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# How to Deploy Silk

## About Silk

Silk offers the flexibility and high performance that organizations need to leverage the public cloud. The Silk Data Virtualization Platform is a combination of tested and packaged software and services. Silk provides a rich set of data services, machine learning, analytics, and policy-based automation and orchestration.

Use this guide to learn about the prerequisites to successfully deploy Silk onto your instance of Microsoft Azure.

Refer to the following guides for more information about the prerequisites, steps involved, architecture, security, and networking requirements to successfully deploy Silk onto your instance of Microsoft Azure.

1. Deploying Silk – Overview & Background
2. How to Deploy Silk
3. Architecture Requirements to Deploy Silk
4. Security Requirements to Deploy Silk
5. Networking Requirements to Deploy Silk

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## How to Deploy Silk

### Deployment Planning – Silk Checklist

You will use the Silk Checklist to plan for deployment.

Refer to the guide [Architecture Requirements to Deploy Silk](#) for additional guidance to complete the Silk Checklist.

During the onboarding process, Silk will send you the Silk Checklist via email and will arrange time to review the checklist with you. The data provided in the Silk Checklist will facilitate the deployment process. Silk will also use the information provided to create the Cluster Configuration file used in deploying the Silk Flex cluster.

## How to Deploy Silk Flex on the Azure Marketplace

Follow the steps below to create a Silk Cloud Data Platform from the Azure marketplace.

1. Once you have configured your cloud services in Azure, create a Silk Cloud Platform from the Azure marketplace.
2. Follow the creation wizard.
3. **Note: The Silk Flex name can be up to 32 characters.**
4. Deploy the Silk environment into a given resource group by following the creation wizard.
5. Once you deploy Silk into your Azure environment, a standard VM is created.
6. Configure the virtual machine settings per the Silk Checklist that you previously completed.
7. **Note: Silk supports authentication to the VM hosting Silk Flex using either a password or a SSH Public Key. Silk recommends using a SSH Public Key instead of a password. This is distinct from the UI login to Silk Flex. If using a password, the password must be at least 8 characters and has restrictions on certain combinations of special characters. In particular, the password must not include single quotation marks ( ' ') or double quotation marks ( " ").**
8. Log into this default VM to bring up the Silk Flex UI. From here, you can visualize your resource groups.
9. Silk Flex is created when it is installed from the marketplace. On first deploying Silk, Silk Flex will be empty.
10. Configure Silk Flex UI settings.
11. Review the Silk Flex instance.

## How to Create a Silk Flex Cluster

Follow the steps below to create a Silk Flex cluster.

**Note: The user needs a way to access the Silk Flex instance interface and Silk Data Pod (SDP) interface over port 443 from the machine(s) that they will use to access these interfaces. Refer to the guide Networking Requirements to Deploy Silk, Section Network: Connectivity & Access for more information.**

1. Log into Silk Flex using the credentials you created during the marketplace deployment (Refer to the guide How to Deploy Silk Flex for more information).
2. Click the **Create Cluster** button.
3. Upload the Cluster Configuration file provided by Silk after completing the Silk Checklist.
4. Configure the VNET and subnet information (Refer to the guide Architecture Requirements to Deploy Silk, Section Architecture: Configure VNETs for more information).
5. Enter the IP information intended for this cluster.
6. Set the default Silk Data Pod (SDP) password to be used.
7. **Note: The Silk SDP UI password must be at least 8 characters and has restrictions on certain combinations of special characters. In particular, the password must not include single quotation marks ( ' ) or double quotation marks ( " ).**
8. **Note: Silk supports configuring access to both the Silk Flex instance and the Silk Data Pod(s) (SDP) using Single Sign On (SSO) via Okta after initial configuration.**
9. Set the callhome settings and SMTP relay information.

## Silk c.node and d.node Image Copy Process

For this step, Silk will provide you with a SAS token and a script to copy the latest c.node and d.node images to your resource group. This process will run using the provided script. The expectation is that you will run this from your own cloud shell instance.

1. Start Cloud Shell.
2. Select PowerShell (Figure 1).

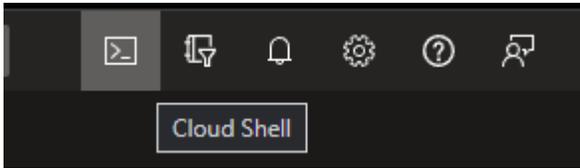


Figure 1: Start Cloud Shell.

