

在Azure中部署安全访问资源连接器

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简介

本文档介绍如何在Azure中逐步部署资源连接器。

先决条件

收集所需信息并了解

- 获取连接器图像。
 - 您可以下载映像一次，并将其用于任意连接器组中的任意数量的连接器。
 - 如果使用以前下载的映像，请确保该映像最新版本。
 - 有关详细信息，请参阅[获取连接器图像](#)。
- 复制为其部署连接器的特定连接器组的调配密钥。
请参阅[资源连接器的调配密钥](#)。

要求

Cisco 建议您了解以下主题：

- Cisco Secure Access控制面板管理员访问权限
- Azure门户访问
- 思科安全客户端
- 注册了ZTA的Windows计算机

使用的组件

本文档中的信息基于在实验室环境中使用下列组件执行的测试：

- ZTNA客户端
- 安全访问
- Azure
- 专用资源

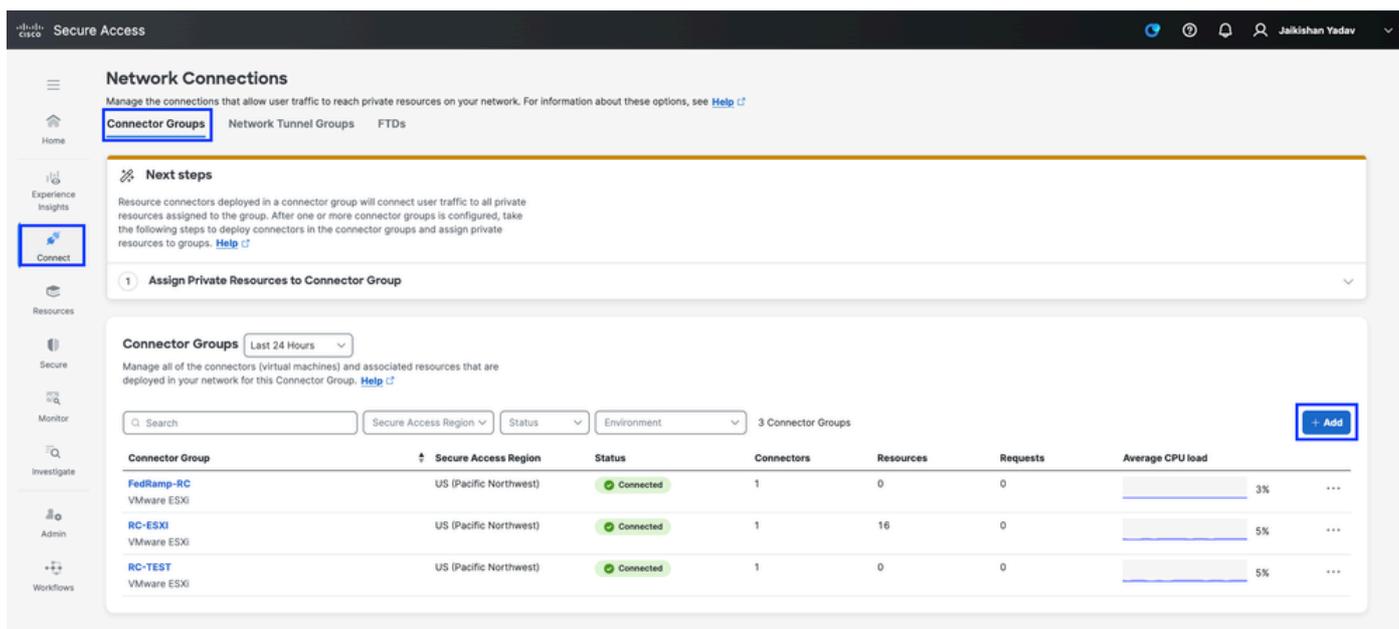
本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

配置

安全访问中的配置

登录[Secure Access Dashboard](#)并导航至 **Connect > Network Connections > Connector Groups**

