



# ORACLE

## **DEPLOYING ORACLE SBC IN MICROSOFT AZURE PUBLIC CLOUD**

**Technical Application Note**

**ORACLE**  

---

**COMMUNICATIONS**



## Disclaimer

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

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## Intended Audience

This document is intended for use by Oracle Systems Engineers, third party Systems Integrators, and end users of the Oracle Enterprise Session Border Controller (E-SBC). It assumes that the reader is familiar with basic operations of the Oracle Communications Enterprise Session Border Controller and Azure Cloud Deployments.

## Document Overview

You can deploy the Oracle Communications Session Border Controller (OCSBC) on Azure public cloud. Azure provides multiple ways of managing your environment(s), including via its web portal, using its PowerShell and its CLI interfaces. This document focuses on the portal. The portal provides navigation via a web-page pane with links to specified functions on the left side of portal pages. These procedures also assume you have reviewed Azure documentation and can access portal pages and navigation.

## Related Documentation

### Oracle SBC

- [Oracle® Communications Session Border Controller Platform Preparation and Installation Guide](#)
- [Oracle® Enterprise Session Border Controller Web GUI User Guide](#)
- [Oracle® Enterprise Session Border Controller Configuration Guide](#)
- [Oracle® Enterprise Session Border Controller Release Notes](#)

### Microsoft Azure

- [Introduction to Azure](#)
- [Get started with Azure](#)
- [Azure security best practices and patterns](#)

## Requirements

### 1) A subscription for Azure portal

**Tip:** You can utilize the search bar at the top of the Azure portal to quickly locate any element, resource or document during configuration and deployment of the Oracle SBC in Azure Public Cloud.

## Create and Deploy on Azure

### Prerequisites to Deploying an Azure Instance

You can create some of the objects required during the SBC deployment procedure prior to or during the deployment. When created prior to SBC deployment, these objects become selectable, typically from drop-down lists in the appropriate deployment dialogs. You may use these objects for a single deployment or for multiple deployments.

These Objects are as follows:

- 1) Resource Group
  - i) Subscription
  - ii) Region
- 2) Networking
  - i) Virtual Networks
  - ii) Subnets
  - iii) Network Security Groups

### Resource Group

Resource group is a container that holds related resources like storage accounts, virtual networks, and VMs for an Azure solution. In Azure, you logically group related resources to deploy, manage, and maintain them as a single entity.

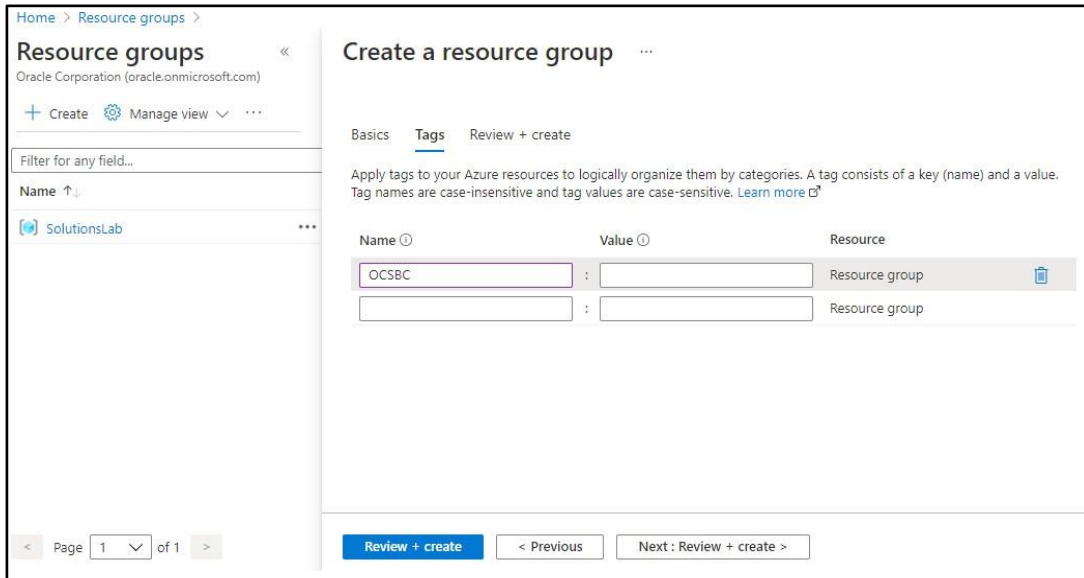
### Creating a Resource Group

From the Azure Portal Home Page, on the left side, select “Resource Group”, and then click “Add”

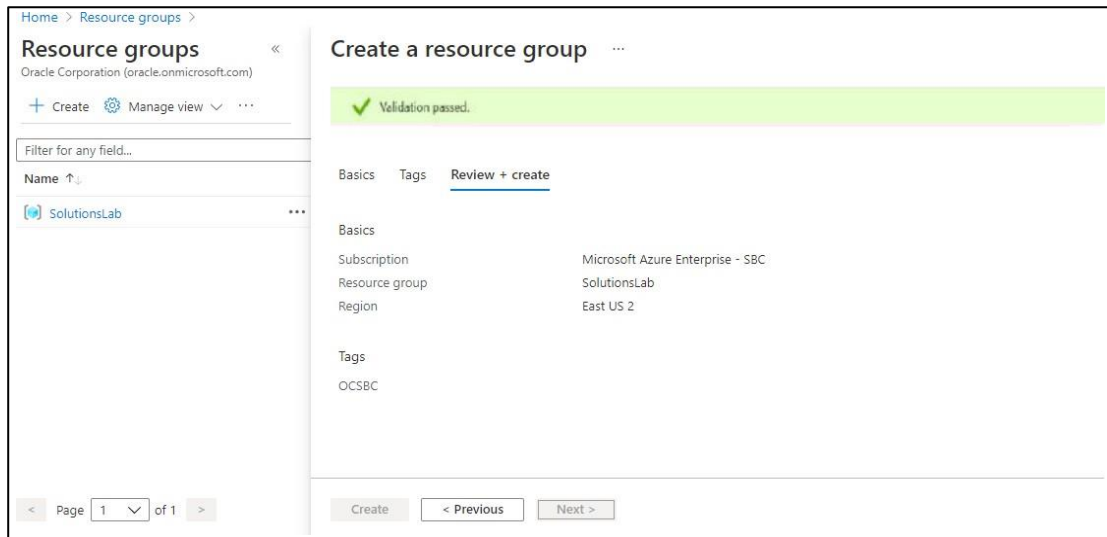
- Choose the correct Subscription from the drop down,
- Give the resource group a name
- Select the region that is right for you and your customers.
- At the bottom, click “Next : Tags”

The screenshot shows the Azure Portal interface for creating a resource group. The breadcrumb navigation at the top indicates the path: Home > Resource groups > Create a resource group. The page title is "Create a resource group" with a three-dot menu icon. Below the title, there are tabs for "Basics", "Tags", and "Review + create". The "Basics" tab is active. A descriptive paragraph explains that a resource group is a container for related resources. Below this, the "Project details" section contains three fields: "Subscription" (a dropdown menu showing "Microsoft Azure Enterprise - SBC"), "Resource group" (a text input field containing "SolutionsLab"), and "Region" (a dropdown menu showing "(US) East US 2"). At the bottom of the form, there are three buttons: "Review + create" (highlighted in blue), "< Previous", and "Next: Tags >". The left sidebar shows the "Resource groups" section with a search filter and a list containing "SolutionsLab".

- Enter a unique identifier under name
- Click Next: Review + Create



- Review the information and click Create



## Network Security Groups

Network Security Groups are used to provide traffic control at the packet level. You can filter network traffic to and from Azure resources in an Azure virtual network with a network security group. A network security group contains security rules that allow or deny inbound network traffic to, or outbound traffic from, several types of Azure resources.

For more detailed information, please see:

[Enable Network Security Groups in Azure Security Center](#)

## Creating Network Security Groups

For Oracle SBC deployment in Azure, each Security Group specifies the type of traffic allowed on a particular type of subnet. **The SBC has 3 types of vNICs, including management (wancom0), and Media (s0p0, s1p0 etc).** To maintain traffic separation, each of the vNICs should be connected to a separate subnet that can be configured and assigned to the Oracle SBC in Azure.

