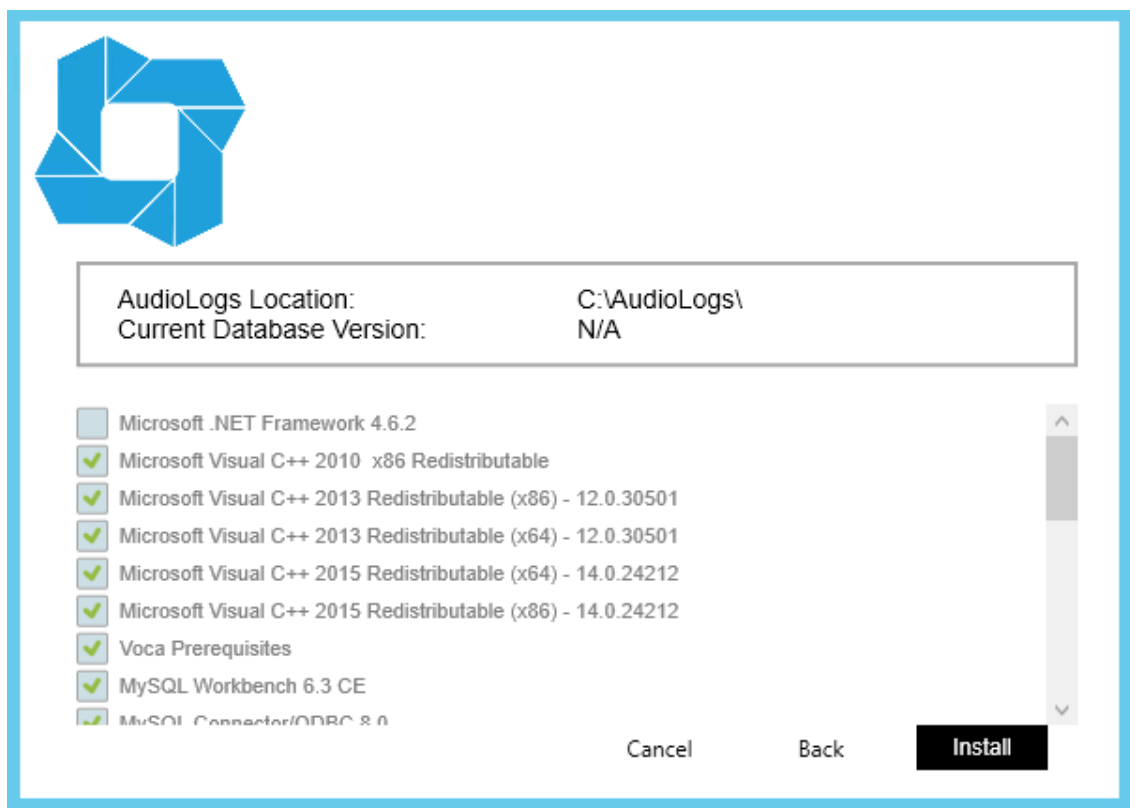
Decline

Accept

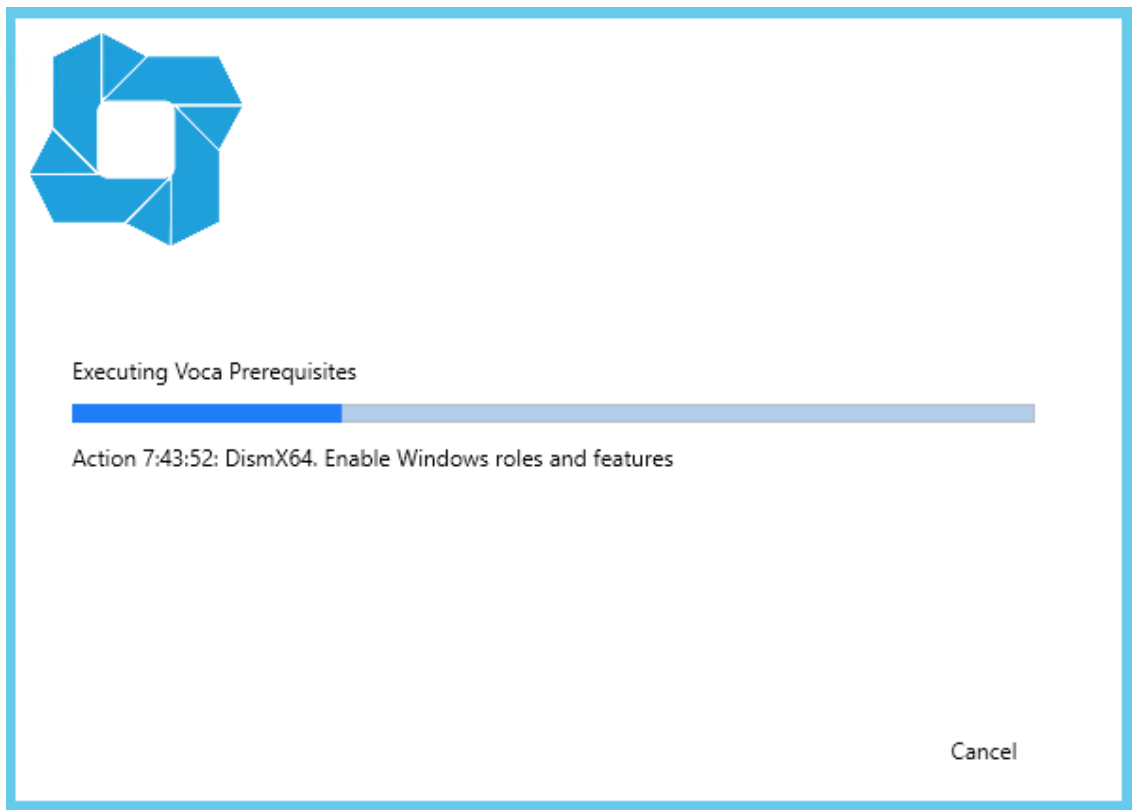
- The AudioLogs directory window appears. The AC Voca system records and saves the speech request in an audio logs directory. Assign the *AudioLogs* directory and click **Next**.



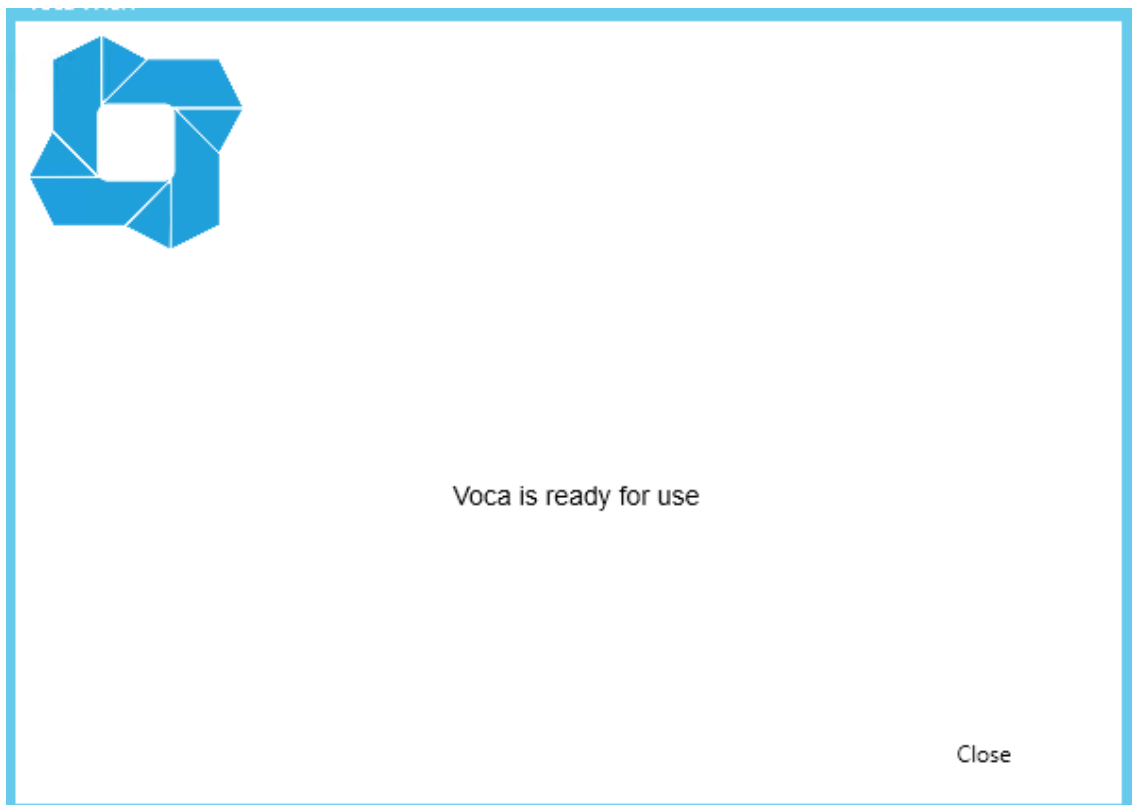
- A window appears displaying the components that are to be installed. Click **Install**.



- Prerequisites and required third-party applications are being installed.



7. When completed, the installer displays the following screen. Click **Close** to restart the server.



4 Configuring AC Voca System


The following describes how to configure the AC Voca system. This configuration procedure should be performed after completing the AC Voca Installation procedure.

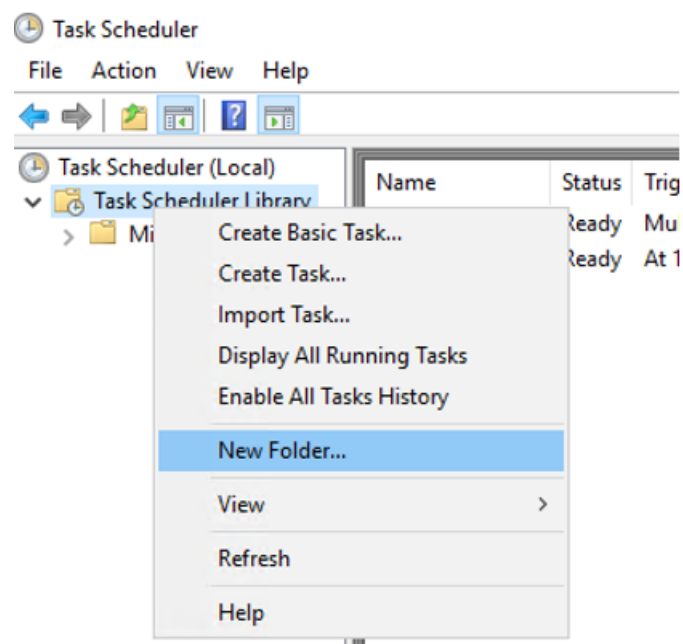
AC Voca Scheduler Tasks

The following describes how to configure the AC Voca system Scheduler tasks:

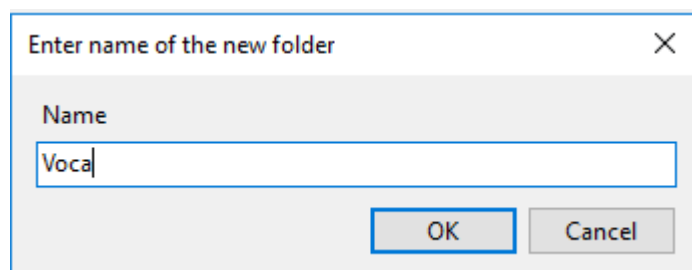
- Voca cleanup scheduler task
- Voca backup scheduler task

➤ To configure Voca Task Scheduler:

1. Press the **Windows**  key, and then open **Administrative Tools**.
2. Open the **Task Scheduler**.
3. Right-click **Task Scheduler Library**, and then choose **New Folder**.

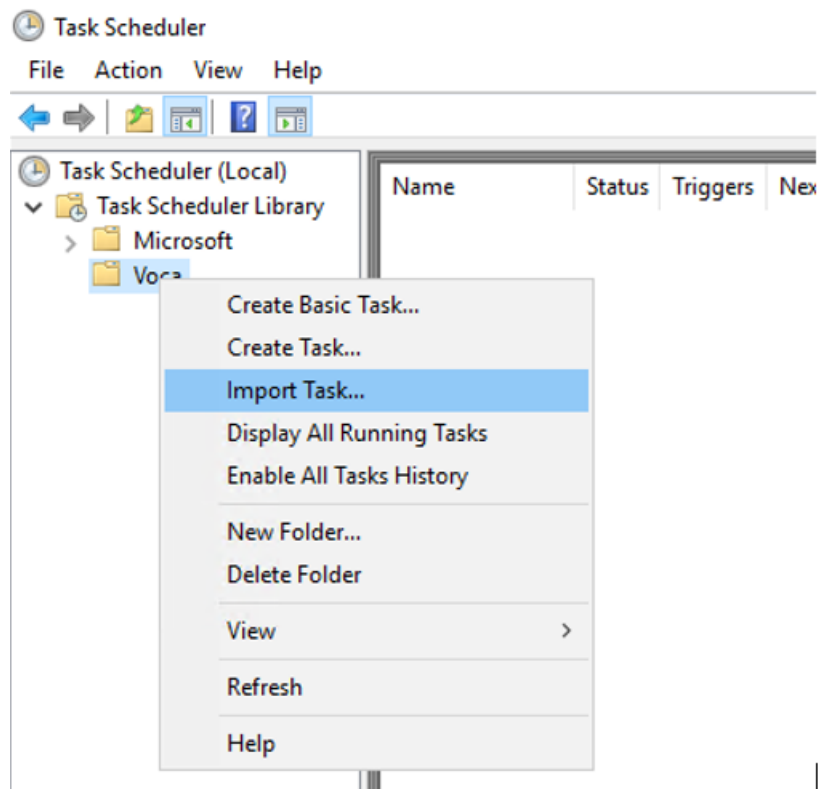


4. In the 'Name' field, enter "Voca", and then click **OK**.

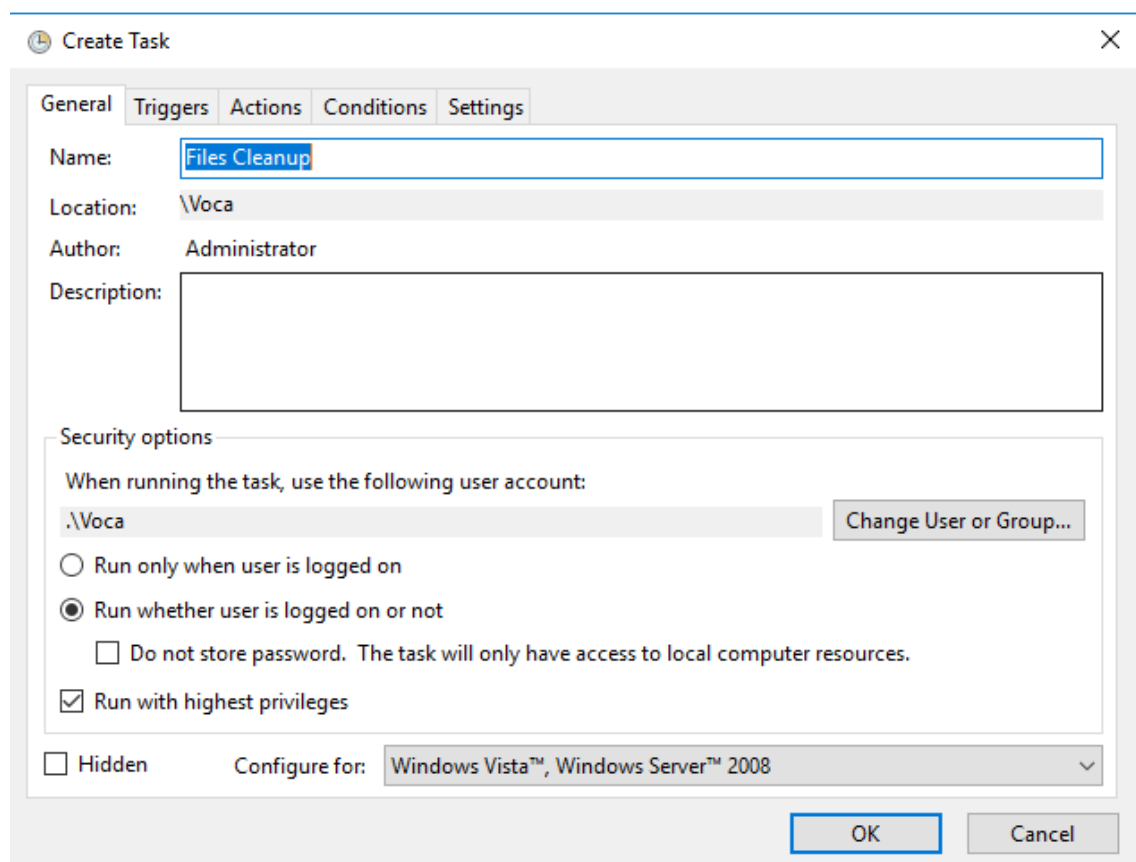


➤ To configure Voca cleanup scheduler task:

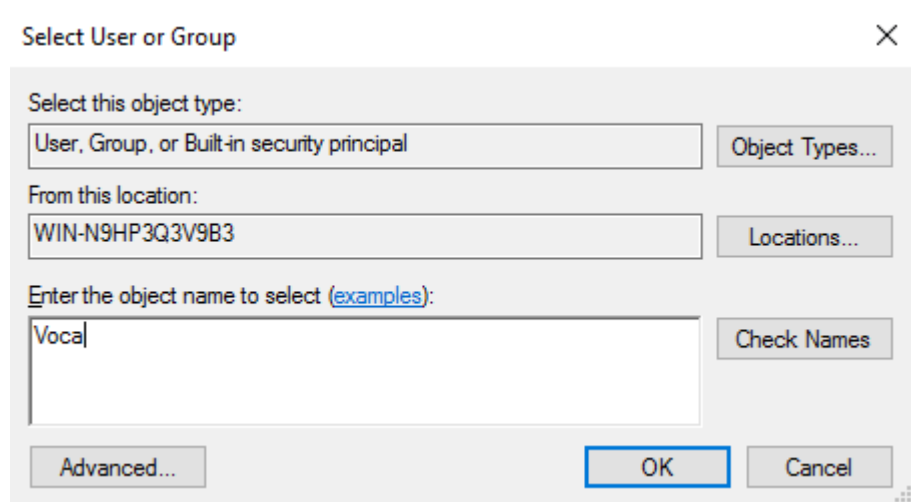
1. Right-click **Voca** Task Scheduler library > **Import Task**.



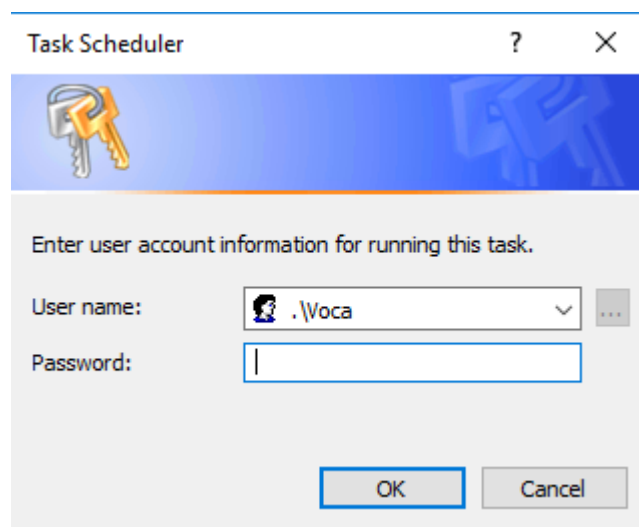
2. Browse to the cleanup task configuration file location - *C:\NSC\VOCA_Scripts\Cleanup_script\Files Cleanup.xml*, and then click **OK**.
3. Click **Change User or Group**.



4. In the 'Enter the object name to select' field, enter "Voca", and then click **Check Names**.

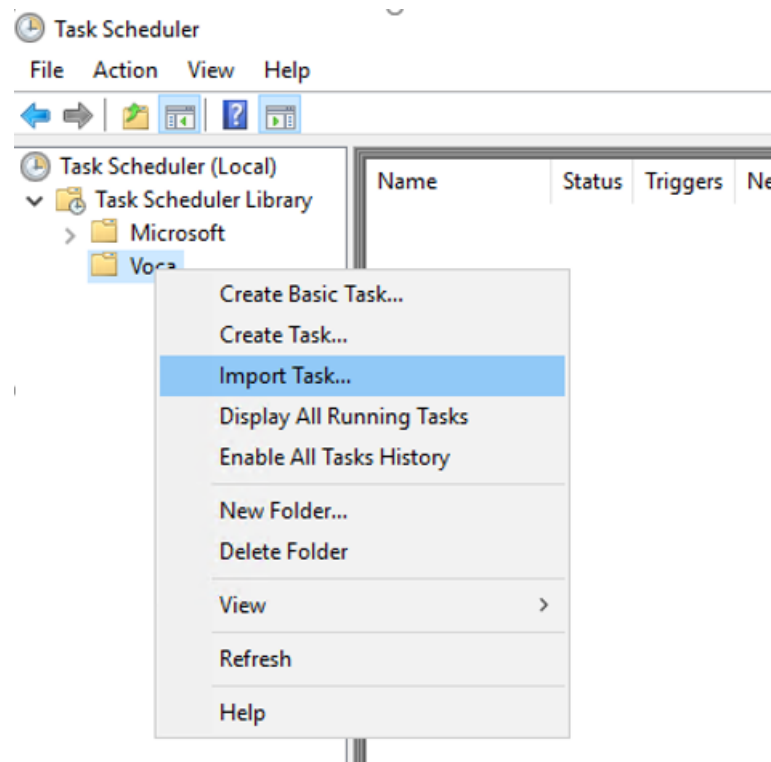


5. Click **OK**.
6. In the Task Scheduler, enter your credentials (To obtain your credentials, contact your AudioCodes representative).

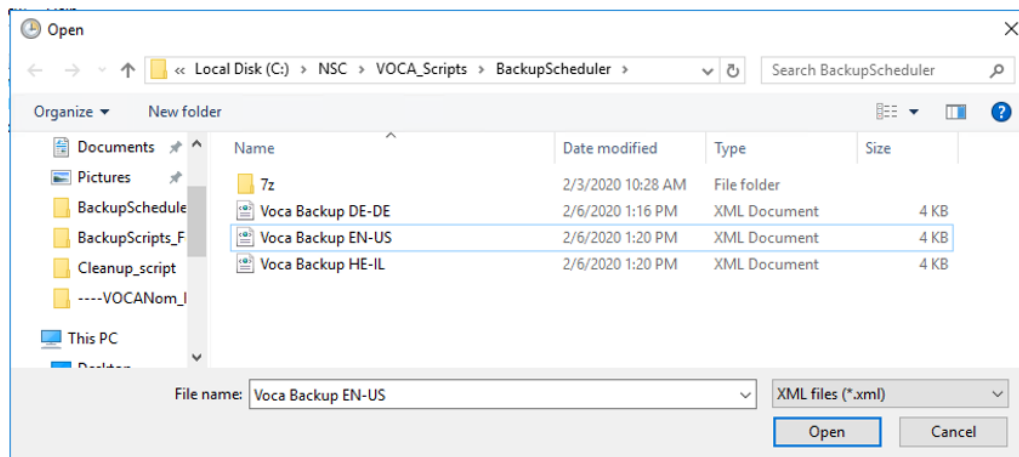


➤ **To configure Voca backup scheduler task:**

1. Right-click on the **Voca Task Scheduler** library, and then click **Import Task**.



2. Browse to the backup task configuration file location at `C:\NSC\VOCA_Scripts\BackupScheduler\`, and then select your system dialect file.
3. Click **Open**.



4. Click **Change User or Group**.

Create Task

General Triggers Actions Conditions Settings

Name: VOCANom Backup_EN-US

Location: \\Voca

Author: Administrator

Description: Backup VOCANom components daily at 00:30

Security options

When running the task, use the following user account:

Administrator Change User or Group...

☐ Run only when user is logged on

☒ Run whether user is logged on or not

☐ Do not store password. The task will only have access to local computer resources.

☐ Run with highest privileges

☐ Hidden

Configure for: Windows® 7, Windows Server™ 2008 R2

OK Cancel

5. In the 'Enter the object name to select' field, enter "Voca", and then click **Check Names**.
6. Click **OK**.

Select User or Group

Select this object type:

User, Group, or Built-in security principal Object Types...

From this location:

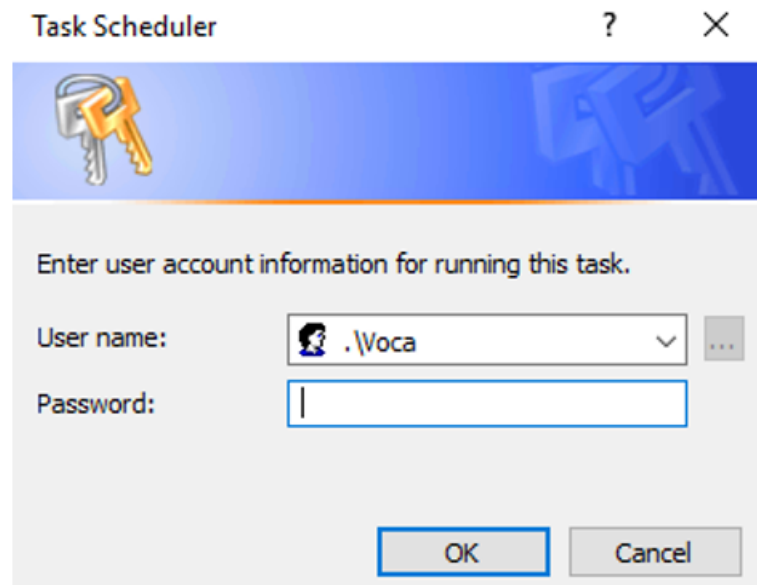
WIN-N9HP3Q3V9B3 Locations...