- 点击 add

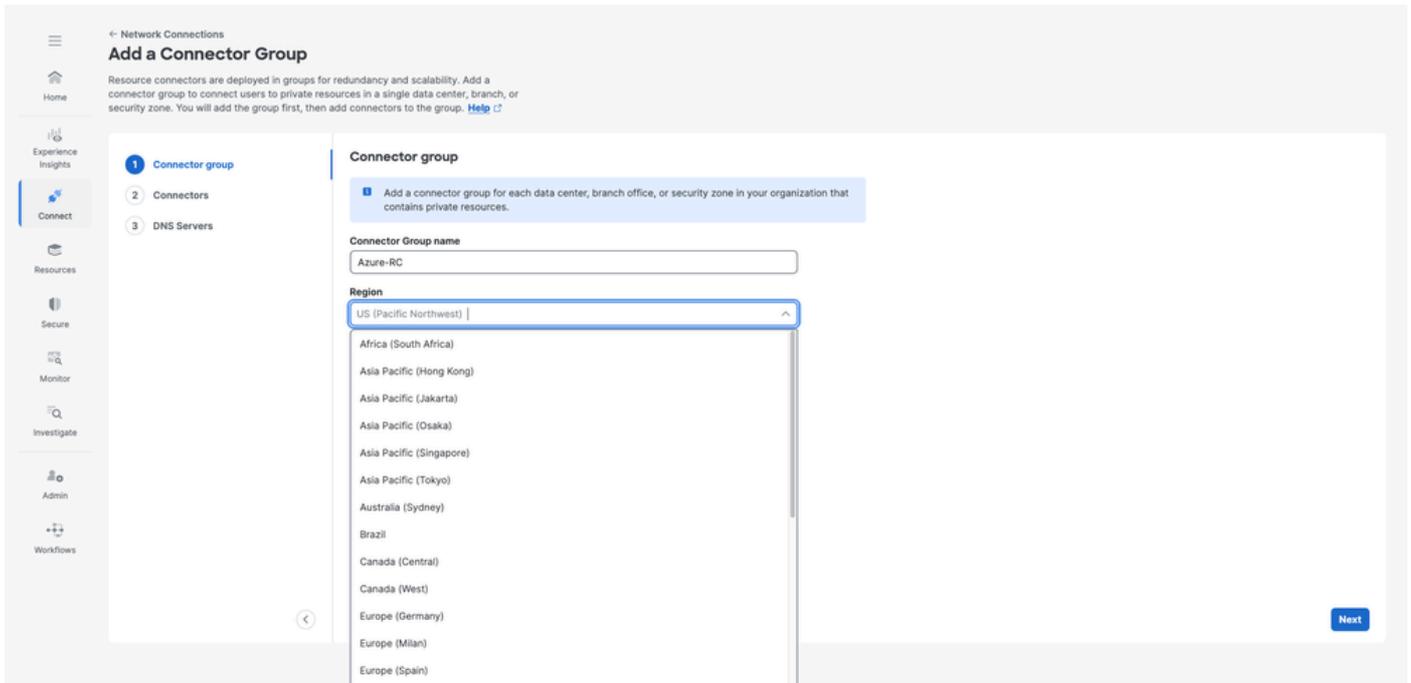


The screenshot shows the Cisco Secure Access dashboard. The main content area is titled "Network Connections" and includes a "Next steps" section with instructions on assigning private resources to connector groups. Below this is a "Connector Groups" section with a search bar, filters for "Secure Access Region", "Status", and "Environment", and a table of connector groups. The table has columns for "Connector Group", "Secure Access Region", "Status", "Connectors", "Resources", "Requests", and "Average CPU load". Three connector groups are listed: "FedRamp-RC" (VMware ESXi, US (Pacific Northwest), Connected, 1 connector, 0 resources, 0 requests, 3% CPU load), "RC-ESXI" (VMware ESXi, US (Pacific Northwest), Connected, 1 connector, 16 resources, 0 requests, 5% CPU load), and "RC-TEST" (VMware ESXi, US (Pacific Northwest), Connected, 1 connector, 0 resources, 0 requests, 5% CPU load). An "Add" button is visible in the top right corner of the table area.

| Connector Group | Secure Access Region | Status | Connectors | Resources | Requests | Average CPU load |
|---------------------------|------------------------|-----------|------------|-----------|----------|------------------|
| FedRamp-RC VMware ESXi | US (Pacific Northwest) | Connected | 1 | 0 | 0 | 3% |
| RC-ESXI VMware ESXi | US (Pacific Northwest) | Connected | 1 | 16 | 0 | 5% |
| RC-TEST VMware ESXi | US (Pacific Northwest) | Connected | 1 | 0 | 0 | 5% |