From Azure's navigation list on the left side of the portal, click Create a resource, Networking, Network Security Group.

## Management Security Rules

Configure the following For Management Interface Network Security Group:

- Name
- Resource Group
- Location
- At the bottom, click “Next : Tags”

The screenshot shows the 'Create network security group' wizard in the Microsoft Azure portal. The 'Basics' tab is selected, and the following fields are visible:

- Project details:**
  - Subscription: Microsoft Azure Enterprise - SBC
  - Resource group: SolutionsLab
- Instance details:**
  - Name: SolutionsLab-MGMT-Security
  - Region: East US 2

At the bottom of the form, there are four buttons: 'Review + create' (highlighted in blue), '< Previous', 'Next : Tags >', and 'Download a template for automation'.

- Enter a unique identifier under name
- Click Next: Review + Create

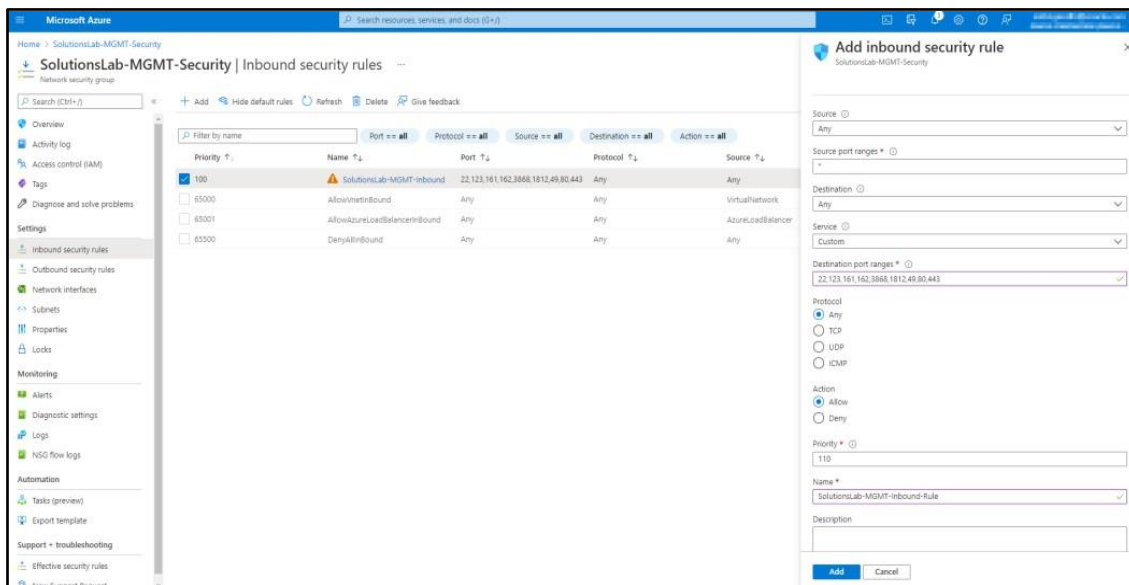
Once the security group is created, you should see it under Home/Recent Resources. Open it.

Under Settings, click on “inbound security rules”, then “add”

The following TCP/UDP protocols and/or ports should be opened for the Management Interface NSG.

Please note, the port matrix below is an example only. The ports opened during installation should depend on the environment needs and user preferences.

Protocol	Port	TCP	UDP
SSH	22	X	
SNMP	161/162	X	X
Radius	1812	X	X
NTP	123		X
HTTPS	443	X	
HTTP	80	X	
Tacacs	49	X	
Diameter	3868	X	



- Click “Add” at the bottom

Next, follow the same procedure as above to create a second inbound security rule for ICMP traffic, using the following parameters:

- Source: Any
- Source Port Ranges: \*
- Destination: Any
- Destination Port Ranges: \*
- Priority: 130
- Name: MGMT\_ICMP



## Media Security Rules

Following the same procedure above under Creating Network Security Groups, configure the following for the Media Interface Network Security Group:

- Name
- Resource Group
- Location
- At the bottom, click “Next : Tags”

The screenshot shows the 'Create network security group' wizard in the Microsoft Azure portal. The 'Basics' tab is selected, and the following information is entered:

- Subscription:** Microsoft Azure Enterprise - SBC
- Resource group:** SolutionsLab
- Name:** SolutionsLab-Media-Security
- Region:** East US 2

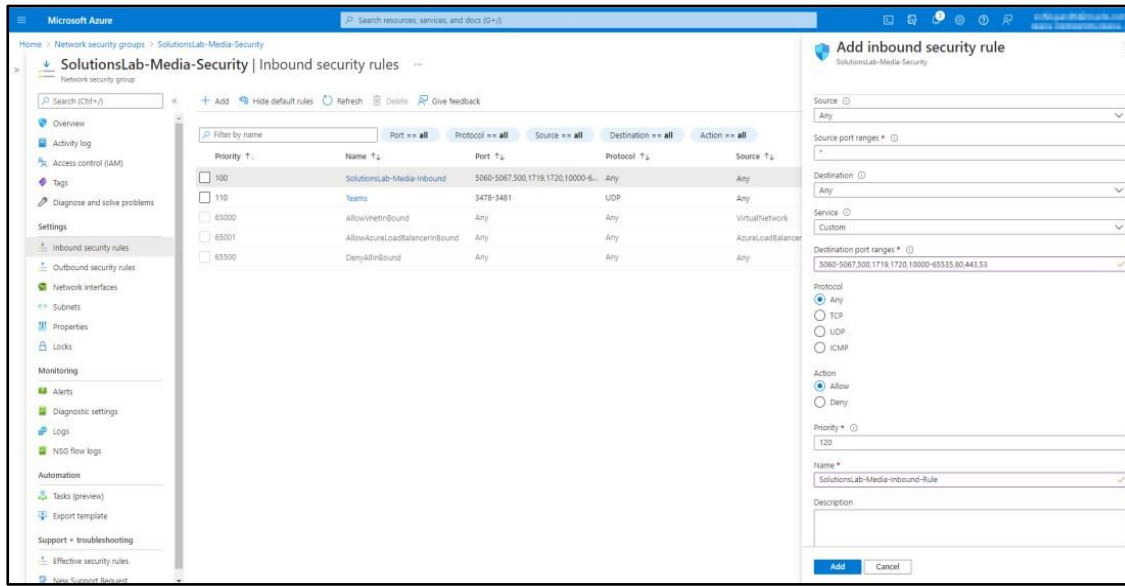
The 'Next : Tags >' button is highlighted, indicating the next step in the process.

- Enter a unique identifier under name
- Click Next: Review + Create

The following TCP/UDP protocols and/or ports should be opened for the Media Interface NSG. This is not a complete list but should work for most applications.

Please note, the port matrix below is an example only. The ports opened during installation should depend on the environment needs and user preferences.

Protocol	Port	TCP	UDP
IKE	500		X
SIP	5060	X	X
SIPS	5061	X	
H.323	1719	X	X
H.323	1720	X	
RTP	10000-65535	X	X



- Click “Add”

## Virtual Networks

Azure Virtual Network enables many types of Azure resources, such as Azure Virtual Machines (VM), to securely communicate with each other, the internet, and on-premises networks. A virtual network is scoped to a single region; however, multiple virtual networks from different regions can be connected together using Virtual Network Peering.

**To deploy the SBC in a particular Resource Group, at least one virtual network (VN) must be created.**

## Creating a Virtual Network

From the Azure portal Home Screen, Select “Virtual networks” from the left side menu, then click “Add”:

Provide the following information in the designated fields:

- Subscription
- Resource Group (created above)
- Virtual Network Name
- Region (same as Resource Group location)
- At the bottom, click “Next : IP Addresses”

Home > Virtual networks >

## Create virtual network ...

Basics Security IP addresses Tags Review + create

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \*

Resource group \*  [Create new](#)

### Instance details

Virtual network name \*

Region \*  [Deploy to an Azure Extended Zone](#)

You can select the appropriate values in Security tab.