Enter the object name to select (examples):

Voca Check Names

Advanced... OK Cancel

7. In the Task Scheduler, enter your credentials (To obtain your credentials, contact your AudioCodes representative).

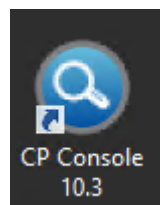


Configuring Enghouse Interactive Communication Portal (CP)

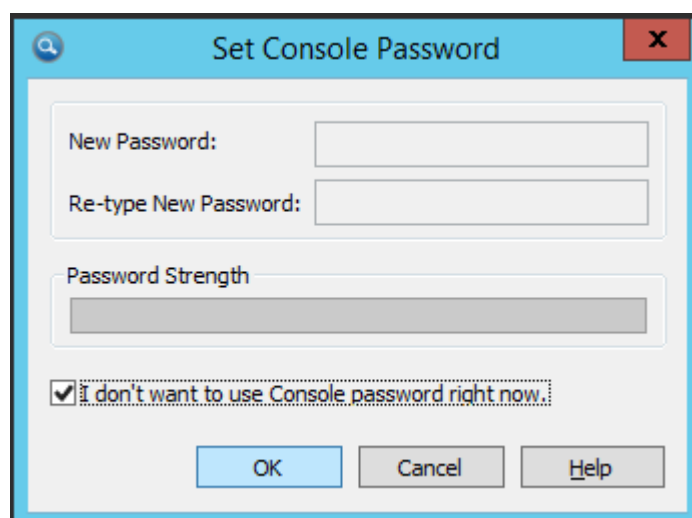
Enghouse Interactive (CP) is a third-party application responsible for SIP connectivity between a customer's PBX and the AC Voca speech recognition agent.

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

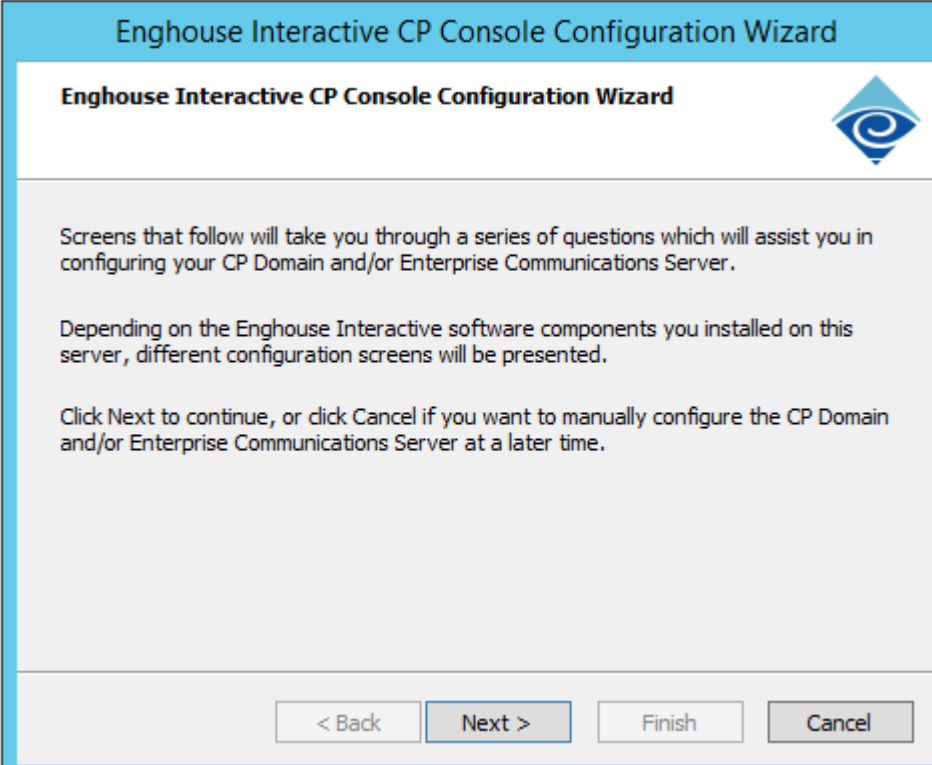
1. Launch the CP Console 10.3.



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**.



Enghouse Interactive CP Console Configuration Wizard

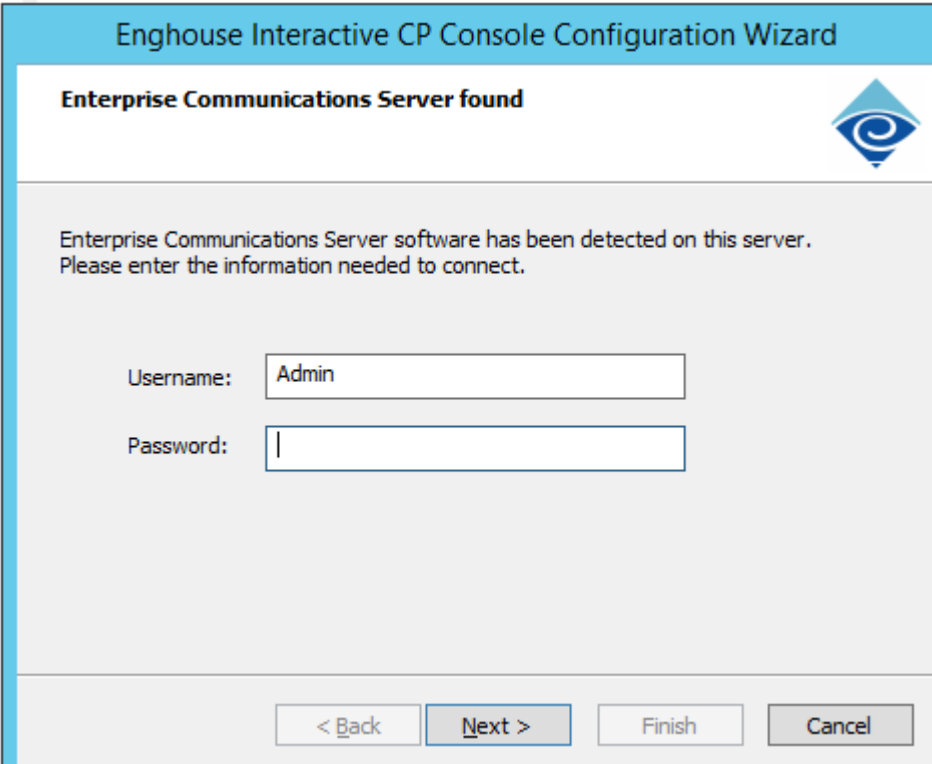
Screens that follow will take you through a series of questions which will assist you in configuring your CP Domain and/or Enterprise Communications Server.

Depending on the Enghouse Interactive software components you installed on this server, different configuration screens will be presented.

Click Next to continue, or click Cancel if you want to manually configure the CP Domain and/or Enterprise Communications Server at a later time.

< Back Next > Finish Cancel

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



Enghouse Interactive CP Console Configuration Wizard

Enterprise Communications Server found

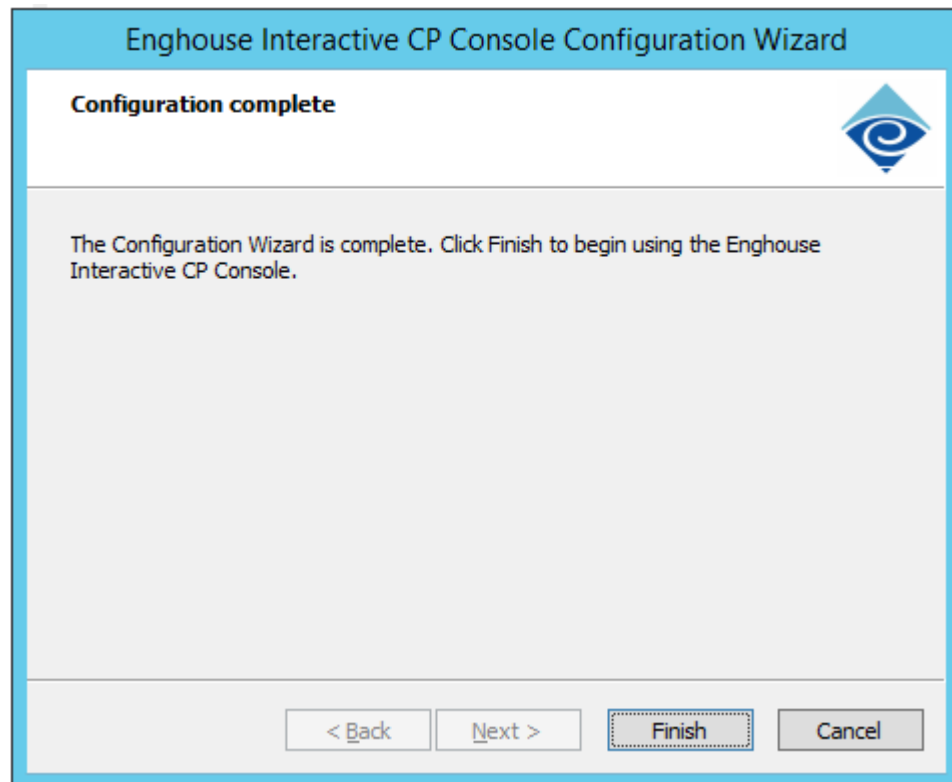
Enterprise Communications Server software has been detected on this server. Please enter the information needed to connect.

Username:

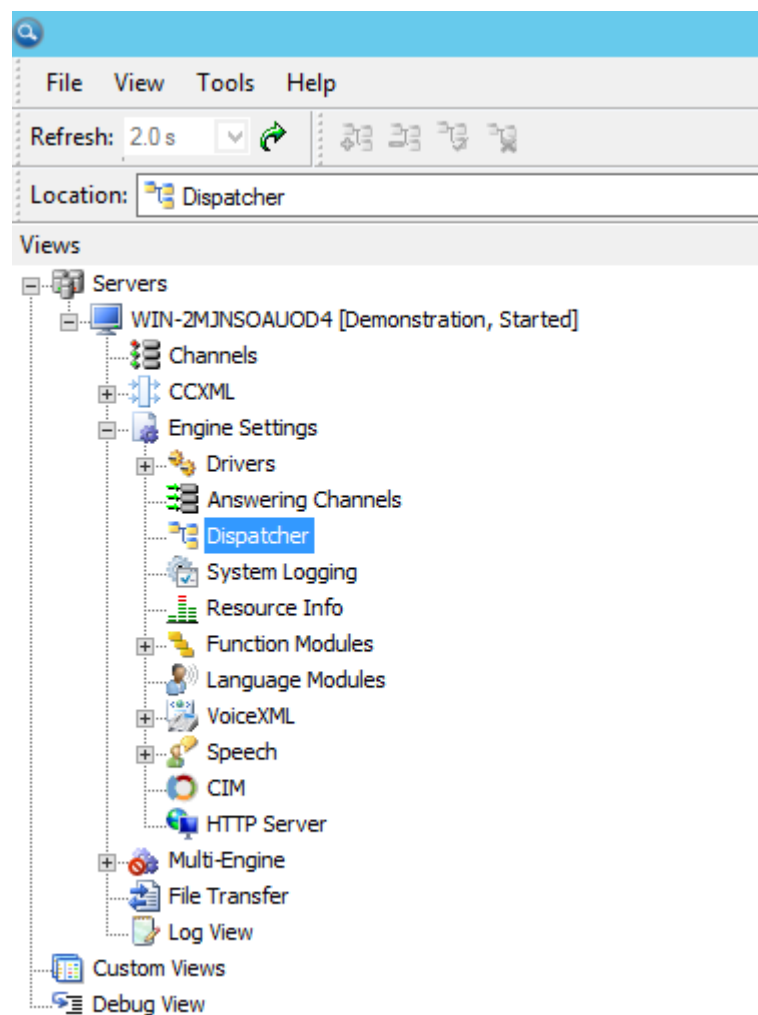
Password:

< Back Next > Finish Cancel

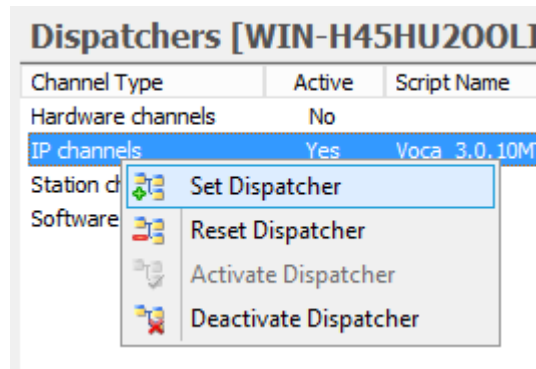
5. Click **Finish** when the configuration completes.



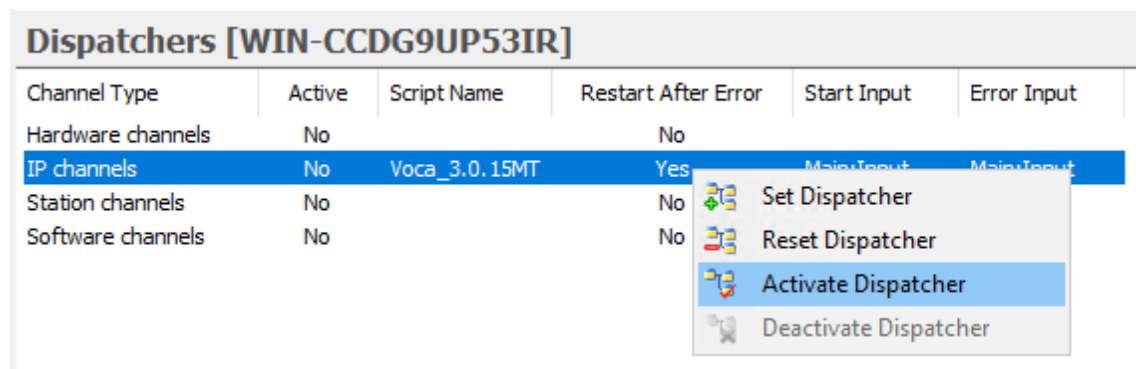
6. On the **ECS view** tab, select **Engine Settings > Dispatcher**.



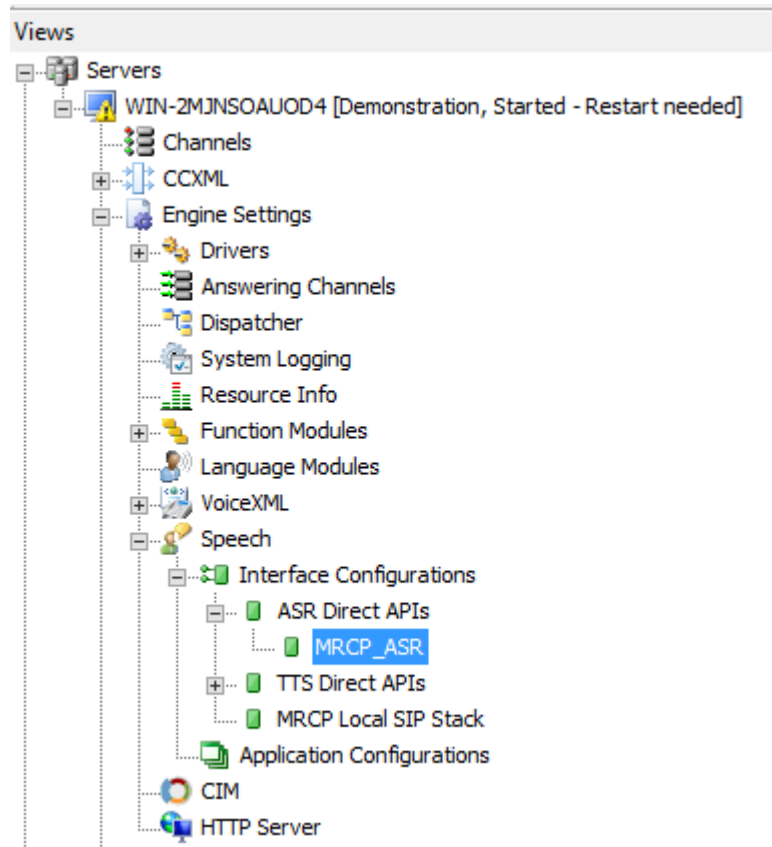
7. Under **Dispatchers**, on the right pane, right-click **IP channels**, and then click **Set Dispatcher**.



8. Select **Voca_3.0.xxMT**.
9. Select the 'Restart script after error' check box, and then click **Set Dispatcher**.
10. If the following **Information** window appears, click **OK**.
11. If the channel is not active, right-click **IP Channels**, and then select **Activate Dispatcher**.



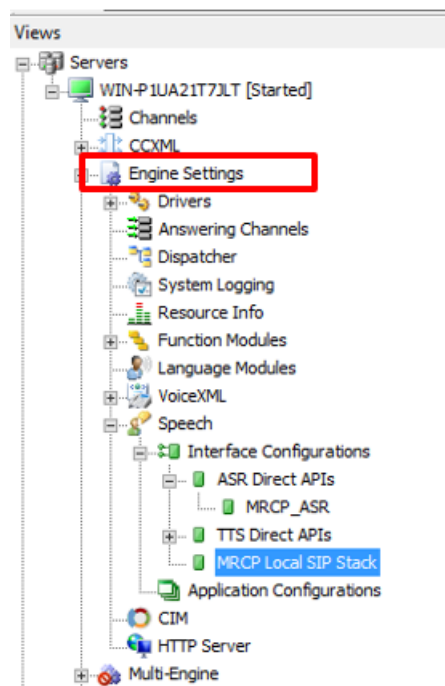
12. On the ECS view tab, select **Engine Settings > Speech > Interface Configurations > ASR Direct APIs > MRCP_ASR**.



13. Make sure all the parameters appear as shown below.

MRCP_ASR [WIN-CCDG9UP53IR]	
Property	Value
Convert result from UTF-8	Disabled
Number of ASR resources in the resource pool (0 to disable; -1 for auto)	0
MRCPv2 server address	sip:10.31.5.250:8060
MRCPv2 server vendor	generic
Base port for RTP	7000
Keep alive timeout in seconds (0 to disable)	20
MRCP server network connection timeout in seconds (0 to disable)	20
SIP Fast Start	Enabled
Max waiting time for a reply to STOP in seconds (0 to disable)	3
Technology name	MRCP_ASR
Description	ASR part of MRCPv2 speech module

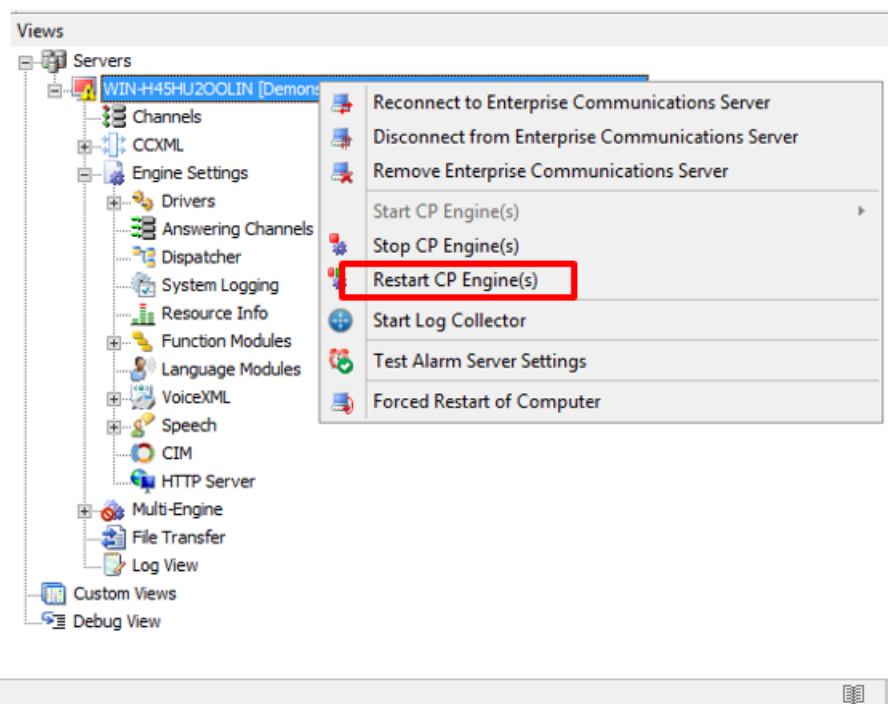
14. In the 'MRCPv2 server address' field, assign the AC Voca local static IP address and port.
15. On the ECS view tab, select **Engine Settings > Speech > Interface Configurations > MRCP Local SIP Track**.



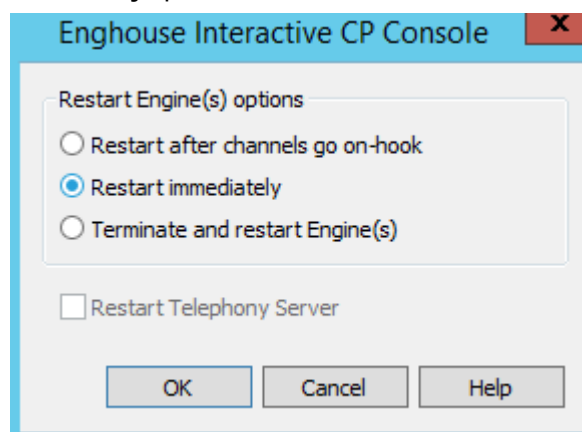
16. Make sure all the parameters appear as shown below.

MRCP Local SIP Stack [WIN-CCDG9UP53IR]	
Property	Value
SIP stack address	sip:10.31.5.250:5700
SIP stack port	5700
SIP message timeout	30
SIP initial message timeout (-1 for using SIP message timeout)	-1
SIP transport protocol	UDP
SIP message VIA: field (leave blank for auto)	

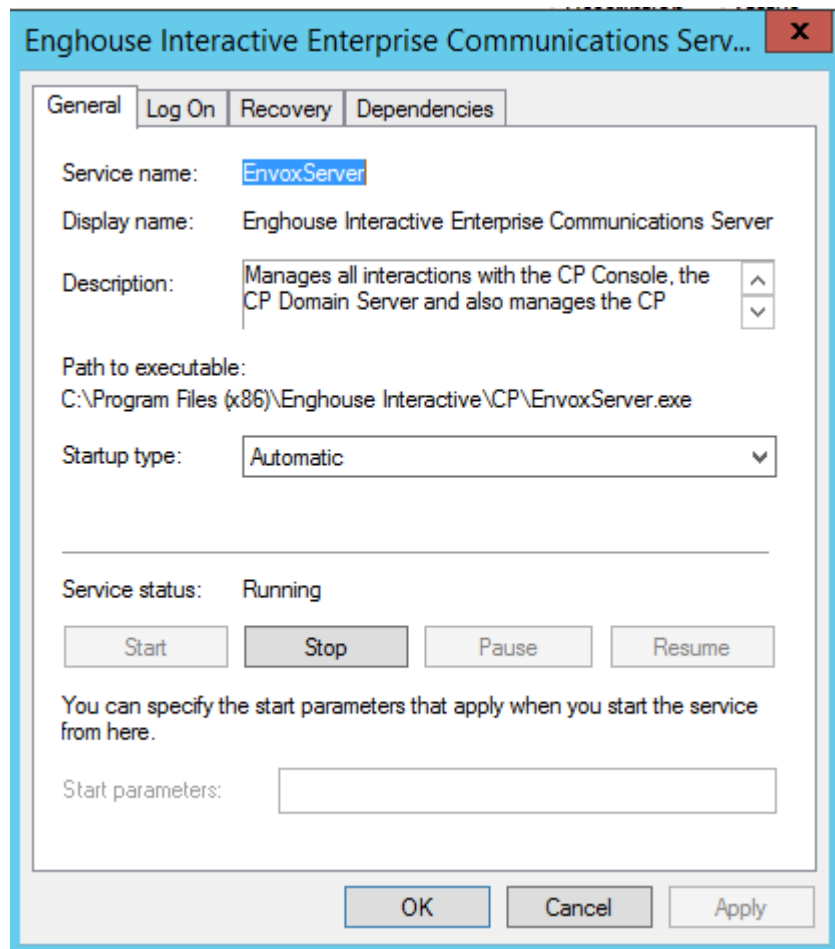
17. In the 'SIP stack address' field, assign the AC Voca local static IP address and port.
 18. In the ECS view, right-click the computer name, and then select **Restart CP Engine(s)**.



19. Click the **Restart immediately** option, and then click **OK**.



20. Configure the service account of Enhouse Interactive Enterprise Communications Server service.
- Open **Administrative Tools > Services**.
 - Open the **Enhouse Interactive Enterprise Communications Server** service.