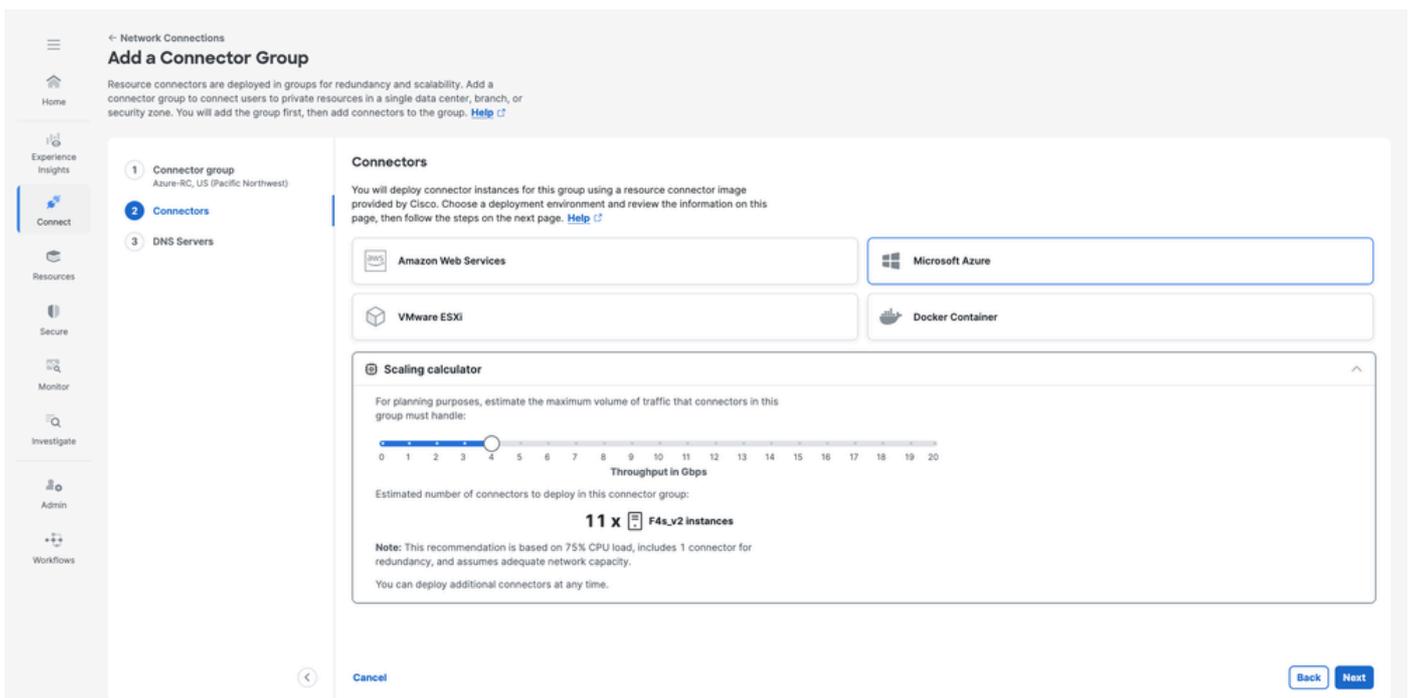
安全访问 — 连接器组

- 指定 Connector Group Name 和 Region
- 点击 Next



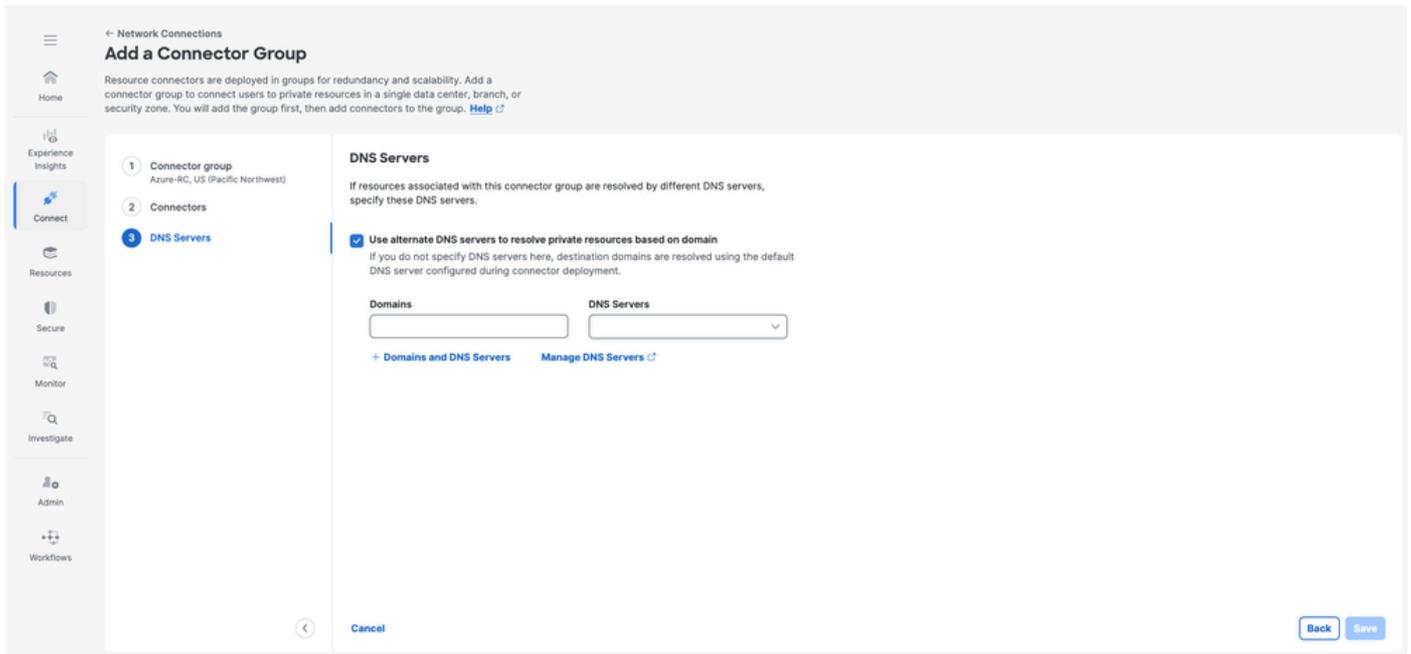
安全访问 — 连接器组配置

- 选择Microsoft Azure，并使用[Scaling Calculator](#)确定所需的资源



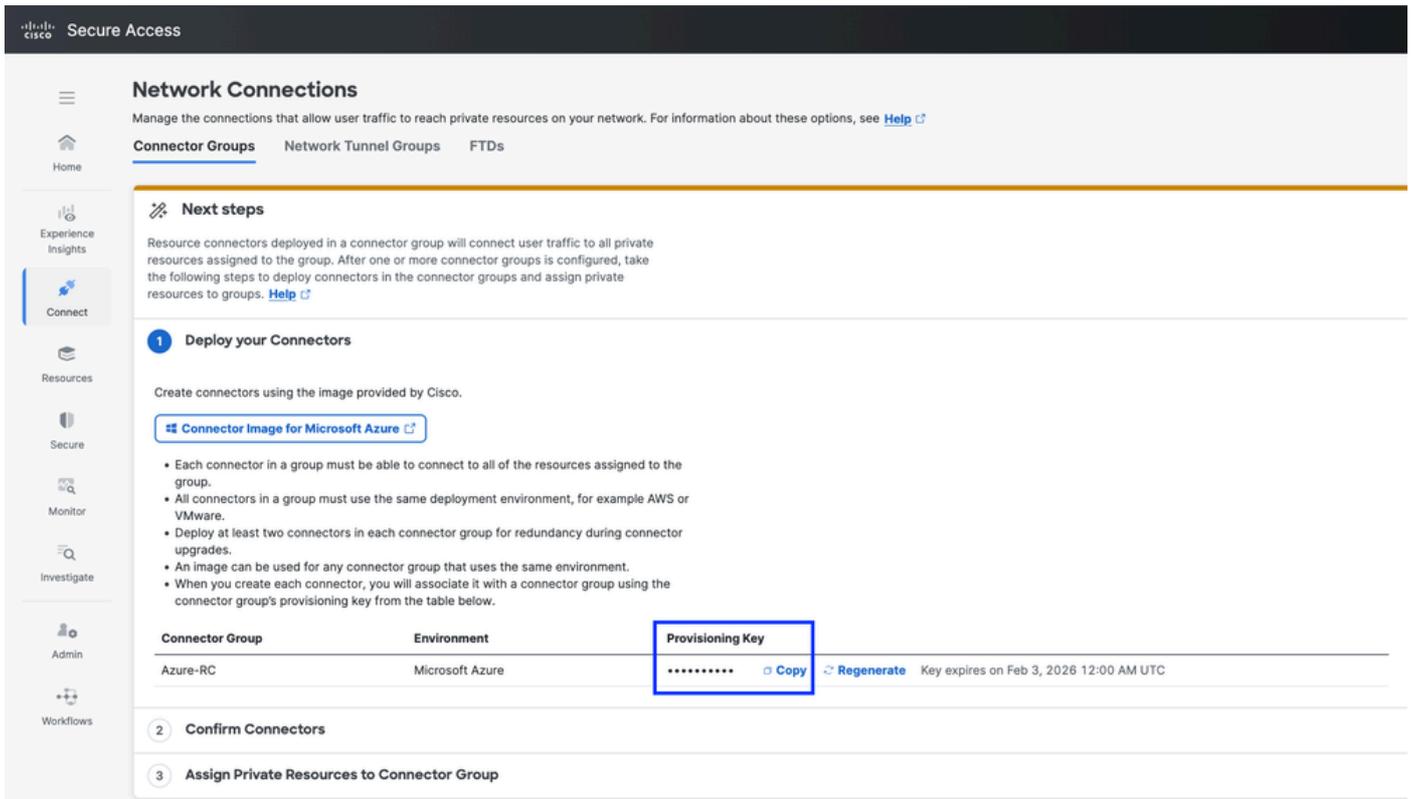
安全访问 — 资源连接器配置审核

- 利用该DNS Servers选项通过专用DNS服务器解析特定域。对于具有多个内部域的组织，这是最佳实践。
- 点击 Save



安全访问 — 资源连接器配置

- 在此阶段，请确保复制 Provisioning Key。稍后在资源连接器部署期间，您需要在 Azure 中使用此选项来启用向安全访问租户注册。



安全访问 — 资源连接器配置

Azure 中的配置

导航到 [Azure 门户](#)，然后导航到 Microsoft Azure Marketplace 并搜索 Cisco Secure Access Resource Connector 映像：