3. Acquire the fmt module (Figure 2).

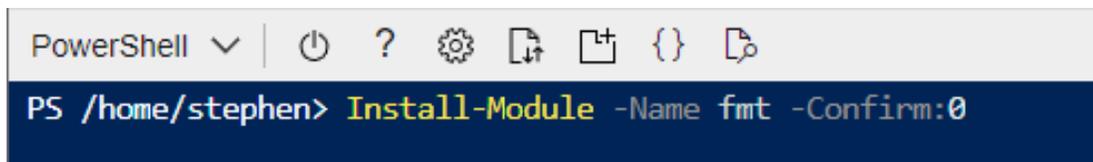


Figure 2: The fmt module.

4. Import the module once it is installed.



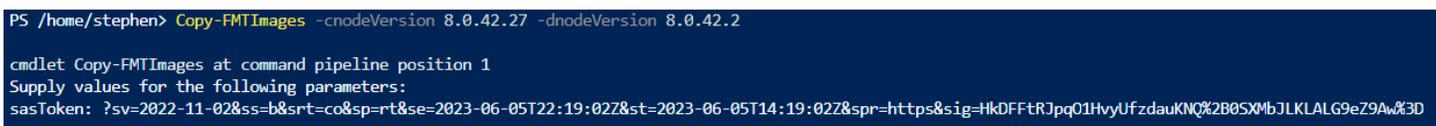
5. Confirm that you are in the correct PowerShell context.
6. Run the copy command **Set-AzContext**.



7. Run the provided script with the desired image versions.



8. You will be prompted to input the SAS token. Paste the token provided by Silk in here:



9. You will also be asked which resource group you want to copy the image to. Select the number from the list.
10. **Note: If you do not see the desired resource group, you are probably logged into the incorrect subscription.**

11. If you prefer, you can specify the resource group by adding the parameter **-targetResourceGroup** <resource group name>.

```
-----  
1. COE-demo15-rg  
2. COE-demo13-rg  
3. cloud-shell-storage-southcentralus  
4. COE-demo3-rg  
5. COE-AADD5  
6. ResourceMoverRG-eastus-eastus2-eus2  
7. ResourceMoverRG-eastus2-eastus-eus2  
8. Product-Host-RG  
9. Product-Flex-RG  
10. Oracle01-RG  
11. Support-Vision0540-RG  
12. Support-JayRG  
13. COE-demo16-rg  
14. support-easus2pv2test  
15. SA-RG-Epic-GenIO  
16. test1  
17. COE-demo12-rg  
18. COE-vaults-rg  
19. CI-DevEnv  
20. support-yosisplayground-centralus
```

12. You should see the copy status bar while waiting for the image to be copied over.

13. **Note: The image copy process can last up to an hour or more.**

14. Once complete, you should have the appropriate image ready for use.

#### Usage Notes:

1. The command supports a few arguments, you can specify **-targetResourceGroup** and **-sasToken** along the command line that lets you specify those values.
2. Refer to the rg selection menu to help avoid subscription context issues where you believe you were logged into the correct subscription, but really was not.
3. Let the script prompt you for the **sasToken** to avoid escape character issues.
4. If you use **-sasToken** be sure to surround it in single quotes, since the token tends to contain special string characters.

## How to Deploy a Silk Data Pod (SDP) via Silk Flex

Follow the steps below to deploy a Silk Data Pod (SDP) from the Silk Flex user interface (UI).

**Note: The user needs a way to access the Silk Flex instance interface and Silk Data Pod (SDP) interface over port 443 from the machine(s) that they will use to access these interfaces. Refer to the guide [Networking Requirements to Deploy Silk](#), Section [Network: Connectivity & Access](#) for more information.**

1. Log into Silk Flex using the credentials assigned in the marketplace deployment (if not already logged in)
2. Follow the steps in the Silk Flex User Guide to configure the SDP. Silk will supply you with this user guide.
3. **Note: During the creation process, you will give the SDP a name. The SDP name must be under 25 characters.**
4. Optional: Add a public IP address to the SDP.

## How to Set Up the Silk Data Pod (SDP) iSCSI Configuration

If the iSCSI network used by the hosts are on a different network, static routes will need to be configured. To do so perform the following:

**Note: The user needs a way to access the Silk Flex instance interface and Silk Data Pod (SDP) interface over port 443 from the machine(s) that they will use to access these interfaces. Refer to the guide Networking Requirements to Deploy Silk, Section Network: Connectivity & Access for more information.**

1. Login to the Silk Data Pod (SDP) user interface (UI).
2. Navigate to the Connectivity tab.
3. Select the Static Routes subtab and click on the +Static Route button.
4. Enter the requested information per Table 1 below:

**Table 1: Information needed to set up the SDP iSCSI configuration.**

Parameter	Input
Destination Subnet Address	Subnet address of the host's iSCSI network
Destination Subnet Mask	Subnet mask of the host's iSCSI network
Gateway IP Address	Gateway IP for the SDP's iSCSI network