Microsoft Azure Search resources, services, and docs (G+)

Home > Virtual networks >

## Create virtual network ...

Basics **Security** IP addresses Tags Review + create

Enhance the security of your virtual network with these additional paid security services. [Learn more](#)

### Virtual network encryption

Enable Virtual network encryption to encrypt traffic traveling within the virtual network. Virtual machines must have accelerated networking enabled. Traffic to public IP addresses is not encrypted. [Learn more](#)

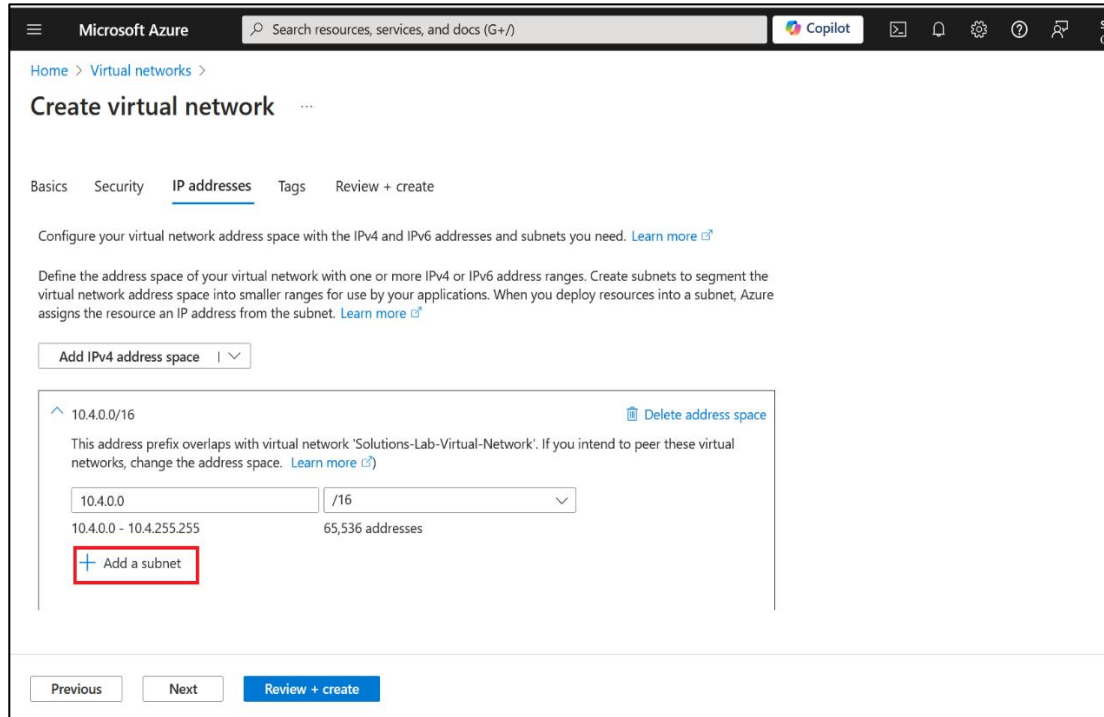
Virtual network encryption

### Azure Bastion

Azure Bastion is a paid service that provides secure RDP/SSH connectivity to your virtual machines over TLS. When you connect via Azure Bastion, your virtual machines do not need a public IP address. [Learn more](#)

Enable Azure Bastion

- IPv4 Address Space: (Ex..10.4.0.0/16)



We'll also be creating the first subnet which will be used for the management interface (wancom0) of the SBC instance

- Click Add Subnet
- Subnet Name
- Subnet Address Range: (Ex..10.4.1.0/24)
- Click Add

**Add a subnet**

Select an address space and configure your subnet. You can customize a default subnet or select from subnet templates if you plan to add select services later. [Learn more](#)

Subnet purpose: Default

Name: OracleSBC\_MGMT

**IPv4**

Include an IPv4 address space:

IPv4 address range: 10.4.0.0/16  
10.4.0.0 - 10.4.255.255

Starting address: 10.4.1.0

Size: /24 (256 addresses)

Subnet address range: 10.4.1.0 - 10.4.1.255

**IPv6**

Include an IPv6 address space:  This virtual network has no IPv6 address ranges.

**Private subnet** PREVIEW

[Give feedback](#)

- At the bottom, click “Next : Tags”
- Enter a unique identifier under name

**Microsoft Azure** Search resources, services, and docs (G+)

Home > Virtual networks >

**Create virtual network**

Basics IP Addresses Security **Tags** Review + create

Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

Name	Value
SolutionsLab	

[Download a template for automation](#)

- Click “Next : Review + Create” and the Virtual network is created successfully.

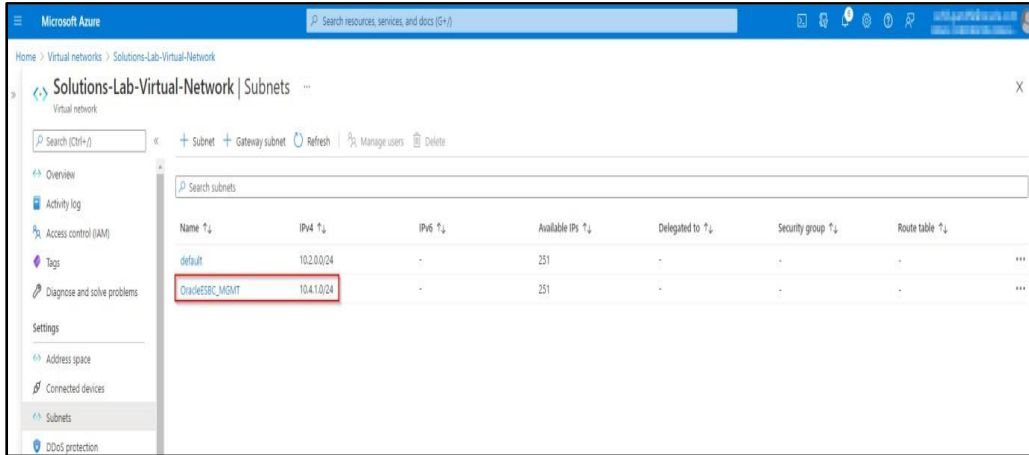
Once the Virtual network is successfully created, open it by clicking on the virtual network name, from here we will create the additional subnets needed for deployment.

## Creating Additional Subnets

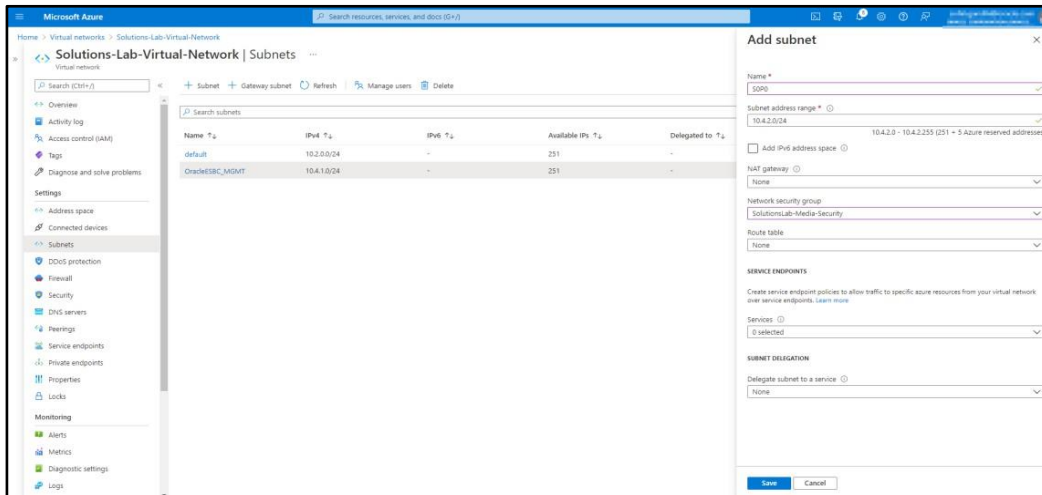
In this document, the Oracle SBC has 2 types of vNICs

- Management (wancom0)
- Media (s0p0, s1p0 etc.)

