

# Virtual network or subnet configuration

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## Public Doc Reference


### [Connectivity architecture for a managed instance in Azure SQL Database](#)

This article explains communication in an Azure SQL Database managed instance. It also describes connectivity architecture and how the components direct traffic to the managed instance.

### [Determine size of a managed instance subnet](#)


Managed instance is placed in dedicated subnet that cannot be resized once you add the resources inside. Therefore, you would need to calculate what IP range of addresses would be required for the subnet depending on the number and types of instances that you want to deploy in the subnet.

### [Create new VNet and subnet for a managed instance](#)

Azure VNet and subnet where you want to deploy your managed instances must be configured according to the [network requirements described here]([https://docs.microsoft.com/en-us/azure/sql-database/sql-database-managed-instance-connectivity-architecture#](https://docs.microsoft.com/en-us/azure/sql-database/sql-database-managed-instance-connectivity-architecture#network-requirements)  network-requirements). In this guide you can find the easiest way to create your new VNet and subnet properly configured for managed instances.

### [Configure existing VNet and subnet for a managed instance](#)


If you want to configure your existing VNet and subnet to deploy managed instances inside, here you can find the script that checks the [network requirements](<https://docs.microsoft.com/en-us/azure/sql-database/sql->

[database-managed-instance-connectivity-architecture#](#)  network-requirements) and make configures your subnet according to the requirements.

### [Configure custom DNS](#)

You need to configure custom DNS if you want to access external resources on the custom domains from your managed instance via linked server of db mail profiles.

### [Sync network configuration](#)

It might happen that although you [integrated your app with an Azure Virtual Network](#) , you can't establish connection to a managed instance. One thing you can try is to refresh networking configuration for your service plan.

### [Find management endpoint IP address](#)

Managed instance uses public endpoint for management-purposes. You can determine IP address of the management endpoint using the script described here.

### [Verify built-in firewall protection](#)

Managed instance is protected with built-in firewall that allows the traffic only on necessary ports. You can check and verify the built-in firewall rules using the script described in this guide.

### [Connect applications](#)

Managed instance is placed in your own private Azure VNet with private IP address. Learn about different patterns for connecting the applications to your managed instance.

## More Information

### Accelerated Networking

Managed Instance is placed on rings where Accelerated Networking is enabled.

### Ports used in NSG

#### Inbound

- 9000 and 9003 are used by Service Fabric.
- 1438, 1440, and 1452 are used by Node Agent.

#### Outbound

- 443 is used for HTTPS communication with other Azure services (like Azure Storage for data or Service Bus for telemetry).
- 12000 is used for cluster node diagnostics.

### How good have you found this content?

