

Upgrading to vRealize Automation 6.2 or Later

vRealize Automation 6.2.5

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see <http://www.vmware.com/support/pubs>.

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<http://www.vmware.com/support/>

The VMware Web site also provides the latest product updates.

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VMware, Inc.
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

Contents

| | |
|---|----|
| Upgrading to vRealize Automation 6.2 or Later | 5 |
| 1 Updated Information | 7 |
| 2 升级到 vRealize Automation 6.2 或更高版本 | 9 |
| 3 Checklist for Upgrading vRealize Automation Components | 11 |
| 4 Prerequisites for Upgrading vRealize Automation | 13 |
| 5 准备升级 vRealize Automation | 15 |
| Verify the Age of Root Passwords for Virtual Appliances | 15 |
| 为当前部署关闭服务 | 16 |
| 关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务 | 17 |
| Downloading Virtual Appliance Updates | 17 |
| 6 Upgrading to vCenter Platform Services Controller | 19 |
| Upgrade an Identity Appliance to PSC for Use with vRealize Automation | 19 |
| Upgrade a vSphere SSO to PSC for Use with vRealize Automation | 21 |
| 7 Installing the Virtual Appliance Updates | 23 |
| Install the Update on the Identity Appliance | 23 |
| Install the Update on the vRealize Automation Appliance | 24 |
| 8 升级 IaaS 服务器 | 27 |
| Upgrade the Database | 27 |
| 下载 IaaS 安装程序 | 29 |
| Upgrade the IaaS Components | 29 |
| 9 vRealize Automation 的升级后任务 | 33 |
| 应用 vRealize Automation 品牌 | 33 |
| 高可用性部署的端口配置 | 34 |
| Enabling the Connect to Remote Console Action for Consumers | 34 |
| Update Customized Workflows | 34 |
| 10 升级故障排除 | 35 |
| 安装或升级失败且显示负载均衡器超时错误 | 35 |
| 在 IaaS 升级期间 Website 组件升级失败 | 35 |
| 间歇性出现不正确的选项卡名称 | 36 |
| Changes Made to /etc/hosts Files Might Be Overwritten | 36 |

vRealize Automation Requires vsphere.local as the Default Tenant Name 36
After Upgrade, Services on the Services Tab of the vRealize Automation Appliance Management
Console Do Not Display Properly 37

Index 39

Upgrading to vRealize Automation 6.2 or Later

《升级到 vRealize Automation 6.2 或更高版本》 tells you how to download and install updates to upgrade to the latest 6.2 release.

As used in this guide, vCloud Automation Center 6.1 includes vCloud Automation Center 6.1 and subsequent hot fixes.

NOTE 并不是所有版本中都提供 vRealize Automation 的所有特性和功能。有关每个版本中特性集的比较，请参见 <https://www.vmware.com/products/vrealize-automation/>。

Intended Audience

This information is intended for experienced Windows or Linux system administrators who are familiar with virtual machine technology and datacenter operations.

VMware Technical Publications Glossary

VMware Technical Publications provides a glossary of terms that might be unfamiliar to you. For definitions of terms as they are used in VMware technical documentation, go to <http://www.vmware.com/support/pubs>.

Updated Information

This *Upgrade to vRealize Automation 6.2 and Later* guide for vRealize Automation is updated with each release of the product or when necessary.

This table provides the update history of the guide.