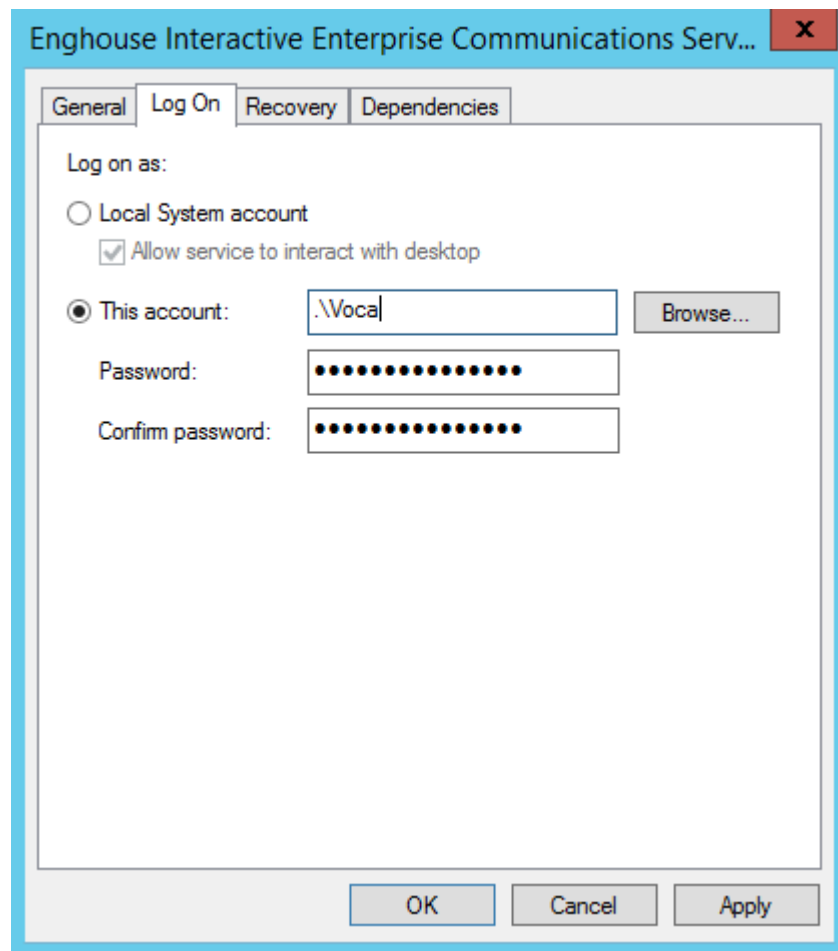
- c. Select the **Log On** tab, and then click the **This account** option.

The screenshot shows a Windows-style dialog box titled "Enghouse Interactive Enterprise Communications Serv...". It has four tabs: "General", "Log On" (which is selected), "Recovery", and "Dependencies". The "Log On" tab contains the following elements:

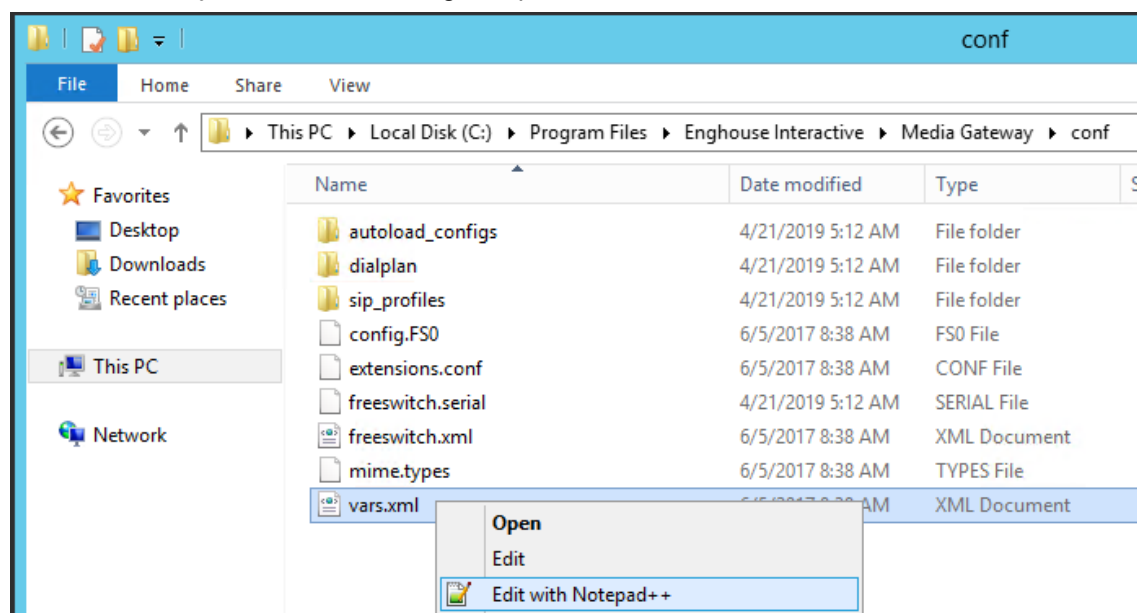
- A label "Log on as:" followed by two radio button options:
 - ☐ Local System account
 - ☒ This account:
- Below the "Local System account" option is a checked checkbox labeled "Allow service to interact with desktop".
- Below the "This account:" option is a text input field, followed by a "Browse..." button.
- Below the text input field is a label "Password:" followed by a password input field (masked with dots).
- Below the password input field is a label "Confirm password:" followed by another password input field (masked with dots).

At the bottom of the dialog box are three buttons: "OK", "Cancel", and "Apply".

- d. Enter the **.Voca** account name.
- e. Enter and confirm your password. To get the credentials, please contact your AudioCodes representative.
- f. Click **OK**.



- g. Click **OK** when the following screen appears.
- 21. Configure the **Media Gateway IP address** settings.
 - a. Edit the Media Gateway configurator file *C:\Program Files\Enghouse Interactive\Media Gateway\conf\vars.xml*, using Notepad++.



- b. Add the following line with the AC Voca system IP address.

```
<X-PRE-PROCESS cmd="set" data="local_ip_v4=10.31.5.250"/>
```



This line should be added before `...data="domain$$... line.`

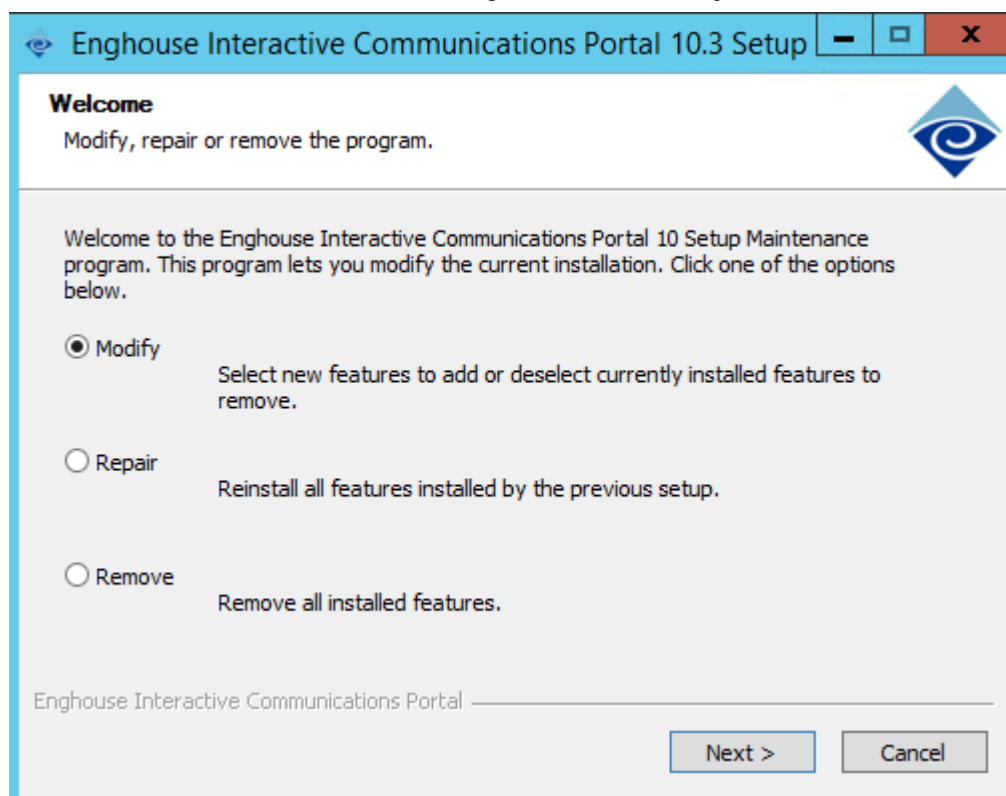
22. Restart the server.
23. Refer to [Installing the AC Voca License.html](#) and [Installing Third Party Licenses.html](#).

Configuring Enhouse CP Additional Language Support (Optional)

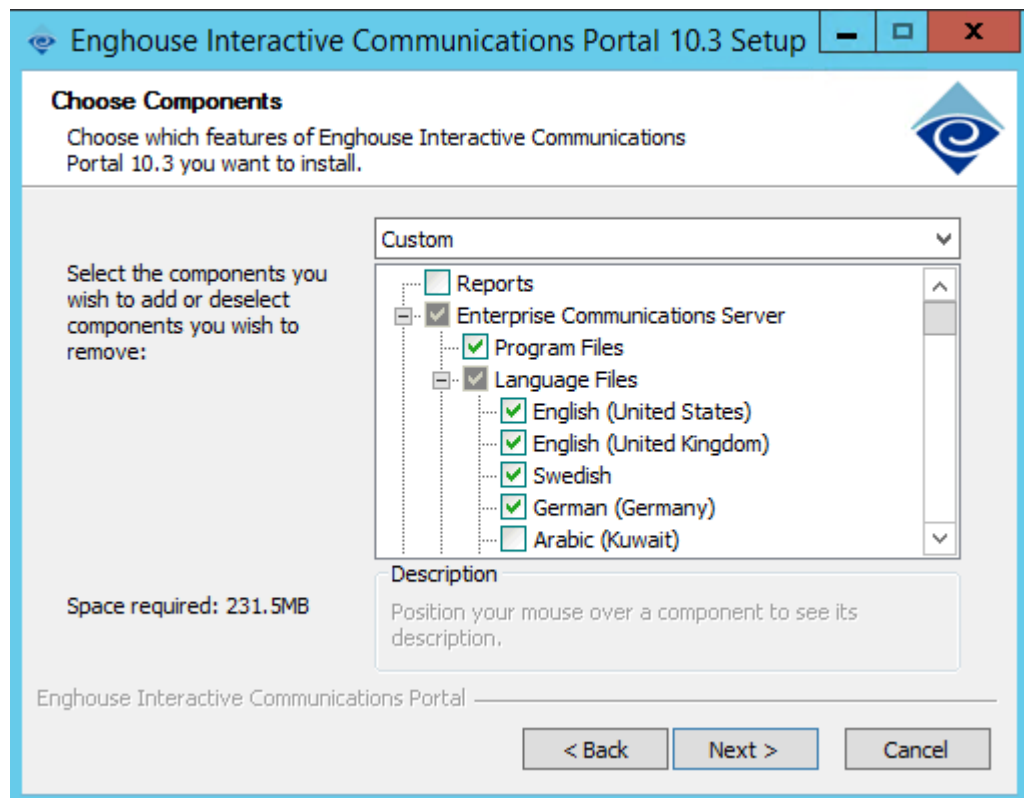
This section describes how to add additional languages to Enhouse Control Panel. By default, Enhouse CP supports English (US) and German (Germany) languages. If Hebrew or Spanish languages are required, you need to run the Enhouse CP installation. If there is no need to add additional languages, skip this section.

➤ To add additional language support:

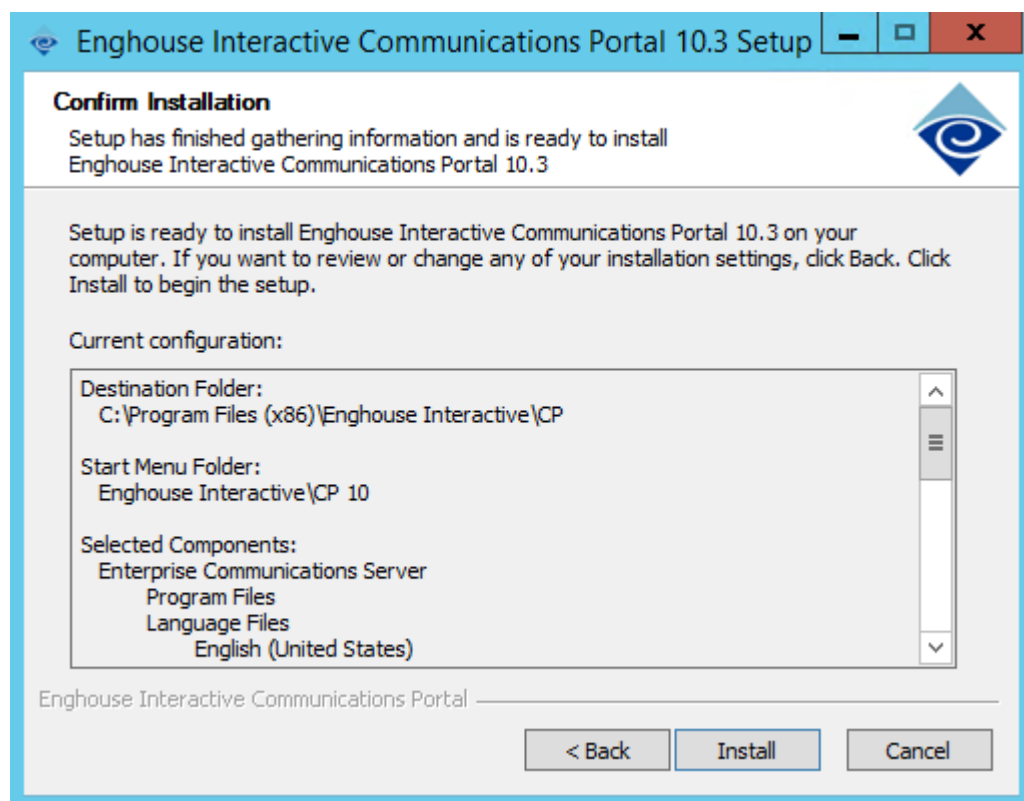
1. Run the Enhouse CP installation file **C:\ACVoca_Install\Enhouse_Interactive_CP\Enhouse_Interactive_CP_103_GA.exe**.
2. The Communications Portal installation begins. Choose **Modify**, and then click **Next**.



3. In the components window, select the required languages:
 - English (US)
 - German (Germany)
 - Spanish (Spain)
 - Spain (Mexico)
 - Hebrew
4. Click **Next**.



5. Click **Install**.



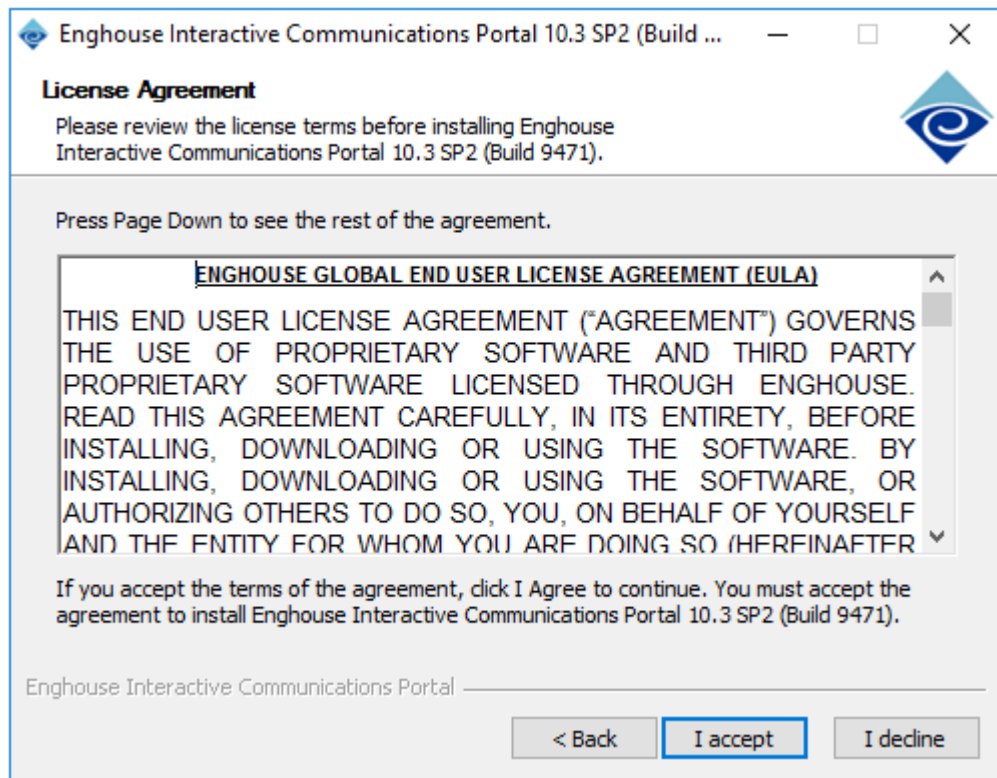
6. Click **Finish**.



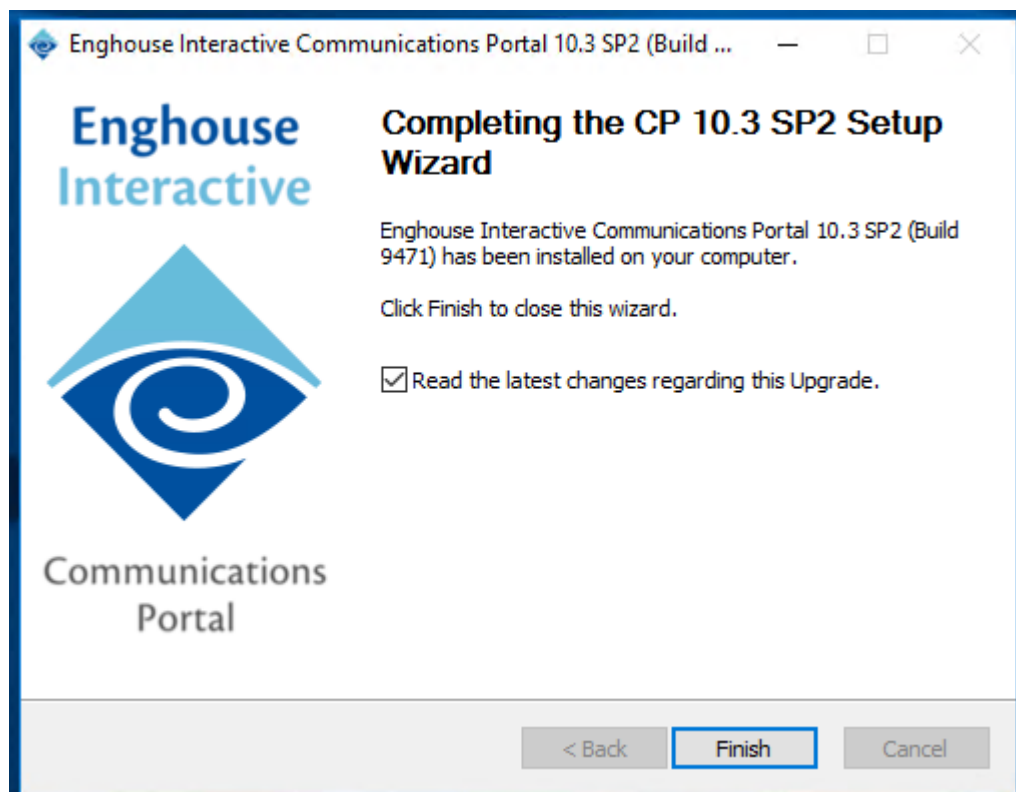
7. Run the Enghouse CP Service Pack installation file, **C:\ACVoca_Install\Enghouse_Interactive_CP\ Enghouse_Interactive_CP_103_SPX.exe.**, and then click **Next**.



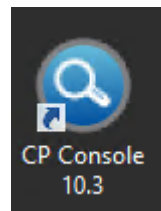
8. Click **I accept**.



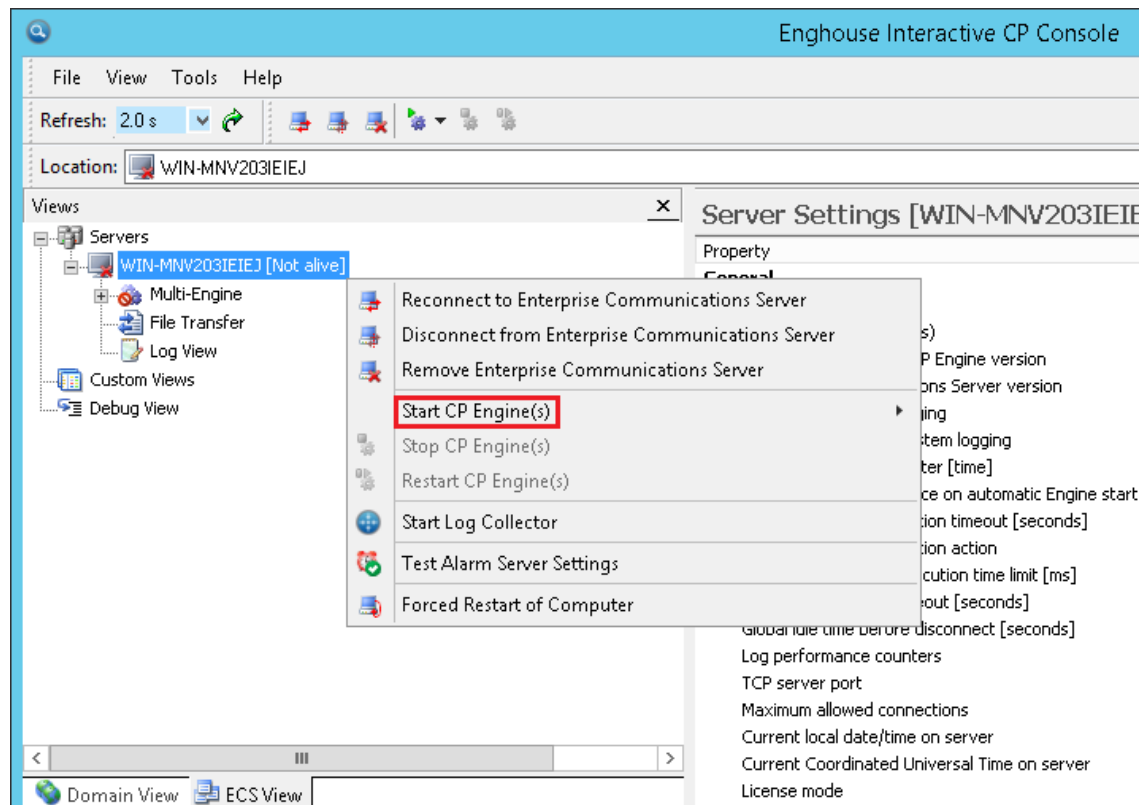
9. Click **Finish**.



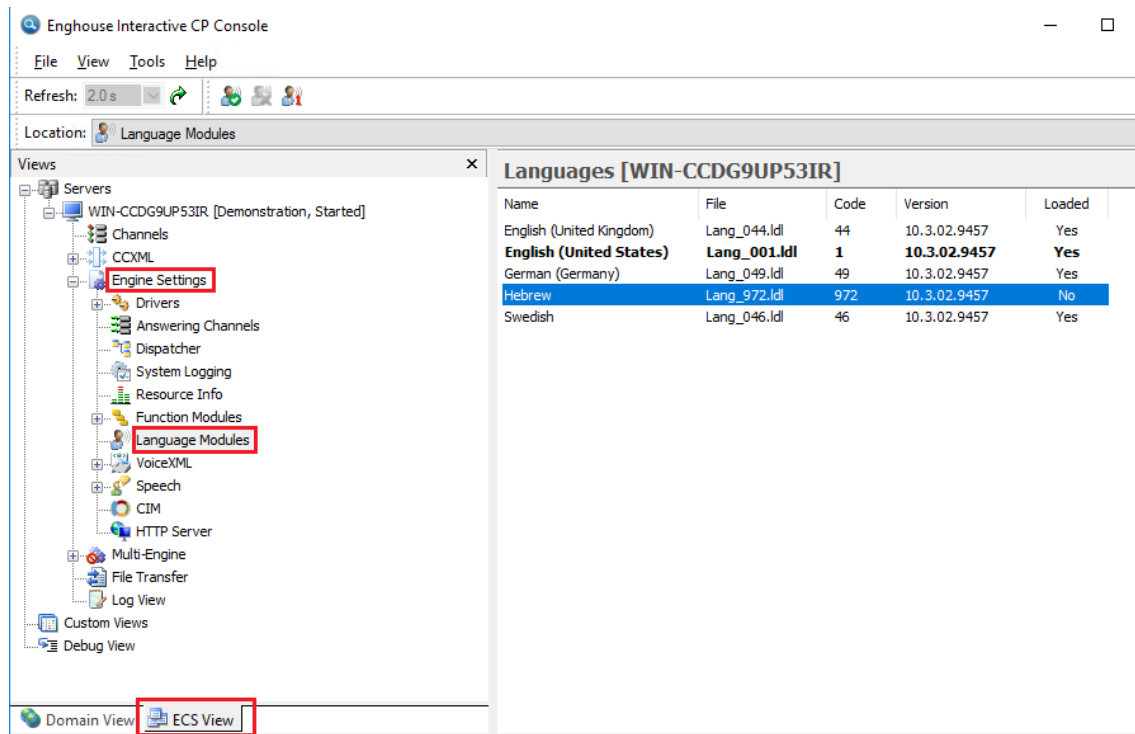
10. Activate (load) the language support and Launch **CP Console 10.3**.