The screenshot shows the Microsoft Azure Marketplace search interface. The search bar contains 'Cisco Secure Access Resource Connector'. Filters for Publisher name, Product Type, Publisher Type, Operating System, and Pricing are all set to 'All'. A notification banner at the top says 'New! Get AI-generated suggestions for 'cisco secure access resource connector'' with a 'View suggestions' button. Below the notification, it shows 'Showing 1 to 1 of 1 results for 'Cisco Secure Access Resource Connector''. The search results list the product 'Cisco Secure Access Resource Connector' by Cisco Systems, Inc., categorized as a Virtual Machine. A 'Create' button is visible at the bottom of the product card. The left sidebar contains navigation options like 'Get Started', 'Management', and 'My Marketplace'.

安全访问 — Azure上的资源连接器创建

- 选择适当的Subscription，然Plan后点击 Create

The screenshot shows the product page for 'Cisco Secure Access Resource Connector' by Cisco Systems, Inc. The page includes the product name, a 'Add to Favorites' button, and a description: 'Cisco Systems, Inc. | Virtual Machine'. It indicates that the product is 'Azure benefit eligible'. Below this, there are dropdown menus for 'Subscription' and 'Plan' (currently showing 'Cisco Secure Access Resource Conne...'). A blue 'Create' button and a 'Start with a pre-set configuration' button are visible. The page also has a navigation bar with 'Overview', 'Plans + Pricing', 'Usage Information + Support', and 'Ratings + Reviews'. The main content area provides an overview of the product, stating it protects internal/private resources and offers secure, granular Zero Trust Network Access. It includes a section for 'Resource Connectors forward traffic securely to private internal resources' and a 'More information' section with links to documentation.

安全访问 — Azure上的资源连接器创建

- 检查和SSHDisks公Networking钥的配置

Microsoft Azure

Search resources, services, and docs (G+/)

Copilot

Home > Marketplace > Cisco Secure Access Resource Connector >

Create a virtual machine

Help me create a VM optimized for high availability | Help me choose the right VM size for my workload | Help me create a low cost VM

Basics | Disks | Networking | Management | Monitoring | Advanced | Tags | Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [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 *

Resource group *
[Create new](#)

Instance details

Virtual machine name *

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

Availability options

Security type
[Configure security features](#)

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

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

Run with Azure Spot discount

Size *
[See all sizes](#)

Enable Hibernation
i Hibernation does not currently support Trusted launch and Confidential virtual machines. [Learn more](#)

< Previous | Next: Disks > | **Review + create**

Create 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

Run with Azure Spot discount

Size *
[See all sizes](#)

Enable Hibernation
i Hibernation does not currently support Trusted launch and Confidential virtual machines for Linux images. [Learn more](#)

Administrator account

Authentication type SSH public key Password
i Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username *

SSH public key source

SSH Key Type RSA SSH Format Ed25519 SSH Format
i Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

Key pair name *

Inbound port rules
Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * None Allow selected ports

Select inbound ports
i All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

< Previous Next : Disks > Review + create



警告：不要丢失私有SSH密钥；否则，您将无法访问RC CLI，并且必须重新部署该CLI以进行故障排除。

Create a virtual machine



Help me choose the right VM size for my workload



Help me create a VM optimized for high availability



Help me create a low cost VM

Basics **Disks** Networking Management Monitoring Advanced Tags Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

i There is a charge for the underlying storage resources consumed by your virtual machine. [Learn more](#)

VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host



i Encryption at host is not registered for the selected subscription. [Learn more](#)

OS disk

OS disk size

Image default (52 GiB)

OS disk type *

Premium SSD (locally-redundant storage)

Delete with VM



Key management

Platform-managed key

Enable Ultra Disk compatibility



Data disks for Azure-RC

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

| LUN | Name | Size (GiB) | Disk type | Host caching | Delete with VM |
|-----|------|------------|-----------|--------------|----------------|
|-----|------|------------|-----------|--------------|----------------|

[Create and attach a new disk](#)

[Attach an existing disk](#)

Advanced

Create a virtual machine

Help me choose the right VM size for my workload Help me create a VM optimized for high availability Help me create a low cost VM

Basics Disks **Networking** Management Monitoring Advanced Tags Review + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution. [Learn more](#)

Network interface

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

Virtual network
[Edit virtual network](#)

Subnet *
[Edit subnet](#) 172.28.0.0 - 172.28.0.255 (256 addresses)

Public IP
[Create new](#)
i Public IP addresses have a nominal charge. [Estimate price](#)

NIC network security group None
 Basic
 Advanced

Public inbound ports * None
 Allow selected ports

Select inbound ports
i All traffic from the internet will be blocked by default. You will be able to change inbound port rules in the VM > Networking page.

Delete public IP and NIC when VM is deleted

Enable accelerated networking The selected image does not support 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

< Previous | Next : Management > | **Review + create**

安全访问 — Azure上的资源连接器创建

- 将复制自Provisioning KeyCisco Secure Access的安全访问粘贴到字User data段

KEY=XXXXXXXXXXXXXXXXXXXX

Create a virtual machine

Help me choose the right VM size for my workload Help me create a VM optimized for high availability Help me create a low cost VM

Your VM will create from this image

Select a VM application to install

Custom data

Pass a script, configuration file, or other data into the virtual machine **while it is being provisioned**. The data will be saved on the VM in a known location. [Learn more about custom data for VMs](#)

Custom data

i Your image must have a code to support consumption of custom data. If your image supports cloud-init, custom-data will be processed by cloud-init. [Learn more about custom data for VMs](#)

User data

Pass a script, configuration file, or other data that will be accessible to your applications throughout the lifetime of the virtual machine. Don't use user data for storing your secrets or passwords. [Learn more about user data for VMs](#)

Enable user data

User data *

KEY="xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx"

Performance (NVMe)

Enable capabilities to enhance the performance of your resources.