| Revision | Description |
|--------------|---|
| EN-001633-05 | <ul style="list-style-type: none"> ■ vRealize Automation 6.2.5 version of this guide. ■ Added “After Upgrade, Services on the Services Tab of the vRealize Automation Appliance Management Console Do Not Display Properly,” on page 37 |
| EN-001633-04 | <ul style="list-style-type: none"> ■ vRealize Automation 6.2.4 version of this guide. |
| EN-001633-03 | <ul style="list-style-type: none"> ■ vRealize Automation 6.2.3 version of this guide. ■ Upgrading to 6.2.3 automatically enables participation in the Customer Experience Improvement Program. See “Install the Update on the vRealize Automation Appliance,” on page 24. ■ Includes minor changes from previous revision. |
| EN-001633-02 | <ul style="list-style-type: none"> ■ Updated the supported Java versions for the database. See “Upgrade the Database,” on page 27. ■ Updated the supported .NET version to 4.5.1 or later. ■ Added information on upgrading to vCenter Platform Services Controller. See Chapter 6, “Upgrading to vCenter Platform Services Controller,” on page 19. |
| EN-001633-01 | <ul style="list-style-type: none"> ■ Document title is changed to reflect upgrade paths from vCloud Automation Center 6.1 and point releases of 6.2. ■ Added link to information about supported upgrade paths in the vRealize Automation release notes, available on the VMware vRealize Automation Documentation landing page. ■ Added instructions to check password timeout values before beginning an upgrade. See “Verify the Age of Root Passwords for Virtual Appliances,” on page 15. ■ Added instructions to reconfigure the load balancer port number to support remote consoles in high-availability deployments. See “高可用性部署的端口配置,” on page 34. ■ Added instructions to modify blueprints to enable the Connect to Remote Console Action for some upgrade scenarios. See “Enabling the Connect to Remote Console Action for Consumers,” on page 34. |
| EN-001633-00 | Initial release. |

升级到 vRealize Automation 6.2 或更高版本

2

升级过程分为多个阶段，各个阶段的步骤必须按特定顺序执行。遵循建议的过程可确保您顺利完成升级操作，尽可能缩短系统停机时间。必须将所有产品组件升级到相同的版本。

注意 自 6.2 起，vCloud Automation Center 已更名为 vRealize Automation。仅更改用户界面和服务名称。包含 vcac 的目录名称和程序名称不受影响。

请在下表中找到当前安装的版本，然后按照右侧文档中的步骤以增量形式将 vRealize Automation 环境升级到最新版本。您可以在 <https://www.vmware.com/support/pubs/vcac-pubs.html> 找到 vCloud Automation Center 和 vRealize Automation 所有版本的文档链接。

表 2-1 支持的升级路径

| 当前安装的版本 | 增量升级的文档 |
|--------------------------------|---|
| vCloud Automation Center 6.0 | 按照以下顺序执行升级： <ul style="list-style-type: none">■ 《将 vCloud Automation Center 6.0 升级到 6.0.1》■ 《升级到 vCloud Automation Center 6.1》■ 《升级到 vRealize Automation 6.2 或更高版本》 |
| vCloud Automation Center 6.0.1 | 按照以下顺序执行升级： <ul style="list-style-type: none">■ 《升级到 vCloud Automation Center 6.1》■ 《升级到 vRealize Automation 6.2 或更高版本》 |
| vCloud Automation Center 6.1.x | 《升级到 vRealize Automation 6.2 或更高版本》 |
| vRealize Automation 6.2.x | 按照《升级到 vRealize Automation 6.2 或更高版本》中所述直接升级到最新的 6.2.x 版本 |

Checklist for Upgrading vRealize Automation Components

3

When you perform an upgrade, you update all vRealize Automation components in this order: virtual appliances, IaaS databases, and IaaS services.

The Upgrade to vRealize Automation Checklist table provides a high-level overview of upgrade tasks.

Print out a copy of this checklist and use it to track your work as you complete the upgrade. Complete the tasks in the order in which they are given.

You must upgrade components in the prescribed order and upgrade all components. Using a different order can result in unexpected behavior after the upgrade or failure of the upgrade to complete.

For information on all supported upgrade paths, see the release notes for vRealize Automation, available on the [VMware vRealize Automation Documentation landing page](#).