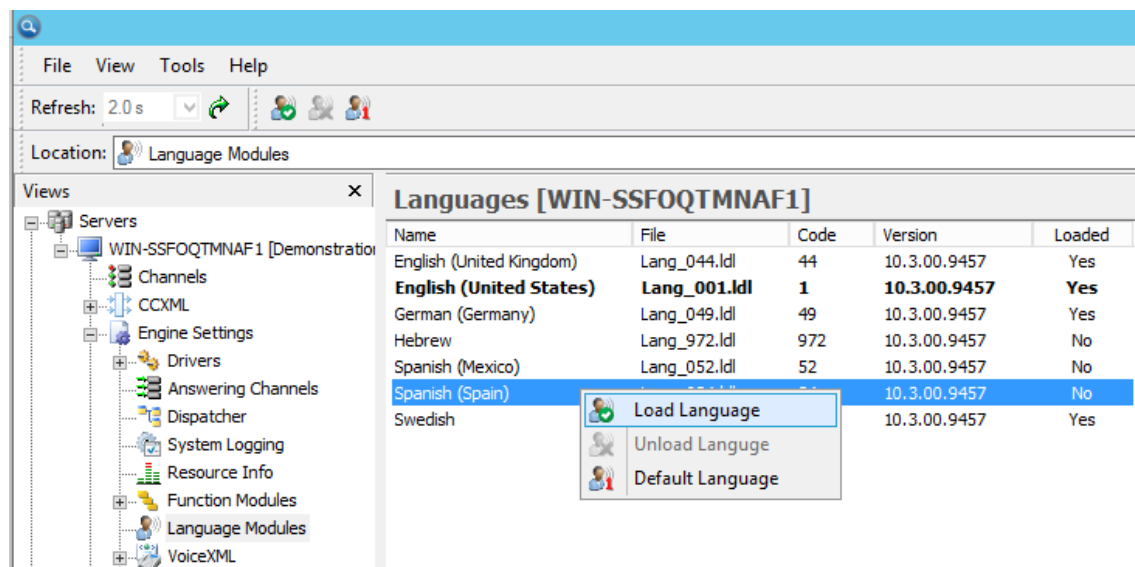
11. If the engine has not started, right-click the server name, and then click **Start CP Engine(s)**.



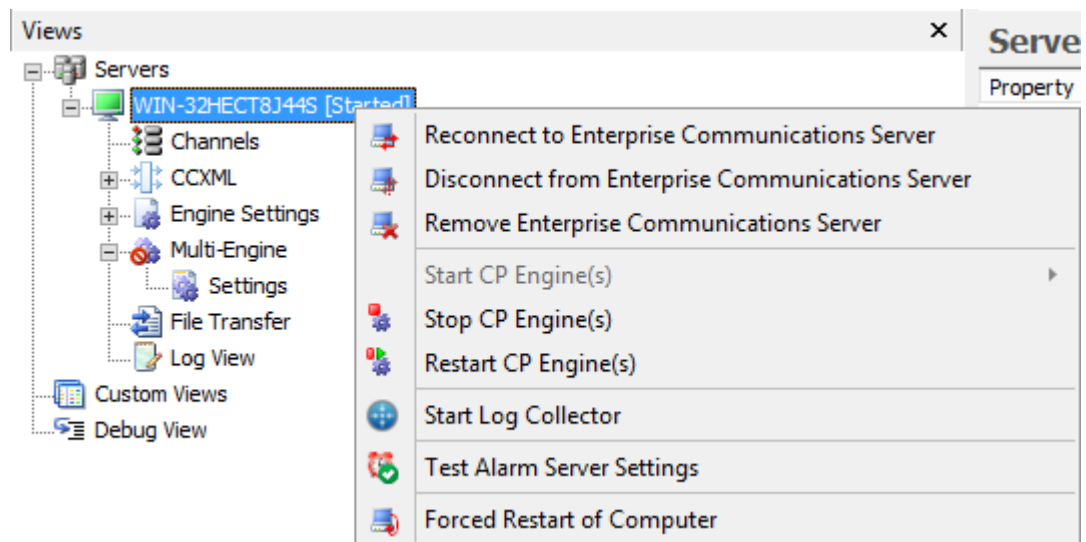
12. Click **ECS View**, on the lower part of the screen, and then browse the **Language Modules**.



13. Right-click on the **Language** module name, and then click **Load Language**.



14. Restart the CP Engine by right-clicking the *server name* > **Restart CP Engine(s)**.

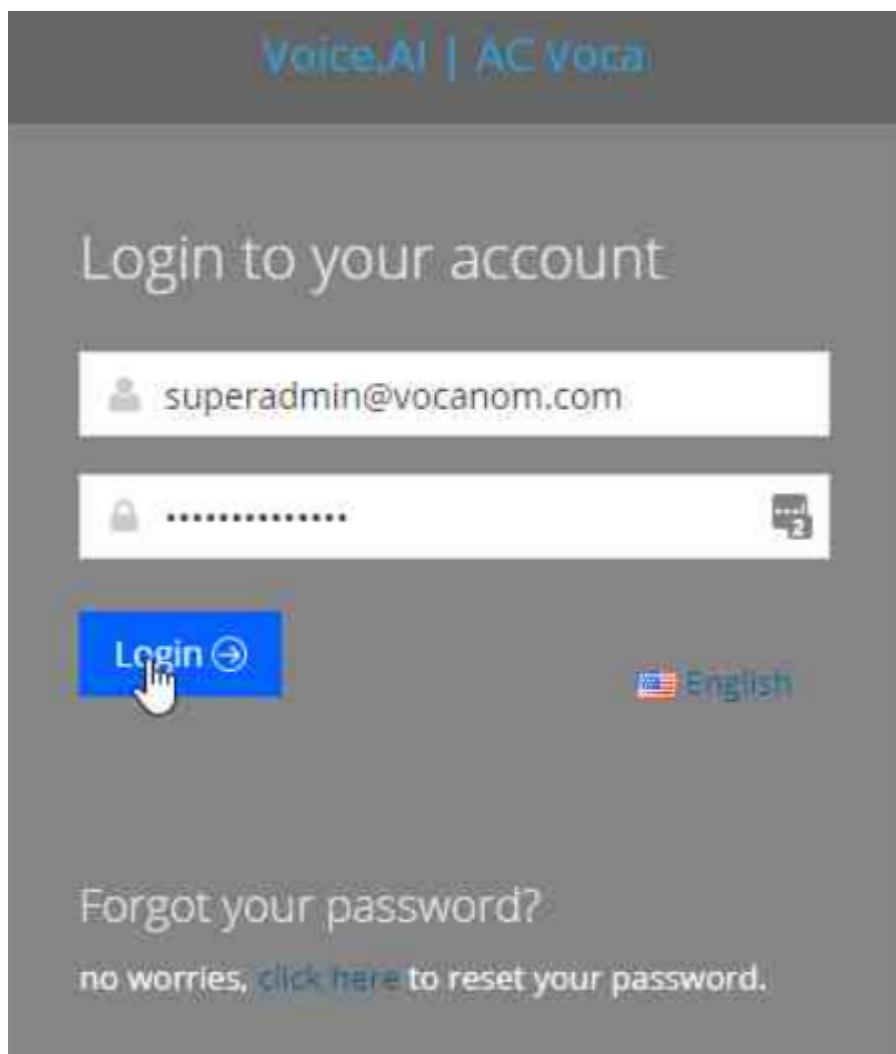


5 Installing the AC Voca License

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

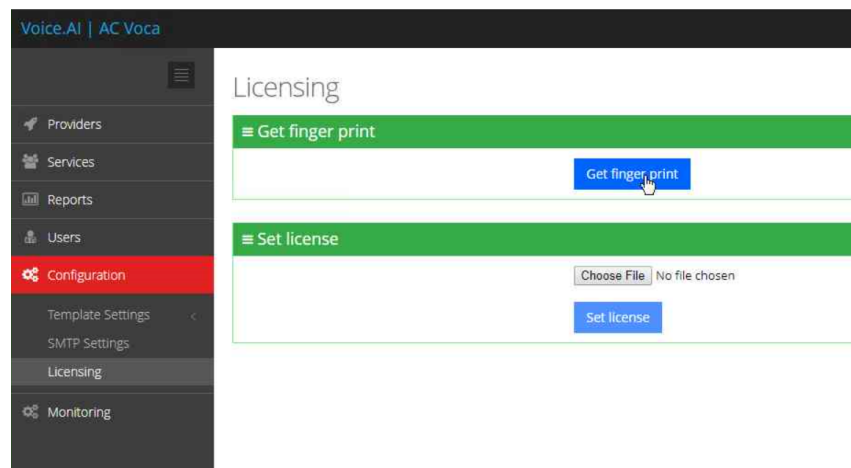
➤ **To install the AC Voca License:**

1. Log in to AC 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.

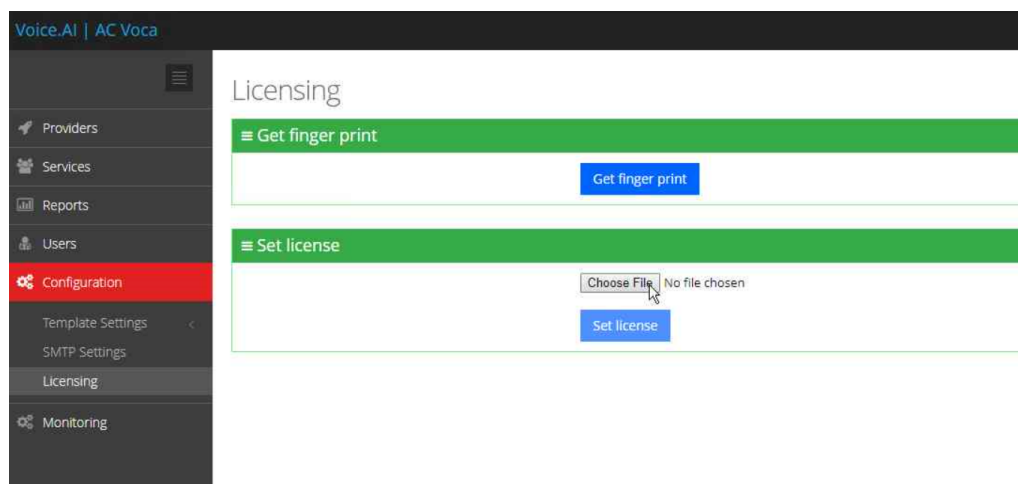
3. On the Licensing page (**Configuration > Licensing**), click **Get finger print**. A finger print file is created on your server.



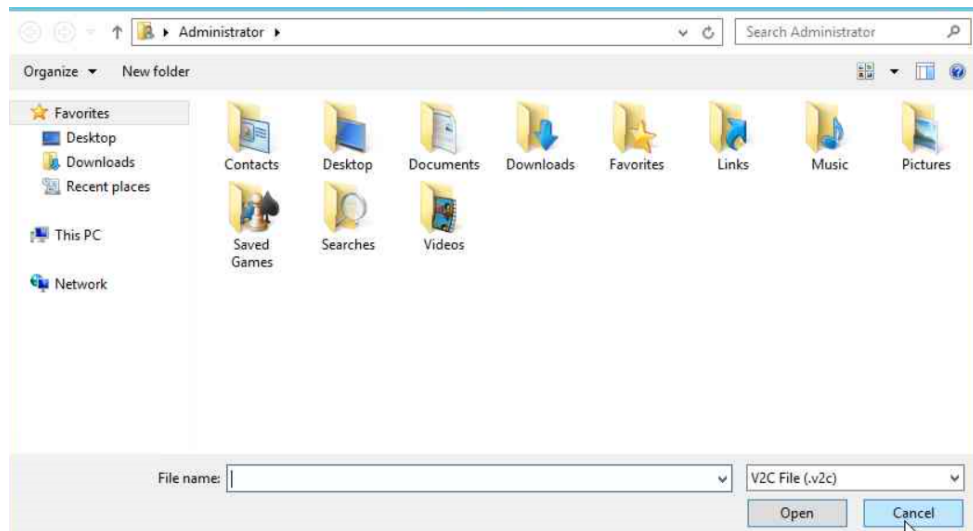
This is a sample Finger print file:

```
<?xml version="1.0" encoding="UTF-8" ?>
<hasp_info>
  <host_fingerprint type="SL-AdminMode" crc="3221380611">
    MXhJSQFckT56GhQoANLk9xgl2SSoakVMDiHoBmr2ABIUbckJmYANwKUqfIJVoG
    7hBFIKSQCE2nY9aApcMhzQatAAGFuWbUB32TIkuwShGCARCBTWqhGEqAyIMqMB
    jPBhiRdQoGtCRJoaA0BiFkaBgApcu1NYDAmAG+kwliU=</host_fingerprint
  >
  <host_fingerprint type="SL-UserMode" vendorid="94011"
    crc="1655718058">
    MnhJSYGMDFU0IJUYDWCElcOgmKfxJpCSbWgMAIlpzmeGADUJR6O2DBIAN7J4W7
    EqcMWQyFFgoABIKyAV5ubKfMjgCpgdQtANuKcUuRGUqBwIGYYNwKwaQwGvKpA1
    OQEknSQAQi0IAwygAtbOEaB6NADGltYNAGCuRJ8M14AVB2QFAHpcEA==</host
    _fingerprint>
</hasp_info>
|
```

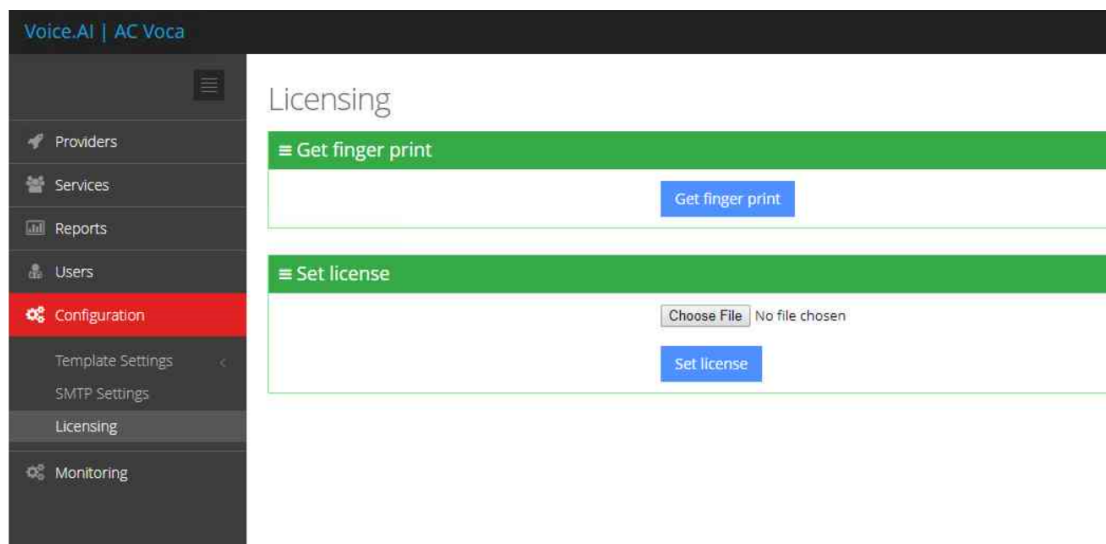
4. Send the Finger print file to AudioCodes.
5. When you have received your License file from AudioCodes, copy it to your server.
6. Click **Choose File** to select your license.



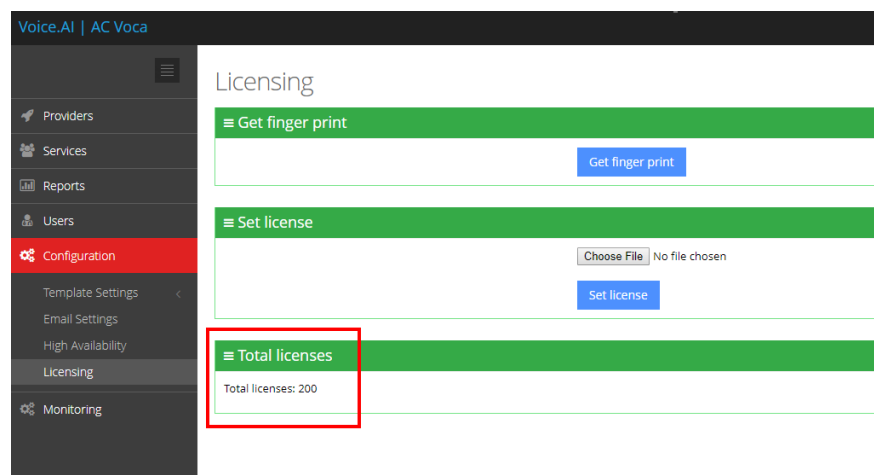
7. Select the license file name, and then click **Open**.



8. In the Set License window, click **Set license** to activate your AC 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> <hasp_scope> <vendor id="94011"> <hasp id="182762873689409811"/>
|</vendor> </hasp_scope> <v2c>YoIHRKCCBzuABH20YzKBggImRi868gv++cAwteDkd0CYnYgqM4ABqIKP87D08BLVnoM1UzGwndJ2Q
|SEmXm9UgJTYAN4x/1c1xRLxeC02UBHMC35BkRF9Y1ha9dvT5bZbQYj83JAbY/BZSgaDDRhIyWbFWLeM4hs4y
|+EkGAaAuXZuth0eumpzS04YyvY7GcVMYsXHUY5j/YqHiEYXptnIsksfnFsE01MITBAvWuY4huHve3jFT95dPUH3gXI+7r-iQFQx0cNSY9HwZk4Jh8kQI9gUhorW
|+YZkGpQxat0Wln5/vf80i1T+snpZ3/Mss+hWfWe8aYaE13z2Xe9BcEVcRH8CeT2aJk+y55QV1TMn/HLJjFZ10gmxbgmSR551c5
|j6EYfBmI3gzIQXQpK9BE1F7dAHTkefChgWZR+IOSKsre0a2YbhMqW+npfx0ycgmR07nFebEFMFb1
|bMvR29Mx9YVU8LXfOK/fvdCXBHEwGghunNuICsD3MY7weS9WZuxn8xIq7+on1R11n91YfCgKeK
|iimm1Kp1yQaKBVtaeUHDA4mx/wVJbekB5p2DpA/o3EVRTzLW1Q60B1FekPggG4p20Tw3QdUjaSZ71J6sPsAYnslwkmSu
|+u6soPL05tfdPKkQ2NAK8ACqaP5+prw4ZXQseb+r888rUDauggr9eAgWdn/r1
|Tm14KuQf1K1tsoK4hueoWn145hXcmZhuEfa0a7MvpvI4FQv3sbqRjRa35oUz0niB48d5PSMF1oIB
|AIUBAYDdAw87pIIE/IAIAo1N3YRjCROBAQSmggSVgAgCiU3dhGMJE6KBhIABAAf/gH0xeE1JAVyR
|PnoaFCgA0sr3GDV1JKhqRUwOIegGavYAEhRtwomZgA3ApS8glWgbuEEUgpJAITadJ1oC1wyHNBq
|0AAYW5ZtQHd1M1S78KEYICTwFPCqEYSoDIgyowGM8GGJF1Cga0JEmhoDQ6IWRoGAC1y7U1gMCYAb6TCWJaoCAvaAEIffPK1MnD5joqV9aZ
|+YtQfuBggLgmEvtD5KvE+vsLashEwGw/K13t0ScY41/nwkdX1PydHwSP1oWCKzL/+5Hz5ahFQEGztVK2rN61ecNzUQzBgS181fj+XNKoz8I4vfJ8NLZEHLZeh1I
|7rhN3j1VZPne8Q4xIw8nu+yjBF6K2nkB4IuCsUgCAuIR2pYcF6VGDH1dZx5vkVALin7Xyn+swpwxraus
|+u41vsvCpqq26HDD2LdEC2MRROK10xYFaQmOYR2SVtqn1PxIwtc+SQnp1fwog8NoCDwe3BSBuhJYtobFVNB2F0R24pcMiGE8S18d05uRd6RGC8LBE
|+eyJ7oFpQfIZ9jThuz805poUbsZsG8tHm9joiMwoYYJ0dRS87zaHsI3M11neeo159F1PMArUQWJgSKrZ+k00GHaEdGt2KyLgJBtU/wIJjDd
|rqAXZ1+ZuxdHKAvcHtBQmJFLWqehLFME1iNN7methd1b/FawtjWgZUmxQptg59CA2niNV0CKdDyL8nc
|+py8/UshF3md7DXQutcn/fPOMEpfBqBwqrnNjhPn9IcY0YHgg1gcUxr7ecoFB6uqKYVaD3
|tznpoQIIsXAZUmGgiHdjn/hV16QUpF7K7EYfQCKMtZQ/xV8panjUVpMscR6glNqj8SaP99fZG1v
|COFFKFPnuaA21PGACMPws/gw1HSX1WfMCx6YTEhr0y2IG+L82gb43c0/sY0wxWnVRu1de5+2w4rfQzH7/+czHfr8v2h0xv+OQt1YTexyyr8ydhgFhwi8zpm
|+1eDYCHPwccIjFrcEYmfqYsC1HtRgpiygKxXeaQFV/HceYU0bbnTI6Z7dYSmkMf1z6Mtg8xKEA5MG615GyUAZuXhve1/YJYneDPKGgS+FLC
|588M7J1AeMz1BSX/ZPJL10qPwo2zu213ZOT8k3IiunZo1XW2yqMA56+G4jLGt8L0sc+0w+KCI+Mf
|queLGZDF0jBKX0WfQmPwAPFGowBB0J1JHocBAYgBAIqCAQCsv7FMTqC5LmEGZMkdu6gsnNIPCT6sRbNe8s6AtUTHgKrTCbttLTS0vMgvNsDmvo
|+mLAF34HyH1WgrUwHmKW2An9oSX5b91fagJUBfWVIneGmX3s1zt2IBbj+9V1YEUYpqrCgpVwSErsMeDVh7P1WjC+iQxhs245Lpw7rHEAs1cxm4Kn0de/S1M
|NrKOR/gjCD1MHTPm5I.xuFSYor6MTYQ4DIW9JBFh90471Q5p01LRfXx+J/kxgmq5r171KacwrgB/
|VfMeb9t2z4YKgb7+CHBF0D8E2Ho02VX0pzFygMJBodKpFd3011R1BanZMv5seFAXUu9t/AL2t6m
|S8eO/FX2haE1pGgBYADAN87orSAAQSB08dyYh1tYXIGvGvdGvyAKIDgAEAOxaAAQKBKvWZ2lu
|Z5BHcmftbWfYIFR1c3R1cgCjE1ABAYELQVNSIEVU22IuZQChA4ABAA==</v2c></hasp_info>

```

6 Installing Third-Party Licenses

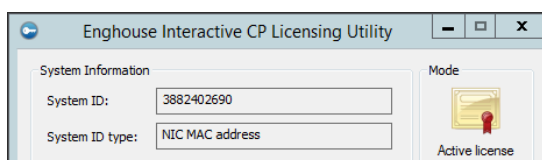
In addition to the previous section that explains how to install the AC Voca license, you must also install the Enghouse Interactive license and a relevant Text to Speech license. This section first describes how to install Enghouse Interactive licenses. Once you have completed this installation, you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

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

1. Run the Envoy 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
- CTConnect Media Gateway License

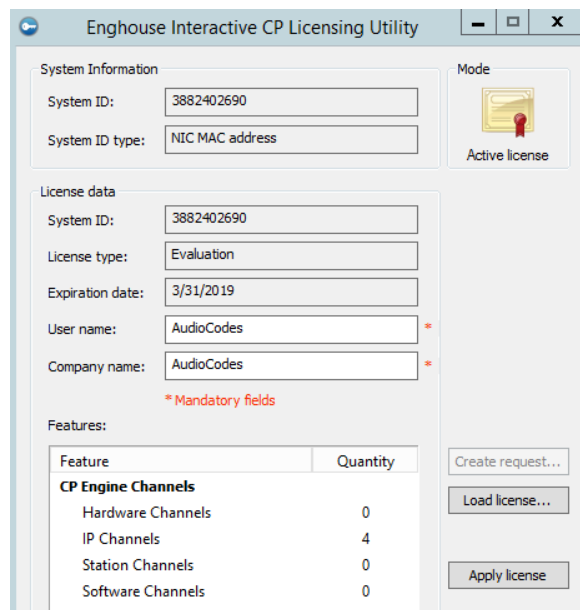
Installing Control Panel License



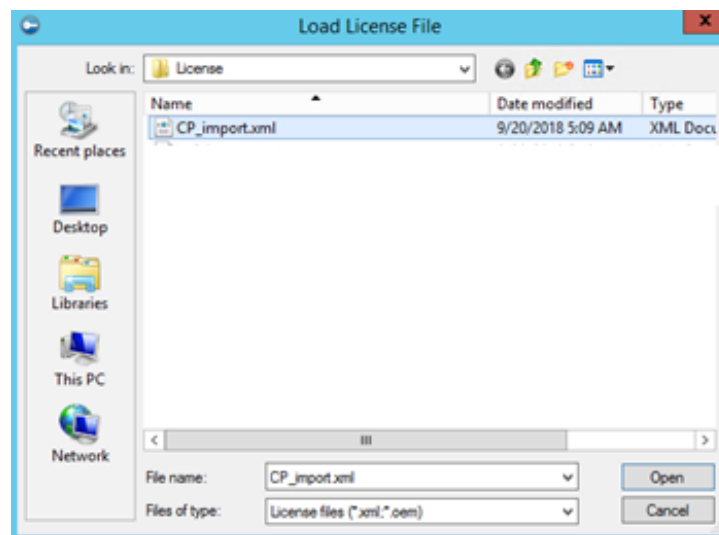
Once you have received your Control Panel license back from AudioCodes, see [Installing Enghouse Interactive License](#) above Paragraph [Verify your System ID number and send it to AudioCodes](#). above, and continue with the following procedure.

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

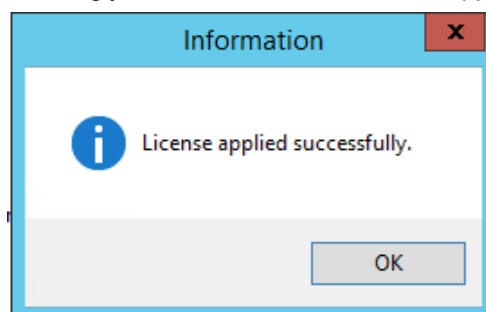
1. Run the Envoy License Utility application from *C:\Program Files (x86)\Enghouse Interactive\CP\CPLicensingUtility.exe*.
2. On the Enghouse Interactive CP Licensing Utility screen, click **Load license**.



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



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



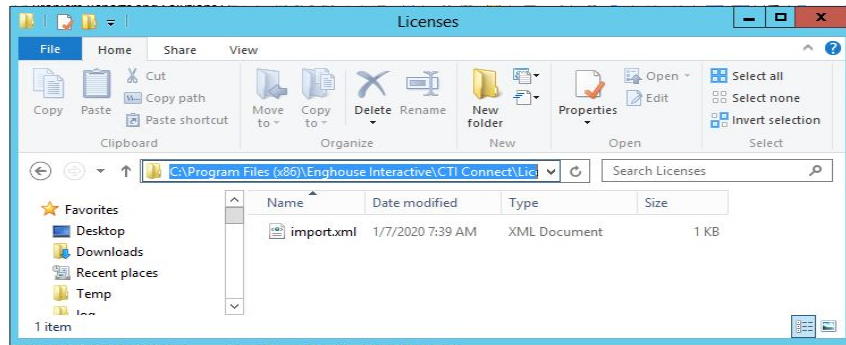
6. Click **OK**.

Installing CTConnect Media Gateway License

Once you have received your CTConnect 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 CTConnect Media Gateway License:

1. Copy the *Enghouse CTConnect 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.

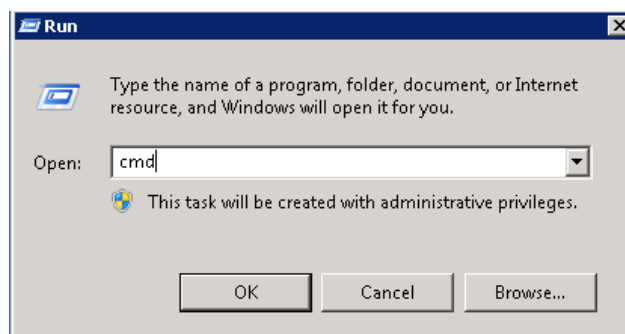
Acapela non-Hebrew Text to Speech



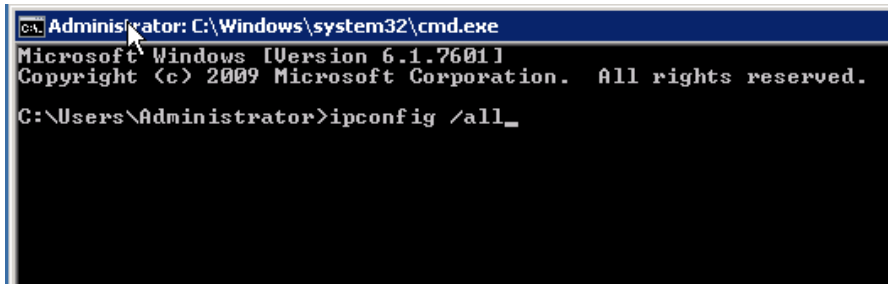
- This installation is only applicable for non-Hebrew text to speech.
- The license key is dependent on your server's MAC address.

➤ 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**.



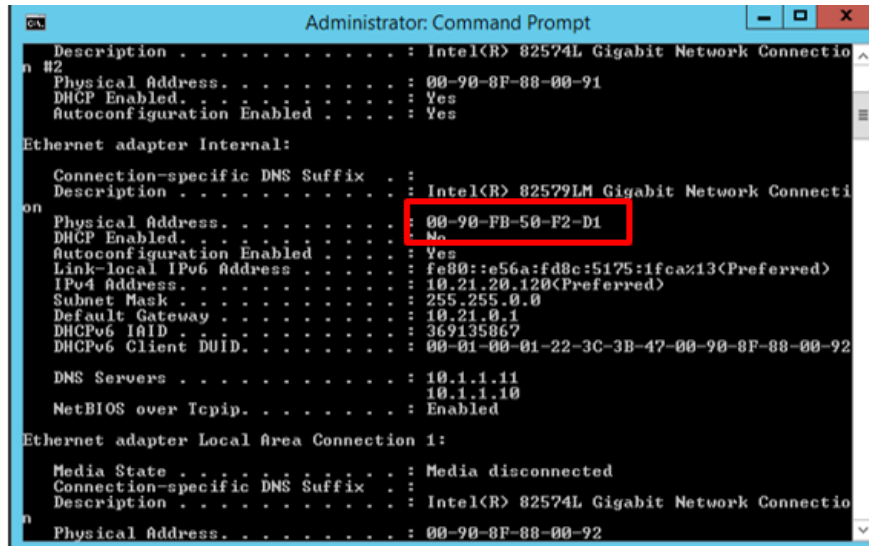
- b. Enter "ipconfig/all".



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig /all
```

