Overview

The SBC SWe Lite is a Microsoft-certified virtualized Session Border Controller (SBC) designed to provide small and mid-sized businesses interworking, security, and survivability for unified communications. The SWe Lite is available for deployment in Azure Marketplace as a BYOL (Bring Your Own License); it will be created as a virtual machine (VM) hosted in Azure.

These instructions include how to configure and deploy the SBC SWe Lite in Microsoft Azure cloud. All configuration commands are via Azure Portal; the equivalent Powershell configuration comments are referenced here: Using Powershell Commands to Add Resource Groups and Virtual Networks in Azure.

Figure 1: SWe Lite in Azure - Network Topology

Step 1: Review Prerequisites
This section details the Microsoft Azure cloud computing requirements for hosting the SWe Lite VM and SWe Lite related resources.

**Microsoft Azure Subscription**

A Microsoft Azure subscription (with credit) is required. Refer to [Microsoft Azure](#).

**Azure Requirements for SWe Lite Virtual Machine**

**Figure 2: Azure Requirements for SWe Lite Virtual Machines**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource group</td>
<td>Required by Azure to host the SWe Lite VM and SWe Lite related resource. Resource types are assigned into a resource group. Configuring a resource group is included in the instructions below.</td>
</tr>
<tr>
<td>Virtual network</td>
<td>Interconnects SWe Lite with other equipment, inside and outside Azure. Minimum of 1 Virtual Network(s) required. Instructions for adding a virtual network are included below.</td>
</tr>
<tr>
<td>Virtual subnet</td>
<td>Hosts the SWe Lite IP addresses (SWe Lite support 2 to 5 Network Adapters that require separate subnets). Minimum of 2 Virtual Subnets required. Instructions for adding a virtual subnet are included below.</td>
</tr>
<tr>
<td>Azure Virtual Machine</td>
<td>Refer to <a href="#">Virtual Machine Requirements - Microsoft Azure</a>.</td>
</tr>
</tbody>
</table>

**Step 2: Create Resource Group**

When creating the Azure resource, Ribbon recommends always using the same resource location.

The Resource Group contains the necessary configuration for Azure to host the SWe Lite VM and the SWe Lite related resources. To deploy a SWe Lite in the Microsoft Azure cloud, the resource group is required for a Virtual Machine (VM).

Create a Resource Group via Azure portal as follows:

1. Connect to the Azure portal. Refer to [portal.azure.com](#).
2. From the menu, click **Resource groups**. For configuration of a Resource Group via Powershell refer to: [Using Powershell Commands to Add Resource Groups and Virtual Networks in Azure](#).
3. Click **Add**.

**Figure 3: Add Resource Group via Portal**
4. Enter the Resource Group Name and click **Review and Create**. The Resource Group is validated.

**Figure 4:** Add Resource Group via Portal

5. Click **Create**. The Resource Group is added and listed in the list of Resource Groups.

**Figure 5:** Resource Group List
**Step 3: Create a Virtual Network and a Virtual Subnet**

The Virtual Network interconnects SWe Lite with other equipment inside and outside Azure. The Virtual Subnet hosts the SWe Lite IP addresses and are interconnected by the previously created Virtual Network. The SBC SWe Lite requires at least two Virtual Subnets, one for management and one for signaling/media. Even though management operations can be performed through the signaling/media subnet, for security reasons, Ribbon recommends disabling HTTP/HTTPS on the signaling/media subnet via ACL.

Create a Virtual Network and a Virtual Subnet via Azure Portal

2. From the main menu, select Virtual Networks. For configuration of a Virtual Network and Virtual Subnet via Powershell refer to: Using Powershell Commands to Add Resource Groups and Virtual Networks in Azure
3. Click the Add button.

**Figure 6: Create Virtual Networks**

4. Enter the Virtual network information. See below for example entries.

**Figure 7: Create Virtual Network**
5. Click **Create**. The Virtual network is added and listed in the list of Virtual networks.

*Figure 8: Add Virtual Network*
6. From the list of virtual networks, click on the newly created Virtual network (i.e., **SWElite-Network**).

7. From **Settings**, select **Subnets**.

**Figure 9: Select Subnet**

8. Click **+Subnet**. The **Add subnet** window is displayed.

9. Enter the required information.

**Figure 10: Add Subnet Window**

10. Click **OK**. The subnet is added to the list of subnets.
Step 4: Deploy SWe Lite From Azure Marketplace

When the SBC SWe Lite image is deployed via Azure Marketplace, the image automatically appears in the general list of available images in Azure Portal. The single image can be used to deploy multiple SBC SWe Lite instances.

Configuration Notes
- For configuration, Ribbon recommends using a Premium SSD Disk Drive and Non-accelerated networking.
- Configuration examples for fields are displayed (i.e., IP address, subnet, etc); configure these fields to match your specific deployment.

Configure the SBC SWe Lite VM via Azure Portal as follows:

2. From the menu, click Create a Resource.
3. In the search bar, enter Ribbon and click <Enter>. Select Ribbon Session Border Controller (SBC) SWe Lite and click Enter.
4. Review the product description and click **Create**.

