

Installing Azure ARC Data Controller on AKS Script

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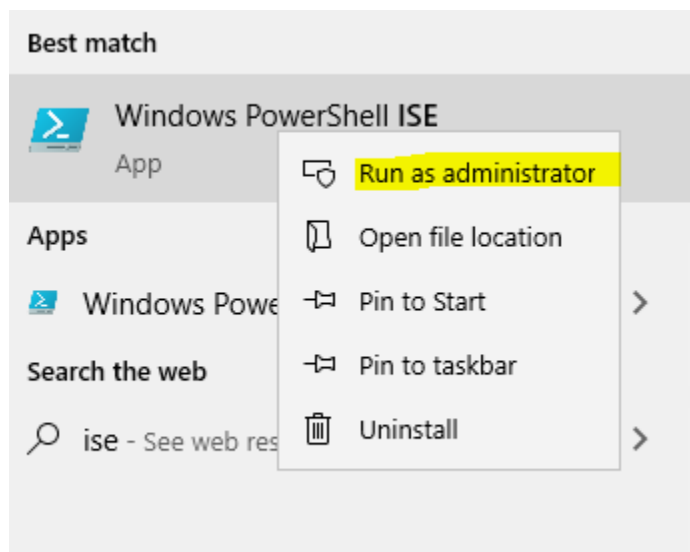
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Installing in Direct Mode

WARNING – Running this PowerShell will deploy a 3 node AKS cluster each node being a standard_D8s_v3. If left running the total cost of this demo will be in excess of **\$840/mo**.

When you are finished with your demo delete the Resource Group you create and a second networking Resource group created on your behalf called MC_<your.rg.name>_<your.aks.cluster.name>_eastus.

To run the deploy



Once you are in PowerShell check your execution policy with the following commands. You will need Unrestricted for LocalMachine.

Check your execution policy using the following command.

```
Get-ExecutionPolicy -list
```

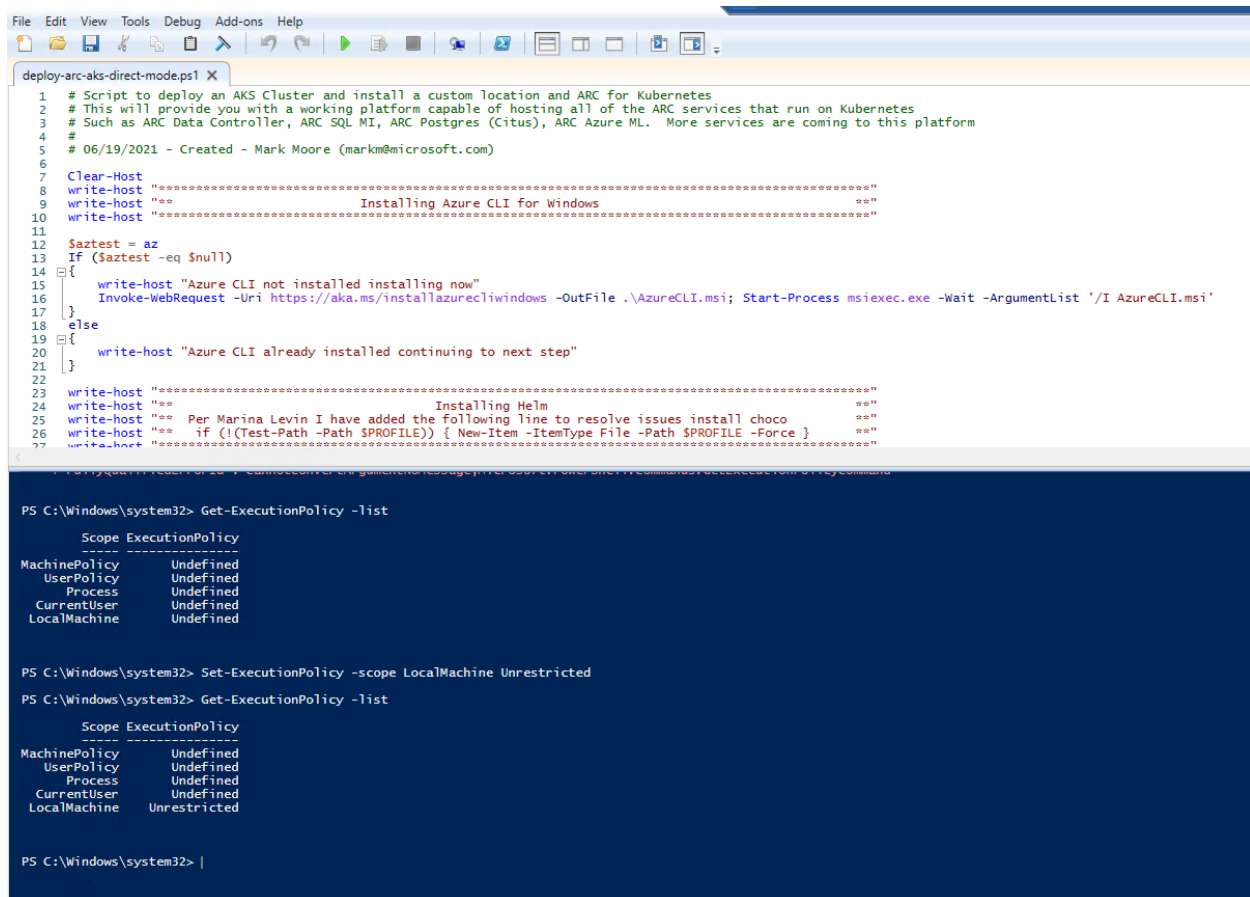
If LocalMachine is not Unrestricted issue the following command.

```
Set-ExecutionPolicy -scope LocalMachine Unrestricted
```

No click file> Open and open the PowerShell Script called:

[Deploy-arc-aks-direct-mode.ps1](#)

Your screen should look like this:



The screenshot shows a Visual Studio Code editor with a PowerShell script named `deploy-arc-aks-direct-mode.ps1`. The script is a PowerShell script designed to deploy an AKS cluster and install various tools. It includes comments in Spanish and English, and a date of creation: 06/19/2021 by Mark Moore. The script performs the following actions:

- Clears the host.
- Writes host information.
- Installs Azure CLI for Windows, checking if it's already installed.
- Installs Helm.
- Performs a test path operation for a profile.

