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Business Edition Premise Provider's Guide

Installing Business Edition Premise

12/19/2025

Installing Business Edition Premise

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The Business Edition Premise installation consists of an off-site and on-site portion. The **off-site** installation steps are performed *before* the server is delivered to the Premise (or customer) site and the **on-site** installation steps are performed *after* the server is delivered to the Premise site.

Although Business Edition Premise typically comes pre-installed on a server, you can also procure the required server and install Business Edition Premise on it yourself, as detailed on this page. Depending on your site or hardware requirements, you can install Business Edition Premise on a single virtual machine (VM) or as a set of five virtual machines.

Tip

If you have received your server with the VM(s) already deployed, you can skip **Part I: Off-site installation** and proceed directly to **Part II: On-site installation**.

Part I: Off-site installation

These steps describe how to prepare the server for delivery to the Premise site.

[+] Step 1. Procure the required hardware

Hardware requirements

The hardware required to run Business Edition Premise depends on the number of agents in the contact center and the virtual machine platform being deployed (multi-VM or single-VM).

Single-VM platforms

51 to 300 agents

Requirement	Minimum configuration
Server type	Dell PowerEdge R420
Processor	Intel Xeon E5-2470 (2.30 GHz, 20 M Cache)
Additional processor	Intel Xeon E5-2470 (2.30 GHz, 20 M Cache)
Memory (RAM)	48 GB
Controller	PERC H710P 1 GB RAID Controller
Hard drives	7x300GB 15 K SAS disks: 6 disks for RAID5 + 1 hot spare; 2.5 inch drive chassis
Guest Operating System	Microsoft Windows 2008 Server R2
Hypervisor Operating System	ESXi 5.5

50 agents or less

Requirement	Minimum configuration
Server type	Dell PowerEdge R430
Processor	Intel Xeon E5-2630 v3 (2.40 GHz, 20 M Cache)
Additional processor	Intel Xeon E5-2630 v3 (2.40 GHz, 20 M Cache)
Memory (RAM)	48 GB
Controller	PERC H730 1 GB RAID Controller
Hard drives	4x600 GB 15 K SAS disks: 3 disks for RAID5 + 1 hot spare; 2.5 inch drive chassis
Guest Operating System	Microsoft Windows 2008 Server R2
Hypervisor Operating System	ESXi 5.5

Multi-VM platforms

100 to 300 agents

Requirement	Minimum configuration
Server type	Dell PowerEdge R720 or Genesys BEP 300
Processor	Intel Xeon E5-2665 (2.40 GHz, 20 M Cache)
Additional processor	Intel Xeon E5-2665 (2.40 GHz, 20 M Cache)
Memory (RAM)	64 GB
Controller	PERC H710P 1 GB RAID Controller
Hard drives	7x300 GB 15 K SAS disks: 6 disks for RAID5 + 1 hot spare; 2.5 inch drive chassis
Guest Operating System	Microsoft Windows 2008 Server R2
Hypervisor Operating System	ESXi 5.5

100 agents or less

Requirement	Minimum configuration
Server type	Dell PowerEdge R420 or Genesys BEP 100
Processor	Intel Xeon E5-2470 (2.30 GHz, 20 M Cache)
Additional processor	Intel Xeon E5-2470 (2.30 GHz, 20 M Cache)
Memory (RAM)	48 GB
Controller	PERC H710P 1 GB RAID Controller
Hard drives	7x300 GB 15 K SAS disks: 6 disks for RAID5 + 1 hot spare; 2.5 inch drive chassis
Guest Operating System	Microsoft Windows 2008 Server R2
Hypervisor Operating System	ESXi 5.5

[+] Step 2. Provision the network

Provision the network to include:

- One IP address within a management control subnet for Dell iDRAC setup and configuration.
- One IP address within the same subnet and available on a Windows domain running DNS/DHCP services for ESXi 5.5 server.

[+] Step 3. Set up the server hardware and iDRAC

1. Perform the initial hardware setup of the server:
 - Connect a network cable to the iDRAC internal management board.
 - Connect a network cable to port 1 of the main Ethernet board (integrated with the motherboard).
 - Connect the power cable.
 - Directly attach a monitor, keyboard, and mouse.
2. Power-on the server by pressing the power button on the front of the console.
3. After the Dell Lifecycle Controller completes the system inventory and displays the **Settings - Language and Keyboard** screen, do the following:
 - Select **Next** to accept the defaults for **Language and Keyboard Type** (English/United States).
 - On the **Network Settings** screen, select **DHCP** from the **IP Address Source** drop-down list and click **Finish**.
4. Configure the server for remote access using the iDRAC management board:
 - Go to **Hardware Configuration > Configuration Wizards > iDRAC settings > Network**.
 - Record the **MAC Address** displayed under **Network Settings** (this is required for an upcoming step).
 - In the **IPv4 Settings** section, set **Enable DHCP** and **Use DHCP to obtain DNS server addresses** to **Enabled**.
 - In the **IPMI Settings** section, set **Enable IPMI Over LAN** to **Enabled**.
 - Click **Back**.
 - Click **Finish** and select **Yes** to save the changes.
 - Click **System Time and Date Configuration**.
 - Set **Time** to the current local time.
 - Click **Finish** and then click **Back** to exit the Configuration Wizard.
 - Go to **System Setup > Advanced Hardware Configuration > System BIOS > System Profile Settings**.
 - From the **System Profile** drop-down menu, select **Performance**.
 - Click **Back**.
 - Click **Finish** and select **Yes** to save the changes.