**Figure 13: Product Description**

5. In the **Basics** tab, configure the fields as described below.

6. From the **Resource group** drop down list in the left side menu, select the Resource Group created previously (i.e., **SWeLite-RG**)

7. In **Virtual machine name** field, enter **SWeLite**.

8. In **Size**, click **Change size** to select the applicable VM size. To determine the required VM size, refer to **Calculating Virtual Machine Requirements for an SBC SWe Lite**. Supported VM sizes include:
   a. B1ms
   b. F1s
   c. F2s
   d. F4s

To view recommended VM sizes, refer to **Virtual Machine Requirements - Microsoft Azure**.
9. In **Authentication Type**, click on **Password**.
10. Enter **Username**, **Password**, and **Confirm Password**.

**Figure 14: Create a virtual machine - Basics**

11. Click **Next: Disks**.
12. From **OS disk type** drop down list, select **Premium SSD**.

**Figure 15: Select Premium SSD**
13. Click **Next: Networking**.

14. Review and verify the default fields.

**Figure 16: Create a virtual machine - Networking**

15. Click **Review + Create**.

16. A screen indicates validation of the VM has passed.

**Figure 17: Validation Passed**

17. Click **Create**. A VM status is displayed.
Figure 18: Create VM

When finished, this message is displayed: **Your deployment is complete.**

18. From the main menu, select **Virtual Machines**. The newly created SBC SWe Lite instance is displayed.

Figure 19: Select Virtual Machines

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**Step 5: Create/Assign Signaling Network Interface on SBC SWe Lite**

The SBC SWe Lite requires at least two Network Interfaces to function at the minimum, one for management and one for signaling/media.

Assign Additional Network Interface via Azure Portal as follows:

2. From the menu, select **Virtual Machines**
3. From the list of VMs, click the check box next to the desired SBC SWe Lite VM.
4. From the main menu select **Stop** and then **Yes** to acknowledge stopping the VM. Wait for the VM status to be **Stopped (Deallocated)**, which can sometimes take a few minutes. Alternatively, right-click on the desired VM and select **Stop**.

Figure 20: SWe Lite VM - Stop function
5. Click on the desired VM to view the settings.

6. From Settings > Networking, click Attach network interface.

7. Click Create network interface.

Figure 21: Select SWe Lite

8. In the Create network interface window, enter the required information. Ensure you enter the signaling subnet address configured previously.

Figure 22: Create Network Interface
9. Click **Create**.

10. Click **Attach network interface** and select the newly created Network Interface. Click **OK**.

**Figure 23**: Create Network Interface

11. Confirm that your VM has two NICs.

**Figure 24**: Confirm NICs

12. From the list of VMs, select the SBC SWe Lite VM.
13. From the main menu select **Start** (alternatively, right-click on the desired VM and select **Start**).

**Step 6: Connect to SBC SWe Lite via Azure Portal**

Connect to the SBC SWe Lite via Azure Portal as follows:

2. From the menu, click **Virtual Machines**.
3. Click on the newly created **SBC SWe Lite**.
4. From **Settings**, select **Networking**.
5. Under **Inbound port rules**, restrict the HTTP and HTTPS access to public and private address. See below.

> To ensure the management interface for the SBC SWe Lite can only be reached from the IP address(es) you specify, restrict the HTTP and HTTPS access to your personal IP address (per previous step).

**Figure 25: HTTP Configuration**

**Figure 26: HTTPS Configuration**

6. Click **Save**.
Step 7: Run Initial Setup

Proceed to SBC SWe Lite Initial Setup for initial configuration and next steps, which include how to access the WebUI and options to extend the SBC SWe Lite trial indefinitely. One initial setup is complete, return here to Step 8.

By default, Azure designates the VM’s first network’s Interface as the primary network interface. Only the primary network interface receives a network default gateway and routes via DHCP. The first network interface on the SWe Lite is recommended to be used only for management. Media traffic routed to this interface will not be processed. To avoid this problem, you must either:

- Create a Static Route(s) on the SWe Lite to route signaling/media traffic to the Media (non admin) interface(s).
- Change the primary network interface assignment from the Management interface to the Media interface. Refer to Change Azure Default Route

Step 8: Run Easy Configuration

The SBC Edge is configured via Easy Configuration Wizard.

1. Access the WebUI. Refer to Logging into the SBC Edge.
2. Click on the Tasks tab.
3. From the left side menu, click SBC Easy Setup > Easy Config Wizard.
4. From the Application drop down box, select the relevant Easy Configuration wizard. Depending on your network, follow a relevant Easy Configuration wizard. Refer to the table below for guidance.

Table 1: Easy Configuration - Microsoft Teams Direct Routing Configuration

<table>
<thead>
<tr>
<th>Deployment Type</th>
<th>Public IP</th>
<th>Private IP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5. The configuration wizard is complete.

**Step 9: Test a Call**

Calls can be tested via the SWe Lite's WEB UI.

1. Access the SBC's WebUI. Refer to Logging into the SBC Edge.
2. In the WebUI, click the **Diagnostics** tab.
3. In the left navigation pane, under **Tools**, click **Test a Call**.

**Figure 28:** Testing a Call

4. Enter the **Destination Phone Number**. This is the destination number of the SIP or analog phone being called (called party number).
5. Enter the optional **Origination/Calling Number**. This number appears on the phone receiving the call as the calling party number to identify the call as the test call.
6. From the **Call Routing Table** drop down list, select a Call Routing Table. Ensure the Call Routing Table you select is configured properly. For information about Call Routing tables, see Managing Call Routing Tables.
7. Click **OK**.