To maintain traffic separation, each of the vNICs should be connected to a separate subnet. Once you are in the Virtual Networks Dialog, click Subnets (in the settings section)



- At the top, click “+Subnet”
- Name (SOP0)
- Address Range (CIDR block) (10.4.2.0/24)
- Network Security Group: (SolutionsLab-Media-Security)
- Click “Save”



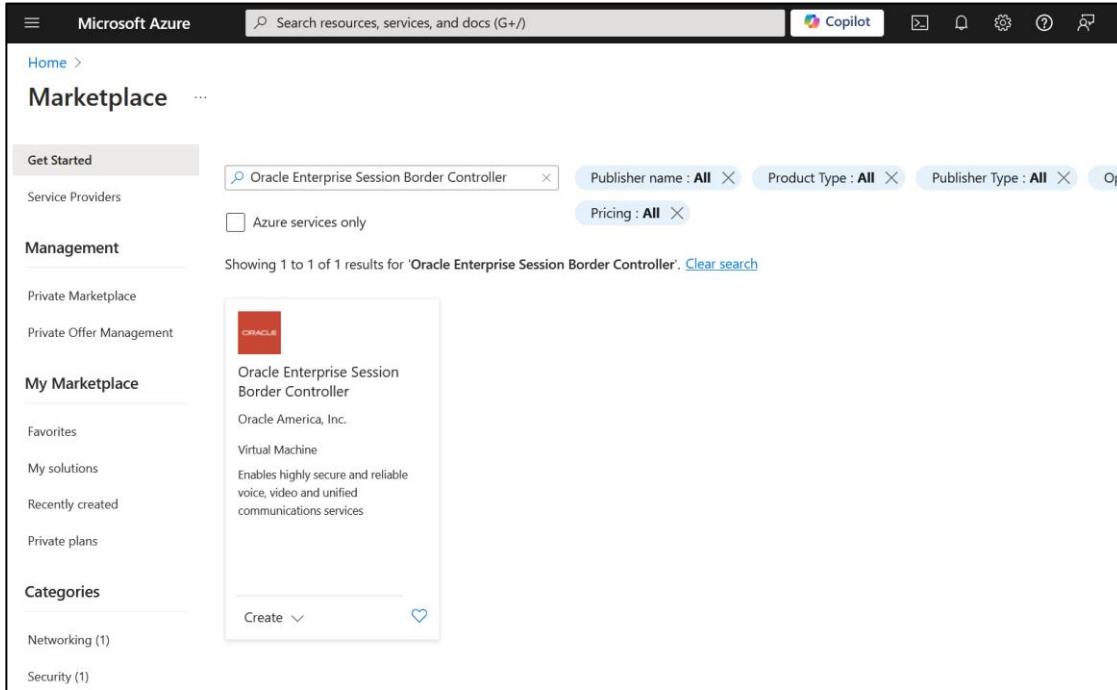
Repeat these steps to create additional subnets for your deployment needs. For the purpose of this example, we'll create one additional subnet with name of S1P0, and Address range of 10.4.3.0/24 to be used for a second media interface.

Name	IPv4	IPv6	Available IPs	Delegated to	Security group	Route table
default	10.2.0.0/24	-	251	-	-	-
S0P0	10.4.2.0/24	-	251	-	SolutionsLab-Media-Security	-
OracleESBC_MGMT	10.4.1.0/24	-	251	-	SolutionsLab-MGMT-Security	-
S1P0	10.4.3.0/24	-	251	-	SolutionsLab-Media-Security	-

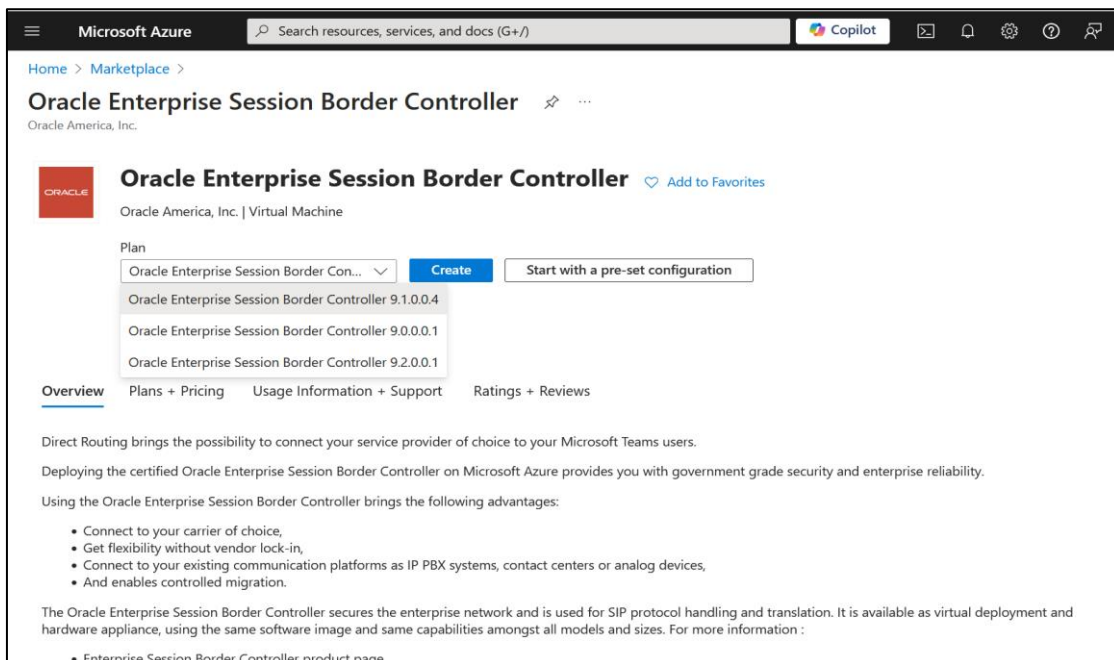
## Create a Virtual Machine

This is the main instance configuration procedure. It includes a multi-dialog wizard that presents configuration options in the preferred sequence. The result of this wizard is an installed, operational OCSBC. You add media interfaces after deployment.

- From the Marketplace, at the marketplace search bar, search for “Oracle Enterprise Session Border Controller”



- Select “Oracle Enterprise Session Border Controller” and this should bring you the screen from where you can create the SBC (we have 9.0, 9.1 and 9.2 as of now)





- Click “Create” and follow the below sequence of steps to create a VM

The instance deployment wizard sequence includes:

1. Basics
2. Disks
3. Networking
4. Management
5. Monitoring
6. Advanced
7. Tags
8. Review and Create

**Your Azure workspace may present dialogs and fields that differ from this procedure. For full information on deploying Azure instances, see the Azure documentation.**

## Basics

You will need to provide:

- Resource Group
- Virtual machine Name
- **Image should be populated with Marketplace image name (E.g., Oracle Enterprise Session Border Controller 9.2.0.0.1 - x64 Gen1)**
- Size: You must research size types and select the type you prefer prior to deployment, as it cannot be changed after deployment. For a list of Azure instances you can use for OCSBC, please see the [Platform and Preparation Guide](#).
- Administrator Account (Create SSH public key pair and store it for future use in order to connect to your virtual machine)
- Inbound Port Rules (Check off all available in the drop-down menu under this field)

The screenshot shows the 'Create a virtual machine' wizard in the Microsoft Azure portal. The breadcrumb navigation is 'Home > Marketplace > Oracle Enterprise Session Border Controller >'. The main heading is 'Create a virtual machine'. Below the heading, there is a blue banner with a Copilot icon and the text 'Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.' Below this banner are three buttons: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. The form fields are as follows:

Subscription *	Microsoft Azure Enterprise - SBC
Resource group *	SolutionsLab <a href="#">Create new</a>
<b>Instance details</b>	
Virtual machine name *	OracleESBC
Region *	(US) East US 2
Availability options	Availability zone
Availability zone *	Zone 1

Below the form fields, there is a note: 'You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)'

At the bottom of the form, there are three buttons: '< Previous', 'Next : Disks >', and 'Review + create'.