Below the script, a terminal window shows the execution of the script. The first command is `Get-ExecutionPolicy -list`, which returns the following output:

Scope	ExecutionPolicy
MachinePolicy	Undefined
UserPolicy	Undefined
Process	Undefined
CurrentUser	Undefined
LocalMachine	Undefined

The second command is `Set-ExecutionPolicy -scope LocalMachine Unrestricted`, which sets the execution policy to Unrestricted for the LocalMachine scope. The third command is `Get-ExecutionPolicy -list`, which returns the following output:

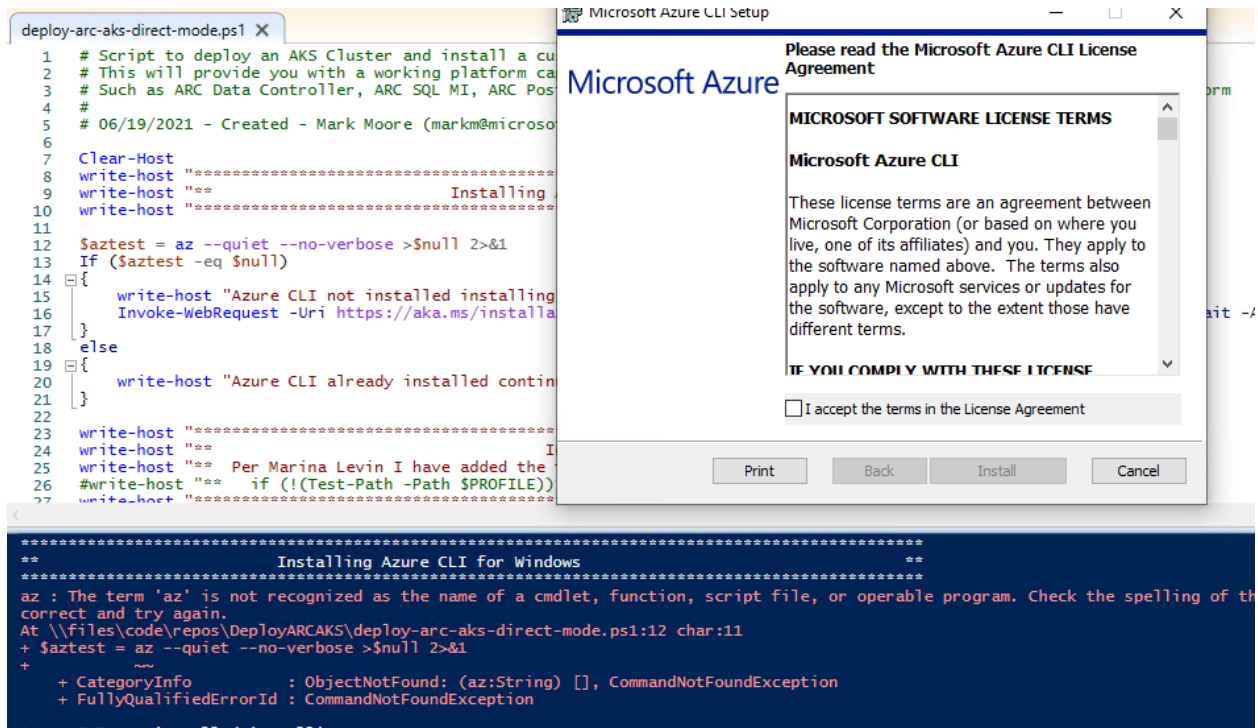
Scope	ExecutionPolicy
MachinePolicy	Undefined
UserPolicy	Undefined
Process	Undefined
CurrentUser	Undefined
LocalMachine	Unrestricted

Begin Executing the script by pressing the run button.



Installing Tools

This PowerShell script will install any tools required that you do not have. Seeing error messages that a tool is not installed is normal and is the result of me testing to see if the tool is present.



The script will download and install the required tool. Accept the license agreement and click install for each tool installed if prompted.

Once the tools are installed, a web browser will open and you will be prompted to login to your Azure Account.

Choose a Subscription

The PowerShell script will log you in to Azure using the AZ command. A browser windows will start and prompt you for your credentials.

Once you successfully login, you will be presented with a list of subscriptions you can access.

Choose the subscription by the number next to it.

	Subscription name	Subscription ID	Status
0	markm - Internal Consumption	8b3d7550-2225-4022-8044-500a00000000	Enabled
1			Enabled
2			Enabled
3			Enabled
4			Enabled
5			Enabled
6			Enabled
7			Enabled
8			Enabled
9			Enabled
10			Enabled
11			Enabled
12			Enabled
13			Enabled
14			Enabled
15			Enabled
16			Enabled
17			Enabled
18			Enabled
19			Enabled
20			Enabled
21			Enabled
22			Enabled
23			Enabled
24			Enabled
25			Enabled
26			Enabled
27			Enabled
28			Enabled
29			Enabled

Enter the number next to the subscription you would like to host AKS and all components for the demo:

The subscription you have chosen will be written to the console and you will be asked to confirm your selection.