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



```
Administrator: Command Prompt

Description . . . . . : Intel(R) 82574L Gigabit Network Connection #2
Physical Address. . . . . : 00-90-8F-88-00-91
DHCP Enabled. . . . . : Yes
Autoconfiguration Enabled . . . . . : Yes


Ethernet adapter Internal:

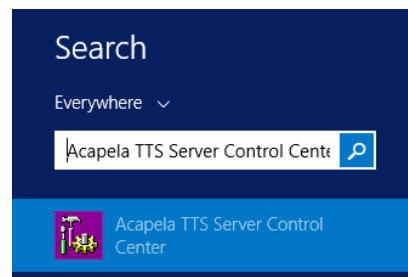
Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) 82579LM Gigabit Network Connection
Physical Address. . . . . : 00-90-FB-50-F2-D1
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e56a:fd8c:5175:1fca%13(Preferred)
IPv4 Address. . . . . : 10.21.20.120(Preferred)
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 10.21.0.1
DHCPv6 Iaid . . . . . : 369135867
DHCPv6 Client DUID. . . . . : 00-01-00-01-22-3C-3B-47-00-90-8F-88-00-92

DNS Servers . . . . . : 10.1.1.11
                        10.1.1.10
NetBIOS over Tcpip. . . . . : Enabled

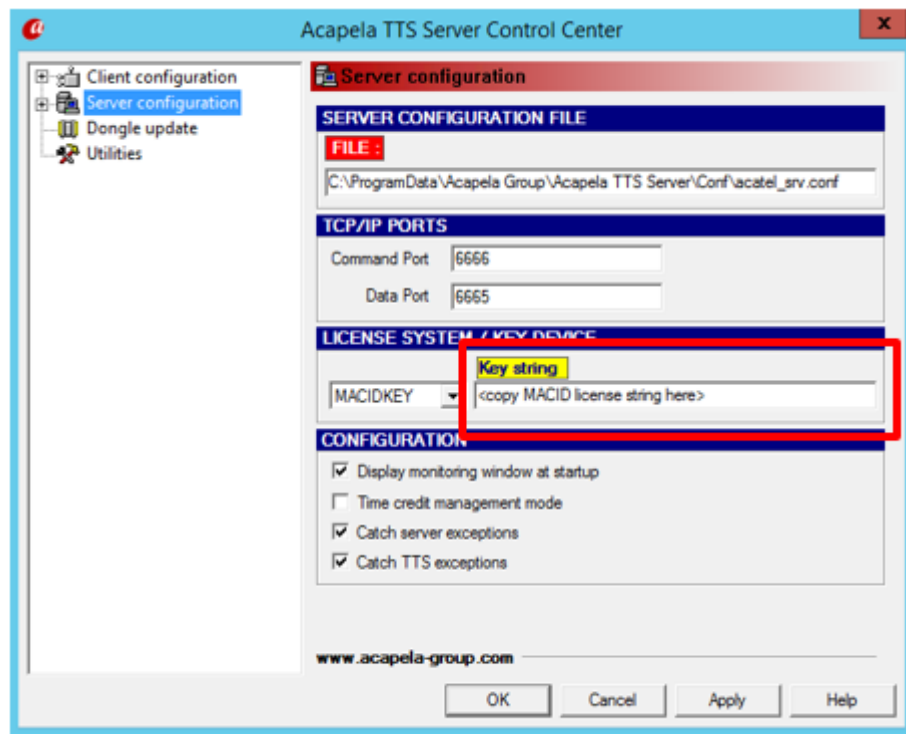
Ethernet adapter Local Area Connection 1:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) 82574L Gigabit Network Connection
Physical Address. . . . . : 00-90-8F-88-00-92
```

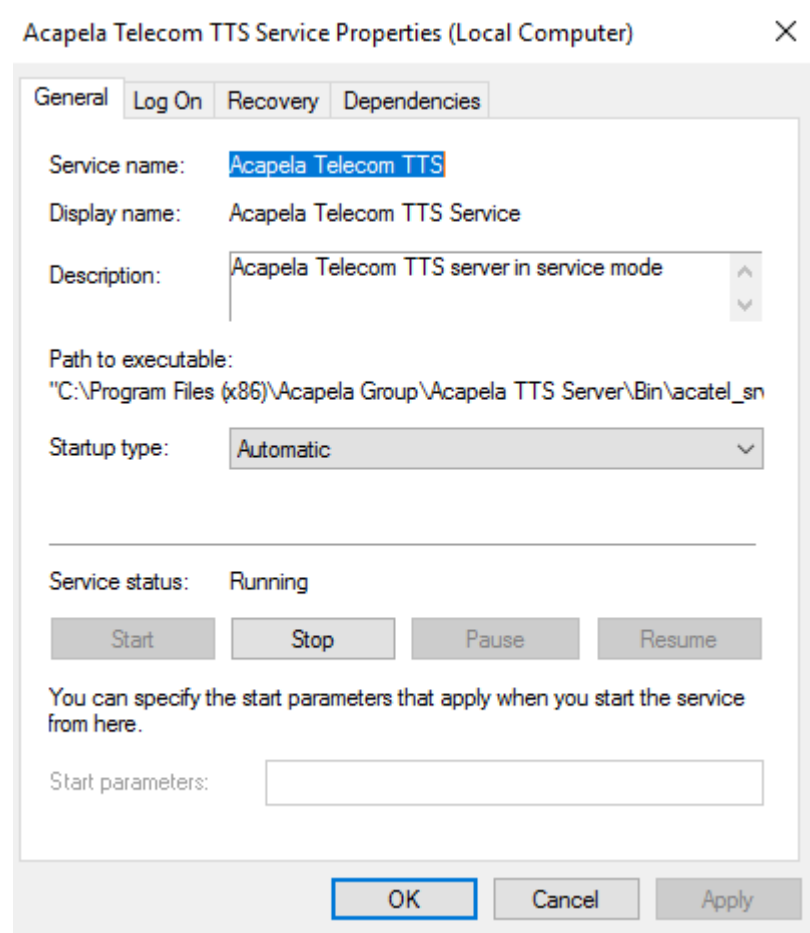
3. AudioCodes will send you the license key.
4. Click , and then in the 'Search' field, enter "Acapela TTS Server Control Center".
5. Select it in the Search results.



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

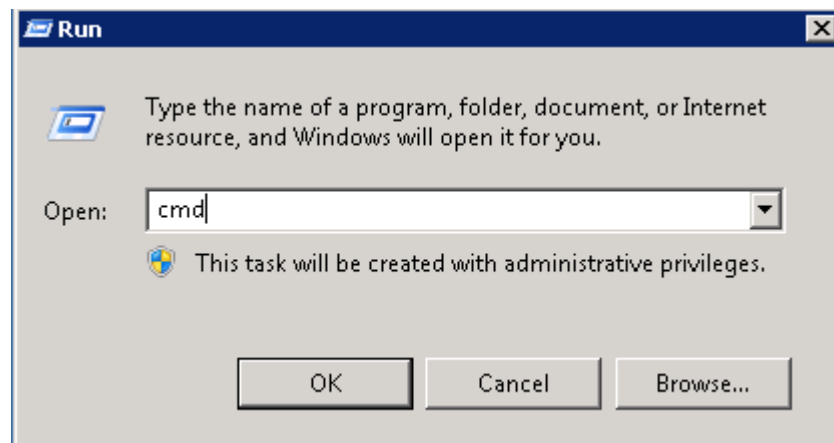


7. Under the **License System/Key Device** group, select **MACIDKEY**.
8. Copy the received license key into the key string field.
9. Click **Apply**, and then **OK**.
10. Configure the **Acapela Telecom TTS Service**:
 - a. Open **Administrative Tools > Services**.
 - b. Open **Acapela Telecom TTS Service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



11. Enable the TTS connector on the database:

- a. In the **Run** dialog box, enter "cmd", and then click **OK**.



- b. Run the following command:

```
C:\NSC\MySQLServer\bin\mysql.exe -h localhost -u seda -p -e
"UPDATE `seda`.`main_configuration` SET `Category`='TTS_Conn'
WHERE `Value` = 'Acapela' AND `Name` = 'EN-US'
```



Make sure you assign the correct dialect name in the command:

English USA:	EN-US
German:	DE-DE
Spanish Spain:	ES-ES
Spanish USA:	ES-US
Spanish Mexico:	ES-MX

- c. Enter the password for the "seda" username (Contact your AudioCodes representative if you don't have the password).

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>C:\NSC\MySQLServer\bin\mysql.exe -h localhost -u seda -p -e "UPDATE `seda`.`main_configuration` SET `Category`='TTS_Conn' WHERE `Value` = 'Acapela' AND `Name` = 'EN-US'"
Enter password: *****
C:\Users\Administrator>
```

7 Configuring AC Voca DNN Speech Recognition Mode

This section describes how to configure and enable AC Voca Deep Neural Networks (DNN) Speech Recognition Mode, which supports English, German and Hebrew dialects only. AC Voca DNN Speech Recognition service runs on a licensed system only (see [Installing AC Voca.htm](#)).

During configuration, you will be asked to enter your database credentials.

➤ **To obtain your credentials:**

1. Contact your AudioCodes representative.
2. Run the **C:\NSC\VOCA_Scripts\DNN_Conf_Script\dnn.bat** file.
3. Enter the password for the "seda" username (Contact your AudioCodes representative if you don't have the password).

```
C:\Windows\System32\cmd.exe
Waiting for 0 seconds, press CTRL+C to quit ...

C:\NSC\VOCA_Scripts\DNN_Conf_Script>sc config NSCServer start=demand
[SC] ChangeServiceConfig SUCCESS

C:\NSC\VOCA_Scripts\DNN_Conf_Script>C:\NSC\DNN\audiocodes-speech-rest install
2020-02-03 09:17:10,611 INFO - Installing the service with id 'audiocodes-speech-

C:\NSC\VOCA_Scripts\DNN_Conf_Script>TIMEOUT /T 15 /NOBREAK

Waiting for 0 seconds, press CTRL+C to quit ...

C:\NSC\VOCA_Scripts\DNN_Conf_Script>sc config audiocodes-speech-rest start=auto
[SC] ChangeServiceConfig SUCCESS

C:\NSC\VOCA_Scripts\DNN_Conf_Script>sc failure audiocodes-speech-rest reset=0 acti
[SC] ChangeServiceConfig2 SUCCESS

C:\NSC\VOCA_Scripts\DNN_Conf_Script>net start audiocodes-speech-rest
The audiocodes-speech-rest service is starting.
The audiocodes-speech-rest service was started successfully.

C:\NSC\VOCA_Scripts\DNN_Conf_Script>TIMEOUT /T 15 /NOBREAK

Waiting for 0 seconds, press CTRL+C to quit ...
-----
Type seda user password when asked
-----
Press any key to continue . . .
```

DNN Speech Recognition Mode is enabled.

8 Configuring AC Voca LDAP Synchronization

This section describes how to configure Lightweight Directory Access Protocol (LDAP) synchronization for AC Voca On-premises and AC Voca Cloud installations.

LDAP Client Requirements

This section describes the system requirements for the AC Voca LDAP Client.

Hardware and Operating System Requirements

- **AC Voca On-premises mode:** The client is running on an AC Voca On-premises server.
- **AC Voca Cloud mode:** The client is running on a customer-provided server with the Windows operating system.

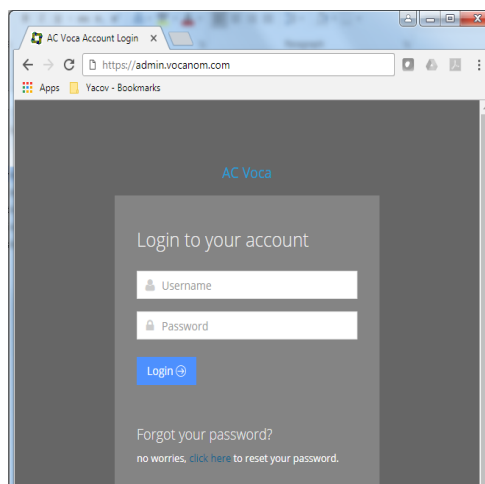
Network Requirements

- The customer LDAP server should be reachable by network for AC Voca LDAP Client



The following requirements are only applicable to AC Voca Cloud mode.

- The AC Voca Cloud server should be reachable by the network for the AC Voca LDAP Client.
- Confirm that you can access the following link: <https://admin.vocanom.com>



LDAP Synchronization Requirements

Customers need to provide the following information:

- LDAP server address or FQDN name
- LDAP Base Distinguished Name (DN)
- LDAP user with *"Password never expired"* enabled settings

Running the LDAP Client Setup

The procedure below describes how to run the LDAP client setup in the following modes:

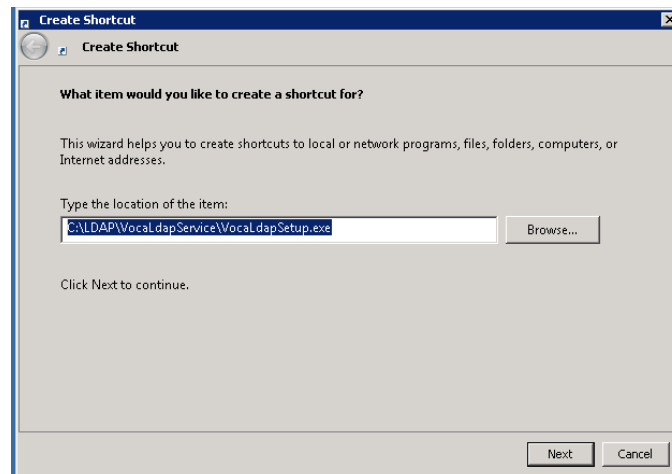
- AC Voca Cloud
- AC Voca On-premises

Running the LDAP Client Setup in AC Voca Cloud Mode

The procedure below describes how you can run the LDAP client in AC Voca Cloud mode.

➤ **To run the LDAP client in AC Voca Cloud mode**

1. Create the **C:\LDAP\VocaLdapService** directory.
2. Copy the LDAP client files to this directory.
3. Create shortcut on the Desktop by doing the following:
 - a. Right-click **Desktop** > **New** > **Shortcut**.
 - b. Browse to **C:\LDAP\VocaLdapService\VocaLdapSetup.exe**.
 - c. Click **Next**, and then click **Finish**.




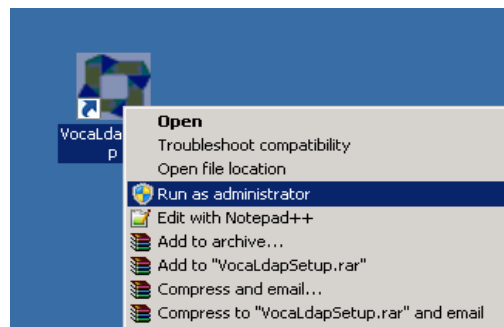
Running the LDAP Client Setup in AC Voca On-premises Mode

The procedure below describes how you can run the LDAP client in AC Voca On-premises mode.

➤ **To run the LDAP client in AC Voca On-premises mode:**

1. Create a shortcut on the Desktop by doing the following:
 - a. Right-click **Desktop** > **New** > **Shortcut**.
 - b. Browse to **C:\LDAP\VocaLdapService\VocaLdapSetup.exe**.
 - c. Click **Next**, and then click **Finish**.

2. Right-click on the **VocaLdapSetup** icon ; the following screen appears:



3. Select **Run as administrator**.

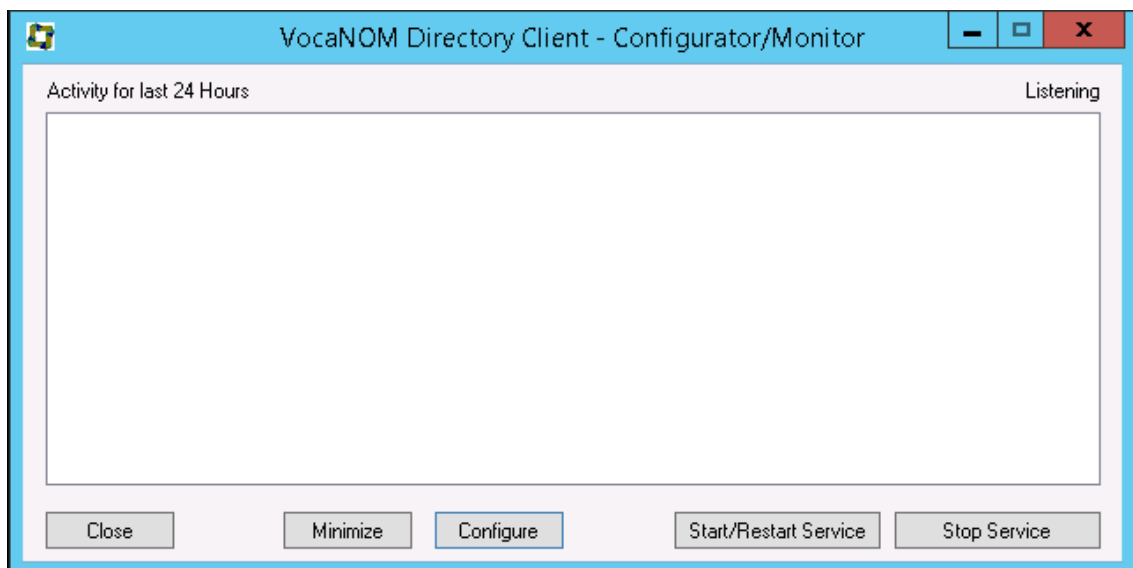
Configuring the LDAP Client

The procedure below describes how to configure the LDAP client.

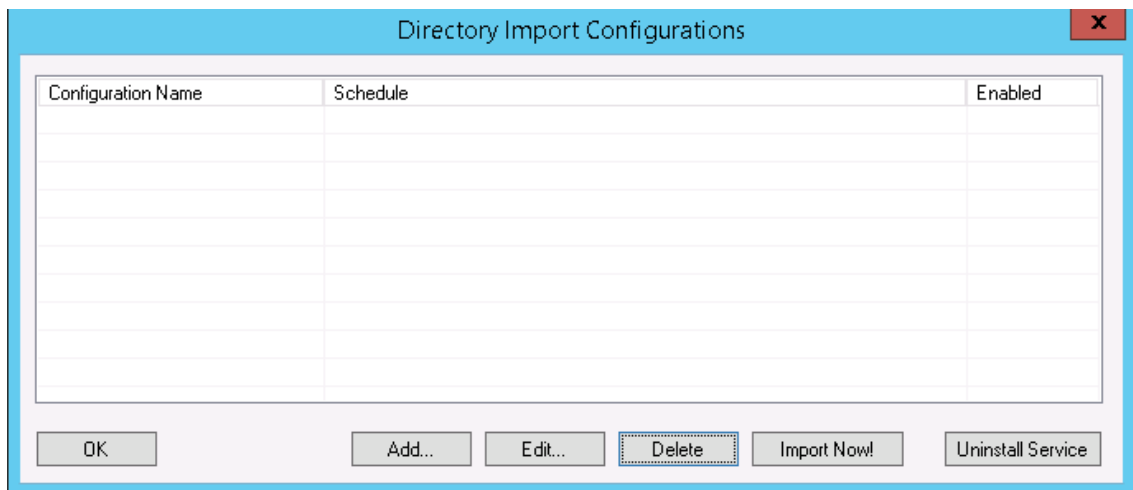
Setting up LDAP Client Synchronization

➤ **To run the LDAP Client Synchronization Setup**

1. On the Configurator/Monitor screen, click **Configure**.



The following screen appears.



2. Click **Add**.
3. Select the 'Enable' check box.
4. In the 'Configuration Name' field, enter the appropriate name.

Entering Fields under LDAP Connection Tab

Enter the following fields under the LDAP Connection tab:

Server: Defines the LDAP server IP address or FQDN name.
User: Defines the LDAP user name.
Password: Defines the LDAP user password.



Ask the customer to enable the 'Password never expires' property for the LDAP user in the Active Directory.

BaseDN: Defines the Base DN
Filter: See [Useful Topics](#) on page 74 regarding filter configuration
FilterUsage: "2"
Encoding: Default

VocaNOM Directory Client Configuration

Configuration Name:

☒ Enable

LDAP Connection | LDAP User Attributes | File Import | Import Schedule | VocaNOM Connection | Email Notification

Server:

Port:

LDAP Version:

User:

Password:

BaseDN:

Filter:

FilterUsage:

Encoding:

OK Cancel



If you are using a secure LDAP connection, use **Port 636** instead of the non-secure **Port 389** (default).

Entering Fields under LDAP User Attributes Tab

Enter the following fields under the LDAP User Attributes tab:

UniqueID: "objectGUID"
FirstName: "givenName"
LastName: "sn"
Extension: "telephoneNumber"
Mobile: "mobile"

Dect: If your organization is using a DECT or WLAN phone, then assign the LDAP field of this phone type.



The DECT or WLAN phone should be enabled on the AC Voca system.

Department: "department"
Email: "mail"

VocaNOM Directory Client Configuration

Configuration Name: AUDC_HE-IL

☒ Enable

LDAP Connection | **LDAP User Attributes** | File Import | Import Schedule | VocaNOM Connection | Email Notification

UniqueID: objectGUID

FirstName: givenName

LastName: sn

Extension: telephoneNumber

Mobile: mobile

Dect:

Department: department

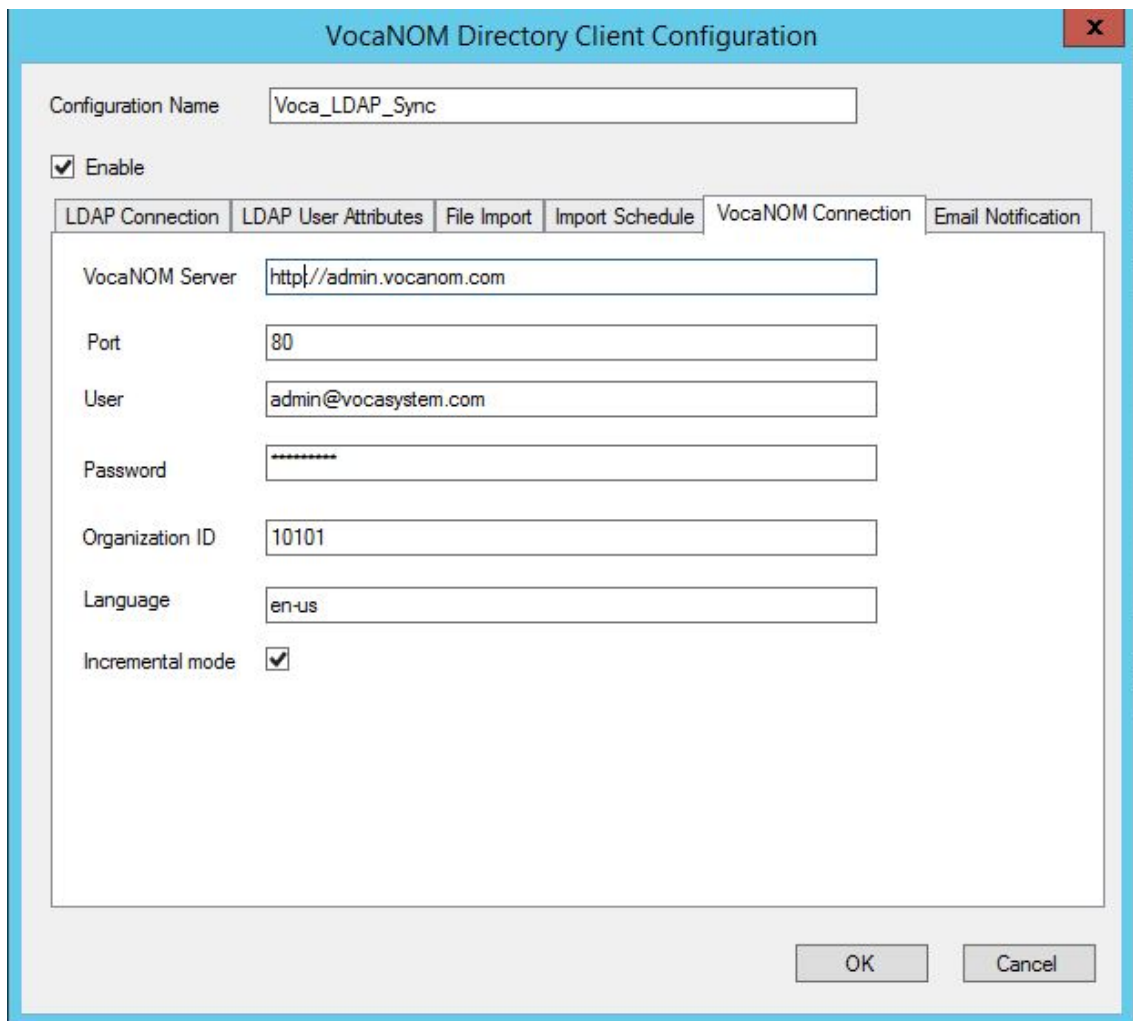
Email: mail

Test LDAP

OK Cancel

Entering Fields Under VocaNOM Connection Tab

- Enter the following fields under the **VocaNOM Connection** tab:
 - User:** Defines the Service Administrator Name
 - Password:** Defines the Service Administrator Password
 - Organization ID:** Defines the Service ID (ask your system integrator for the System ID)
 - Language:** Defines the service dialect
 - Incremental mode:**
 - When **Incremental mode** is enabled, the LDAP sync disables all contacts NOT in the list.
 - When **incremental mode** is not enabled, the LDAP sync adds the contacts to the system (without disabling the contacts that do not appear in the updated list)



VocaNOM Directory Client Configuration

Configuration Name:

☒ Enable

LDAP Connection | LDAP User Attributes | File Import | Import Schedule | **VocaNOM Connection** | Email Notification

VocaNOM Server:

Port:

User:

Password:

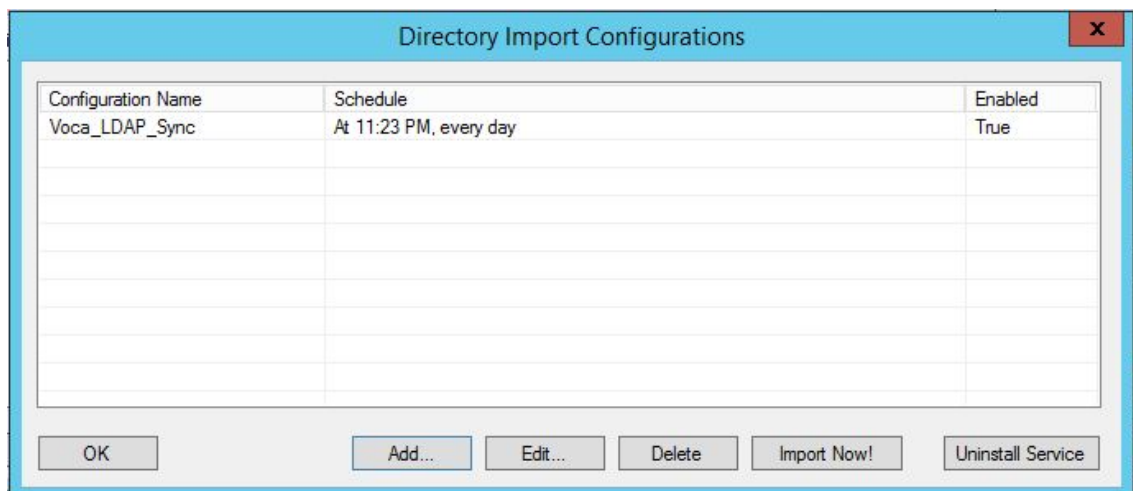
Organization ID:

Language:

Incremental mode: ☒

OK Cancel

- Click **OK**; the following screen appears:



Directory Import Configurations

Configuration Name	Schedule	Enabled
Voca_LDAP_Sync	At 11:23 PM, every day	True

OK Add... Edit... Delete Import Now! Uninstall Service

- Click **OK**.
- Click **Close**.

Configuring Files in LDAP Client On-premises Mode

The following files need to be configured only in On-premises mode:

- Host file
- LDAP Client file

Configuring the Hosts File

The procedure below describes how to configure the hosts file.

➤ **To configure the hosts file:**

1. Using a text editor (for example, Notepad++), open the `C:\Windows\System32\drivers\etc\host` file.
2. Add a line that includes the VocaNOM System IP Address and **admin.vocanom.com**.