5. Update DHCP and DNS for the iDRAC management board:

- Enter the MAC address you recorded earlier into the DHCP server configuration and restart the DHCP service.
- Update the DNS server with the iDRAC hostname and IP address.
- You can access the system using iDRAC by entering the following URL into a browser:
`https://<hostname or ip address>/login.html`

[+] Step 4. Obtain the required licenses

Obtain the following licenses:

<tabber> Single VM=

License requirements for single-VM installations

- One Microsoft SQL Server 2008 R2 64-bit license, required for internal access of server components.
Important: This license to be applied on the Premise site.
- One Microsoft Windows Server 2008 R2 64-bit licenses with the appropriate number of client access licenses.
Important: These licenses to be applied on the Premise site.
- One VMware vSphere Standard Server ESXi 5.5 license for 2 physical CPUs (unlimited cores per CPU).
- Alternatively, you can purchase the BEP Operations pack from Genesys, which contains appropriate licenses from Microsoft without the need for client access licenses.
- One Genesys software license for 50 agents, or 100 or 300 agents.
Important: The MAC address information required for this license is obtained from the VM during server configuration.

| Multi-VM=

License requirements for multi-VM installations

- One Microsoft SQL Server 2008 R2 64-bit license, required for internal access of server components.
Important: This license to be applied on the Premise site.
- Three Microsoft Windows Server 2008 R2 64-bit licenses with the appropriate number of client access licenses.
Important: These licenses to be applied on the Premise site.
- One VMware vSphere Standard Server ESXi 5.5 license for 2 physical CPUs (unlimited cores per CPU).
- Alternatively, you can purchase the BEP Operations pack from Genesys, which contains appropriate licenses from Microsoft without the need for client access licenses.
- One Genesys software license for 100 or 300 agents.

Important: The MAC address information required for this license is obtained from the core VM during server configuration.

[+] Step 5. Configure the server

This step describes how to configure the server storage as a RAID-5 disk group containing two virtual disks. Virtual Disk 1 is used for the installation of the ESXi operating system and Virtual Disk 2 is used for the virtual machine(s) VMFS5 datastore.

WATCH: To view a short demonstration of how to configure the server storage (for 100 to 300 agents) as a RAID-5 disk group containing two virtual disks, click the Genesys icon below:



Important

The creation of a root password for the ESXi server and the configuration of additional user accounts is at the discretion of the party performing the installation.

1. Login to iDRAC and launch the Virtual Console, and then power on the server.
2. Configure disk group 0 and Virtual Disk 1:
 - a. Press **<CTRL> + <R>** during POST to enter the RAID Configuration Utility.
 - b. Configure the server as RAID-5 with a single hot spare drive:
 - Under **Physical Disks**, select the Disk IDs as follows:
For single-VM or BEP50 configurations of less than 50 agents, select Disk IDs *:00 through *:02
For all other configurations, select Disk IDs *:00 through *:05
 - c. Under **Basic Settings**, change the **VD Size** to **20 GB** and type ESXi as the **VD Name**.
 - d. Enable the **Advanced Settings** option and select **Initialize** (reply OK to the warning) and **Configure Hot Spare**.
 - e. In the **Dedicated Hotspare for Disk Group 0** window, select the first Disk ID and select **OK**.
3. Configure virtual disk two:
 - From the **Virtual Disk Management** screen, select **Disk Group** and then **Add New VD**.
 - For the **VD Name**, type VM Storage.
 - Enable **Advanced Settings** and confirm that the Read Policy is **Adaptive Read-Ahead** and the

Write Policy is **Write Back**.

- Select **Initialize** (reply OK to the warning).
- Exit and reboot the server.

4. Modify the boot sequence for the server:

- Press **F2** during POST to enter the system BIOS.
- From the BIOS menu, navigate to **System Setup Main Menu > System BIOS > Boot Settings > Bios Boot Settings > Hard-Disk Drive Sequence**.
- Move the Integrated RAID Controller (H710P or H730) to the top of the list.
- Exit and reboot the server.

[+] Step 6. Install the VMware vSphere ESXi Server and Client

WATCH: To view a short demonstration of the ESXi Server installation, click the Genesys icon below:



1. Install VMware vSphere 5.5 Standard ESXi Server on the 20 GB Virtual Disk 1 (configured in the previous step), using the license you procured. Give the server a unique name such as *bep_location*.
For more information about VMware vSphere 5.5 Standard ESXi Server, see the [VMware vSphere ESXi and vCenter Server 5.5 Documentation](#) (opens in a new window or tab).
 - After installing, navigate to **Configure Management Network > IPv6 Configuration** and disable IPv6 support.
2. If you are installing the VMs off-site, you must perform the following steps, which you will need to repeat at the customer site (see [On-site installation](#)):
 - Power on the ESXi server and retrieve its MAC address (for setup in a DHCP server to assign an IP address and in a DNS server so the host name of the ESXi server can be associated to the assigned IP address when first connected to the network):
 - Open the ESXi console for your ESXi server and go to **<F2> Customize System/View Logs > Configure Management Network > Network Adapters/<D> View Details**.
 - Copy the MAC address.
 - Log into the DHCP server.
 - In the Command window, configure the MAC address with the assigned IP address for the ESXi server.
 - Restart the DHCP server.
3. Install the VMware vSphere 5.5 Client on any Windows workstation that has network connectivity to the

ESXi Server:

IMPORTANT: The ESXi server must be powered on.

- Open a browser and enter the IP address assigned to the ESXi server.
- On the **VMware ESXi Welcome** page, click the download link for the VMware vSphere 5.5 Client and follow the prompts to install. For more information, see the [VMware vSphere ESXi and vCenter Server 5.5 Documentation](#) (opens in a new window or tab).

[+] Step 7. Configure the VM storage requirements

WATCH: To view a short demonstration of the virtual storage configuration, click the Genesys icon below:



1. Log in to the vSphere Client workstation as a user with ESXi administrator rights and select the **Configuration** tab.
2. In the Hardware section, click **Storage**, and then select **Add Storage**.
3. Accept the default settings by clicking **Next** for each configuration screen, and give the datastore a name (for example, VM Storage).
4. For the Capacity, accept the default selection of **Maximum available space**.
5. Click **Finish**.