Installing Kubernetes Extensions

Ignore warning messages about the extensions being in preview.

Creating a Resource Group

You are prompted to enter the name of the resource group you want to use for your AKS Cluster.

Check to ensure Operations Management is enabled in your subscription.

Create the AKS Cluster

Enter the name you would like to call your AKS cluster.

Installing Kubernetes Extensions

It will take a few minutes before you see additional output. If the Kubernetes extensions are not installed, you will see warning messages about them being in preview as they are installed.

Checking if Operations Management is enable in your subscription. If it is not it will be enabled.

Installing the AKS Cluster.

Creating the cluster will take some time. When it is complete you will see a description of your cluster written to the console as JSON it should look something like this:

```
Merged "ARCAKSc1u2" as current context in C:\Users\markm\kube\config
```

NAME	STATUS	ROLES	AGE	VERSION
aks-nodepool1-36882054-vmss000000	Ready	agent	93s	v1.19.11
aks-nodepool1-36882054-vmss000001	Ready	agent	2m10s	v1.19.11
aks-nodepool1-36882054-vmss000002	Ready	agent	2m8s	v1.19.11

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE	IP	NODE	NOMINATED NODE	READINESS GATES
kube-system	azure-ip-masq-agent-51m6f	1/1	Running	0	2m8s	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	azure-ip-masq-agent-mbfh2	1/1	Running	0	2m10s	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	azure-ip-masq-agent-vmz9p	1/1	Running	0	93s	10.240.0.4	aks-nodepool1-36882054-vmss000000	<none>	<none>
kube-system	coredns-76c97c8599-4mwk1	1/1	Running	0	114s	10.244.1.5	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	coredns-76c97c8599-8zcb6	1/1	Running	0	3m12s	10.244.0.3	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	coredns-autoscaler-599949fd86-6d4ps	1/1	Running	0	3m7s	10.244.1.4	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6qxw6	1/1	Running	0	3m9s	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6tgpw	1/1	Running	0	3m9s	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	kube-proxy-2rb9t	1/1	Running	0	2m10s	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	kube-proxy-447dt	1/1	Running	0	93s	10.240.0.4	aks-nodepool1-36882054-vmss000000	<none>	<none>
kube-system	kube-proxy-cj9r7	1/1	Running	0	2m8s	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	metrics-server-77c8679d7d-xdkc7	1/1	Running	0	3m12s	10.244.1.3	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	omsagent-7qsb	1/1	Running	0	2m10s	10.244.0.2	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	omsagent-cl4hg	1/1	Running	0	2m8s	10.244.1.2	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	omsagent-rs-74c4f49f7f-d5j7r	1/1	Running	0	3m11s	10.244.0.4	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	omsagent-tlcm2	1/1	Running	0	93s	10.244.2.2	aks-nodepool1-36882054-vmss000000	<none>	<none>

Press Enter to continue::

Installing a Custom Location

A Custom Location is a service you can install once Azure ARC for Kubernetes has been installed. I have chosen the custom location name of 'arcdemo'. You can modify the PowerShell script and insert your own name if you wish.

Creating a Service Principal

The Azure ARC Data Controller requires a service principal to use to upload data to azure. In this section I prompt you for the name you would prefer. This name must be unique for the entire tenant, not just your subscription so I generate a guid and append the first 4 characters of that guid to what ever name you choose to ensure it is unique.

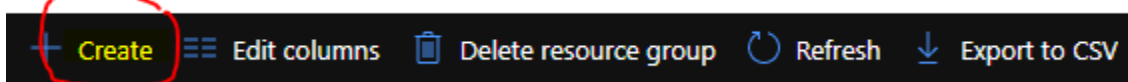
Installing the Data Controller

This section must be done via the portal. The product team does not yet support using the AZ command to install a Data Controller. This will change in the future. When it does I will update this script to create the Data Controller for you.

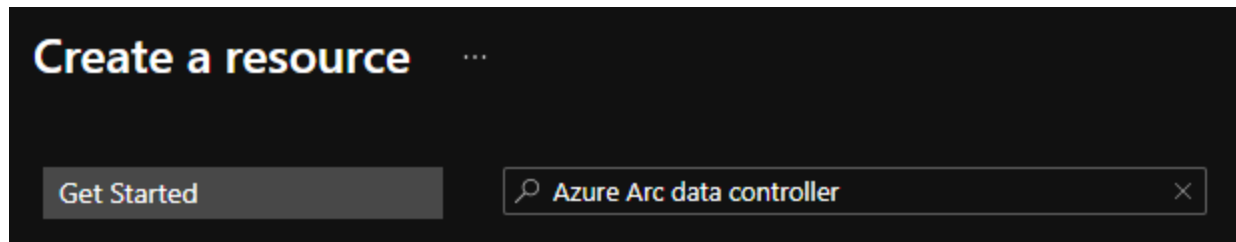
Go to <https://portal.azure.com> and login.

Go to the resource group you created in the PowerShell script.

