

# Create an Azure Red Hat OpenShift 4 cluster

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Azure Red Hat OpenShift is a managed OpenShift service that lets you quickly deploy and manage clusters. This article shows you how to deploy an Azure Red Hat OpenShift cluster using either Azure CLI or the Azure portal.

Azure portal

## Before you begin

Sign in to the [Azure portal](#).

Register the `Microsoft.RedHatOpenShift` resource provider. For instructions on registering resource providers using Azure portal, see [Register resource provider](#).

## Create an Azure Red Hat OpenShift cluster

1. On the Azure portal menu or from the **Home** page, select **All Services** under three horizontal bars on the top left hand page.
2. Search for and select **Azure Red Hat OpenShift clusters**.
3. Select **Create**.
4. On the **Basics** tab, configure the following options:
  - **Project details:**
    - Select an Azure **Subscription**.
    - Select or create an Azure **Resource group**, such as *myResourceGroup*.
  - **Instance details:**
    - Select a **Region** for the Azure Red Hat OpenShift cluster.
    - Enter an **OpenShift cluster name**, such as *myAROCcluster*.
    - Enter a **Domain name**.
    - Select **Master VM Size** and **Worker VM Size**.
    - Select **Worker node count** (i.e., the number of worker nodes to create).

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### Project details

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

Subscription ⓘ *	<input type="text" value="test-aro_SubscriptionContainer"/>
Resource group ⓘ *	<input type="text" value="test-aro-rg"/>
	<a href="#">Create new</a>

### Instance details

Region ⓘ *	<input type="text" value="(US) East US"/>
OpenShift cluster name * ⓘ	<input type="text" value="testcluster"/>
Domain name * ⓘ	<input type="text" value="testdomain"/>
	<div><div> ⓘ The OpenShift console will be available at <a href="https://console-openshift-console.apps.testdomain.eastus.aroapp.io">https://console-openshift-console.apps.testdomain.eastus.aroapp.io</a></div></div>
Master VM size *	<div><div><b>3x Standard_D8s_v3</b></div><div>8 vcpus, 32 GB memory</div><div><a href="#">Change size</a></div></div>
Worker VM size *	<div><div><b>3x Standard_D4s_v3</b></div><div>4 vcpus, 16 GB memory</div><div><a href="#">Change size</a></div></div>
Worker node count * ⓘ	<div><div><input type="range" value="3"/></div><div>3</div></div>

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### ! Note

The **Domain name** field is pre-populated with a random string. You can either specify a domain name (e.g., *example.com*) or a string/prefix (e.g., *abc*) that will be used as part of the auto-generated DNS name for OpenShift console and API servers. This prefix is also used as part of the name of the resource group that is created to host the cluster VMs if a resource group name is not specified.

5. On the **Authentication** tab, complete the following sections.

Under **Service principal information**, select either **Create new** or **Existing**. If you choose to use an existing service principal, enter the following information:

- **Service principal client ID** is your appld.
- **Service principal client secret** is the service principal's decrypted Secret value.

ⓘ **Note**

If you need to create a service principal, see [Creating and using a service principal with an Azure Red Hat OpenShift cluster](#).

Under **Pull secret**, enter the **Red Hat pull secret** (i.e., your cluster's pull secret's decrypted value). If you don't have a pull secret, leave this field blank.

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**Service principal information**

Service principal type

☐ Create new

☒ Existing

Service principal client ID \* ⓘ

Service principal client secret \* ⓘ

**Pull secret**

Red Hat pull secret ⓘ

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6. On the **Networking** tab, configure the required options.

ⓘ **Note**

Azure Red Hat OpenShift clusters running OpenShift 4 require a virtual network with two empty subnets: one for the control plane and one for worker nodes.

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### Cluster network

Virtual network *	<div>(New) aro-vnet-lgnybaaa</div> <div>Create new</div>
Master subnet *	<div>(New) master-subnet (10.1.0.0/27)</div> <div>10.1.0.0 - 10.1.0.31 (32 addresses)</div>
Worker subnet *	<div>(New) worker-subnet (10.1.0.128/25)</div> <div>10.1.0.128 - 10.1.0.255 (128 addresses)</div>
Pod CIDR	10.128.0.0/14 10.128.0.0 - 10.131.255.255 (262144 addresses)
Service CIDR	172.30.0.0/16 172.30.0.0 - 172.30.255.255 (65536 addresses)

### Network settings

API server visibility *	<div><input checked="" type="radio"/> Public</div> <div><input type="radio"/> Private</div>
Ingress visibility *	<div><input checked="" type="radio"/> Public</div> <div><input type="radio"/> Private</div>

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7. On the **Tags** tab, add tags to organize your resources.

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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	Resource
<input type="text"/>	:	<input type="text"/>

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8. Check **Review + create** and then **Create** when validation completes.

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### TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

### Basics

Subscription	Content & Learning_SubscriptionContainer
Resource group	test-aro-rg
Location	East US
OpenShift cluster name	testcluster
Domain name	testdomain
Master VM size	Standard_D8s_v3
Worker VM size	Standard_D4s_v3
Worker node count	3

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9. It takes approximately 35 to 45 minutes to create the Azure Red Hat OpenShift cluster. When your deployment is complete, navigate to your resource by either:

- Clicking **Go to resource**, or
- Browsing to the Azure Red Hat OpenShift cluster resource group and selecting the Azure Red Hat OpenShift resource.
  - Per example cluster dashboard below: browsing for *myResourceGroup* and selecting *myAROCcluster* resource.

## Next steps

Learn how to [connect to an Azure Red Hat OpenShift cluster](#).