[+] Step 8. Deploy the VM platform (single or multi)

<tabber> Single VM=

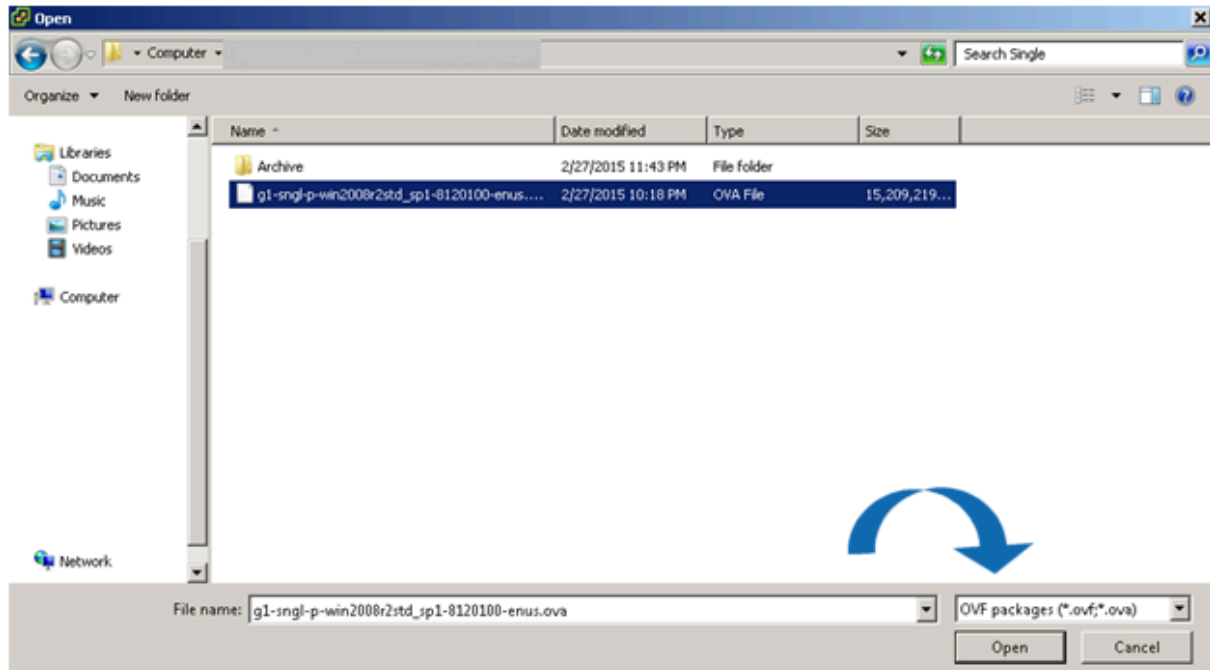
Single-VM deployment

1. Obtain the OVA VM template:
 - Log into the vSphere Client as a user with ESXi administrator rights.
 - Select **File > Deploy OVF Template**
 - Save the BEP OVA VM template to a network drive on the same subnet as the ESXi Server or to a Genesys-supplied hard drive.
2. Launch the file and deploy the VM:

- The VM name must be in the following format:

VM role-platform-product version-language code.

Example: g1-sngl-p-win2008r2std_sp1-8120007-enus.



Important

Do not change the VM naming format!

- Genesys recommends that you keep the default settings during deployment.

Important

When selecting storage for the OVA file, a minimum of 800 GB of available storage is required.

| Multi-VM=

Multi-VM deployment

- Obtain the OVA VM template:

- Log into the vSphere Client as a user with ESXi administrator rights.

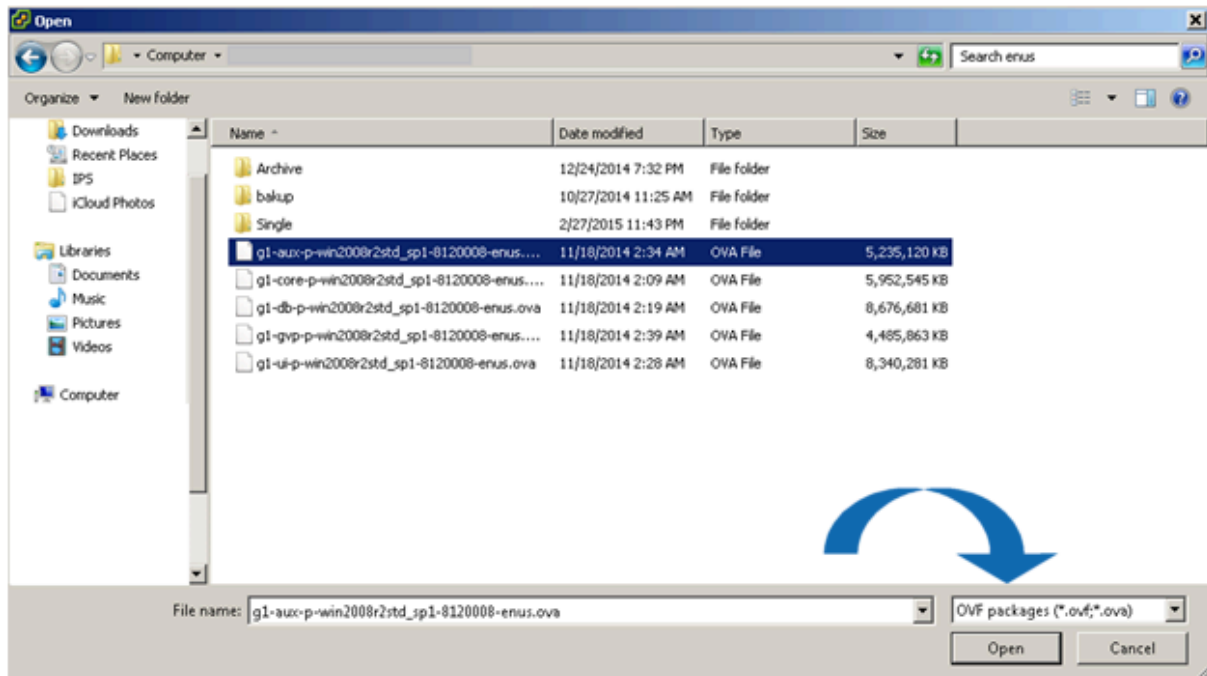
- Select **File > Deploy OVF Template**
- Save the BEP OVA VM template to a network drive on the same subnet as the ESXi Server or to a Genesys-supplied hard drive.