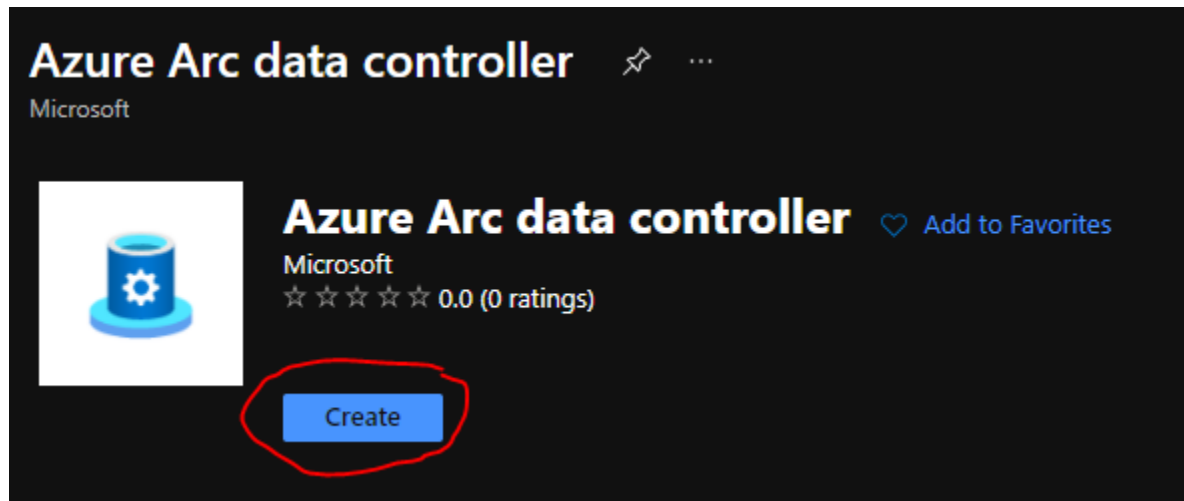
Click Create



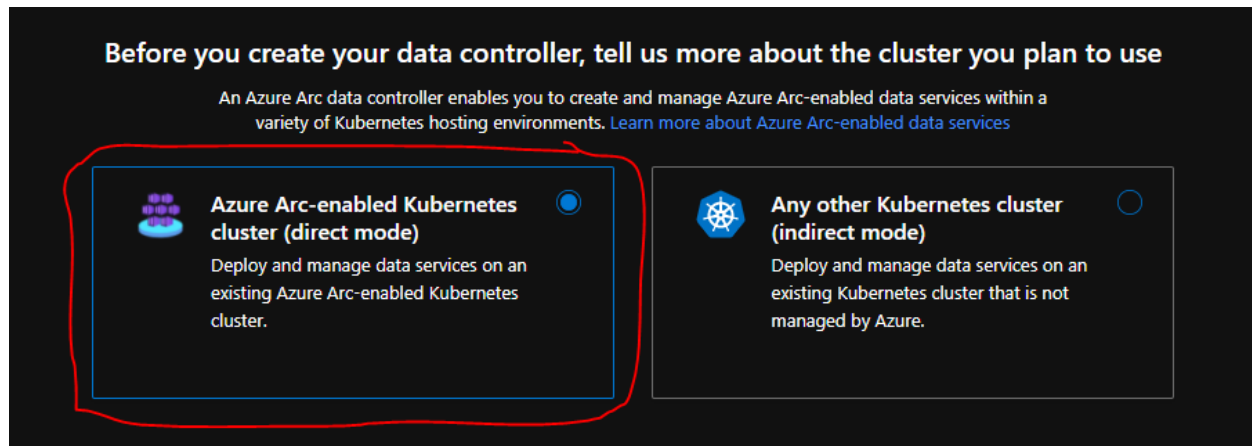
In the search box enter 'Azure Arc data controller' and select Azure ARC Data Controller and press enter.



Click Create



Select direct mode and click Next: Data controller details >



Your resource group should be pre-populated. If not select the resource group name you provided during the script.

Create Azure Arc data controller (preview) ...

Microsoft

- 1 Prerequisites
- 2 **Data controller details**
- 3 Additional Settings
- 4 Tags
- 5 Review + Create

Create an Azure Arc data controller to enable Azure data services in the Kubernetes environment of your choice.

Project details

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

Subscription * ⓘ

Resource group * ⓘ

Data controller details

Provide a name to identify your data controller for remote management and monitoring.

i This data controller will be installed in direct mode to an existing Azure Arc-enabled Kubernetes cluster. This configuration will allow you to manage the creation and deployment of data services using this data controller directly from the Azure portal.

Data controller name *

Custom location

A custom location is an Azure resource that represents the namespace on your kubernetes cluster where the data controller will be hosted. [Learn more about custom locations](#)

Custom location * ⓘ

Kubernetes configuration

Select a profile appropriate for your cluster configuration.

Kubernetes configuration template * ⓘ

[< Previous](#)

[Next : Additional Settings >](#)

Enter the name for your Data Controller.

For the custom location select arcdemo from the drop down.

Scroll down to the next section.

controller will be hosted. [Learn more about custom locations](#)

arcdemo

Select a profile appropriate for your cluster configuration.

azure-arc-aks-default-storage

default

default

- **Node port:** Exposes the service on each node's IP at a static port.
- **Load balancer:** Exposes the service externally through a load balancer.

markm

□ □ □ □ □ □ □ □

.....

1-800-955-6767

Abstract The purpose of this study was to determine the effect of a 12-week, low-intensity, supervised walking program on the physical and psychological health of sedentary, middle-aged women. The study was a randomized, controlled trial. The subjects were 40 sedentary, middle-aged women who were randomly assigned to either a supervised walking program or a control group. The walking program consisted of 12 weeks of supervised walking, 3 times per week, for 30 minutes per session. The control group consisted of 20 women who did not participate in the walking program. The subjects were assessed at baseline and at 12 weeks for physical and psychological health. The physical health assessment included measures of body mass index (BMI), waist circumference, and blood pressure. The psychological health assessment included measures of self-esteem, anxiety, and depression. The results of the study showed that the walking program had a significant positive effect on the physical and psychological health of the subjects. The walking program resulted in a significant decrease in BMI, waist circumference, and blood pressure. The walking program also resulted in a significant increase in self-esteem and a significant decrease in anxiety and depression. The results of this study suggest that a 12-week, low-intensity, supervised walking program can improve the physical and psychological health of sedentary, middle-aged women.