Higher remote disk storage performance with NVMe

i The selected image and size are not supported for NVMe. [See supported VM images and sizes](#)

Host

Azure Dedicated Hosts allow you to provision and manage a physical server within our data centers that are dedicated to your Azure subscription. A dedicated host gives you assurance that only VMs from your subscription are on the host, flexibility to

< Previous Next : Tags > Review + create

安全访问 — Azure上的资源连接器创建

- [查看并点击Create](#) 以继续创建您的 Resource Connector

Microsoft Azure

Search resources, services, and docs (G+)

Copilot

Home > Marketplace > Cisco Secure Access Resource Connector >

Create a virtual machine

Help me create a VM optimized for high availability | Help me choose the right VM size for my workload | Help me create a low cost VM

Validation passed

| | |
|----------------------|---|
| Subscription | cx-tac-sspt-zu-azure (cxsecurity) |
| Resource group | (new) Jai-Azure-RG |
| Virtual machine name | Azure-RC |
| Region | West US |
| Availability options | No infrastructure redundancy required |
| Zone options | Self-selected zone |
| Security type | Trusted launch virtual machines |
| Enable secure boot | Yes |
| Enable vTPM | Yes |
| Integrity monitoring | No |
| Image | Cisco Secure Access Resource Connector - Gen2 |
| VM architecture | x64 |
| Size | Standard F4s v2 (4 vcpus, 8 GiB memory) |
| Enable Hibernation | No |
| Authentication type | SSH public key |
| Username | azureuser |
| SSH Key format | Ed25519 |
| Key pair name | Azure-RC_key |
| Public inbound ports | None |
| Azure Spot | No |

Disks

| | |
|------------------------|-----------------|
| OS disk size | Image default |
| OS disk type | Premium SSD LRS |
| Use managed disks | Yes |
| Delete OS disk with VM | Enabled |
| Ephemeral OS disk | No |

Networking

| | |
|------------------------|-------------------|
| Virtual network | vnet-westus |
| Subnet | snet-westus-1 |
| Public IP | (new) Azure-RC-ip |
| Accelerated networking | Off |

< Previous | Next > | **Create**

安全访问 — Azure上的资源连接器创建

- 点击Create后，将显示用于下载私钥的选项。点击 Download private key and create resource

Microsoft Azure

Search resources, services, and docs (G+)

Home > Marketplace > Cisco Secure Access Resource Connector >

Create a virtual machine

Help me create a VM optimized for high availability | Help me choose the right VM size for my workload | Help me create a low cost VM

Validation passed

| | |
|----------------------|---|
| Subscription | cx-tac-sspt-zu-azure (cxsecurity) |
| Resource group | (new) Jai-Azure-RG |
| Virtual machine name | Azure-RC |
| Region | West US |
| Availability options | No infrastructure redundancy required |
| Zone options | Self-selected zone |
| Security type | Trusted launch virtual machines |
| Enable secure boot | Yes |
| Enable vTPM | Yes |
| Integrity monitoring | No |
| Image | Cisco Secure Access Resource Connector - Gen2 |
| VM architecture | x64 |
| Size | Standard F4s v2 (4 vcpus, 8 GiB memory) |
| Enable Hibernation | No |
| Authentication type | SSH public key |
| Username | azureuser |
| SSH Key format | Ed25519 |
| Key pair name | Azure-RC_key |
| Public inbound ports | None |
| Azure Spot | No |

Generate new key pair

An SSH key pair contains both a public key and a private key. Azure doesn't store the private key. After the SSH key resource is created, you won't be able to download the private key again. [Learn more](#)

[Download private key and create resource](#)

[Return to create a virtual machine](#)

| | |
|------------------------|-----------------|
| Disks | |
| OS disk size | Image default |
| OS disk type | Premium SSD LRS |
| Use managed disks | Yes |
| Delete OS disk with VM | Enabled |
| Ephemeral OS disk | No |

| | |
|-------------------|-------------------|
| Networking | |
| Virtual network | vnet-westus |
| Subnet | snet-westus-1 |
| Public IP | (new) Azure-RC-ip |

< Previous | Next > | **Create**

安全访问 — Azure上的资源连接器创建



警告：不要丢失私有SSH密钥；否则，您将无法访问RC CLI，并且必须重新部署该CLI以进行故障排除。

- 之后，您可以看到您的Resource Connector

Microsoft Azure

Search resources, services, and docs (G+)