2. Launch the file and deploy the five VMs (aux, core, db, gvp, ui).

- The VM names must be in the following format:

VM role-platform-product version-language code

Example: g1-core-p-win2008r2std_sp1-8120008-enus



Important

Do not change the format.

- Genesys recommends that you keep the default settings during deployment.

Important

When selecting storage for the OVA file, a minimum of 1.2 TB of available storage is required.

Dell R420 or Genesys BEP100 memory allocation: The default memory allocation for each VM applies to the Dell R720 or Genesys BEP300 and its 64GB of total memory. If you are installing the VMs on a Dell R420 or Genesys BEP100, you must open each VM Properties window and adjust the memory and processor allocation for each VM.

VM	Memory	Processors
Aux	4 GB	4
Core	6 GB	4
DB	6 GB	4
GVP	4 GB	4
UI	4 GB	4

[+] Step 9. Enable VM restoration

To enable VM restoration, take a snapshot of a VM in its current state. To take a snapshot, do the following for each deployed VM:

1. Right-click on the VM and select **Snapshot**.
2. From the Snapshot menu, select **Take Snapshot**.
3. In the **Take Virtual Machine Snapshot** window, enter a name and description for the snapshot.
4. Click **Ok**.

For more information about snapshots, see Using Snapshots To Manage Virtual Machines in the VMware in [VMware vSphere ESXi and vCenter Server 5.1 Documentation](#) (opens in a new window or tab).

[+] Step 10. Confirm that the VM(s) start

Power on each deployed VM and confirm that it starts by opening its Console window and verifying that the **Set Up Windows** screen is visible. Once confirmed, power off the VM.

Important: Do not proceed with the Set Up Windows steps unless the server is located at the Premise site.

Tip

Although the tune-up script starts automatically on the VM after you log in, you can select to postpone the tune-up procedure until the next restart of the VM. To do so, select No when the script asks "Would you like to do the tune-up now?" The script automatically starts when the VM restarts at the customer site, and continues to run during each restart until it completes successfully.

[+] Step 11. Off-site verification checklist

This step confirms that the off-site portion of the installation is complete and that the server is ready

for delivery to the Premise site.

1. Log in to iDRAC and confirm the following:

- The server configuration is RAID-5.
- The storage controller card model is H730 for R430 models (or H710P for all other models).
- Disk sizes are 600 GB, 15K, SAS (or 300 GB, 15K, SAS, for multi-VM, 100 to 300 agents).

2. Connect to the ESXi server with a vSphere client and confirm the following:

- The VM is deployed and able to start. (If you installed the multi-VM platform, confirm this for each of the five VMs.)
- The ESXi server has all CPUs (≥ 16 CPUs) and RAM (48 GB, or 64 GB for multi-VM, 100 to 300 agents).
- The VM is present, with a snapshot taken. (If you installed the multi-VM platform, confirm for each of the five VMs.)
- You can locate the MAC address for the VM, as this is needed when ordering appropriate Genesys licenses. (For multi-VM, use the MAC address for the core VM.)
- Ensure that you have adjusted the memory and CPU values of the VMs according to the table shown in the step for deploying the VMs, as required for your deployment.
- The VM(s) are the same version. If you deployed the VM(s) according to the steps described in this wiki, the version is included in the name of the VM.

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Part II: On-site installation

Important

These steps describe how to finalize the server installation and configuration at the Premise site. Perform these steps only *after* the off-site portion of the installation is complete and the server is delivered to the Premise site. The steps are divided into several subsections and must be completed in the order described.

<tabber>

Single VM=

Single-VM installation

Follow these instructions if you are installing the single-VM environment for Business Edition Premise.

Before you begin

[+] Step 1. Confirm that you have the required licenses

Important

You require the following licenses before installing Business Edition Premise. If you do not have all required licenses, do not proceed with the installation steps.

- One Windows Server 2008 license key for activating Windows when starting the VM.
- One Genesys software license for the required number of agents.
- One Business Objects Enterprise (BOE) version 3.1 license key.
- One Microsoft SQL Server 2008 R2 64-bit license.

[+] Step 2. Provision the network

Provision the network to include:

- One IP address within a single subnet and available on the Windows domain running DNS/DHCP services for the Virtual Machine (VM); you also need to assign a hostname for the VM for entry into a DNS server
- One IP address within a management control subnet for Dell iDRAC configuration, to enable hardware alarming using email (the address must be able to access the customer corporate email server)
- One IP address within the same subnet and available on a Windows domain running DNS/DHCP services for ESXi server.

Hardware configuration

[+] Step 3. Set up hardware monitoring

Your Dell server includes an Integrated Dell Remote Access Controller (iDRAC) that monitors the server hardware and can send email notifications to help you avoid the data loss that *will* occur if two drives in the RAID array fail.

Warning

Failure to monitor the health of your RAID array can result in loss of data.
Ensure that you set up Dell hardware monitoring with email notification.

To configure the iDRAC to send email notifications:

1. Use a browser to log into the Dell iDRAC at `https://IP address/login.html`, where *IP address* is the

management interface IP address or DNS entry name. Enter the username and password that you specified when configuring the iDRAC.

2. Navigate to **Alerts > Alerts Filter**.

- Ensure that *only* **System Health**, **Storage**, **Warning**, and **Critical** are checked.
- Uncheck the other five items.
- Click **Apply**.

3. Under **Alerts and Remote System Log Configuration**, check the **Email** box in the heading for *each* of the 8 pages.

4. Select the **SNMP and E-Mail Settings** tab.

- Under **Destination E-mail Addresses**, add up to four addresses to receive alert emails.
- Check **State** for each address.
- Click **Apply**.

5. Under **SMTP (E-Mail) Server Address Settings**:

- Enter the IP address or FQDN/DNS name of the corporate email server (authentication is optional).
- Click **Apply**.

6. Under **Destination E-mail Addresses**:

- Click **Send** to send an email alert to each of the configured accounts.
- Verify that each account received the test email.