<https://login.microsoftonline.com>

.....

Next : Additional Settings >

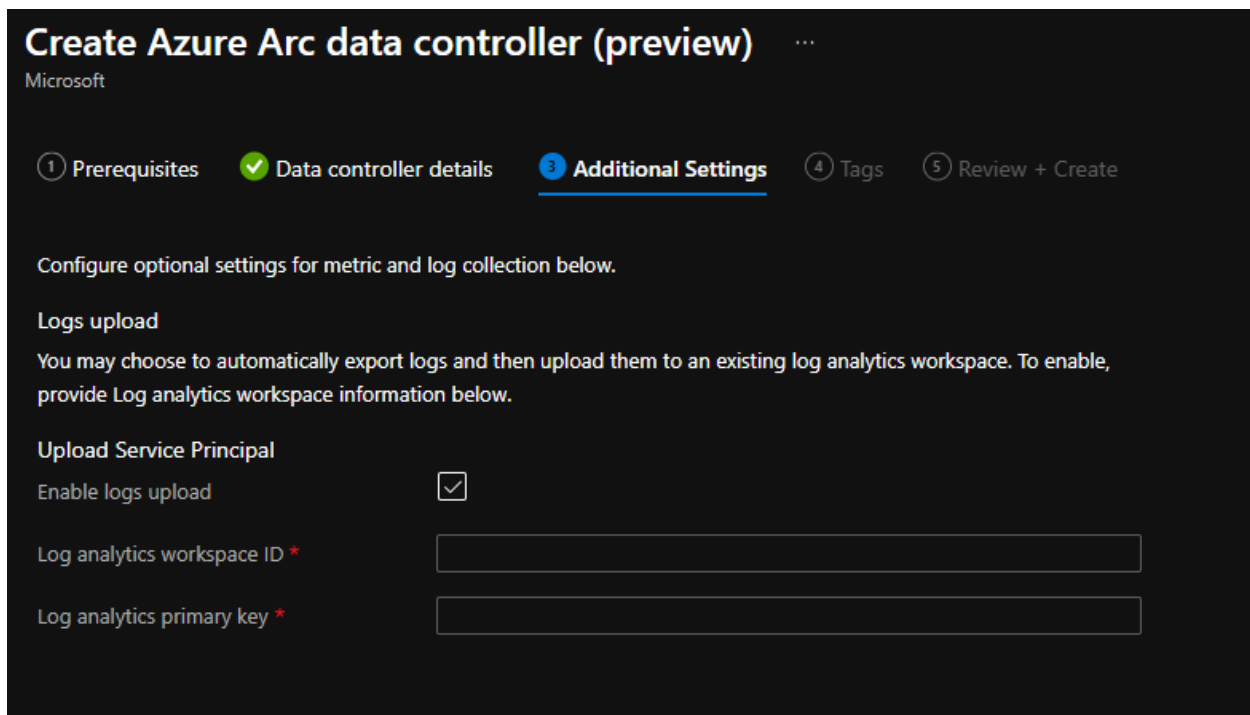
Enter a username and password.

The service Principle settings were provided to you at the end of the script. Just cut and paste the values into the portal.

```
*****
**                               Copy and save the information Below                               **
**   You will need this information when creating the Data Controller in the portal   **
*****
**
** Client Id      = [REDACTED]
** Tenant Id     = [REDACTED]
** Client Secret = [REDACTED]
**
PS C:\Users\markm> |
```

Click Next: Additional Settings >

If you want to use Log Analytics for your log files, Enter the information below:



Create Azure Arc data controller (preview) ...

Microsoft

① Prerequisites ☒ Data controller details **③ Additional Settings** ④ Tags ⑤ Review + Create

Configure optional settings for metric and log collection below.

Logs upload

You may choose to automatically export logs and then upload them to an existing log analytics workspace. To enable, provide Log analytics workspace information below.

Upload Service Principal

Enable logs upload ☒

Log analytics workspace ID *

Log analytics primary key *

If you choose not to use Log Analytics simply uncheck the box next to Enable logs upload

Click Next: Tags >

Enter any tags you would like to use and click

'Next: Review + Create >'

If everything looks good click 'Create'

Before you can create Data Controller resources such as SQL MI or Postgres Hyperscale, you will need to wait for the data controller deployment to complete.

You can monitor the deployment in a CMD windows.

CD to C:\Users\yourusername\.azure-kubectl and enter the following command:

```
Kubectl get pods -A -o wide
```

You will see three namespaces.