Table 3-1. Upgrade to vRealize Automation Checklist

| Task | Instructions | Notes |
|---|---|---|
| <input type="checkbox"/> Complete and verify all prerequisites for the upgrade. | See Chapter 4, “Prerequisites for Upgrading vRealize Automation,” on page 13. | |
| <input type="checkbox"/> If you are upgrading a distributed deployment that uses a load balancer, shut down the vco-service on each vRealize Appliance. | See “为当前部署关闭服务,” on page 16. | |
| <input type="checkbox"/> Shut down services on your IaaS Windows Servers. | See “关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务,” on page 17. | |
| <input type="checkbox"/> Check for updates to the Identity Appliance. | See “Downloading Virtual Appliance Updates,” on page 17. | |
| <input type="checkbox"/> Install the 6.2 update on the Identity Appliance. | See “Install the Update on the Identity Appliance,” on page 23. | If you plan to use vSphere PSC as your SSO appliance, see Chapter 6, “Upgrading to vCenter Platform Services Controller,” on page 19. |
| <input type="checkbox"/> Check for updates to the vRealize Appliance. | See “Downloading Virtual Appliance Updates,” on page 17. | |
| <input type="checkbox"/> Install the 6.2 update on each vRealize Appliance in your installation. | See “Install the Update on the vRealize Automation Appliance,” on page 24. | |
| <input type="checkbox"/> Update the IaaS database. | See “Upgrade the Database,” on page 27. | |

Table 3-1. Upgrade to vRealize Automation Checklist (Continued)

| Task | Instructions | Notes |
|---|--|-------|
| <input type="checkbox"/> Download and install updates for IaaS. | See Chapter 8, “升级 IaaS 服务器,” on page 27. | |
| <input type="checkbox"/> (Optional) Apply vRealize Automation branding to 6.2 | See “应用 vRealize Automation 品牌,” on page 33. | |

Prerequisites for Upgrading vRealize Automation

4

Before you run the upgrade, review the prerequisites.

System Configuration Requirements

Verify the following system requirements before you begin an upgrade.

- Verify that you are following a supported upgrade path. See the vRealize Automation release notes for a list of supported upgrade paths.
- Verify that all appliances and servers that are part of your deployment meet the system requirements for the version you are upgrading to. See the *vRealize Automation Support Matrix* on the VMware Web site at <https://www.vmware.com/support/pubs/vcac-pubs.html>.
- If you are using a vSphere SSO, verify that it is a supported version and at the correct patch level. See the 《vRealize Automation 支持列表》 for information about supported versions
- Consult the *VMware Product Interoperability Matrix* on the VMware Web site for information about compatibility with other VMware products.

General Prerequisites

Verify that the following prerequisites are finished before you begin an upgrade.

- Your source installation is fully installed and configured.
- Microsoft Distributed Transaction Coordinator (MSDTC) is enabled on all vRealize Automation and associated SQL servers. For instructions, see the VMware Knowledge Base article *Various tasks fail after upgrading or migrating to VMware vCloud Automation Center (vCAC) 6.1.x (2089503)* at <http://kb.vmware.com/kb/2089503>.
- You have backups for vRealize Appliance configuration files in the following directories for each appliance.
 - `/etc/vcac/`
 - `/etc/vco/`
 - `/etc/apache2/`
 - `/etc/rabbitmq/`
- You have backups for all databases.
- You have backups for any files you have customized, such as `DataCenterLocations.xml`.
- You have a snapshot of your virtual appliances and IaaS servers.
- You perform the upgrade at a time when the system is not in heavy use.

- You have followed the instructions in “[关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务](#),” on page 17.

Order of Upgrade for Integrations

Review the following table for information about the order of upgrade for other VMware components integrated with your vRealize Automation deployment.

| If your site uses ... | Take this action |
|--|---|
| vRealize Automation Designer, formerly vCloud Automation Center Designer | If your site includes vRealize Automation Designer, uninstall it. After the upgrade is finished, install the 6.2.x version provided on the VMware Appliance Install download page. For more information about installing and using vRealize Automation Designer, see 《 计算机可扩展性 》. |
| An external vRealize Orchestrator appliance | If your deployment uses an external vRealize Orchestrator appliance and it is connected to the Identity Appliance, upgrade vRealize Orchestrator before you upgrade vRealize Automation. |