Home >

CreateVm-cisco.cisco-resource-connector-cisco-sec-20260119144612 | Overview

Deployment

Search | Delete | Cancel | Redeploy | Download | Refresh

Overview

Inputs

Outputs

Template

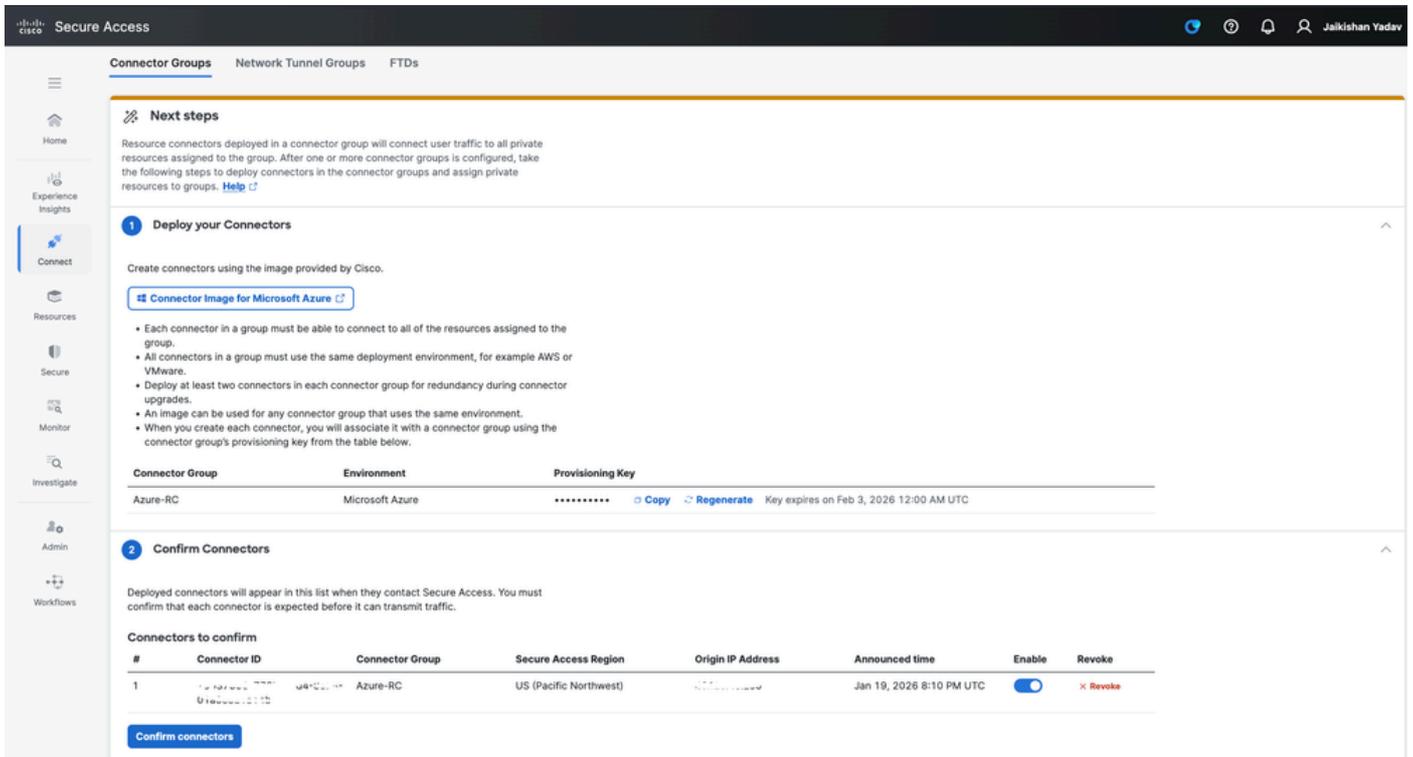
Deployment is in progress

Deployment name: CreateVm-cisco-resource-connector-cisco... Start time: 1/19/2026, 3:08:05 PM
 Subscription: cx-tac-sspt-20-azure (cxsecurity) Correlation ID: d6369344-515a-4f8b-ad8e-6f8dccc87418
 Resource group: Jai-Azure-RG

| Resource | Type | Status | Operation details |
|---|---|---------|-----------------------------------|
| Azure-RC | Microsoft.Compute/virtualMachines | Created | Operation details |
| azure-rc708 | Microsoft.Network/networkInterfaces | OK | Operation details |
| network-interface-associated-virtual-network-2026011915 | Microsoft.Resources/deployments | OK | Operation details |
| Azure-RC-ip | Microsoft.Network/publicIPAddresses | OK | Operation details |
| Azure-RC-nsg | Microsoft.Network/networkSecurityGroups | OK | Operation details |

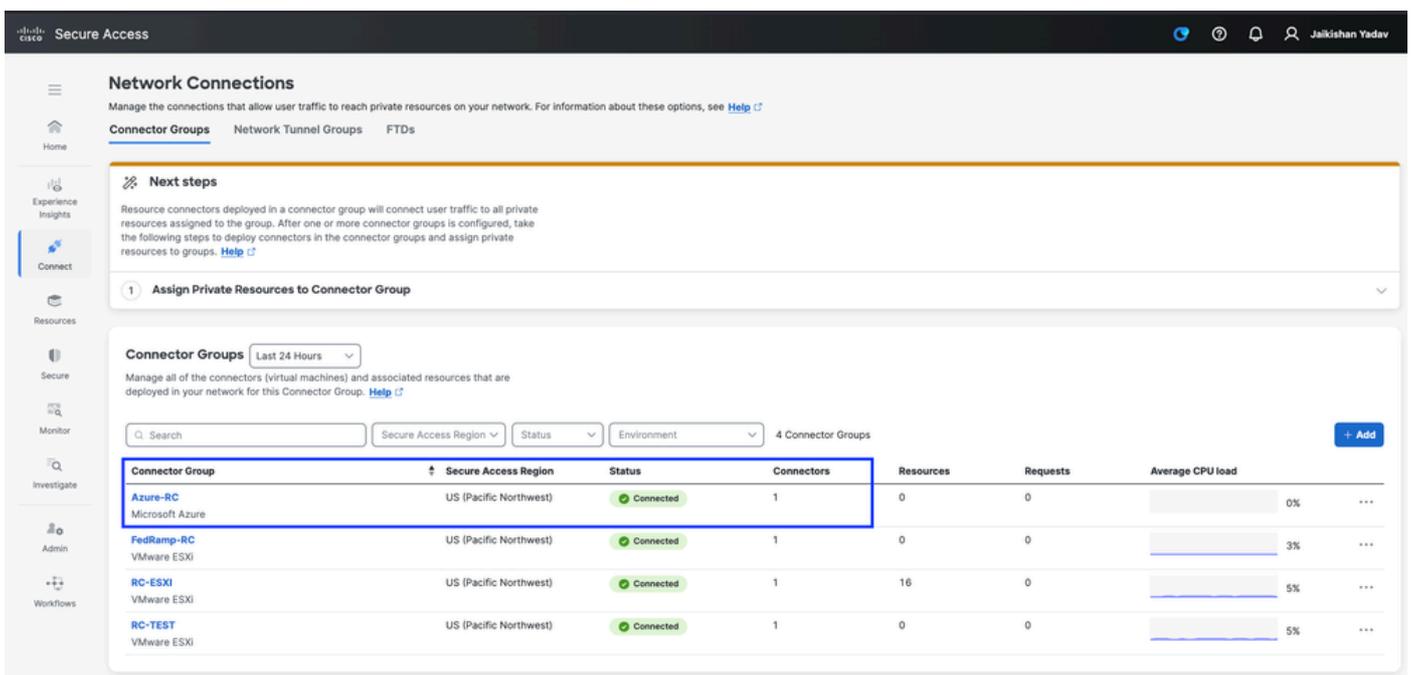
安全访问 — Azure上的资源连接器部署

- 然后，导航到[安全访问控制面板](#)，以确认连接并在您的安全访问租户中成功部署Resource Connector
- 点击 **Connect > Network Connections > Connector Groups**
- 在选项2“Confirm Connectors”（确认连接器）下，Confirm Connectors 点击以结束部署



安全访问 — 资源连接器确认

现在，您可以在安全访问租户中看到部署并连接新的资源连接器：



安全访问 — 资源连接器

验证

从inbuild Bastion CLI访问

在Azure中，访问资源连接器并点击Bastion:

- Authentication Type:选择 SSH Private key from Local File
- Username:您必须使用 acadmin
- Local File:选择之前下载的private key项