Kube-system (This is your Kubernetes Cluster)

Azure-arc (This is Arc Enables Kubernetes)

Arc (This is your Data Controller)

It will look similar to this:

```
C:\Users\markm\.azure-kubectl\kubectl get pods -A -o wide
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE	IP	NODE	NOMINATED NODE	READINESS GATES
arc	bootstrapper-9g794	1/1	Running	0	51m	10.244.0.6	aks-nodepool1-36882854-vmss000001	<none>	<none>
arc	control-8t9zv	2/2	Running	0	5m53s	10.244.2.11	aks-nodepool1-36882854-vmss000000	<none>	<none>
arc	controldb-0	2/2	Running	0	4m24s	10.244.0.8	aks-nodepool1-36882854-vmss000001	<none>	<none>
arc	logsdb-0	1/1	Running	0	2m26s	10.244.1.11	aks-nodepool1-36882854-vmss000002	<none>	<none>
arc	logsui-zpcvn	1/1	Running	0	2m27s	10.244.1.7	aks-nodepool1-36882854-vmss000002	<none>	<none>
arc	metricsdb-0	1/1	Running	0	2m27s	10.244.1.10	aks-nodepool1-36882854-vmss000002	<none>	<none>
arc	metricsdc-2vltp	1/1	Running	0	2m26s	10.244.0.10	aks-nodepool1-36882854-vmss000001	<none>	<none>
arc	metricsdc-5vnrk	1/1	Running	0	2m26s	10.244.1.8	aks-nodepool1-36882854-vmss000002	<none>	<none>
arc	metricsdc-cvsfp	1/1	Running	0	2m26s	10.244.2.12	aks-nodepool1-36882854-vmss000000	<none>	<none>
arc	metricsui-rnnp5	1/1	Running	0	2m25s	10.244.1.9	aks-nodepool1-36882854-vmss000002	<none>	<none>
arc	mgmtproxy-66mnd	2/2	Running	0	2m27s	10.244.0.9	aks-nodepool1-36882854-vmss000001	<none>	<none>
azure-arc	cluster-metadata-operator-7cfff54c4f-thjpv	2/2	Running	0	53m	10.244.2.3	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	clusterconnect-agent-6dfd867c68-wtjdf	3/3	Running	0	53m	10.244.2.5	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	clusteridentityoperator-fd498bf96-vqf4g	2/2	Running	0	53m	10.244.1.6	aks-nodepool1-36882854-vmss000002	<none>	<none>
azure-arc	config-agent-5696bcff9d-5r1fw	2/2	Running	0	53m	10.244.0.5	aks-nodepool1-36882854-vmss000001	<none>	<none>
azure-arc	controller-manager-8676dcdc6-8mrvn	2/2	Running	0	53m	10.244.2.10	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	extension-manager-6d7b7546c7-ck49w	2/2	Running	0	53m	10.244.2.4	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	flux-logs-agent-6506f89c56-m8tuc	1/1	Running	0	53m	10.244.2.8	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	kube-aad-proxy-c9b84df8c-g57hb	2/2	Running	0	53m	10.244.2.9	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	metrics-agent-5b9b94754f-wsjhr	2/2	Running	0	53m	10.244.2.6	aks-nodepool1-36882854-vmss000000	<none>	<none>
azure-arc	resource-sync-agent-f8c7c6b6b-c85rx	2/2	Running	0	53m	10.244.2.7	aks-nodepool1-36882854-vmss000000	<none>	<none>
kube-system	azure-ip-masq-agent-51m6f	1/1	Running	0	59m	10.240.0.6	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	azure-ip-masq-agent-mbfh2	1/1	Running	0	59m	10.240.0.5	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	azure-ip-masq-agent-vmz9p	1/1	Running	0	59m	10.240.0.4	aks-nodepool1-36882854-vmss000000	<none>	<none>
kube-system	coredns-76c97c8599-4mkl	1/1	Running	0	59m	10.244.1.5	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	coredns-76c97c8599-8zcb6	1/1	Running	0	60m	10.244.0.3	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	coredns-autoscaler-599949fd86-6d4ps	1/1	Running	0	60m	10.244.1.4	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6qxw6	1/1	Running	0	60m	10.240.0.6	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6tgpw	1/1	Running	0	60m	10.240.0.5	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	kube-proxy-2rb9t	1/1	Running	0	59m	10.240.0.5	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	kube-proxy-447dt	1/1	Running	0	59m	10.240.0.4	aks-nodepool1-36882854-vmss000000	<none>	<none>
kube-system	kube-proxy-cj9n7	1/1	Running	0	59m	10.240.0.6	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	metrics-server-77c8679d7d-xdkc7	1/1	Running	0	60m	10.244.1.3	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	omsagent-7q5bb	1/1	Running	0	59m	10.244.0.2	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	omsagent-cl4hg	1/1	Running	1	59m	10.244.1.2	aks-nodepool1-36882854-vmss000002	<none>	<none>
kube-system	omsagent-rs-74c449f7f-d5j7r	1/1	Running	0	60m	10.244.0.4	aks-nodepool1-36882854-vmss000001	<none>	<none>
kube-system	omsagent-tlcm2	1/1	Running	1	59m	10.244.2.2	aks-nodepool1-36882854-vmss000000	<none>	<none>

```
C:\Users\markm\.azure-kubectl\
```

You will need to wait until all of the Pods have a running state before you create Data Controller Services.

Create a SQL Managed Instance

Go back to your resource group and click on create again.

In the search box enter 'Azure SQL Managed Instance - Azure Arc

Click Create

Create Azure SQL Managed Instance - Azure Arc

Microsoft

BasicsTagsReview + create

Deploy an Azure Arc-enabled SQL Managed Instance in the Kubernetes environment of your choice. [Learn more](#)

Project details

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

Subscription * ⓘ

markm - Internal Consumption

Resource group * ⓘ

ARCDemoRG2

Managed Instance details

Enter required settings for this instance, including picking a location and configuring the compute and storage resources.

Instance name * ⓘ

sqlmi1

Custom location * ⓘ

arcdemo

Service type * ⓘ

LoadBalancer

Compute + Storage ⓘ

4 vCores, 8 Gi memory
[Configure compute + storage](#)

Administrator account

Managed Instance admin login * ⓘ

markm

Password * ⓘ

.....

Confirm password * ⓘ

.....

You resource group should be prepopulated, if it is not choose the resource group name you chose during script execution.

Enter a name for your SQL MI

Select arcdemo as the Custom Location

Choose Load Balancer

You can configure your compute and storage or leave the defaults

Choose a username / password combination for your SQL Instance. You can login to the instance using this username and password in SSMS when it is deployed.

You can check the deployment of the Managed Instance using kubectl again from the CMD prompt.

kubectl get pods -A -o wide