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Marketplace > Oracle Enterprise Session Border Controller >

## Create a virtual machine

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

Security type

Image \*   
[See all images](#) | [Configure VM generation](#)

VM architecture  Arm64  x64  
 Arm64 is not supported with the selected image.

Run with Azure Spot discount

Size \*   
[See all sizes](#)

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Marketplace > Oracle Enterprise Session Border Controller >

## Create a virtual machine

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

Administrator account

Authentication type  SSH public key  Password

SSH public key source

SSH Key Type  RSA SSH Format  Ed25519 SSH Format  
 Ed25519 offers better performance and security with a smaller key size, while RSA is

- Click "Next : Disks"

## Disks

- Disk configuration includes setting the OS disk type to Premium SSD

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal. The breadcrumb navigation is 'Home > Marketplace > Oracle Enterprise Session Border Controller >'. The page title is 'Create a virtual machine'. Below the title, there is a Copilot banner with three buttons: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. The main configuration area is titled 'OS disk' and includes the following settings:

- OS disk size: Image default (19 GiB)
- OS disk type: Premium SSD (locally-redundant storage)
- Delete with VM:
- Key management: Platform-managed key
- Enable Ultra Disk compatibility:

Below the OS disk settings, there is a section for 'Data disks for OracleESBC' with a note: 'You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.' At the bottom of the form, there are three buttons: '< Previous', 'Next: Networking >', and 'Review + create'.

- Click “Next: Networking”

## Networking

### Configuration Fields:

- Virtual Network
- Subnet (Select <your\_management\_subnet> from drop down)
- Public IP (give it a name or use default name provided)
- Network Security Group (move radio button to advanced, and select the MGMT NSG configured previously in this document)
- Accelerated Networking set to “Off”
- Load Balancing set to “No”

**Note:** It is recommended to disable Accelerated Networking on management interface.

Enable it for media network interfaces for low network latency and increased network performance but doing so might incur additional charges from Azure.

Refer <https://docs.microsoft.com/en-us/azure/virtual-network/create-vm-accelerated-networking-cli> for additional information related to Accelerated networking.

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Marketplace > Oracle Enterprise Session Border Controller >

## Create a virtual machine

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

[Help me create a low cost VM](#)
[Help me create a VM optimized for high availability](#)
[Help me choose the right VM size for my workload](#)

**Network interface**

When creating a virtual machine, a network interface will be created for you.

Virtual network \*  [Create new](#)

Subnet \*  [Manage subnet configuration](#)

Public IP  [Create new](#)

NIC network security group  None  Basic  Advanced

**i** The selected subnet 'OracleESBC\_MGMT (10.4.1.0/24)' is already associated to a network security group 'SolutionsLab-MGMT-Security'. We recommend managing connectivity to this virtual machine via the existing network security

< Previous Next : Management > Review + create

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Virtual machines >

## Create a virtual machine

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

[Help me create a low cost VM](#)
[Help me create a VM optimized for high availability](#)
[Help me choose the right VM size for my workload](#)

Configure network security group \*  [Create new](#)

Delete public IP and NIC when VM is deleted

Enable accelerated networking

**Load balancing**

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Load balancing options  None  Azure load balancer Supports all TCP/UDP network traffic, port-forwarding, and outbound flows.  Application gateway Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.

< Previous Next : Management > Review + create

- Click "Next : Management"

## Management

Select the default options in this tab.

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal, specifically the Management tab. The page title is 'Create a virtual machine' and the breadcrumb is 'Home > Marketplace > Oracle Enterprise Session Border Controller >'. Below the title, there are three Copilot suggestions: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. The main content area includes a section for 'Microsoft Defender for Cloud' with a note that the subscription is protected by the Foundational Cloud Security Posture Management Free Plan. Below this, there are two sections with checkboxes: 'Identity' (Enable system assigned managed identity) and 'Microsoft Entra ID' (Login with Microsoft Entra ID). A warning message states 'This image does not support Login with Microsoft Entra ID.' At the bottom, there are navigation buttons: '< Previous', 'Next : Monitoring >', and 'Review + create'.

- Click “Next : Monitoring”

## Monitoring

Monitoring Configuration Includes:

- Boot Diagnostics: Enable with managed storage account (recommended)
- Leave all other fields set to OFF.

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal, specifically the Monitoring tab. The page title is 'Create a virtual machine' and the breadcrumb is 'Home > Marketplace > Oracle Enterprise Session Border Controller >'. Below the title, there are three Copilot suggestions: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. The main content area includes a navigation bar with tabs: Basics, Disks, Networking, Management, Monitoring (selected), Advanced, Tags, and Review + create. Below the navigation bar, there is a section for 'Configure monitoring options for your VM.' This section includes three sub-sections: 'Alerts' (Enable recommended alert rules), 'Diagnostics' (Boot diagnostics and Enable OS guest diagnostics), and 'Health' (Enable application health monitoring). In the 'Diagnostics' section, the 'Enable with managed storage account (recommended)' option is selected. At the bottom, there are navigation buttons: '< Previous', 'Next : Advanced >', and 'Review + create'.

- Click “Next : Advanced”

## Advanced

- No Changes Necessary in the Advanced configuration Page
- Click “Next : Tags”

## Tags

- Define the Tag we have been using throughout this guide.
- Select it from the drop down menu, Under Name

The screenshot shows the 'Create a virtual machine' page in the Microsoft Azure portal. The breadcrumb trail is 'Home > Marketplace > Oracle Enterprise Session Border Controller >'. The page title is 'Create a virtual machine'. Below the title, there is a Copilot banner with three prompts: 'Help me create a low cost VM', 'Help me create a VM optimized for high availability', and 'Help me choose the right VM size for my workload'. The navigation tabs are 'Basics', 'Disks', 'Networking', 'Management', 'Monitoring', 'Advanced', 'Tags', and 'Review + create'. The 'Tags' tab is active. Below the tabs, there is a text block explaining tags: 'Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more about tags](#)'. A note states: 'Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.' Below this, there is a table with three columns: 'Name', 'Value', and 'Resource'. The first row has 'SolutionsLab' in the Name column, an empty field in the Value column, and '13 selected' in the Resource column. The second row has an empty field in the Name column, an empty field in the Value column, and '13 selected' in the Resource column. At the bottom of the page, there are three buttons: '< Previous', 'Next : Review + create >', and 'Review + create'.

- Click “Next: Review + Create”

## Review and Create

- Review the information for accuracy for your deployment.
- Verify Validation Passed is displayed at the top of the screen.

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Marketplace > Oracle Enterprise Session Border Controller >

## Create a virtual machine

Validation passed

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

[Help me create a low cost VM](#)
[Help me create a VM optimized for high availability](#)
[Help me choose the right VM size for my workload](#)

**Basics**

Subscription	Microsoft Azure Enterprise - SBC
Resource group	SolutionsLab
Virtual machine name	OracleESBC
Region	East US 2
Availability options	Availability zone
Availability zone	1
Security type	Standard
Image	Oracle Enterprise Session Border Controller 9.2.0.0.1 - Gen1
VM architecture	x64
Size	Standard F4s (4 vcpus, 8 GiB memory)
Enable Hibernation	No
Authentication type	SSH public key

< Previous Next > **Create** Download

Microsoft Azure Search resources, services, and docs (G+/) Copilot

Home > Marketplace > Oracle Enterprise Session Border Controller >

## Create a virtual machine

Validation passed

Try out the Microsoft Copilot for Azure for additional recommendations when creating a virtual machine.