7. Return to the **Alerts** tab. Enable alerts and click **Apply**.

[+] Step 4. Configure Time Zone and Network Time Protocol (NTP)

To configure the Time Zone and NTP settings:

1. Navigate to **Overview > iDRAC Settings > Properties > Settings**. The Time Zone and NTP page appears.
2. From the Time Zone drop-down menu, select the required time zone and click **Apply**.
3. Enable NTP, enter the NTP server addresses, and click **Apply**.

DHCP and DNS server assignment

[+] Step 5. Update DHCP and DNS servers for ESXi

Power on the ESXi server (if needed) and retrieve its MAC address (for setup in a DHCP server to assign an IP address and in a DNS server so the host name of the ESXi server can be associated to the assigned IP address when first connected to the network):

1. Open the ESXi console for your ESXi server and do the following:
 - Go to **<F2> Customize System/View Logs > Configure Management Network > Network**

Adapters/<D> View Details.

- Copy the MAC address.
2. Log into the customer DHCP server.
 - In the Command window, replace the existing MAC address for the ESXi server with the one you copied.
 3. Restart the DHCP server.
 4. Update the customer DNS server with new host name of the ESXi server and the IP address assigned from the customer pool of addresses and given out by their DHCP server.
 5. Open a DOS prompt and confirm the DNS association by doing a Forward and Reverse nslookup, as follows:
 - nslookup <IP_address>
 - nslookup <hostname>

[+] Step 6. Update DHCP and DNS servers for the VM

Before you power on the VM, retrieve its MAC address (from VM properties) to populate the DHCP server and update the DNS server:

1. In the vSphere Client inventory, do the following:
 - Right-click the VM and select **Edit Settings > Network adapter 1**.
 - Copy the MAC address.
2. Log into the DHCP server.
 - In the Command window, replace the existing MAC address for the VM with the one you copied.
3. Restart the DHCP server.
4. Update the customer DNS server with the new host name of the VM server and the IP address assigned from the customer pool of addresses and given out by their DHCP server.
5. Open a DOS prompt and confirm the DNS association by doing a Forward and Reverse nslookup, as follows:
 - nslookup <IP_address>
 - nslookup <hostname>

[+] Step 7. Configure NTP on the ESXi server to synchronize the VM

Configure an NTP (network time) daemon to synchronize the customer VM:

1. In the vSphere Client, select the ESXi server, and then select the **Configuration** tab.
2. From the **Software** menu, click **Time Configuration** and select **Properties**.
3. Select **NTP Client Enabled** and then click **Options**. The **NTP Daemon (ntpd) Options** window

opens.

4. In the **NTP Daemon Options** window, do the following:

- Under **General**, select **Start and stop with host**.
- Click **OK**.

Important

You must be back in the **Time Configuration** screen to do the next step.

- In the **Time Configuration** window, click **Options**.
 - Under **NTP Settings**, add an NTP Server in the customer time zone (the **NTP Server website** lists available NTP servers) and select **Restart NTP service to apply changes**.
 - Click **OK**.
5. Select **Options** and verify that the General settings are as follows:
- Status = **Running**.
 - Startup Policy = **Start and Stop with Host**.
 - The **Start** button appears in the Service Commands section.
6. Click **OK** to close the **NTP Daemon Options** and **Time Configuration** windows.

VM configuration

[+] Step 8. Power on and configure the VM

1. Power on the VM.
2. In Windows setup, enter the locale and product key, accept the license terms, and change the password.
3. Confirm that the dialog for changing the user password at the first login appears. The Windows desktop loads and the tuneup script automatically runs.

Tip

If you enter incorrect information during the tuneup script configuration, Genesys recommends that you redeploy the VM and begin the tuneup script configuration again. If you made a snapshot of the VM prior to entering any data for the tuneup configuration script, you can revert to that snapshot.

4. After the tuneup script launches automatically, enter values when prompted.
 - a. For the **Host** naming scheme:
 - Select 1 to use default host name (g1-sngl-p).

Use this option for environments that you do not plan to extend and if the default naming convention suits your needs.

- Select 2 to use default host names with custom suffixes (such as `gl-sngl-p-env1`).

The script prompts you for the suffix. Use this option if default names with suffixes agree with your host naming convention.

Important

The suffix can contain no more than 4 characters.

- Select 3 to use a custom name for the host (such as `newyork-sngl`).

The script prompts you for a name. Use this option if you need to conform to a customer naming convention.

Important

The host name can contain no more than 15 characters.

b. For the **Domain** configuration:

This setting defines how the FQDN of the hosts is presented in Genesys Configuration; Genesys software uses these names when establishing network connections.

- Select 1 to have the tuneup script use the domain name that it detects automatically.
- Select 2 (Other domain name) to enter the domain name manually. When prompted, enter the domain name.
- Select 3 if your environment does not require a domain name. (Typically, this option is reserved for lab use on systems not running in a domain.)

c. Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).

d. When prompted, specify the following as required for your VoIP media gateway (source and destination of VoIP traffic) configuration:

- gateway-ip-address
- gateway-port

e. Rename? Yes

f. Reboot? Yes

Important

Ensure that the VM fully restarts before proceeding.

[+] Step 9. Configure the BOE tuneup script

The **tuneup_boe.bat** script launches automatically after VM startup.

1. Enter the BOE license code (Genesys does not provide this).
2. Wait for the BOE tuneup script to finish and close (the script can take 30 minutes or more to complete).
3. When it completes, restart the VM.

[+] Step 10. Configure Windows Server for the VM

Important

Make sure the BOE configuration script has already run before completing this step.

1. In the **Initial Configuration Tasks** window, click **Set time zone**.
 - Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
2. Set up licenses by placing the Flex LM license file (acquired in the previous step) in the **GCTI\flexlm** folder.
3. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
 - In the **System Properties** window, click **Change**.
 - In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
 - Click **OK**.
 - Restart the VM.