```
C:\Users\markm\azure-kubectl>kubectl get pods -A -o wide
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE	IP	NODE	NOMINATED NODE	READINESS GATES
arc	bootstrapper-9g794	1/1	Running	0	63m	10.244.0.6	aks-nodepool1-36882054-vmss000001	<none>	<none>
arc	control-8t9zv	2/2	Running	0	17m	10.244.2.11	aks-nodepool1-36882054-vmss000000	<none>	<none>
arc	control-db-0	2/2	Running	0	15m	10.244.0.8	aks-nodepool1-36882054-vmss000001	<none>	<none>
arc	logsdb-0	1/1	Running	0	13m	10.244.1.11	aks-nodepool1-36882054-vmss000002	<none>	<none>
arc	logsui-zpcvn	1/1	Running	0	13m	10.244.1.7	aks-nodepool1-36882054-vmss000002	<none>	<none>
arc	metricsdb-0	1/1	Running	0	13m	10.244.1.10	aks-nodepool1-36882054-vmss000002	<none>	<none>
arc	metricsdc-2vltp	1/1	Running	0	13m	10.244.0.10	aks-nodepool1-36882054-vmss000001	<none>	<none>
arc	metricsdc-5vwr	1/1	Running	0	13m	10.244.1.8	aks-nodepool1-36882054-vmss000002	<none>	<none>
arc	metricsdc-cvsfp	1/1	Running	0	13m	10.244.2.12	aks-nodepool1-36882054-vmss000000	<none>	<none>
arc	metricsui-rvnp5	1/1	Running	0	13m	10.244.1.9	aks-nodepool1-36882054-vmss000002	<none>	<none>
arc	mgmtproxy-60mr4	2/2	Running	0	13m	10.244.0.9	aks-nodepool1-36882054-vmss000001	<none>	<none>
arc	sqlmi-0	0/3	Pending	0	5s	<none>	<none>	<none>	<none>
azure-arc	cluster-metadata-operator-7cfff574c4f-thjpv	2/2	Running	0	65m	10.244.2.3	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	clusterconnect-agent-6dfd867c68-wtjdf	3/3	Running	0	65m	10.244.2.5	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	clusteridentityoperator-fd498bf96-vqf4g	2/2	Running	0	65m	10.244.1.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
azure-arc	config-agent-5696bcff9-5rlfw	2/2	Running	0	65m	10.244.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
azure-arc	controller-manager-8676dcd6-8mrvm	2/2	Running	0	65m	10.244.2.10	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	extension-manager-6d7b7546c7-ck49w	2/2	Running	0	65m	10.244.2.4	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	flux-logs-agent-6596f50c56-mbtwc	1/1	Running	0	65m	10.244.2.8	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	kube-ads-proxy-c9b04df8c-g57hb	2/2	Running	0	65m	10.244.2.9	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	metrics-agent-5b9b94754f-wsjhr	2/2	Running	0	65m	10.244.2.6	aks-nodepool1-36882054-vmss000000	<none>	<none>
azure-arc	resource-sync-agent-f8c7c6b6b-c85rx	2/2	Running	0	65m	10.244.2.7	aks-nodepool1-36882054-vmss000000	<none>	<none>
kube-system	azure-ip-masq-agent-5lm6f	1/1	Running	0	71m	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	azure-ip-masq-agent-mbfh2	1/1	Running	0	71m	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	azure-ip-masq-agent-vmz9p	1/1	Running	0	70m	10.240.0.4	aks-nodepool1-36882054-vmss000000	<none>	<none>
kube-system	coredns-76c97c8599-4nwkl	1/1	Running	0	71m	10.244.1.5	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	coredns-76c97c8599-8zcb6	1/1	Running	0	72m	10.244.0.3	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	coredns-autocalen-599949fd86-6d4ps	1/1	Running	0	72m	10.244.1.4	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6qxw6	1/1	Running	0	72m	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	connectivity-agent-947765fc4-6tgup	1/1	Running	0	72m	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	kube-proxy-2rb9t	1/1	Running	0	71m	10.240.0.5	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	kube-proxy-447dt	1/1	Running	0	70m	10.240.0.4	aks-nodepool1-36882054-vmss000000	<none>	<none>
kube-system	kube-proxy-cj9r7	1/1	Running	0	71m	10.240.0.6	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	metrics-server-77c8679d7d-xdkc7	1/1	Running	0	72m	10.244.1.3	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	omsagent-7qsb6	1/1	Running	0	71m	10.244.0.2	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	omsagent-cl4hg	1/1	Running	1	71m	10.244.1.2	aks-nodepool1-36882054-vmss000002	<none>	<none>
kube-system	omsagent-rs-74c4f49f7f-d5j7r	1/1	Running	0	72m	10.244.0.4	aks-nodepool1-36882054-vmss000001	<none>	<none>
kube-system	omsagent-tlcm2	1/1	Running	1	70m	10.244.2.2	aks-nodepool1-36882054-vmss000000	<none>	<none>

You will see your SQL MI pod in a pending state. Under the Ready column you will see 0/3, 1/3 or 2/3 when the state is pending. This means the SQL MI pod consist of 3 containers and you can see how many containers have been deployed.