The screenshot shows the Azure portal interface for configuring Bastion access to a virtual machine. The breadcrumb navigation indicates the path: Home > CreateVm-cisco.cisco-resource-connector-cisco-sec-20260122113614 | Overview > Azure-RC. The main heading is "Azure-RC | Bastion" with a sub-heading "Virtual machine". A search bar is present at the top left. The left sidebar contains a navigation menu with options like Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect, Bastion (highlighted), Networking, and Settings. The main content area provides information about Azure Bastion and the current configuration. It states "Using Bastion: vnet-westus-bastion" and "Provisioning State: Succeeded". Below this, it prompts the user to enter a username and password. The configuration fields are: Authentication Type (SSH Private Key from Local File), Username (acadmin), and Local File (Azure-RC_key.pem). There is an "Advanced" section with a checked option "Open in new browser tab" and a prominent "Connect" button at the bottom.

```
cdn.bastionglobal.azure.com/2020...dex.react.html?datapath=ee6d...9039f47cf4ca374t
Import bookmarks... Quicker Backlog Training Tech Articles Work Links Personal TC-EE Related LAB Secure-Access CSA-IFT Sec
You have entered the Console Mode on this Resource Connector.
Type 'help' to get a list of supported commands.

Following is the list of commands available:
=====
Resource Connector Specific
=====
Command      || Description
diagnostic   || Run a series of connectivity tests
help         || Provides the list of commands available
routeadd     || Allows (non-persistent) routes to be added with network and gateway
routedel     || Allows (non-persistent) added routes to be deleted with network
              and gateway. This will not permit deletion of system created routes
routeshow    || Shows all the routes in the system
sshkey       || Manages SSH public keys for aadmin user (add, list, delete, clean)
stats        || Displays a series of statistics
tcpdump      || Provides packet capture information on VM interface IP
techsupport  || Provides software version, VPN tunnel state, system monitoring
              metrics, snapshot info and software logs
version      || Shows the software version running in the VM
=====
Linux Native
=====
Command      || Description
clear        || Clears screen
date         || Provides system time
df           || Provides disk and partition usage
free         || Shows memory that is free and used
history      || Provides the list of commands previously executed
iostat      || Shows cpu and disk utilization
mpstat      || Shows detailed CPU utilization
netstat      || Shows all open network connections
nslookup     || Finds all DNS records for website
ping         || Confirms network connectivity
reboot       || Reboots the VM
tcptracroute || Traceroutes pathway using TCP
traceroute   || Traceroutes pathway using ICMP packets
uptime       || Shows current time and how long the system has been up and running
vmstat       || Shows VM memory statistics
7:00 PM 10/11/2020 07:00 PM 10/11/2020 ~ $
```

安全访问 — 访问资源连接器命令行

从MAC-OS终端访问RC

打开终端并使用 `ssh -i <private-key-file-path> aadmin@x.x.x.x` 连接到资源连接器。

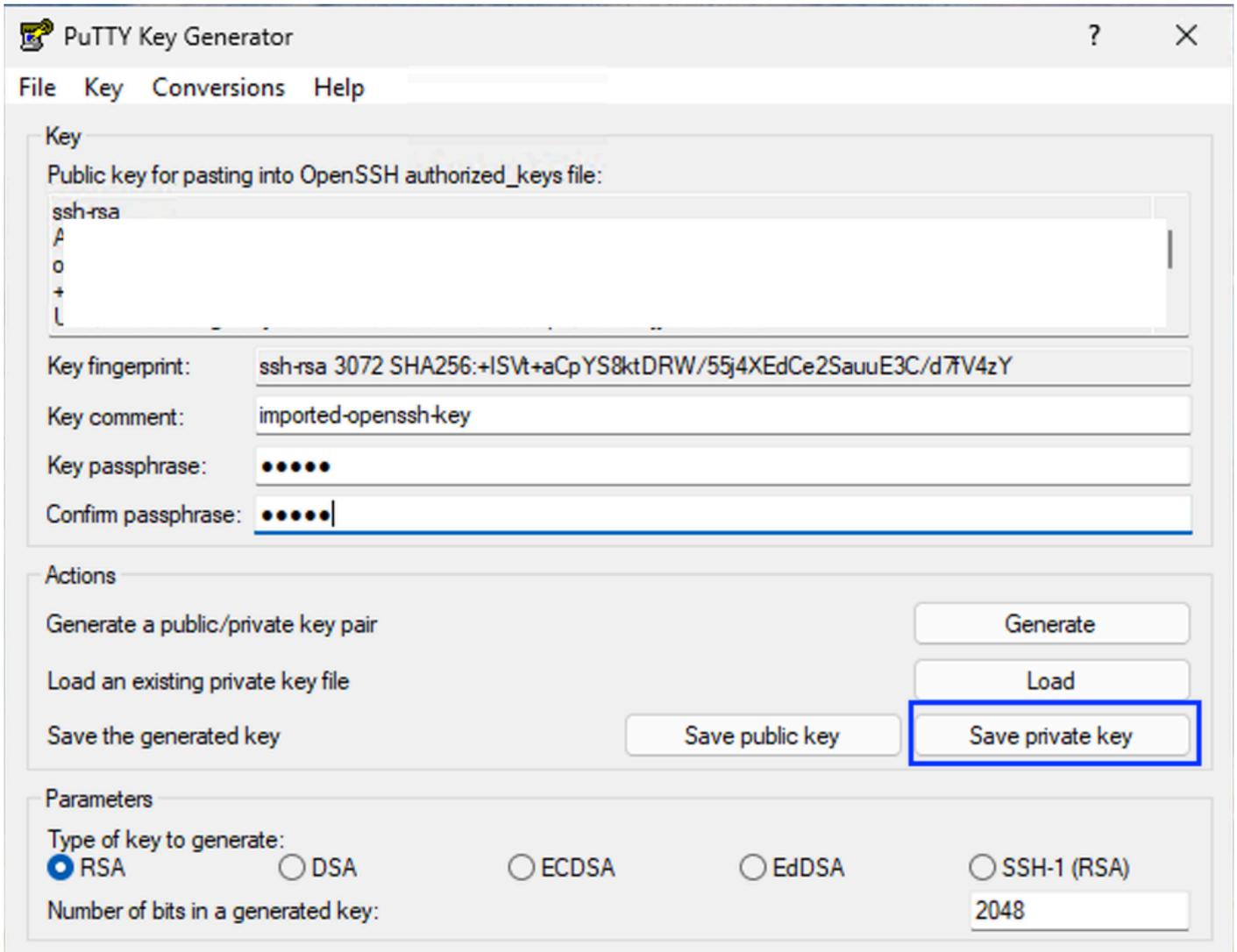
```
Downloads — ssh -i ~/Downloads/Azure-RC_key.pem acadmin@i-... 243x59
You have entered the Console Mode on this Resource Connector.
Type 'help' to get a list of supported commands.

Following is the list of commands available:
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Resource Connector Specific
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vmstat       || Shows VM memory statistics
$
```