准备升级 vRealize Automation

开始升级之前，必须下载虚拟设备更新并关闭 vRealize Appliance 实例和 IaaS 服务器上的服务。

本章讨论了以下主题：

- [“Verify the Age of Root Passwords for Virtual Appliances,”](#) on page 15
- [“为当前部署关闭服务”](#)第 16 页，
- [“关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务”](#)第 17 页，
- [“Downloading Virtual Appliance Updates,”](#) on page 17

Verify the Age of Root Passwords for Virtual Appliances

Before you upgrade vRealize Automation, you must verify the age of the root passwords for the Identity Appliance, or other SSO appliance, and the vRealize Appliance.

If a root password is 365 days old or older, you must change the password before you run the upgrade. If a root password is 364 days old or newer, you can proceed with the upgrade.

Verify the age of the password.

Procedure

- 1 Log in to the vRealize Appliance for the version that you want to upgrade with SSH, or log in to the virtual machine console by using the user name **root** and the password you specified when the appliance was deployed.
- 2 Run the `chage -l` command.

The output of the `chage -l` command appears. In this example, the date in the Last Change field is less than 364 days ago.

```
Minimum: 0
Maximum: 365
Warning: 7
Inactive: -1
Last Change: Dec 29, 2014
Password Expires: Dec 29, 2015
Password Inactive: Never
Account Expires: Never"
```

- 3 Check the value in the Last Change field.
 - If the date reported in the Last Change field is less than 364 days ago you can proceed with the upgrade.
 - If the date reported in the Last Change field is more than 365 days ago you must change your password before running the upgrade.

为当前部署关闭服务

对于在负载均衡器后面部署和配置多个设备的高可用性部署，在开始升级之前，请确保已在当前部署中的每个 vCloud Automation Center Appliance 或 vRealize Appliance 上禁用 vco-server 服务。

重要事项 如果升级最小部署，请勿执行以下步骤。

步骤

- 1 使用 SSH 登录当前部署的 vCloud Automation Center Appliance 或 vRealize Appliance，或者登录虚拟机控制台。
- 2 确认已启用 SSH。
 - a 使用完全限定域名 (<https://va-hostname.domain.name:5480/>)、用户名 root 以及部署设备时指定的密码登录到管理控制台。
 - b 单击管理选项卡。
 - c 确认已选中 **SSH 服务已启用**和**管理员 SSH 登录**。
选中 **SSH 服务已启用**复选框，将为除 root 用户以外的所有其他用户启用 SSH 访问。选择已启用**管理员 SSH 登录**，将允许 root 用户进行 SSH 登录。
- 3 (可选) 如果未启用 SSH，请在**管理选项卡**上选中 **SSH 服务已启用**和**管理员 SSH 登录**对应的复选框，然后单击**保存设置**。
- 4 禁用 vco-server 服务。


```
service vco-server stop
chkconfig vco-server off
```

对于当前部署中的每个设备 以及从 vCloud Automation Center Appliance 或早期版本的 vRealize Appliance 配置的 PostgreSQL 虚拟设备，请执行此步骤。
- 5 确认该服务已停止。返回的状态应为未运行 (NOT RUNNING)。


```
service vco-server status
```
- 6 在每个 vCloud Automation Center Appliance 或 vRealize Appliance 上，停止 vcac-server、apache2 和 rabbitmq-server 服务。
请勿对计划更新的第一个节点执行该步骤。


```
service vcac-server stop
service apache2 stop
service rabbitmq-server stop
```
- 7 确认上述服务已停止。每个服务返回的状态应为未运行 (NOT RUNNING)。


```
service vcac-server status
service apache2 status
service rabbitmq-server status
```

在升级每个 vCloud Automation Center Appliance 或 vRealize Appliance 之前，请勿重新引导设备或启动上述服务。请勿在计划更新的第一个节点上停止 vcac、apache 和 rabbitmq 服务。