Once you see 3/3 the state will be Running and you can login to your Managed Instance is SSMS.

Go to your resource group with the Kubernetes cluster and click on the Managed Instance Resource.

You can connect to your managed Instance with SSMS using the External Endpoint.

 Delete  Feedback

^ Essentials

Resource group : [ARCdemoRG2](#)

Data controller : [arcdc](#)

Location : East US

Namespace : arc

Subscription : [markm - Internal Consumption](#)

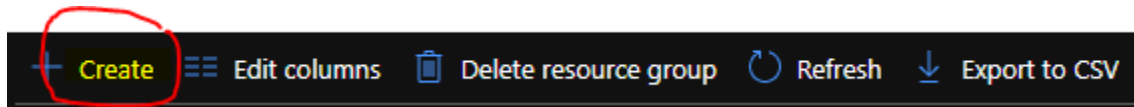
External endpoint : [52.146.84.43,1433](#)

Subscription ID : [9ac817f3-c68f-4899-89cb-f64c8cde9fd3](#)

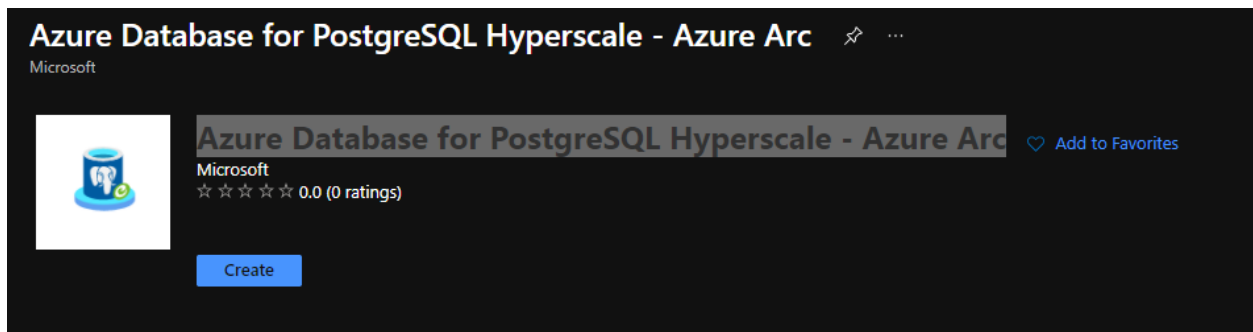
Last upload : a minute ago

Create a Postgres Hyperscale Instance

Go to your resource group, and click on Create



Azure Database for PostgreSQL Hyperscale - Azure ARC in the search bar.



Click Create

Home > ARCDemoRG2 > Create a resource > Azure Database for PostgreSQL Hyperscale - Azure Arc >

Create an Azure Arc-enabled PostgreSQL Hyperscale server group

Azure Arc-enabled PostgreSQL Hyperscale

Project details

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

Subscription *	markm - Internal Consumption
Resource group *	ARCDemoRG2

PostgreSQL Hyperscale server group details

Enter required settings for this instance, including picking a location and configuring the compute and storage resources.

Azure Arc-enabled PostgreSQL Hyperscale Name *	pg1
Custom location *	arcdemo

i Only custom locations to which you have access and for which a data controller has been configured are shown. [Learn more.](#)

Service type *	LoadBalancer
Compute + Storage	2 workers, vCores, 0.25 Gib memory Configure compute + storage
Extensions	citus

Administrator account

Password *
Confirm password *

[Review + create](#)

[Previous](#)

[Next: Tags](#)

The resource group should be prepopulated with the one you created during script execution. If it is not select it.

Name your Postgres Instance

Select arcdemo as the custom location.

Select Load Balancer.

You can select the default configuration. I chose 2 workers in the example above.

Note: workers are used for Hyperscale. If you choose 0 workers you will have a single Postgres Pod running on one node. Since we only have a 3 node cluster I would not choose more than 2 workers. More than that will just deploy on nodes that already have a worker.

Enter a Password for you Postgres Instance.

Click Review + Create

Click Create

You can check the status of the deployment as shown in the SQL MI deployment.

Go to the deployed Postgres Instance to get your public endpoint to connect to the instance in your tool of choice. Azure Data Studio will work.

The screenshot shows the Azure portal interface for an Azure Arc-enabled PostgreSQL Hyperscale instance named 'pg1'. The instance is in the 'PREVIEW' state and is located in the 'East US' region. The configuration details are as follows:

- Resource group: ARCDemoRG2
- Location: East US
- Subscription: markm - Internal Consumption
- Subscription ID: 9ac817f3-c68f-4899-89cb-f64c8cde9fd3
- Data controller: arcdc
- Namespace: arc
- External endpoint: 52.146.24.169:5432
- PostgreSQL admin: postgres
- Node configuration: 3 nodes, 0.25Gi RAM, 5Gi storage per node
- PostgreSQL version: 12
- Last upload: a minute ago

The 'Server group nodes' table shows the following nodes:

NAME	Type	Status
pg1c0-0	Coordinator	Available
pg1w0-0	Worker	Available
pg1w0-1	Worker	Available

The 'Develop and Manage' section at the bottom states: 'Azure Arc-enabled data services is currently in Public Preview. You can develop containerized applications along with your Azure Arc-enabled PostgreSQL Hyperscale server group and manage these applications with the azdata cli and Azure Data Studio.'

Install Indirect Mode

Documentation will be provided in the future. Required input is at a minimum, you will still need to login by entering credentials, choose a subscription and provide user names and passwords for the data controller and Postgres Instance.