[Help me create a low cost VM](#)
[Help me create a VM optimized for high availability](#)
[Help me choose the right VM size for my workload](#)

**Monitoring**

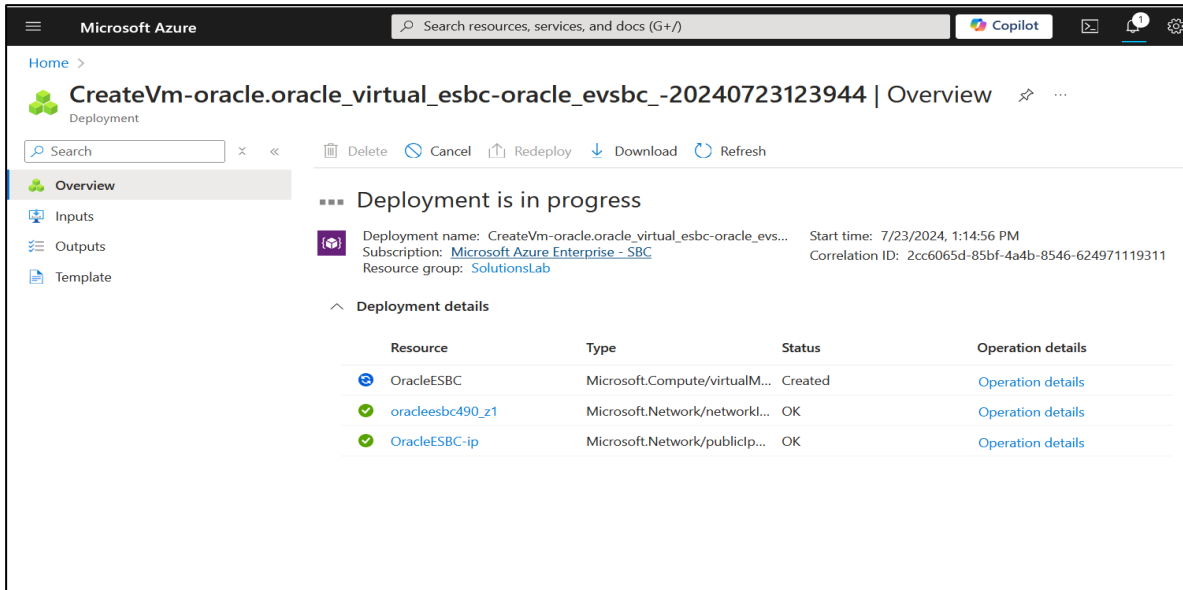
Alerts	Off
Boot diagnostics	On
Enable OS guest diagnostics	Off
Enable application health monitoring	Off

**Advanced**

Extensions	None
VM applications	None
Cloud init	No
User data	No
Disk controller type	-
Proximity placement group	None

< Previous Next > **Create** Download

- Click Create, and you should see: “Your Deployment is Underway” progress page

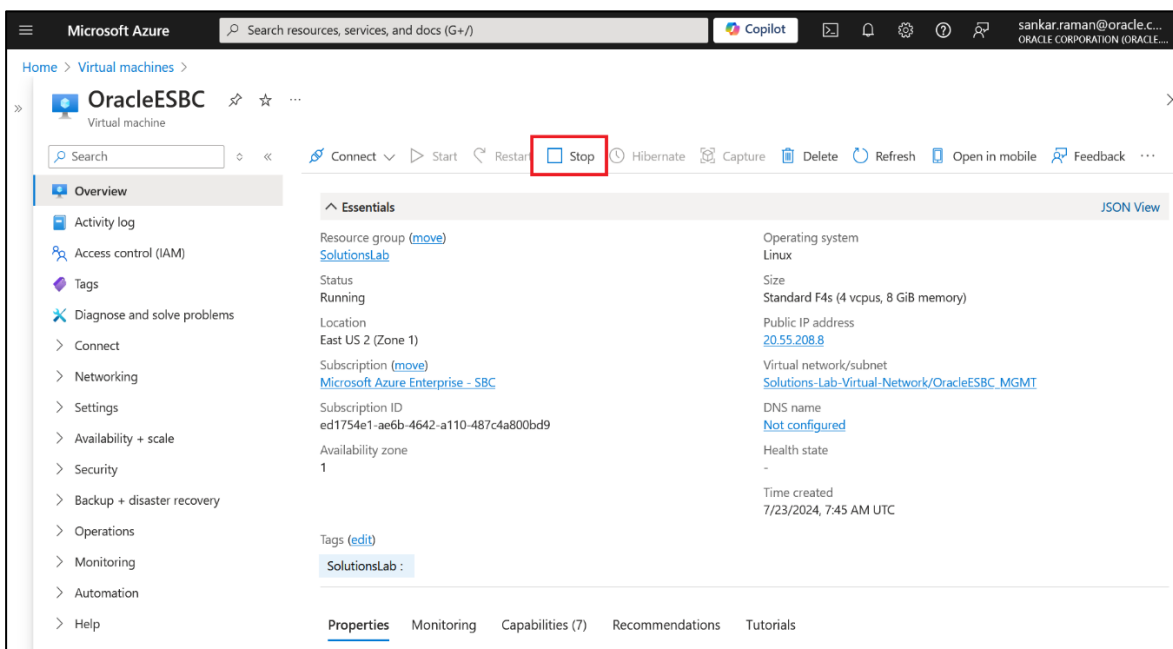


## Create Networking for Media Interfaces

Creation of the SBC virtual machine includes establishing networking to the primary management interface, wancom0. Now we need to create networking for all other interfaces. Azure requires that we stop the SBC instance before we can create or attach additional networking interfaces for Media.

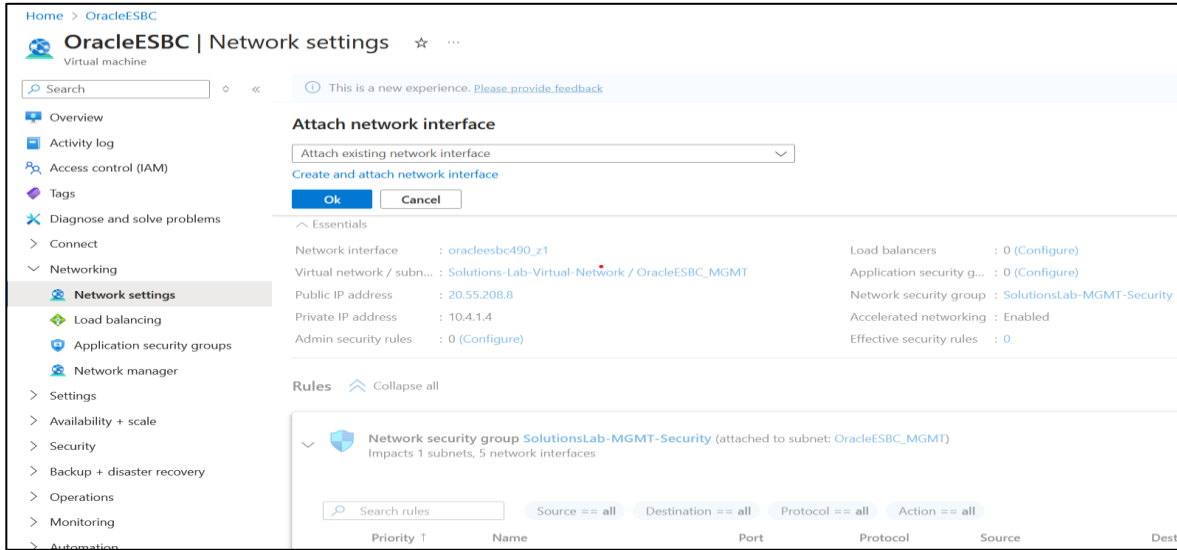
From Azure's navigation list, on the left side of the portal, select “Virtual machines”

Select the instance we have just created. Once you select it, you will see displayed an instance-specific navigation pane on the left side of the dialog.





- At the top, click on “Stop”
- Once the VM is stopped and deallocated, click on Networking under Settings in the instance specific navigation menu.
- Next, “Attach Network Interface” then” Create and attach network Interface”



## Create Network Interfaces

Configure the applicable Create Network interface fields, including:

- Name: SOP0
- Subnet: From the drop down, select the subnet created for SOP0 interface
- Network Security Group (move radio button to advanced, and select the Media NSG configured previously in this document)
- Private IP: Set to static
- Private IP Address: Set to an address within the subnet, in this case, we’re using 10.4.2.5
- Accelerated Networking set to “Disabled” by default by Azure. The steps to enable the parameter is given in the next section for user information.