下一步

[“关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务”](#) 第 17 页, 。

关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务

开始升级之前, 请关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务。

对于分布式安装, 请按照建议的顺序为所有运行 IaaS 服务的服务器关闭 vCloud Automation Center 服务。

步骤

- 1 登录 IaaS Windows 服务器。
- 2 选择开始 > 管理工具 > 服务。
- 3 按照以下顺序关闭服务。
 - a 所有 VMware vCloud Automation Center 代理
 - b 所有 VMware DEM Worker
 - c VMware DEM Orchestrator
 - d VMware vCloud Automation Center Manager Service

下一步

选择下载虚拟设备更新的方法。有关详细信息, 请参见[“Downloading Virtual Appliance Updates”](#)第 17 页, 。

Downloading Virtual Appliance Updates

You can check for updates on the **Update** tab of the VMware vRealize Appliance management console and download the updates by using one of the following methods.

- [从 VMware 存储库下载虚拟设备更新](#) 第 17 页, 您可以从 vmware.com 网站上的公用存储库中下载 Identity Appliance 或 vCloud Automation Center Appliance 的更新。
- [下载虚拟设备更新以便与 CD-ROM 驱动器配合使用](#) 第 18 页, 您可以通过设备从虚拟 CD-ROM 驱动器读取的 ISO 文件更新虚拟设备。

从 VMware 存储库下载虚拟设备更新

您可以从 vmware.com 网站上的公用存储库中下载 Identity Appliance 或 vCloud Automation Center Appliance 的更新。

步骤

- 1 通过使用完全限定域名 (<https://va-hostname.domain.name:5480>) 转到虚拟设备的管理控制台。
- 2 Log in with the user name root and the password you specified when the appliance was deployed.
- 3 单击更新选项卡。
- 4 单击设置。
- 5 (可选) 在“自动更新”面板中设置检查更新的频率。
- 6 在“更新存储库”面板中选择使用默认存储库。
默认存储库将设置为正确的 VMware.com URL。
- 7 单击保存设置。

下一步

- [“Install the Update on the Identity Appliance”](#)第 23 页, 。
- 如果已更新到 Identity Appliance, 或者如果使用其他 VMware 设备支持 Single Sign-On 功能, 请转到 [“Install the Update on the vRealize Automation Appliance”](#)第 24 页, 。

下载虚拟设备更新以便与 CD-ROM 驱动器配合使用

您可以通过设备从虚拟 CD-ROM 驱动器读取的 ISO 文件更新虚拟设备。

前提条件

- [“为当前部署关闭服务”](#)第 16 页, 。
- 在更新任何 vCloud Automation Center Appliance 之前, 必须启用您在升级中使用的所有 CD-ROM 驱动器。有关将 CD-ROM 驱动器添加到 vSphere Client 的虚拟机中的信息, 请参见 vSphere 文档中心。

步骤

- 1 从 vmware.com 网站下载更新 ISO 文件。
- 2 将您正更新的虚拟设备的 CD-ROM 驱动器连接到下载的 ISO 文件。
- 3 通过使用完全限定域名 (<https://va-hostname.domain.name:5480>) 转到虚拟设备的管理控制台。
- 4 Log in with the user name root and the password you specified when the appliance was deployed.
- 5 单击更新选项卡。
- 6 单击设置。
- 7 在“更新存储库”下, 选择使用 CDROM 更新。
- 8 单击保存设置。

下一步

- [“Install the Update on the Identity Appliance”](#)第 23 页, 。
- 如果已更新到 Identity Appliance, 或者如果使用其他 VMware 设备支持 Single Sign-On 功能, 请转到 [“Install the Update on the vRealize Automation Appliance”](#)第 24 页, 。

Upgrading to vCenter Platform Services Controller

6

vRealize Appliance 6.2 or later supports the use of vCenter Platform Services Controller (PSC), the SSO component of vSphere 6.0.