[+] Step 11. Verify the IP address of the VM

1. Verify the VM IP address is correct by doing the following:
 - Run the Windows command `ipconfig/all`. If the host received proper IP configuration from your DHCP Server, the values will match your network settings.
 - Verify that the server can reach the remote host:

Ping an external server (such as a server you plan to use for your agent desktops) by running the command `ping <remote host name or IP address>`. The remote host must be reachable via ping and the output of the ping command looks similar to this example (note the shortened output and sample IP addresses; ping times may vary):

Pinging agent-desktop.domain.com [1.2.3.4] with 32 bytes of data:

Reply from 1.2.3.4: bytes=32 time<1ms TTL=128

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
Ping statistics for 1.2.3.4:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- From the remote host you just pinged, open the console window and issue the following command:

```
ping <remote host name or IP address>
```

Important

The VM host must be reachable and the output of the ping command must look similar to the example above.

[+] Step 12. Verify the status of Genesys services

1. Click **Start**.
2. Enter Services in the **Search programs and files** dialog box.
3. Select **Services** and locate groups of services with names starting with Genesys in the list of local services.
4. Confirm that all Genesys services have a status of *Started* with a startup type of *Automatic*, with the following exceptions:
 - Genesys DB Server [DBServer_OCS] (not started, Manual)
 - Genesys Outbound Contact Server [OCS] (not started, Manual)

[+] Step 13. Enter Configuration Manager details

1. On the VM console, click **Start** and select **All programs > Genesys Solutions > Framework > Configuration Manager > Start Configuration Manager**.
2. In the dialog box, enter:
 - User name: default
 - Password: password
 - Application: default
 - Host name: localhost
 - Port: 8888

Important

Before proceeding to the next step, ensure that Configuration Manager starts and its main window displays Environment and Resources objects.

Final steps

[+] Step 14. Backup the VM

Genesys recommends that you backup the VM by exporting it to an external location or device.

1. Open the vSphere Client.
2. Power off the VM.
3. In the vSphere client, highlight the target VM and select **File > Export > Export OVF Template**.
4. For the file format, select Single File (OVA).
5. Specify the output file name and location.
6. Export the file.

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| Multi-VM=

Multi-VM installation

Follow these instructions if you are installing the multi-VM environment for Business Edition Premise.

Before you begin

[+] Step 1. Confirm that you have the required licenses

Important

You require the following licenses before installing Business Edition Premise. If you do not have all required licenses, do not proceed with the installation steps.

- Three Windows Server 2008 license keys for activating Windows when starting each VM.
- One Genesys software license for either 100 or 300 agents.
- One Business Objects Enterprise (BOE) version 3.1 license key.
- One Microsoft SQL Server 2008 R2 64-bit license.

[+] Step 2. Provision the network

Provision the network to include:

- Five IP addresses within a single subnet and available on the Windows domain running DNS/DHCP services for the Virtual Machines (VMs); you also need to assign five hostnames for the VMs for entry into a DNS server
- One IP address within a management control subnet for Dell iDRAC configuration, to enable hardware alarming using email (the address must be able to access the customer corporate email server)
- One IP address within the same subnet and available on a Windows domain running DNS/DHCP services for ESXi server.

Hardware configuration

[+] Step 3. Set up hardware monitoring

Your Dell server includes an Integrated Dell Remote Access Controller (iDRAC) that monitors the server hardware and can send email notifications to help you avoid the data loss that *will* occur if two drives in the RAID array fail.

Warning

Failure to monitor the health of your RAID array can result in loss of data.
Ensure that you set up Dell hardware monitoring with email notification.

To configure the iDRAC to send email notifications:

1. Use a browser to log into the Dell iDRAC at `https://IP address/login.html`, where *IP address* is the management interface IP address or DNS entry name. Enter the username and password that you specified when configuring the iDRAC.
2. Navigate to **Alerts > Alerts Filter**.
 - Ensure that *only* **System Health**, **Storage**, **Warning**, and **Critical** are checked.
 - Uncheck the other five items.
 - Click **Apply**.
3. Under **Alerts and Remote System Log Configuration**, check the **Email** box in the heading for *each* of the 8 pages.
4. Select the **SNMP and E-Mail Settings** tab.
 - Under **Destination E-mail Addresses**, add up to four addresses to receive alert emails.
 - Check **State** for each address.
 - Click **Apply**.
5. Under **SMTP (E-Mail) Server Address Settings**:

- Enter the IP address or FQDN/DNS name of the corporate email server (authentication is optional).
 - Click **Apply**.
6. Under **Destination E-mail Addresses**:
 - Click **Send** to send an email alert to each of the configured accounts.
 - Verify that each account received the test email.
 7. Return to the **Alerts** tab. Enable alerts and click **Apply**.

[+] Step 4. Configure Time Zone and Network Time Protocol (NTP)

To configure the Time Zone and NTP settings:

1. Navigate to **Overview > iDRAC Settings > Properties > Settings**. The Time Zone and NTP page appears.
2. From the Time Zone drop-down menu, select the required time zone and click **Apply**.
3. Enable NTP, enter the NTP server addresses, and click **Apply**.

DHCP and DNS server assignment

[+] Step 5. Update DHCP and DNS servers for ESXi

Power on the ESXi server (if needed) and retrieve its MAC address (for setup in a DHCP server to assign an IP address and in a DNS server so the host name of the ESXi server can be associated to the assigned IP address when first connected to the network):

1. Open the ESXi console for your ESXi server and do the following:
 - Go to **<F2> Customize System/View Logs > Configure Management Network > Network Adapters/<D> View Details**.
 - Copy the MAC address.
2. Log into the customer DHCP server.
 - In the Command window, replace the existing MAC address for the ESXi server with the one you copied.
3. Restart the DHCP server.
4. Update the customer DNS server with new host name of the ESXi server and the IP address assigned from the customer pool of addresses and given out by their DHCP server.
5. Open a DOS prompt and confirm the DNS association by doing a Forward and Reverse nslookup, as follows:
 - nslookup <IP_address>
 - nslookup <hostname>