Home > OracleESBC | Network settings >

## Create network interface

**Project details**

Subscription

Resource group \*  [Create new](#)

Location

**Network interface**

Name \*

Virtual network

Subnet \*

NIC network security group  None  
 Basic  
 Advanced

[Create](#)

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Home > OracleESBC | Network settings >

## Create network interface

Subnet \*

NIC network security group  None  
 Basic  
 Advanced

Configure network security group \*  [Create new](#)

Private IP address assignment  
 Dynamic  Static

Private IP address \*

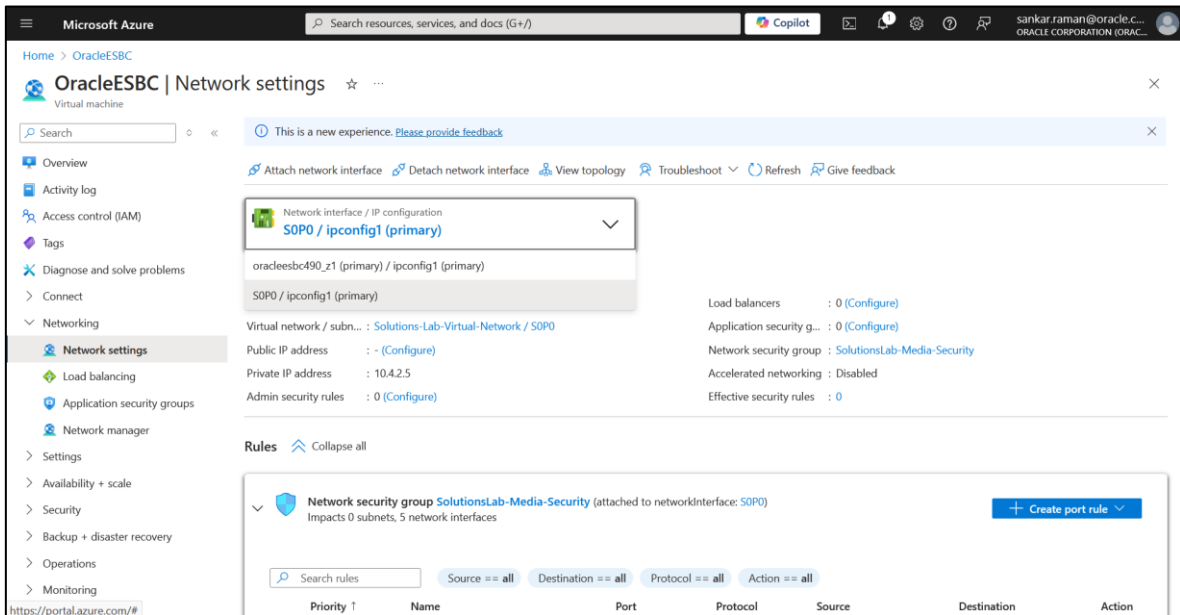
Private IP address (IPv6)

Accelerated networking  Disabled  Enabled

[Create](#)

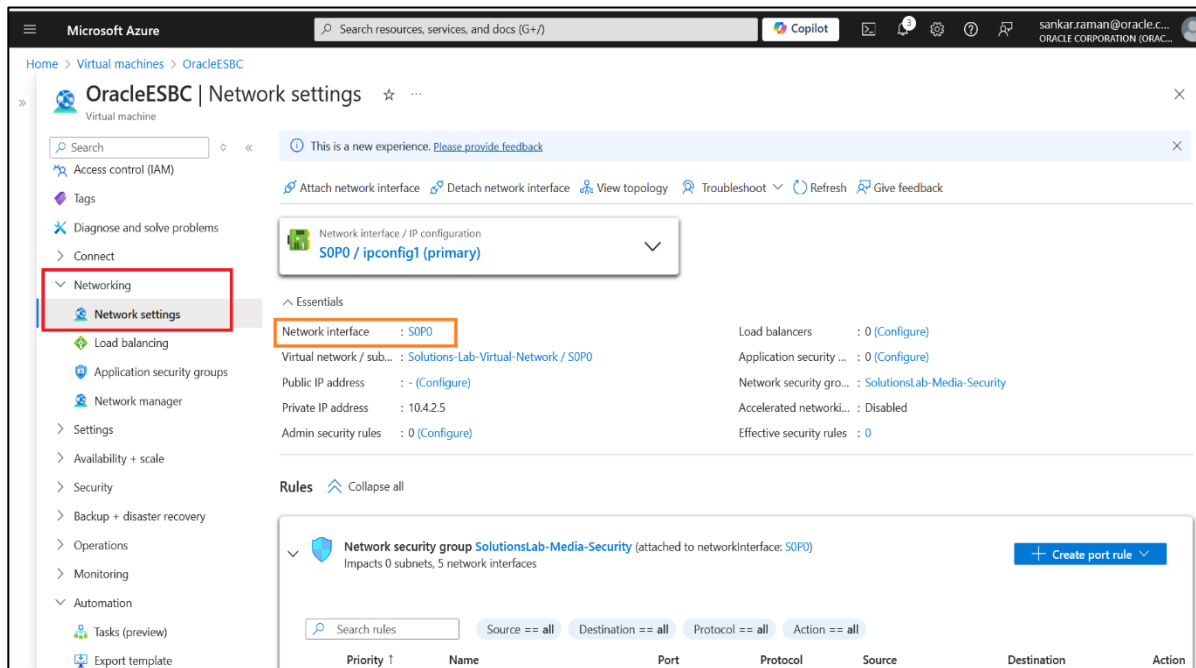
- At the bottom, Click “Create”

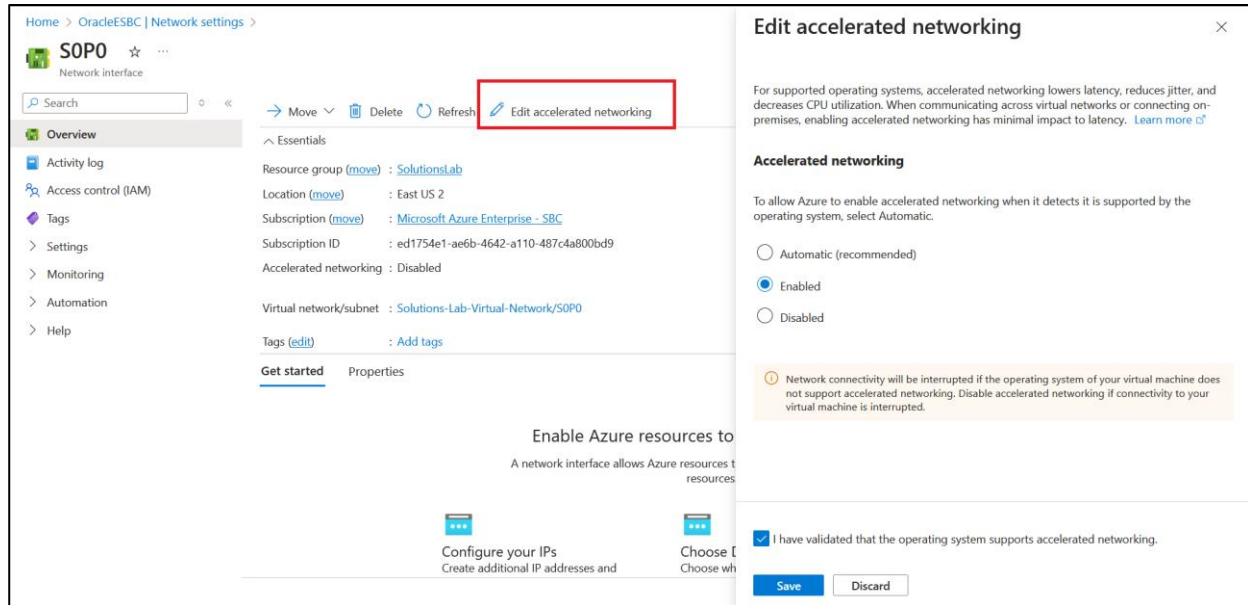
Once you press Create it will create the New Network Interface and also attach network interface, later it will bring you back to the main networking dialog.



In case you want to edit the settings of the accelerated networking for the media interfaces (SOP0, S1P0 etc.), please follow the steps given below.