```
14 # For example:
15 #
16 #      102.54.94.97      rhino.acme.com      # source server
17 #      38.25.63.10      x.acme.com          # x client host
18
19 # localhost name resolution is handled within DNS itself.
20 #   127.0.0.1      localhost
21 #   ::1            localhost
22 10.21.20.20 admin.vocanom.com
```

Testing LDAP Client Connectivity

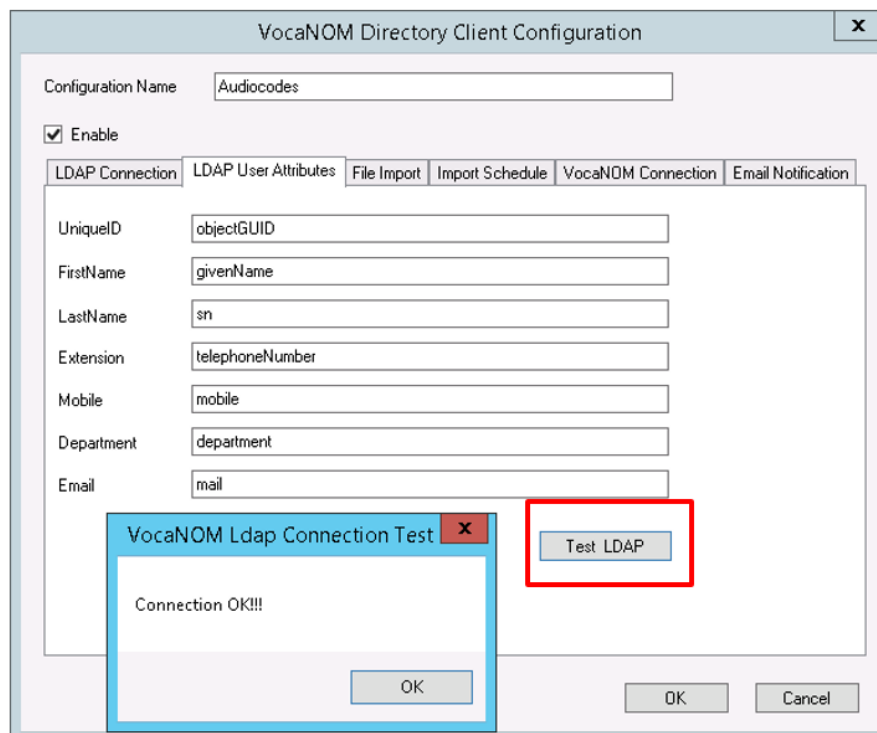
The procedure below describes how to test LDAP connectivity

LDAP Server Connectivity Testing

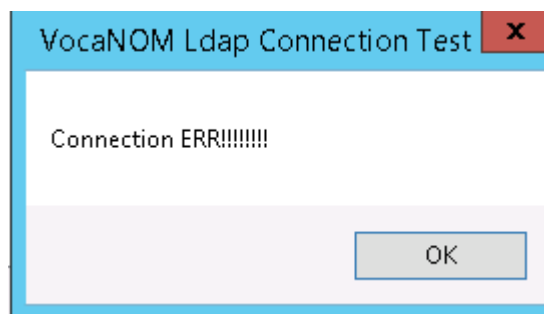
The procedure below describes how to test the LDAP server connection.

➤ **To test the LDAP server connection:**

1. On the VocaNOM Directory Client Configuration screen, select the **LDAP User Attributes** tab.
2. Click **Test LDAP**.
 - If the **Connection OK!!!** dialog box appears, then the LDAP server is reachable by the network.



- If the **Connection ERR!!!** dialog box appears, see [Troubleshooting Customer's LDAP Server](#) on the next page.

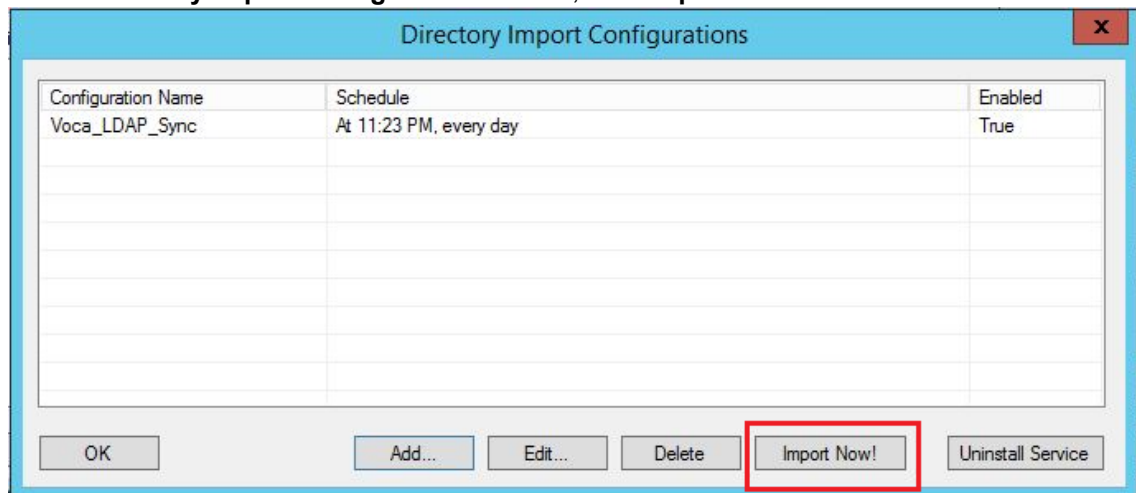


VocaNOM Server Connectivity Testing

The procedure below describes how to test the VocaNOM server connection.

➤ **To test the VocaNOM server connection:**

1. On the **Directory Import Configurations** screen, click **Import Now**.



2. Confirm that contacts have been successfully created in the VocaNOM system.
3. If the VocaNOM Cloud system is not synchronized with the customer's LDAP and some errors appear in the `C:\LDAP\VocaLdapService\logs\` log file, see [LDAP Client Does not Connect to the VocaNOM Server](#) on page 59.

Troubleshooting LDAP Client Connectivity

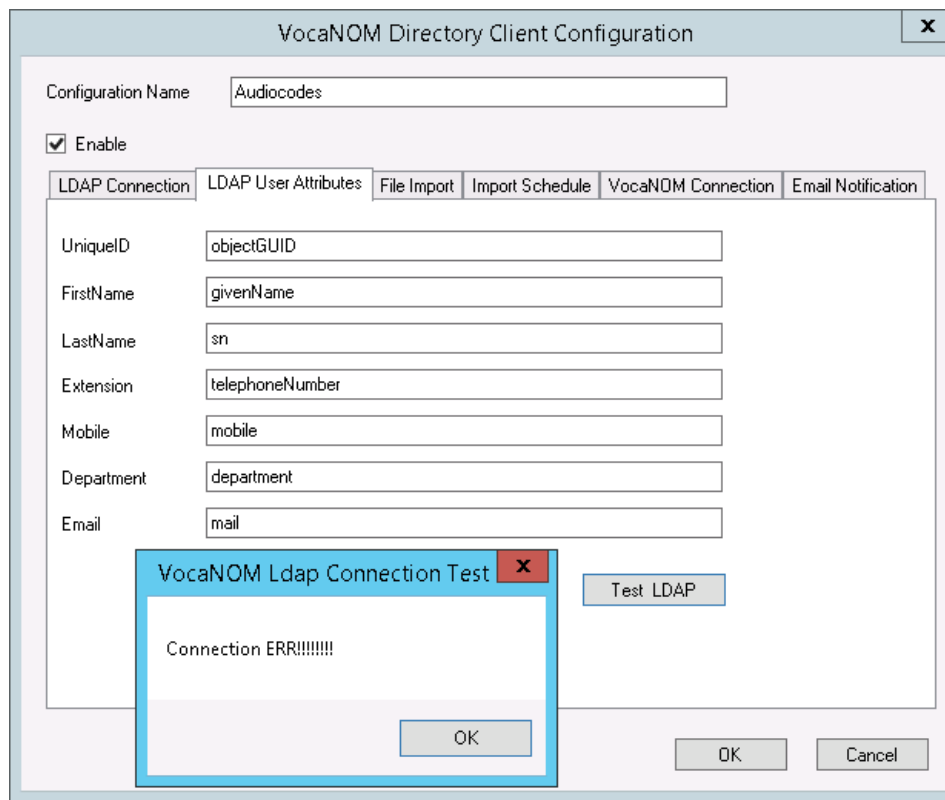
The procedure below describes how to troubleshoot LDAP client connectivity.

Troubleshooting Customer's LDAP Server

The procedure below describes how to troubleshoot the customer's LDAP server.

➤ **To troubleshoot the customer's LDAP server:**

1. If you click on **Test LDAP**, the "Connection ERR!!!" dialog box appears.



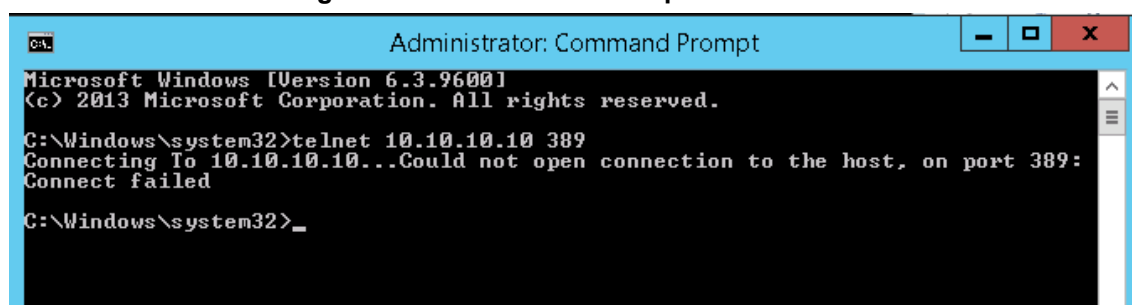
2. Check the `C:\LDAP\VocaLdapService\logs\` log file. If an 'LDAP error' appears, then the LDAP server is not operational.
 - You can also test the Telnet connectivity to the LDAP server by running the following command in the *Command Line* console:

```
telnet <LDAP server name or IP> 389
```

For example:

```
telnet ldap.audiocodes.com 389
telnet 10.10.10.10 389
```

Figure 8-1: Command Prompt



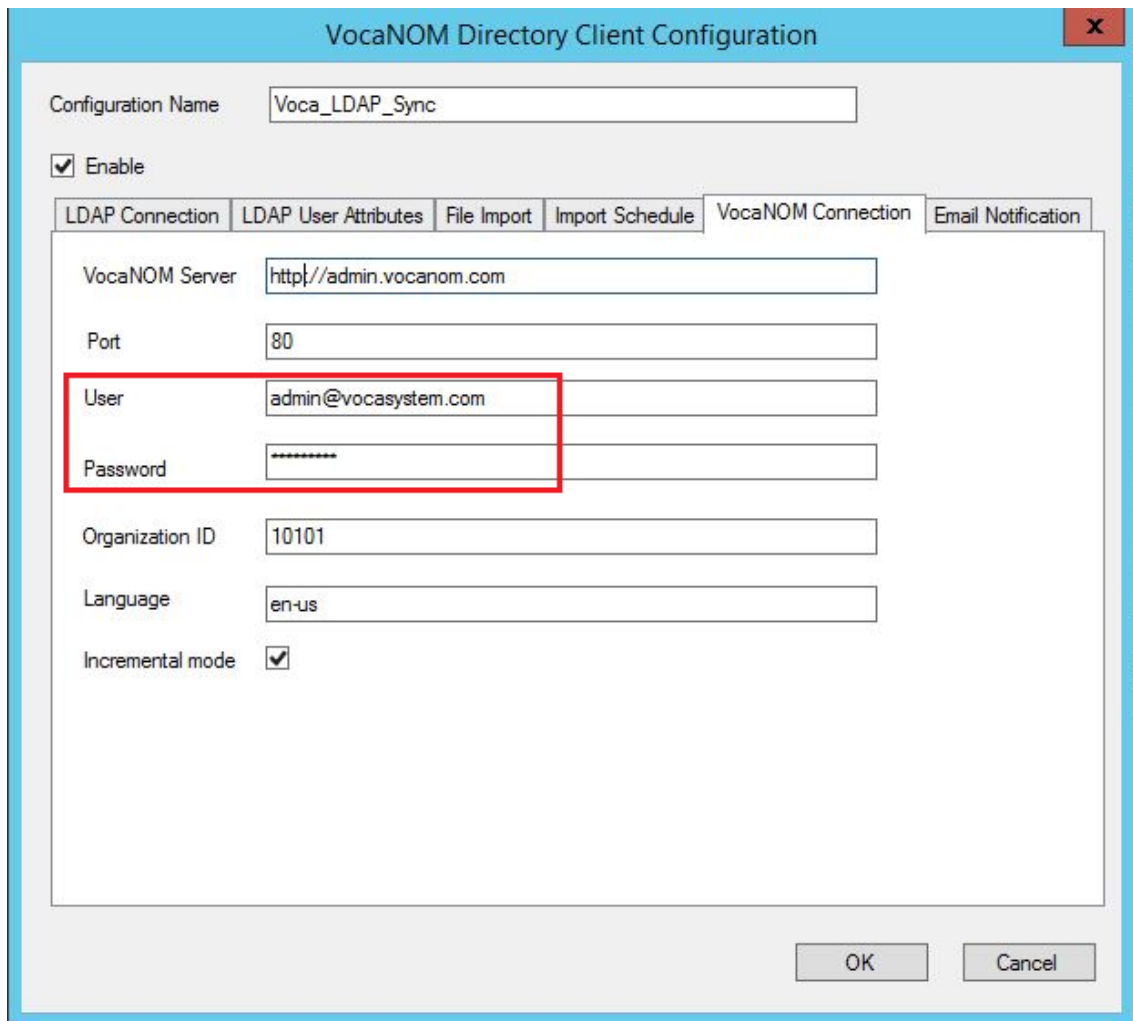
- If the LDAP server is not reachable by Telnet, check the network connectivity (firewall, routing and DNS).
3. Check if the following error appears in the `C:\LDAP\VocaLdapService\logs\` log file:

```
Error LDAP error .....The user name or password
```

If so:

- Verify the customer user name and password of the LDAP user

- Re-enter them under the **LDAP Connection** tab, as shown in the figure below.



The screenshot shows the "VocaNOM Directory Client Configuration" dialog box. The "LDAP Connection" tab is selected. The configuration details are as follows:

Field	Value
Configuration Name	Voca_LDAP_Sync
Enable	<input checked="" type="checkbox"/>
VocaNOM Server	http://admin.vocanome.com
Port	80
User	admin@vocasystem.com
Password	*****
Organization ID	10101
Language	en-us
Incremental mode	<input checked="" type="checkbox"/>

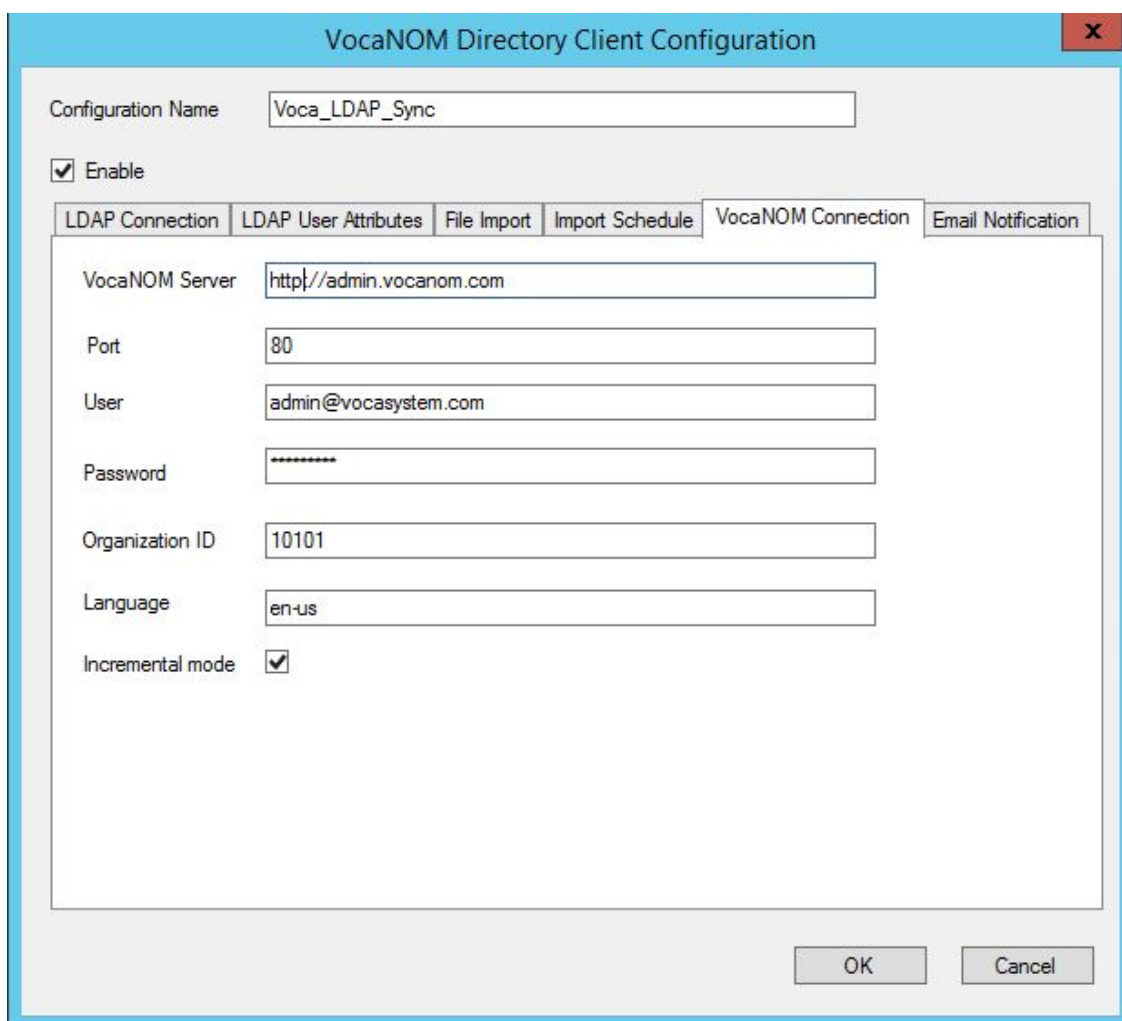
The "User" and "Password" fields are highlighted with a red box. The "OK" and "Cancel" buttons are at the bottom right.

LDAP Client Does not Connect to the VocaNOM Server

Check if the following error appears in the `C:\LDAP\VocaLdapService\logs\` log file.

Server was unable to process request. ----> Authentication error!!!

If so, check the User and Password under the **VocaNOM Connection** tab, and then re-enter these fields if necessary.



VocaNOM Directory Client Configuration

Configuration Name:

☒ Enable

LDAP Connection | LDAP User Attributes | File Import | Import Schedule | **VocaNOM Connection** | Email Notification

VocaNOM Server:

Port:

User:

Password:

Organization ID:

Language:

Incremental mode: ☒

OK Cancel

Error [Run] [LDAP import] edmws exception:Value Cannot be Null

Check If the following error appears.

Error [Run] [LDAP import] edmws exception:Value cannot be null

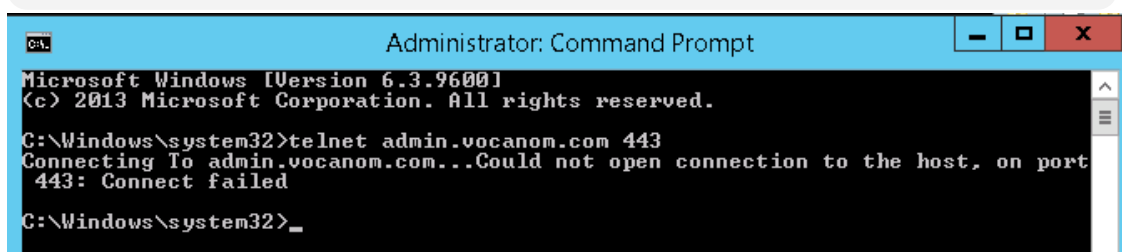
If so, check connectivity to the VocaNOM server.

For *LDAP Client On-premises mode*, check that the settings described in [Configuring Files in LDAP Client On-premises Mode](#) on page 54 have been applied.

For *LDAP Client Cloud mode*, check if the VocaNOM cloud server is reachable by network and do the following:

1. Run the following command in the Command Line console.