[+] Step 6. Update DHCP and DNS servers for VMs

Before you power on the VMs, retrieve the MAC address for each deployed VM (from VM properties) to populate the DHCP server and update the DNS server:

1. In the vSphere Client inventory, do the following for each VM:
 - Right-click the virtual machine and select **Edit Settings > Network adapter 1**.
 - Copy the MAC address.
2. Log into the DHCP server.
 - In the Command window, replace the existing MAC address for each VM.
3. Restart the DHCP server.
4. Update the customer DNS server with the new host name of each VM server and the IP address assigned from the customer pool of addresses and given out by their DHCP server.
5. Open a DOS prompt and confirm the DNS association by doing a Forward and Reverse nslookup, as follows:
 - nslookup <IP_address>
 - nslookup <hostname>

[+] Step 7. Configure NTP on the ESXi server to synchronize VMs

Configure an NTP (network time) daemon to synchronize the customer VMs:

1. In the vSphere Client, select the ESXi server, and then select the **Configuration** tab.
2. From the **Software** menu, click **Time Configuration** and select **Properties**.
3. Select **NTP Client Enabled** and then click **Options**. The **NTP Daemon (ntpd) Options** window opens.
4. In the **NTP Daemon Options** window, do the following:
 - Under **General**, select **Start and stop with host**.
 - Click **OK**.

Important

You must be back in the **Time Configuration** screen to do the next step.

- In the **Time Configuration** window, click **Options**.
 - Under **NTP Settings**, add an NTP Server in the customer time zone (the **NTP Server website** lists available NTP servers) and select **Restart NTP service to apply changes**.
 - Click **OK**.
5. Select **Options** and verify that the General settings are as follows:

- Status = **Running**.
- Startup Policy = **Start and Stop with Host**.
- The **Start** button appears in the Service Commands section.

6. Click **OK** to close the **NTP Daemon Options** and **Time Configuration** windows.

VM configuration

Important

You must power on and configure the core VM before powering on or configuring any of the other VMs.

CORE

[+] Step 8. Power on and configure the core VM

1. Power on the core VM.
2. In Windows setup, enter the locale and product key, accept the license terms, and change the password.
3. Confirm that the dialog for changing the user password at the first login appears. The Windows desktop loads and the tuneup script automatically runs.

Tip

If you enter incorrect information during the tuneup script configuration, Genesys recommends that you redeploy the core VM and begin the tuneup script configuration again. If you made a snapshot of the core VM prior to entering any data for the tuneup configuration script, you can revert to that snapshot. This approach can also be applied to the other VMs; however, if you redeploy the core VM (or revert to a snapshot), you must also redeploy the other VMs.

4. After the tuneup script launches automatically, enter values when prompted.

For the **Host** naming scheme:

- Select 1 to use default host names (g1-core-p, g1-ui-p, g1-db-p, g1-aux-p, g1-gvp-p).
Use this option for environments that you do not plan to extend and if the default naming convention suits your needs.
- Select 2 to use default host names with custom suffixes (such as g1-core-p-env1).
The script prompts you for the suffix. Use this option if default names with suffixes agree with your host naming convention.

Important

The suffix can contain no more than 4 characters.

- Select 3 to use custom names for each host (such as `newyork-core` and `newyork-ui`).

The script prompts you for each name, which should identify the role of the host (core, ui, db, aux, or gvp). Use this option if you need to conform to a customer naming convention.

Important

Each host name can contain no more than 15 characters.

For the **Domain** configuration:

This setting defines how the FQDN of the hosts is presented in Genesys Configuration; Genesys software uses these names when establishing network connections.

- Select 1 to have the tuneup script use the domain name that it detects automatically.
- Select 2 (Other domain name) to enter the domain name manually. When prompted, enter the domain name.
- Select 3 if your environment does not require a domain name. (Typically, this option is reserved for lab use on systems not running in a domain.)
- Rename? Yes
- Reboot? Yes

Important

Ensure that the core VM fully restarts before you proceed.

[+] Step 9. Configure Windows Server for the core VM

1. In the **Initial Configuration Tasks** window in the vSphere client on the core VM:
 - Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
2. Set up licenses by placing the Flex LM license file (acquired in the previous step) in the **GCTI\flexlm** folder.
3. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
 - In the **System Properties** window, click **Change**.

- In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
- Click **OK**.

4. Reboot the VM.

[+] Step 10. Verify the core IP address

1. Verify that the IP address of the core VM is correct:

- Run the Windows command `ipconfig/all`. If the host received proper IP configuration from your DHCP Server, the values will match your network settings.
- Verify that the server can reach the remote host:

Ping an external server (such as a server you plan to use for your agent desktops) by running the command `ping remote host name or IP address`. The remote host must be reachable via ping and the output of the ping command looks similar to this example (note the shortened output and sample IP addresses; ping times may vary):

```
Pinging agent-desktop.domain.com [1.2.3.4] with 32 bytes of data:
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Ping statistics for 1.2.3.4:
```

```
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
```

```
Approximate round trip times in milli-seconds:
```

```
Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- From the remote host you just pinged, open the console window and issue the following command:

```
ping core VM name or IP address
```

The core VM host must be reachable and the output of ping command must look similar to the example in the previous substep.

[+] Step 11. Verify the status of Genesys services

1. Click **Start**.
2. Enter Services in the **Search programs and files** dialog box.
3. Select **Services** and locate groups of services with names starting with Genesys in the list of local services.
4. Confirm that all Genesys services have a status of *Started* with a startup type of *Automatic*.

[+] Step 12. Enter Configuration Manager details for the core VM

1. On the console of the core VM, click **Start** and select **All programs > Genesys Solutions > Start Configuration Manager**.
2. In the dialog box, enter:
 - User name: default
 - Password: password
 - Application: default
 - Host name: localhost
 - Port: 8888

Important

Before proceeding to the next step, ensure that Configuration Manager starts and its main window displays Environment and Resources objects.

DB

[+] Step 13. Configure the db VM

You must configure the db VM first, followed by the remaining VMs (do not configure the **ui** VM until instructed to do so).

1. Power on the db VM.
2. In Windows setup, set the **locale**, enter the **product key**, accept the **license terms**, and change the **password**. To verify, use the same criteria as for the core server.
3. The tuneup script automatically launches. When prompted:
 - Enter the Primary Core Host **IP address** (do not use the host name).
4. The time zone is configured as part of the tuneup script (this only applies to the db VM).
 - Set the time zone for GIM in the format *Continent/City or Region*. (For a list of time zones, see the TZ column in [List of tz database time zones](#).)
5. Enter **Yes** to rename and restart the VM.

Important

Ensure that the VM fully restarts before you proceed.

[+] Step 14. Configure Windows Server for the db VM

1. In the **Initial Configuration Tasks** window in the vSphere client on the db VM:

- Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
2. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
 - In the **System Properties** window, click **Change**.
 - In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
 - Click **OK**.
 3. Reboot the VM.

AUX and GVP

[+] Step 15. Configure the aux and gvp VMs

For the gvp and aux VMs, do the following:

1. Power on the VM.
2. In Windows setup, set the **locale**, enter the **product key**, accept the **license terms**, and change the **password**. To verify, use the same criteria as for the core server.
3. Confirm that the dialog for changing the user password at the first login appears.
4. The Windows desktop loads and the tuneup script automatically runs. When prompted:
 - Enter the Primary Core Host **IP address** (do not use the host name).
5. **For the gvp VM only:** When prompted, specify the following as required for your VoIP media gateway (source and destination of VoIP traffic) configuration:
 - gateway-ip-address
 - gateway-port
6. Enter **Yes** to rename and restart the VM.

Important

Ensure that the VM fully restarts before you proceed.

[+] Step 16. Configure Windows Server for the aux and gvp VMs

1. In the **Initial Configuration Tasks** window in the vSphere client on the aux and gvp VMs:
 - Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
 2. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
-

- In the **System Properties** window, click **Change**.
- In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
- Click **OK**.

3. Reboot the VM.

[+] Step 17. Verify the gvp and aux IP addresses

1. For the gvp and aux VMs, verify that their IP addresses is correct:

- Run the Windows command `ipconfig/all`. If the host received proper IP configuration from your DHCP Server, the values will match your network settings.
- Verify that the server can reach the remote host:

Ping an external server (such as a server you plan to use for your agent desktops) by running the command `ping remote host name or IP address`. The remote host must be reachable via ping and the output of the ping command looks similar to this example (note the shortened output and sample IP addresses; ping times may vary):

```
Pinging agent-desktop.domain.com [1.2.3.4] with 32 bytes of data:
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Ping statistics for 1.2.3.4:
```

```
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
```

```
Approximate round trip times in milli-seconds:
```

```
Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- From the remote host you just pinged, open the console window and issue the following command:

```
ping <remote host name or IP address>
```

UI

[+] Step 18. Configure the ui VM

Important

Configure the ui VM only after you have configured all other VMs.

1. Power on the VM.
2. In Windows setup, set the **locale**, enter the **product key**, accept the **license terms**, and change the **password**. To verify, use the same criteria as for the core server.
3. The UI tuneup script automatically launches. When prompted:

- Enter the Primary Core Host **IP address**.
- Enter **Yes** to rename and restart the VM. Ensure that the ui VM fully restarts before you proceed.

{ {NoteFormat}After the ui VM restarts, the tuneup script for BOE (tuneup_boe.bat) runs automatically. Do not respond to the prompts at this time. Minimize the script window and continue to the next steps.

[+] Step 19. Configure Windows Server for the ui VM

Important

You must complete this step before configuring the BOE script.

1. In the **Initial Configuration Tasks** window in the vSphere client on the ui VM:
 - Set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
2. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
 - In the **System Properties** window, click **Change**.
 - In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
 - Click **OK**.
 - Reboot the VM.

{ {NoteFormat}After the ui VM restarts, the tuneup script for BOE (tuneup_boe.bat) runs automatically. Do not respond to the prompts at this time. Minimize the script window and continue to the next steps.

[+] Step 20. Verify the ui IP address

1. Verify the ui VM IP addresses is correct by doing the following:
 - Run the Windows command `ipconfig/all`. If the host received proper IP configuration from your DHCP Server, the values will match your network settings.
 - Verify that the server can reach the remote host:

Ping an external server (such as a server you plan to use for your agent desktops) by running the command `ping <remote host name or IP address>`. The remote host must be reachable via ping and the output of the ping command looks similar to this example (note the shortened output and sample IP addresses; ping times may vary):

```
Pinging agent-desktop.domain.com [1.2.3.4] with 32 bytes of data:
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

```
Reply from 1.2.3.4: bytes=32 time<1ms TTL=128
```

Ping statistics for 1.2.3.4:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

- From the remote host you just pinged, open the console window and issue the following command:

```
ping <remote host name or IP address>
```

[+] Step 21. Configure the BOE tuneup script

The `tuneup_boe.bat` script runs automatically during ui VM startup and should be minimized on your desktop. Restore the script window and do the following:

1. Enter the BOE license code (Genesys does not provide this).
2. Wait for the BOE tuneup script to finish and close (the script can take 30 minutes or more to complete).
3. In the **Initial Configuration Tasks** window, set the time zone in the format *Continent/City or Region*. For a list of time zones, see the TZ column in [List of tz database time zones](#).
4. If your environment uses a domain, you can add it by doing the following:
 - Click **Provide computer name and domain**.
 - In the **System Properties** window, click **Change**.
 - In the **Computer Name/Domain Changes** window, select **Domain** and enter the domain name.
 - Click **OK**.
5. In the Windows security window, enter the administrator ID and password.
6. Restart the VM.

Final steps

[+] Step 22. Backup the VMs

Genesys recommends that you backup the VMs by exporting them to an external location or device.

1. Open the vSphere Client.
2. For each VM, do the following:
 - Power off the VM.
 - In the vSphere client, highlight the target VM and select **File > Export > Export OVF Template**.
 - For the file format, select **Single File (OVA)**.
 - Specify the output file name and location.
 - Export the file.

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