- 1) From the Azure portal page for the VM, select Networking from the left menu.
- 2) On the Networking page, select the Network Interface and click on the network interface name.
- 3) At the top of the NIC Overview page, select Edit accelerated networking.
- 4) Select the options that you may require (Automatic, Enabled, or Disabled) and then select Save. In our example, we have enabled the option.





Follow this same procedure to create a second network interface with the following configuration:

- Name: S1P0
- Subnet: From the drop down, select the subnet created for SOP0 interface
- Network Security Group (move radio button to advanced, and select the Media NSG configured previously in this document)
- Private IP: Set to static
- Private IP Address: Set to an address within the subnet, in this case, we're using 10.4.3.5

Start your instance after creating and attaching all interfaces. Use the instance's Serial Console to connect to the virtual COM1 serial port. After boot-up, proceed with setting your OCSBC passwords from the OCSBC command line interface.

## Initial access to SBC

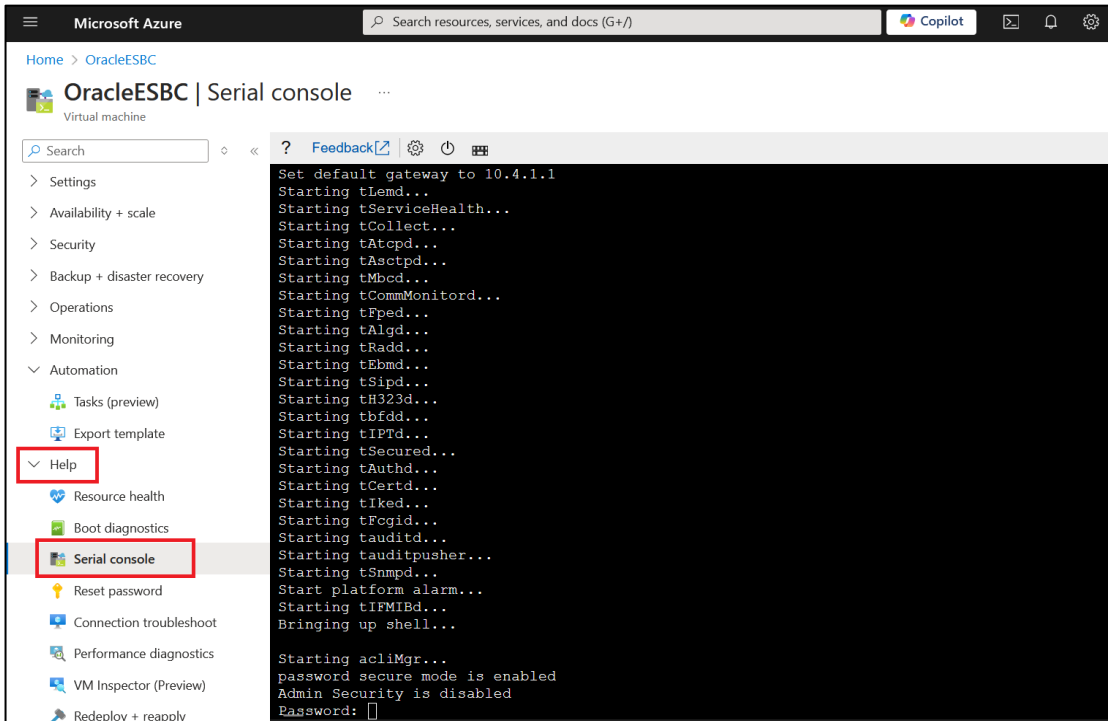
The procedure now turns to accessing the OCSBC, and steps required for initial setup

At this point, you could access the SBC in two ways:

1. SSH to the public IP address (or option DNS label name if configured), assigned to the management interface which can be easily located under the VME's "Overview" page
2. Access the SBC via the serial console in the Azure Portal (Only if custom storage account is enable in Boot Diagnostics setting)

For the purposes of this example, we will be utilizing the serial console for the initial access and setup procedure.

- To access the SBC serial console, click on serial console, under “Help”



## Set User and Admin Passwords

You will need to set both the user and admin passwords when logging in for the first time

- At the password prompt, enter **“acme”** (if accessing the SBC via SSH, username: “user”, password: “acme”)
- When prompted, enter the new SBC user password twice, paying close attention to the rules displayed in the output

```
Starting acliMgr...
password secure mode is enabled
Admin Security is disabled
Password:
%
% Only alphabetic (upper or lower case), numeric and punctuation
% characters are allowed in the password.
% Password must be 8 - 64 characters,
% and have 3 of the 4 following character classes :
%   - lower case alpha
%   - upper case alpha
%   - numerals
%   - punctuation
%
Enter New Password: 
```

- At the prompt, type “enable”
- Password: “packet”
- Enter the new admin password twice, paying close attention to the password rules displayed.

```

Password is acceptable.

Password changed successfully

Notifications:
- No Valid License Present! (aid: 327702, tid: 2907)
- Product not initialized; Please use 'setup product' (aid: 327725, tid: 2907)
> en
Password:
%
% Only alphabetic (upper or lower case), numeric and punctuation
% characters are allowed in the password.
% Password must be 8 - 64 characters,
% and have 3 of the 4 following character classes :
%
%   - lower case alpha
%   - upper case alpha
%   - numerals
%   - punctuation
%
Enter New Password: █

```

## Interface Mapping

The final step in deploying the Oracle SBC in Azure Public cloud is to verify the network interfaces have MAC addresses assigned to them.

- Access the serial console through the azure portal under support + troubleshooting
- Log into enable mode
- Run the command

```
>show interface mapping
Interface Mapping Info:
```

```

# show interface mapping
Interface Mapping Info
-----
Eth-IF  MAC-Addr          Label
wancom0 60:45:BD:79:B3:11  #generic
wancom1 00:22:48:4E:28:7D  #generic
s0p0    00:22:48:4E:27:37  #generic
wancom2 FF:FF:FF:FF:FF:FF  #dummy
spare   FF:FF:FF:FF:FF:FF  #dummy
s1p0    FF:FF:FF:FF:FF:FF  #dummy
s0p1    FF:FF:FF:FF:FF:FF  #dummy
s1p1    FF:FF:FF:FF:FF:FF  #dummy
s0p2    FF:FF:FF:FF:FF:FF  #dummy
s1p2    FF:FF:FF:FF:FF:FF  #dummy
s0p3    FF:FF:FF:FF:FF:FF  #dummy
s1p3    FF:FF:FF:FF:FF:FF  #dummy

```

- As you can see above, since we have not configured all eight network interfaces possible on the SBC, we'll need to correct the interface to MAC address mappings.
- The interface-mapping branch on the SBC includes a swap command, which allows us to make those adjustments. A reboot is required for the changes to take effect.

- While in enable mode in the SBC CLI, type:

```
# interface-mapping
(interface-mapping)# swap wancom1 slp0
Interface Mapping Info after swapping
-----
Eth-IF   MAC-Addr          Label
wancom0  60:45:BD:79:B3:11  #generic
wancom1  FF:FF:FF:FF:FF:FF  #dummy
sOp0     00:22:48:4E:27:37  #generic
wancom2  FF:FF:FF:FF:FF:FF  #dummy
spare    FF:FF:FF:FF:FF:FF  #dummy
slp0     00:22:48:4E:28:7D  #generic
sOp1     FF:FF:FF:FF:FF:FF  #dummy
slp1     FF:FF:FF:FF:FF:FF  #dummy
sOp2     FF:FF:FF:FF:FF:FF  #dummy
slp2     FF:FF:FF:FF:FF:FF  #dummy
sOp3     FF:FF:FF:FF:FF:FF  #dummy
slp3     FF:FF:FF:FF:FF:FF  #dummy

Changes could affect service, and Requires Reboot to become effective.
Continue [y/n]?: y

WARNING: This change requires a reboot to become effective.
(interface-mapping)#
```

When the SBC comes back up from reboot, it is now ready for full configuration.

Refer to the [Oracle® Communications Session Border Controller Configuration Guide](#) after you have completed this deployment for administrative and service configuration, including product setup and entitlement setup configuration.



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