```
telnet admin.vocanom.com 443
```



```
Administrator: Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.
C:\Windows\system32>telnet admin.vocanom.com 443
Connecting To admin.vocanom.com...Could not open connection to the host, on port
443: Connect failed
C:\Windows\system32>_
```

2. Check access using the following link: <https://admin.vocanom.com>.

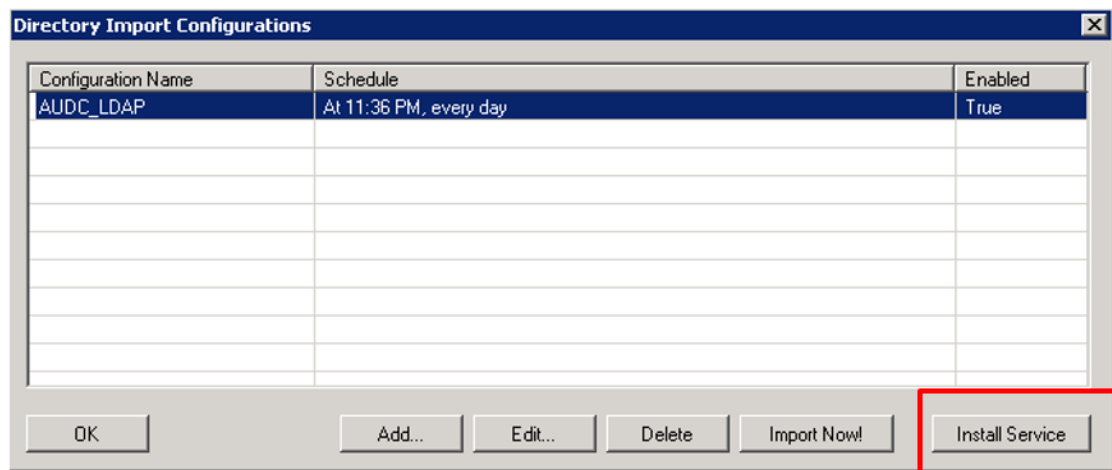
3. If the VocaNOM server is not reachable by Telnet or by the provided link, ask the customer to check network connectivity (Firewall, Routing and DNS).

Installing LDAP Client Service

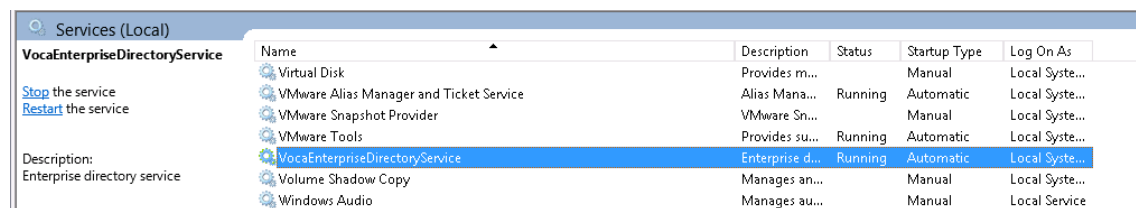
The procedure below describes how to install the LDAP client service to enable automatic synchronization procedures.

➤ **To install the LDAP client service:**

1. On the Directory Import Configuration screen, click **Install Service**.



The LDAP client service is installed.



2. By default, the VocaNOM LDAP service runs the synchronization procedure each day at 23:00.

9 Improving LDAP Synchronization

This appendix describes how to improve LDAP synchronization by using the following filters.

- Basic LDAP
- Advanced LDAP
- LDAP User Attributes

Basic LDAP Filters

- The following LDAP filter receives active (not disabled) contacts with first and last name and office or mobile phones.

```
(&(givenName=*)(sn=*)(!((userAccountControl=514)(userAccountControl=546)))(|
  (telephoneNumber=*)(mobile=*)))
```

- The following filter is the same as the above, but receives only active contacts i.e., contacts without phones.

```
(&(givenName=*)(sn=*)(!((userAccountControl=514)(userAccountControl=546))))
```

Advanced LDAP Filters

Sometimes, after LDAP synchronization, VocaNOM contains irrelevant contacts or objects. You need to understand the LDAP structure and improve the filter. VocaNOM contains the non-users contacts (printers, computers etc.).

Add the following user's object to the filter:

- objectCategory=person
- objectClass=user

For example:

- Filter without phones:

```
(&(objectCategory=person)(objectClass=user)(givenName=*)(sn=*)(!
  (userAccountControl=514)(userAccountControl=546))))
```

- Filter with phones:

```
(&(objectCategory=person)(objectClass=user)(givenName=*)(sn=*)(
  (telephoneNumber=*)(mobile=*))(!((userAccountControl=514)
  (userAccountControl=546))))
```

VocaNOM contains the following contacts:

- Dismissed employees
- Employees who have resigned

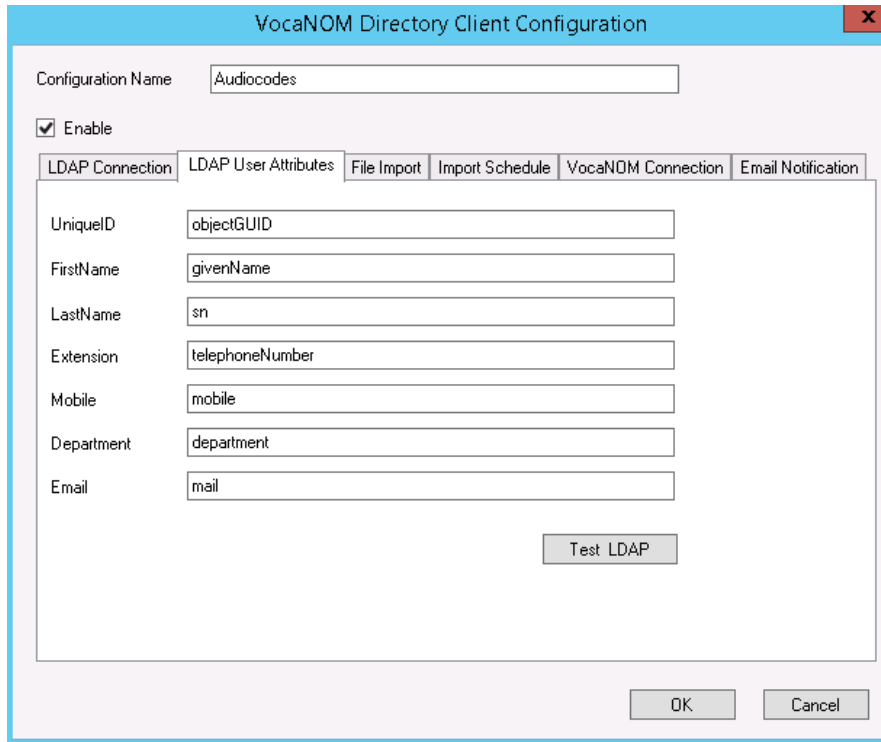
These contacts are usually disabled by the System Administrator in the Active Directory.

The filters provided by AudioCodes don't receive contacts with *userAccountControl=514* and *userAccountControl=546* (i.e., disabled contacts). Sometimes the disabled contacts have other *userAccountControl* values which need to be added to the filters.

For more information on how to use the UserAccountControl flags, refer to <https://support.microsoft.com/en-us/help/305144/how-to-use-the-useraccountcontrol-flags-to-manipulate-user-account-pro>.

LDAP User Attributes

The Active Directory sometimes contains relevant information in another attribute, which needs to be changed on the VocaNOM LDAP Client. For example, the LDAP *telephoneNumber* attribute is empty, but the *msRTCSIP* attribute contains the phone number. See the default settings below:



VocaNOM Directory Client Configuration

Configuration Name: Audiocodes

☒ Enable

LDAP Connection | **LDAP User Attributes** | File Import | Import Schedule | VocaNOM Connection | Email Notification

UniqueID: objectGUID

FirstName: givenName

LastName: sn

Extension: telephoneNumber

Mobile: mobile

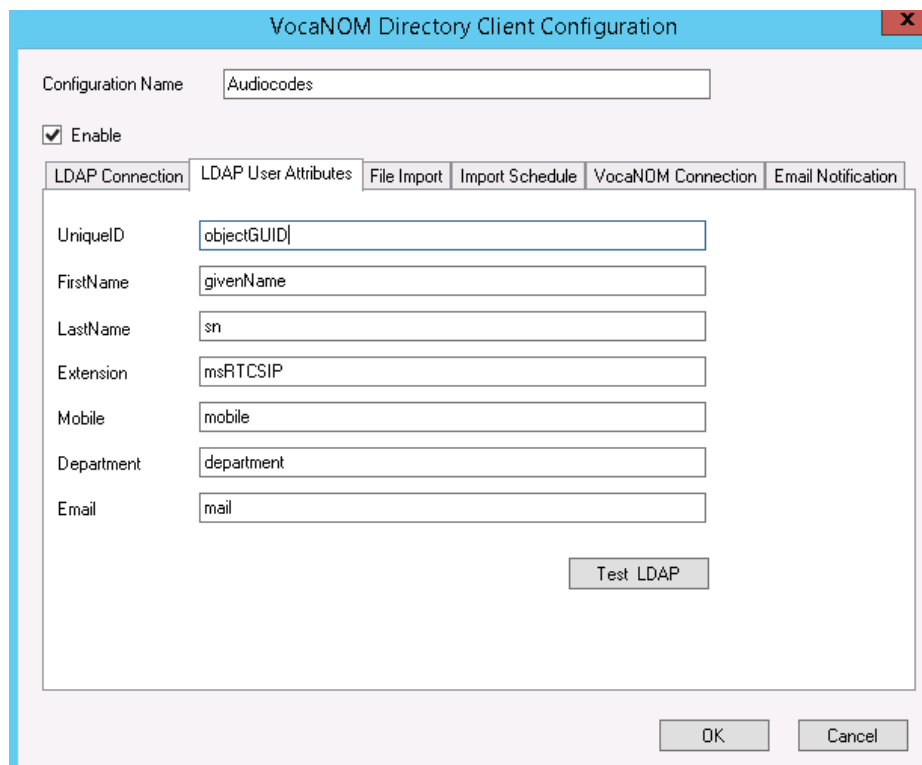
Department: department

Email: mail

Test LDAP

OK Cancel

The figure below displays how to change the attribute in the VocaNOM LDAP client.



VocaNOM Directory Client Configuration

Configuration Name: Audiocodes

☒ Enable

LDAP Connection | **LDAP User Attributes** | File Import | Import Schedule | VocaNOM Connection | Email Notification

UniqueID: objectGUID

FirstName: givenName

LastName: sn

Extension: msRTCSIP

Mobile: mobile

Department: department

Email: mail

Test LDAP

OK Cancel

10 Configuring SBC Settings for AC Voca

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

- **Coder settings**
- **Delayed offer SDP settings**
- **Terminate OPTIONS request**
- **Alternate routing settings**

Coder Settings

AC 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 AC 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 AC Voca SIP entity.

Delayed Offer SDP Settings

AC 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 AC Voca SIP entity.



For the Remote Delayed Offer Support function, you need to assign extension coders in the IP Profile of the AC 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 AC Voca does not respond, or responds with a SIP error, create the alternative routing setting and redirect the call to customer's extension.

11 Installing Signed Certificates on the IIS

To configure AC 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

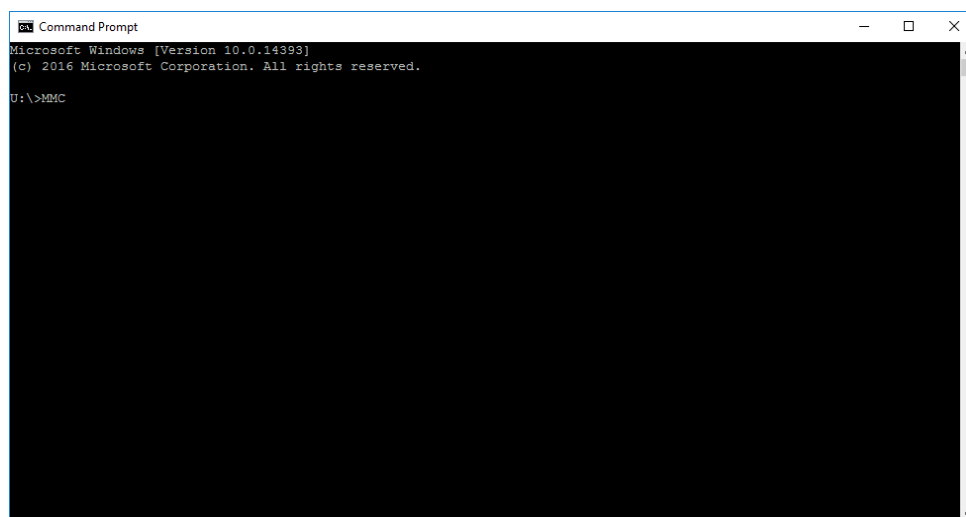
You can manage certificates in the MMC Snap-in.

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

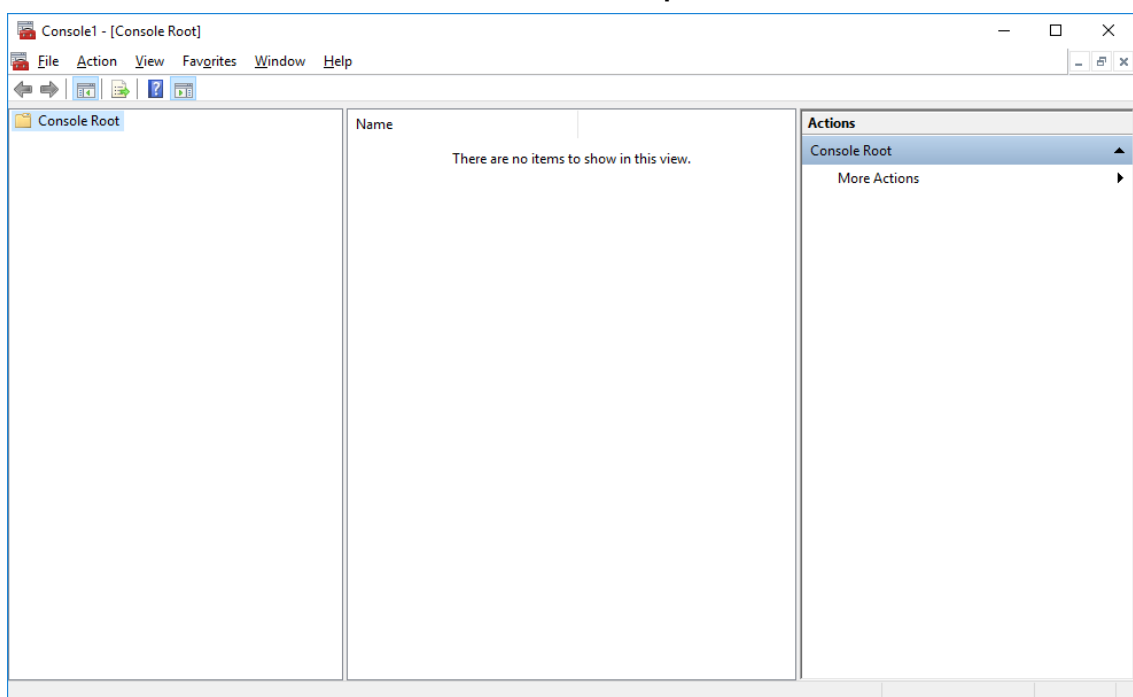
1. Open the Command Prompt window.
2. Enter **MMC** and then press ENTER.



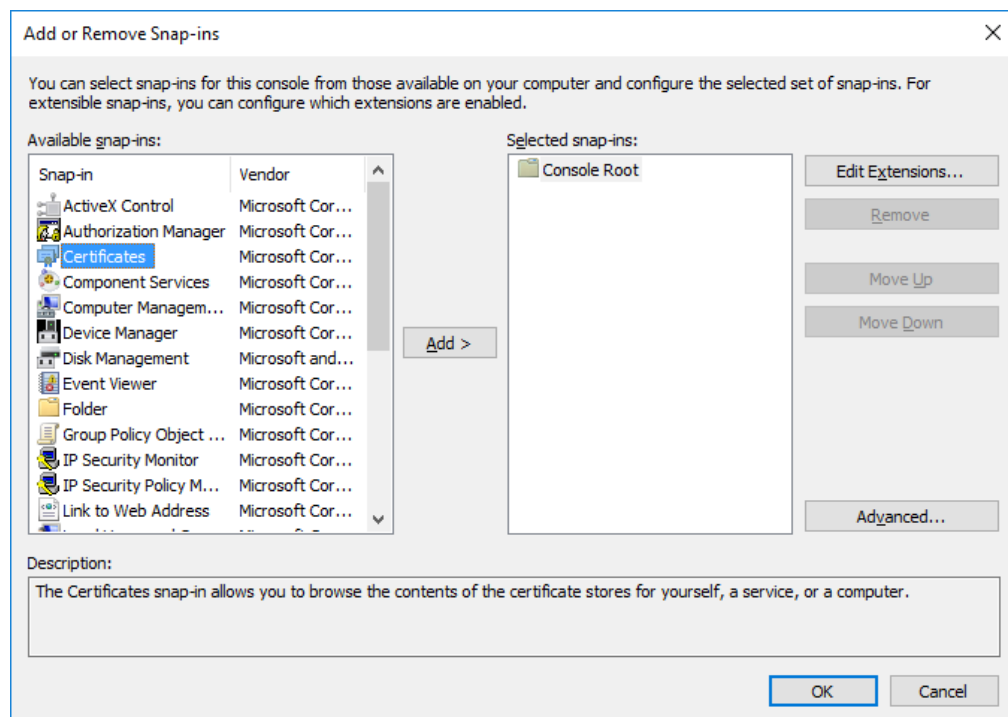
To view certificates in the local machine store, you must be set up as an Administrator.



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

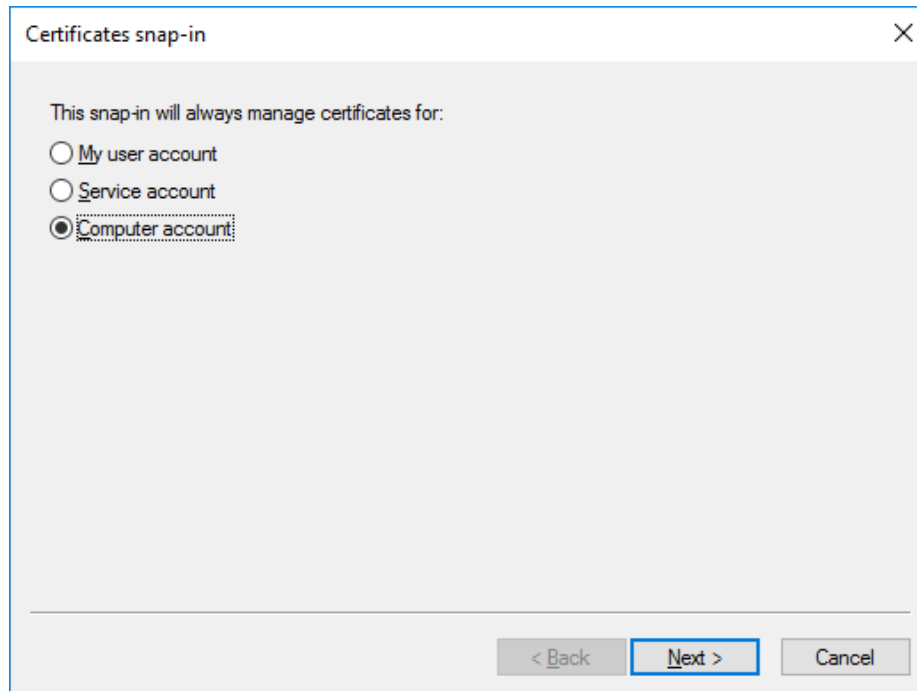


4. From the File menu, choose **Add/Remove Snap In**.
5. In the 'Available snap-ins', select **Certificates**.



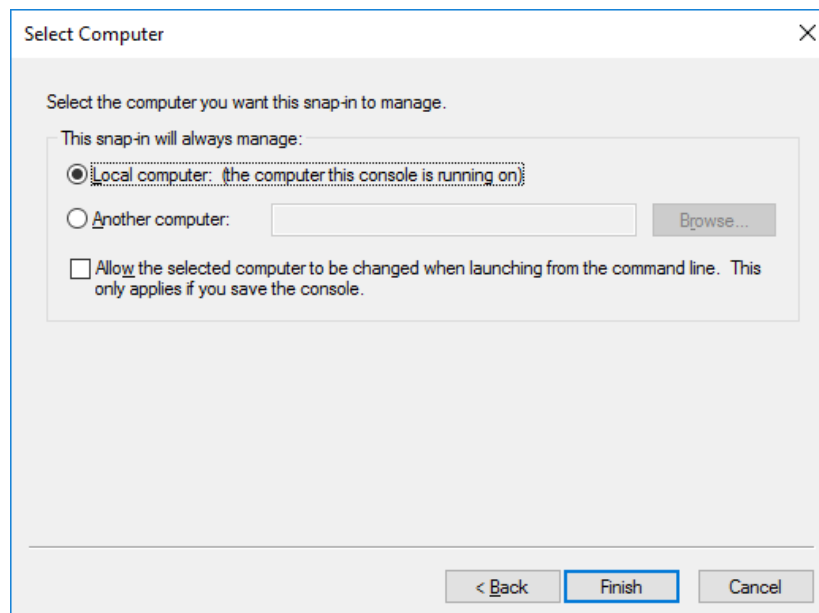
6. Click **Add >** to add snap-ins.

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

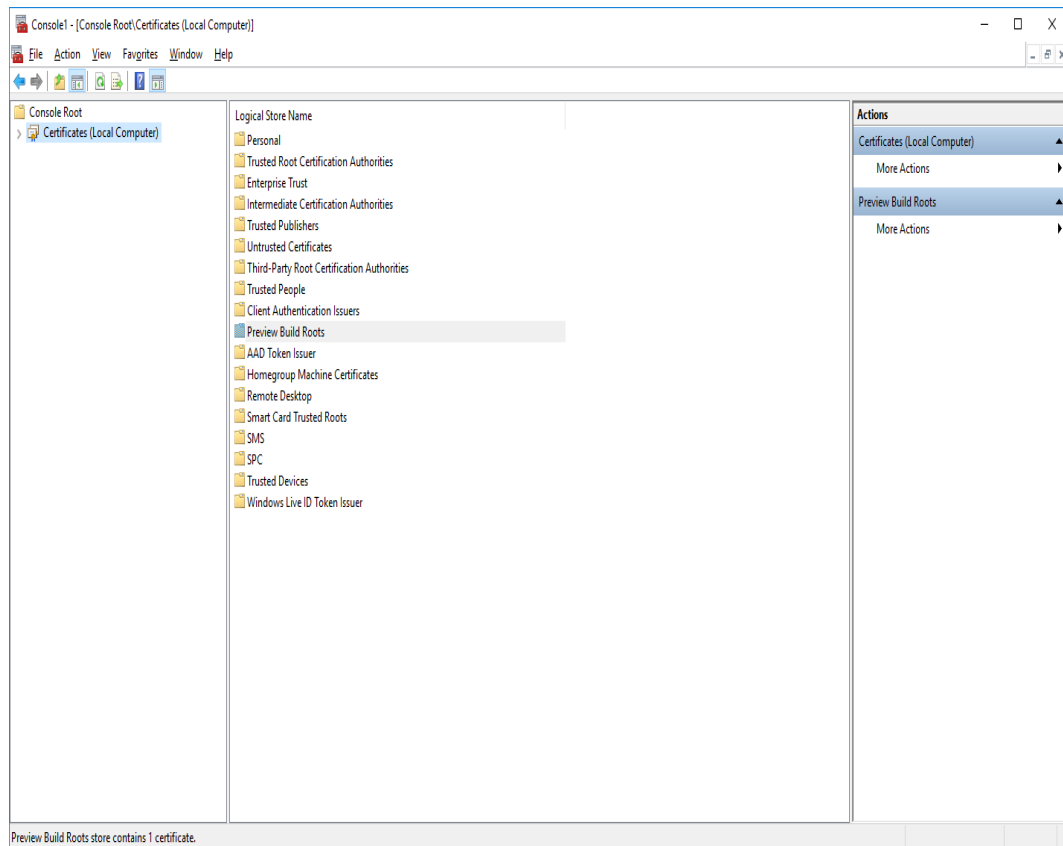


You can select either **My user account** or **Service account** options. If you are not an Administrator of the computer, you can manage certificates only for your user account.

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

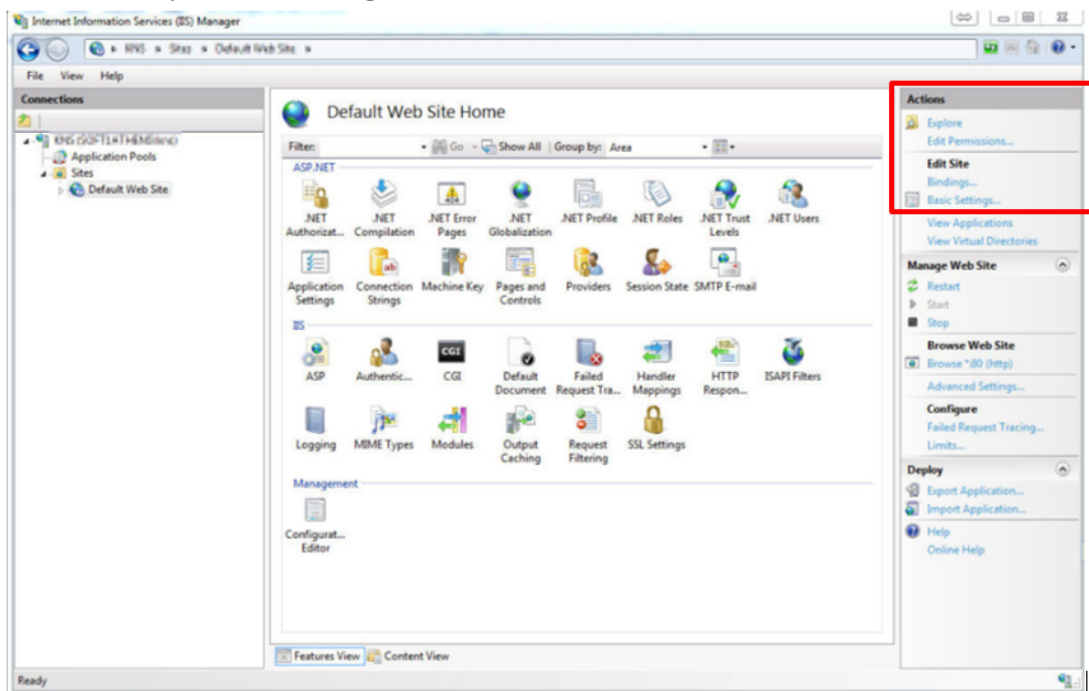
1. Navigate to **Console Root > Certificates (Local Computer) > Personal > Certificates**.
2. On right pane, select **All Tasks > Import**.
3. Follow the dialog to install the certificate.

Selecting a Certificate in IIS Manager

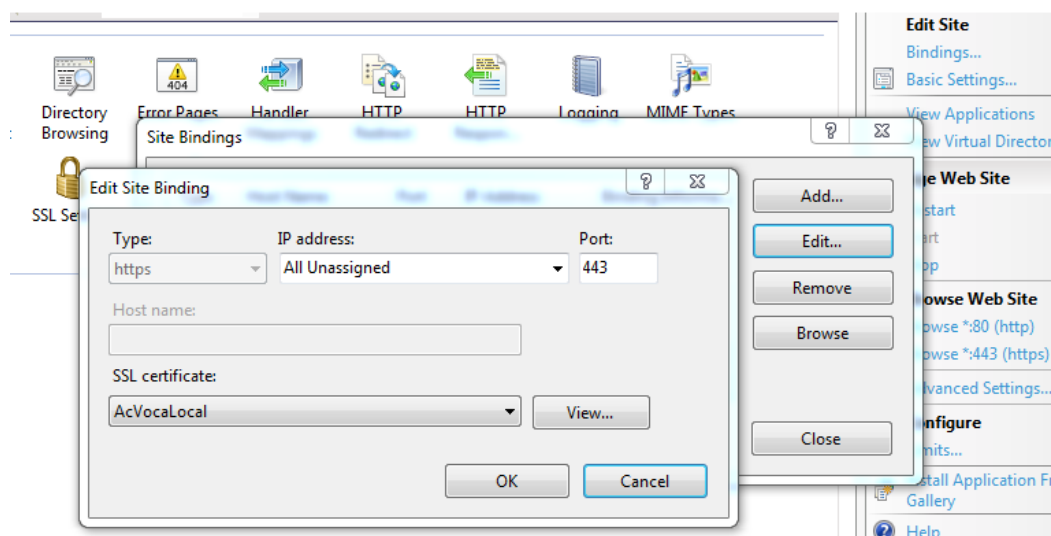
You can select a certificate in the Internet Information Services (IIS) Manager.

➤ 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**.

12 Enabling .NET Framework 3.5 on Windows

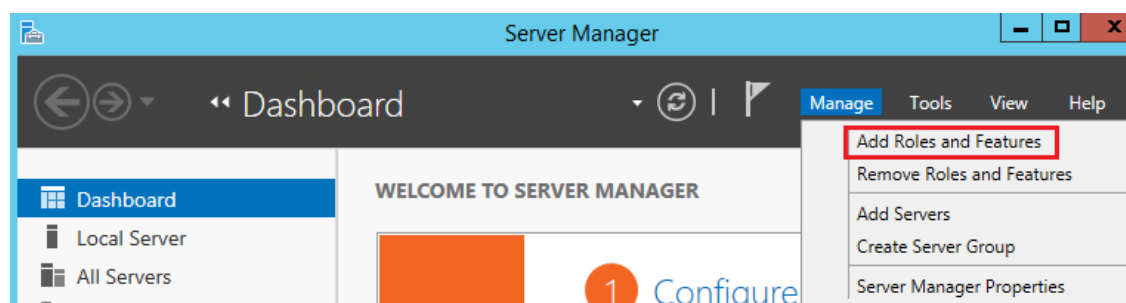
You can use Server Manager to enable .NET Framework 3.5. For more information, see Microsoft's guidelines [here](#).

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

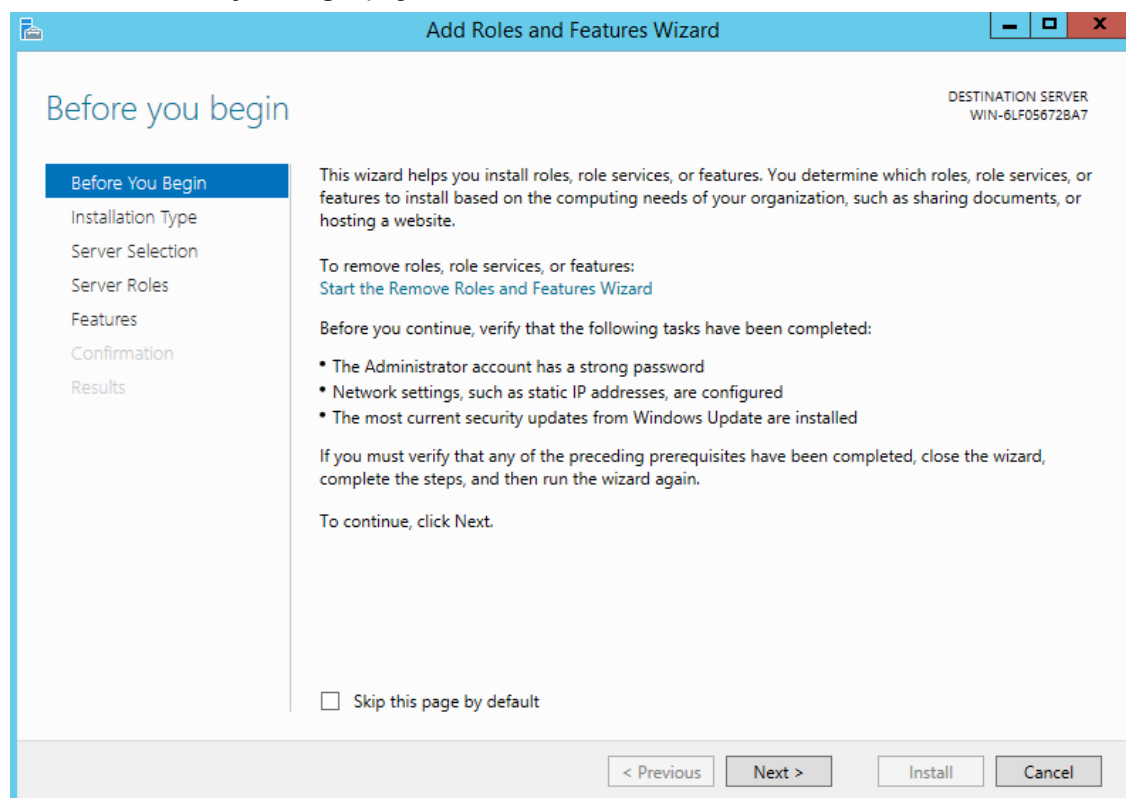
- Windows Server 2012 R2 or 2016
- Administrator user rights. The current user must be a member of the local Administrators group to add or remove Windows features.
- Target computers might need network access and rights to use either alternate sources or an Internet connection to use Windows Update.
- Installation media (only if you have no Internet connection to use Windows Update)

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

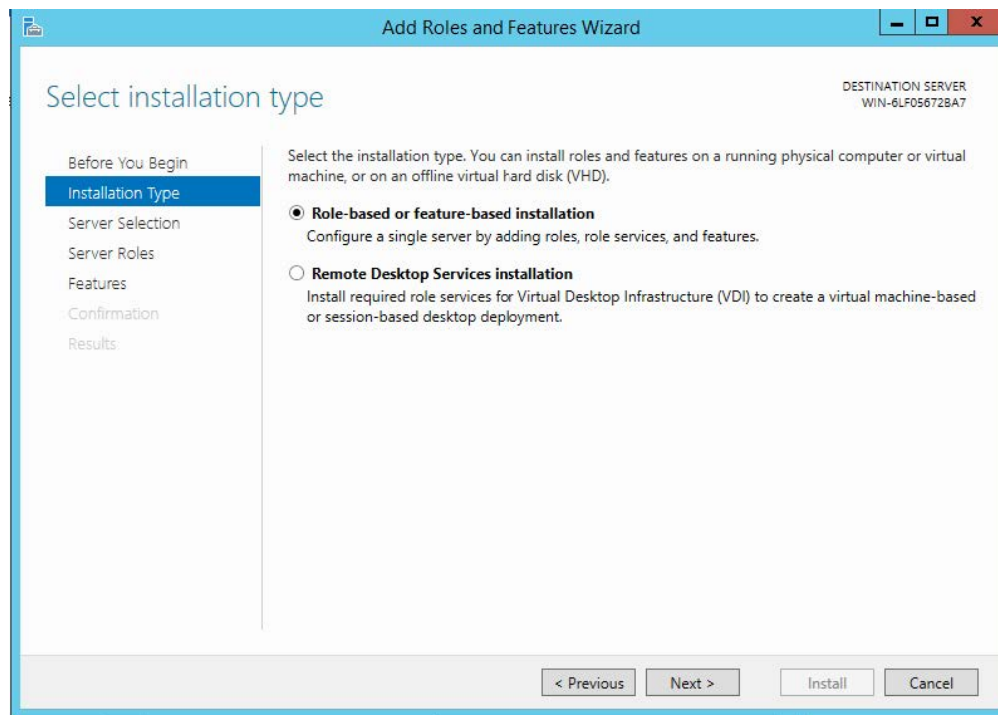
1. On the Server Manager page, click **Manage**, and then select **Add Roles and Features** to start the Add Roles and Features Wizard.



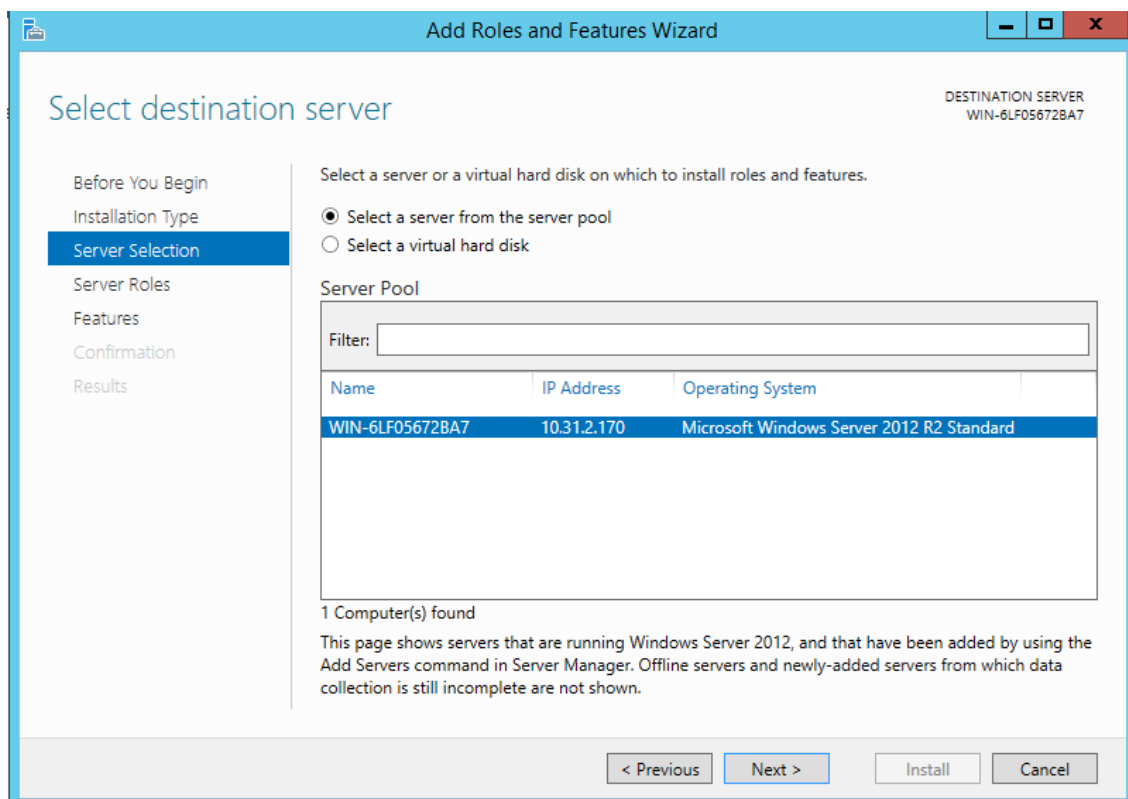
2. On the **Before you Begin** page, click **Next**.



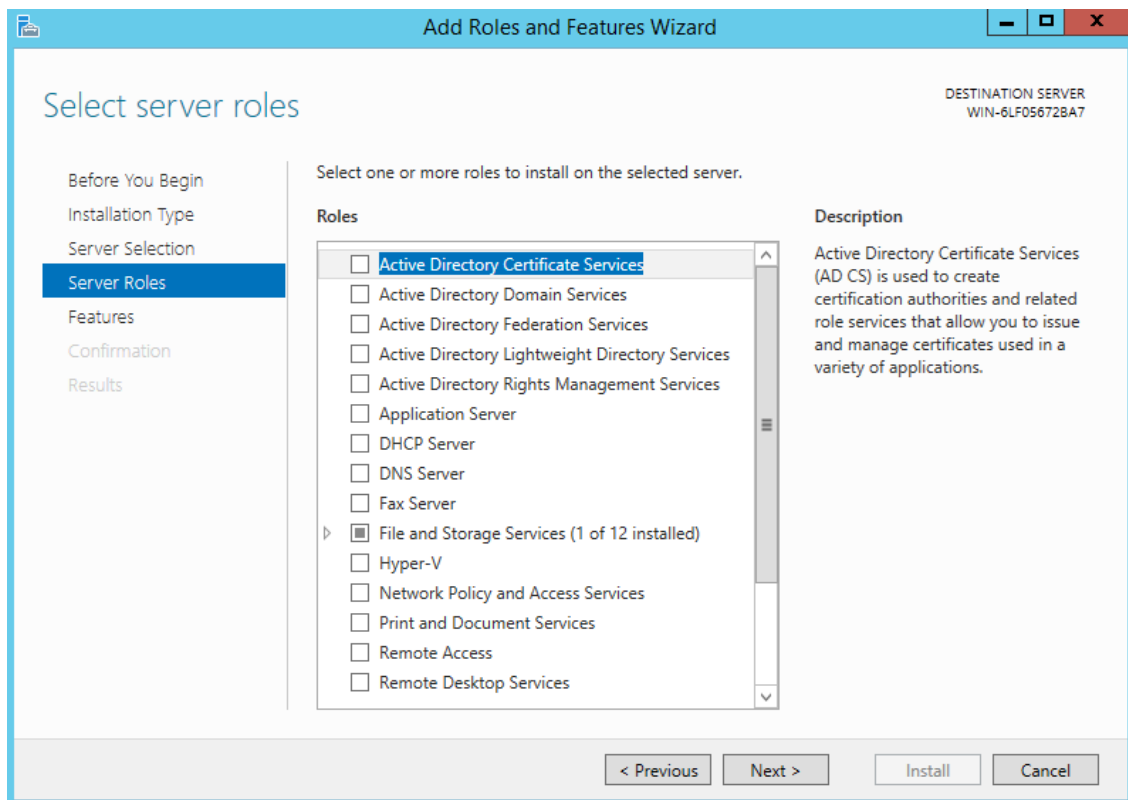
3. On the **Select Installation Type** page, click the **Role-based or feature-based installation** option, and then click **Next**.



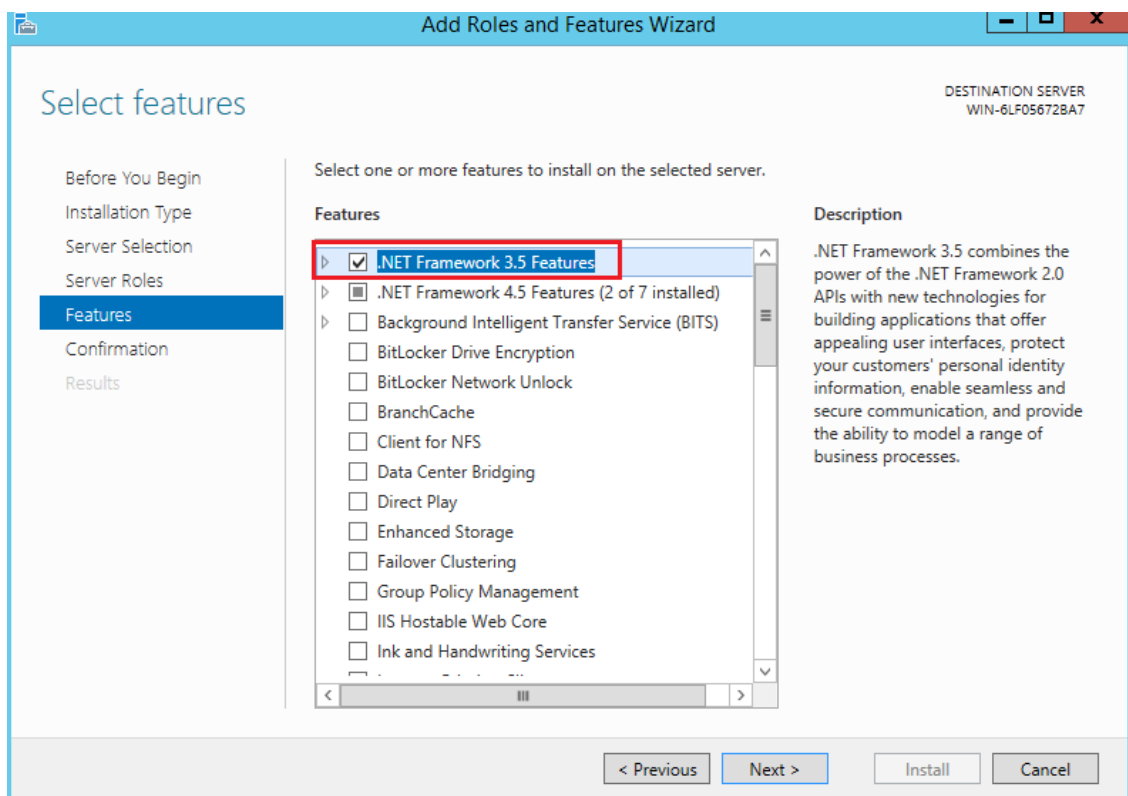
4. On the **Selection Destination Server** page, select the target server, and then click **Next**.



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



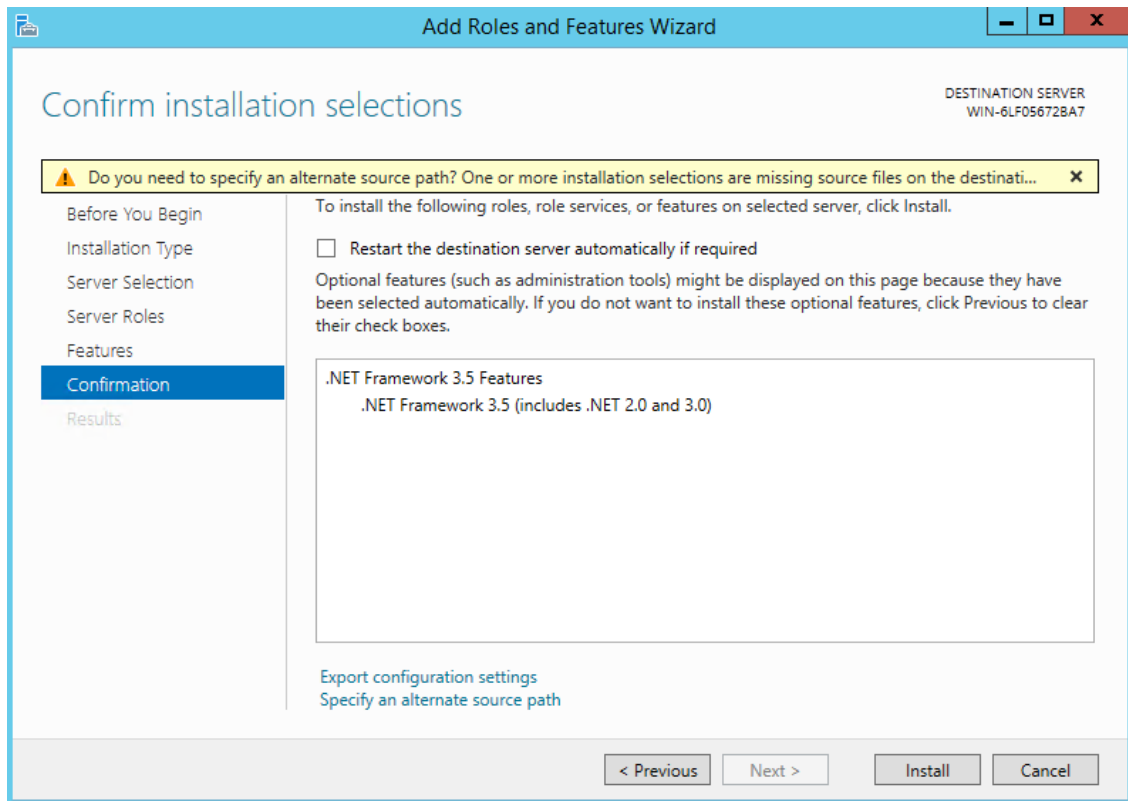
6. On the Select Features page, select the '.Net Framework 3.5 Features' check box, and then click **Next**.



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**.



13 Useful Topics

The following are some useful links to refer to for additional information:

- For Active Directory - LDAP Syntax Filters, go to <https://social.technet.microsoft.com/wiki/contents/articles/5392.active-directory-ldap-syntax-filters.aspx>
- For using the UserAccountControl Flags, go to <https://support.microsoft.com/en-us/help/305144/how-to-use-the-useraccountcontrol-flags-to-manipulate-user-account-pro>
- For LDAP Filter Syntax, go to <http://www.ldapexplorer.com/en/manual/109010000-ldap-filter-syntax.htm>

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