You can upgrade from a vRealize Automation Identity Appliance to PSC or from a vSphere SSO used for vRealize Automation to PSC. Upgrades to PSC can be done as part of an upgrade of your deployment or independent of a general upgrade.

This chapter includes the following topics:

- [“Upgrade an Identity Appliance to PSC for Use with vRealize Automation,”](#) on page 19
- [“Upgrade a vSphere SSO to PSC for Use with vRealize Automation,”](#) on page 21

Upgrade an Identity Appliance to PSC for Use with vRealize Automation

You can upgrade a vRealize Automation Identity Appliance with vCenter Platform Services Controller (PSC), a component of vSphere 6.x. To do this, you must register the new SSO with vRealize Appliance, add identity stores, and create a new solution user.

You can upgrade to PSC as part of your product upgrade or as an independent product component.

Prerequisites

- Backup and create a snapshot of your Identity Appliance.
- Save information for identity stores for all tenants. You must recreate this information in the new SSO appliance.
- Install vCenter PSC.
 - Download the vCenter Server (VCSA) for Linux and Windows Deploys from the VMware download site.
 - Follow the deployment procedures in the *VMware vCenter Server 6.0 Deployment Guide* searchable at <http://www.vmware.com>.
- If you are upgrading to PSC as part of a complete product upgrade, upgrade your vRealize Automation deployment before beginning the following procedure.

Procedure

- 1 Navigate to the vRealize Appliance management console by using its fully qualified domain name, <https://vra-va-hostname.domain.name:5480/>.
- 2 Log in with user name root and the password you specified when you deployed vRealize Appliance.
- 3 Click the **vRA Settings** tab and click **SSO** from the menu bar.

- 4 Change the value in the **SSO Port** text box to **443**.
- 5 Enter the default administrator name **administrator@vsphere.local** in the **SSO Admin User** text box.
- 6 Enter the SSO administrator password in the **SSO Admin Password** text box. The password must match the password you specified in the SSO settings for the Identity Appliance.
- 7 Click **Save Settings**.
- 8 If you are prompted with a warning about an untrusted host, click **OK** to proceed and to restart vRealize Appliance services.
- 9 Wait for all services to restart before using vRealize Automation.
 - a Click the **Services** tab.
 - b Monitor the Registered Services listing. You can click **Refresh** to see the latest information.
- 10 Add identity stores to the new appliance.
 - a Log out of the vRealize Appliance management console.
 - b Go to your default tenant at `https://vCAC FQDN/vcac` and log in as `administrator@vsphere.local`.
 - c Open the tenant.
 - d Click **Update**.
 - e Open each configured tenant and add the identity stores you configured prior to the upgrade and saved earlier,
 - f Click **Add**.
 - g Click **Update**.
 - h Reopen the tenant and confirm that settings for the tenant and the IaaS administrators display correctly.
 - i Add identity stores for all tenants.
- 11 Go to the IaaS machine where Model Manager Data was installed and imported from and create a new data file.
 - a Open a Windows command prompt as an administrator.
 - b Go to `C:\Program Files (x86)\VMware\VCAC\Server\Model Manager Data\Cafe\`.
 - c Rename the file `vcac-config.data` to `vcac-config.old`.
 - d Run the following command to create the updated data file: `Vcac-Config.exe GetServerCertificates -url https://(vCAC FQDN) --FileName vcac-config.data`.

For example:

```
Vcac-Config.exe GetServerCertificates -url https://vcac.vcloud.local
--FileName vcac-config.data
```
- 12 Create a new solution user. A solution user represents the IaaS service and is used for authentication between Windows and virtual appliances. Use a command of the following form: `Vcac-Config.exe RegisterSolutionUser -url https://(vCAC FQDN) --Tenant vsphere.local -cu administrator@vsphere.local -cp password --FileName vcac-config.data -v`

For example:

```
Vcac-Config.exe RegisterSolutionUser -url https://vcac.vcloud.local
--Tenant vsphere.local -cu administrator@vsphere.local -cp Passw0rd123
--FileName vcac-config.data -v
```

