# GENESYS™

# Business Edition Premise Provider's Guide

## Off-site installation

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This topic describes the steps required to install Business Edition Premise on a server before it is delivered to the customer site. After you successfully complete these steps, the off-site portion of the Business Edition Premise installation is complete and you can proceed to the on-site portion of the installation, to be performed at the customer site.

<multistep> Procure the required hardware=

## Hardware requirements

The hardware required to run Business Edition Premise depends on the number of agents in the contact center.

### 100 to 300 agents

| Requirement | Minimum configuration |
|---|---|
| Server type | Dell PowerEdge R720 or Genesys BEP300 |
| Processor | Intel Xeon E5-2665 2.40 GHz, 20 M Cache, 8.0 GT/s QPI, Turbo, 8 C, 115 W, Max Mem 1600 MHz |
| Additional processor | Intel Xeon E5-2665 2.40 GHz, 20 M Cache, 8.0 GT/s QPI, Turbo, 8 C, 115 W |
| Memory (RAM) | 96 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 5.1 |

### Fewer than 100 agents

| Requirement | Minimum configuration |
|---|---|
| Server type | Dell PowerEdge R420 or Genesys BEP100 |
| Processor | Intel Xeon E5-2470 2.30 GHz, 20 M Cache, 8.0 GT/s QPI, Turbo, 8 C, 95 W, Max Mem 1600 MHz |
| Additional processor | Intel Xeon E5-2470 2.30 GHz, 20 M Cache, 8.0 GT/s QPI, Turbo, 8 C, 95 W |
| 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 5.1 |

|-| 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 ESXi5.1 server.

|-| 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`

  The default iDRAC username and password are as follows:

  **Username:** root

  **Password:** calvin

  For more information about iDRAC, see the Dell Owner's Manual for your R720 or R420, particularly the section "iDRAC Settings Utility", and also the iDRAC7 User's Guide available at Dell product support.

|-| Obtain licenses= Obtain the following licenses:

- One Microsoft SQL Server 2008 R2 64-bit license with 50 client access licenses 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 Server ESXi 5.1 license.

- 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.

|-| Configure the server=

## 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.

Configure the Dell or Genesys server by completing the following steps:

1. Configure the RAID array:

   - Press **<CTRL>** + **<R>** during POST to enter the RAID Configuration Utility.

   - Confirm that RAID is configured as RAID 5 with a single hot spare drive.

   - Enable RAID controller caching.

   - Under the **Advanced Settings** menu for the virtual disk, set the write policy to **write-back** and the read policy to **read-through**.

2. Modify the boot sequence for the server:

   - Press **F2** during POST to enter the system BIOS.

- From the BIOS menu, select **System Setup Main Menu** > **System BIOS** > **Boot Settings** > **Bios Boot Settings** > **Hard-Disk Drive Sequence**.

- Move **Integrated RAID Controller 1:PERC H710P Mini(bus 01 dev 00)** to the top of the list.

3. Install VMware vSphere 5.1 Standard ESXi Server, using the license you procured. Give the server a unique name such as bep_*location*.
   See VMware vSphere ESXi and vCenter Server 5.1 Documentation (open in a new window or tab).

4. 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.

|-| Obtain the templates= Obtain the five OVA VM templates for importing into the ESXi Server (from either a network drive on the same subnet as the ESXi Server or from a Genesys-supplied hard drive). |-| Install a VMware vSphere 5.1 Client= Install a VMware vSphere 5.1 Client on any Windows workstation that has network connectivity to the ESXi Server.

> ## Important
> The ESXi server must be powered on.

1. Open a browser and enter the IP address assigned to the ESXi server.
   The **VMware ESXi Welcome** page appears.

2. Click the download link for the VMware Sphere client to download and install.

For more information, see the VMware vSphere ESXi and vCenter Server 5.1 Documentation (open in a new window or tab). |-| Deploy the VMs=

1. To deploy the VMs onto the ESXi server, log in to the vSphere Client workstation as a user with ESXi administrator rights.

2. Open the vSphere client and deploy the five VMs: aux, core, db, gvp, ui.
   The VM names use the format *VM role-platform-product version-language code*; for example, `g1-core-p-win2008r2std_sp1-8110020-enus`. **Important**: Do not change the format.

**Dell R420 or Genesys BEP100 memory allocation:** The default memory allocation for each VM applies to the Dell R720 or Genesys BEP300 and its 96GB 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 |

|-| Enable VM restoration= To enable restoration of the VMs in case problems arise, you can take a snapshot of each 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 (open in a new window or tab). |-| Confirm that the VMs start= Power on each VM and confirm that the VM 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 customer 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.

|-| 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. Login to iDRAC and confirm the following:
   - Verify a RAID 5 configuration (6 disks plus 1 hot spare).
   - Verify that the storage controller card is model H710P.
   - Confirm that disk sizes are 300 GB, 15K, SAS.
2. Connect to the ESXi server with a vSphere client and confirm that all five VMs are deployed and able to start.
   - Verify that the ESXi server has all CPUs (>= 16 CPUs) and RAM (96 GB)
   - Verify that the five VMS are present (aux, core, db, gvp, ui), with snapshots for each.

- The MAC address for the g1-core-p VM is obtainable (used for ordering appropriate Genesys licenses).

- If your deployment is a Dell 420 or BEP 100 (100 agents), the memory and CPU for VMs must be adjusted according to the table shown in the step for deploying the VMs.

- Verify that all VMs are the same version. If you deployed the VMs according to the steps described in this documentation, the version is included in the name of the VM.

</multistep> Next: On-site installation.