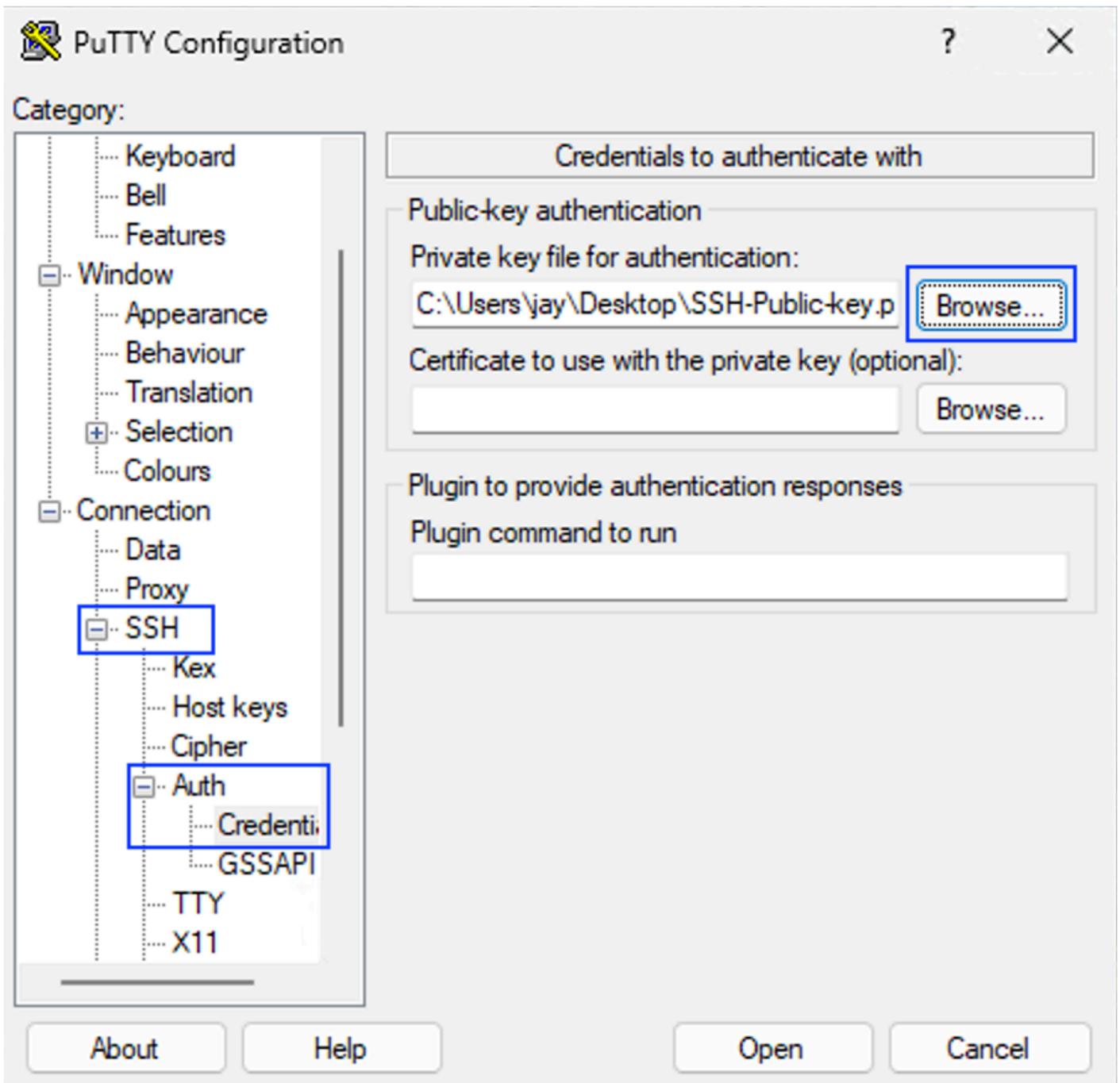
安全访问 — 访问资源连接器命令行

从Windows访问 — Putty

要使用私钥，必须使用以下命令将SSH private key从.pem转换.ppk为formatPuttygen:



- 以.ppk格式保存私钥
- 启动putty应用程序，导航到SSH > Auth > Credentials，然后在其中浏览SSH private key您的。ppkformat



- 导航至Session并输入资源连接器的IP地址，然后单击 Open



提示：username：acadmin 命令：将私钥从.pem格式转换为.ppk格式时配置的命令

```

routeadd    || Allows (non-persistent) routes to be added with network and gate
way
routedel    || Allows (non-persistent) added routes to be deleted with network
            and gateway. This will not permit deletion of system created rou
tes
routeshow   || Shows all the routes in the system
sshkey      || Manages SSH public keys for acadmin user (add, list, delete, cle
an)
stats       || Displays a series of statistics
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techsupport || Provides software version, VPN tunnel state, system monitoring
            metrics, snapshot info and software logs
version     || Shows the software version running in the VM
=====
==
Linux Native
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Command     || Description

clear       || Clears screen
date        || Provides system time
df          || Provides disk and partition usage
free        || Shows memory that is free and used
history     || Provides the list of commands previously executed
iostat     || Shows cpu and disk utilization
mpstat     || Shows detailed CPU utilization
netstat    || Shows all open network connections
nslookup   || Finds all DNS records for website
ping       || Confirms network connectivity
reboot     || Reboots the VM
tcptracroute || Traceroutes pathway using TCP
traceroute || Traceroutes pathway using ICMP packets
uptime     || Shows current time and how long the system has been up and runni
ng
vmstat     || Shows VM memorv statistics

```

故障排除

要访问故障排除命令，请访问。



警告：不要丢失私有SSH密钥；否则，您将无法访问RC CLI，并且必须重新部署该CLI以进行故障排除。

相关信息

- [思科技术支持和下载](#)
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