- 13 Move the solution user into the IaaS database with a command of the following form: `Vcac-Config.exe MoveRegistrationDataToDB --FileName vcac-config.data -s "SQL Server FQDN" -d "Database_name" -v`

For example:

```
Vcac-Config.exe MoveRegistrationDataToDB --FileName vcac-config.data
-s "sql.vcloud.local" -d "vCAC" -v
```

- 14 Restart IIS or open an elevated command prompt window and type `iisreset`.
- 15 From the IaaS Windows machine, select **Start > Administrative Tools > Services**.
- 16 Restart machines for all IaaS Services in the recommended order.

All IaaS services must be restarted for the solution user change to take effect.

- a VMware vCloud Automation Center Service (manager service)
- b VMware DEM-Orchestrator
- c VMware DEM-Worker
- d VMware vRealize Automation Agents

You have created a new PSC SSO appliance with required vRealize Automation information.

Upgrade a vSphere SSO to PSC for Use with vRealize Automation

You can upgrade a vSphere SSO to vCenter Platform Services Controller (PSC), a component of vSphere 6.x. Because PSC uses a different port from other supported SSOs, you must edit your vRealize Appliance configuration to specify the new port.

You can upgrade to PSC as part of your product upgrade or as an independent product component.

NOTE PSC version 6.0 that was introduced in vSphere 6.0 allows you to specify a tenant name other than `vsphere.local`. vRealize Automation requires `vsphere.local` as the name of the default tenant because you cannot enter the name of the tenant on the SSO tab of the management console when you configure vRealize Automation. If you have used another name, rename the tenant to `vsphere.local`.

Prerequisites

- Upgrade your vCenter SSO appliance to vCenter PSC.
Instructions for upgrading a 5.5 vCenter SSO to vCenter PSC are available from the vSphere documentation center and the white paper *vCenter Server Deployment* searchable at <http://www.vmware.com>.
- If you are upgrading to PSC as part of a complete product upgrade, upgrade your vRealize Automation deployment before beginning the following procedure.

Procedure

- 1 Navigate to the vRealize Appliance management console by using its fully qualified domain name, `https://vra-va-hostname.domain.name:5480/`.
- 2 Log in with user name `root` and the password you specified when you deployed vRealize Appliance.
- 3 Click the **vRA Settings** tab and click **SSO** from the menu bar.
- 4 Change the value in the **SSO Port** text box to **443**.
- 5 Enter the default administrator name `administrator@vsphere.local` in the **SSO Admin User** text box.

- 6 Enter the SSO administrator password in the **SSO Admin Password** text box. The password must match the password you specified in the SSO settings for the Identity Appliance.
- 7 Click **Save Settings**.
- 8 If you are prompted with a warning about an untrusted host, click **OK** to proceed and to restart vRealize Appliance services.
- 9 Wait for all services to restart before using vRealize Automation.
 - a Click the **Services** tab.
 - b Monitor the Registered Services listing. You can click **Refresh** to see the latest information.

The Platform Services Controller server is in use.

Installing the Virtual Appliance Updates

7

After you complete prerequisites for upgrading and download the update, you install updates for the Identity Appliance and for all instances of the vRealize Appliance. You can also choose to upgrade from an Identity Appliance or vSphere SSO appliance to vCenter Platform Services Controller (PSC).

Your vRealize Automation upgrade does not affect vSphere appliances, however, you must reconfigure vRealize Automation settings when you upgrade to PSC from an earlier version of the vSphere SSO or when you replace an Identity Appliance with PSC. For more information, see [第 6 章“Upgrading to vCenter Platform Services Controller”第 19 页](#), .

本章讨论了以下主题：

- [“Install the Update on the Identity Appliance,”](#) on page 23
- [“Install the Update on the vRealize Automation Appliance,”](#) on page 24

Install the Update on the Identity Appliance

You install the update on the Identity Appliance before you update the vRealize Appliance.

Prerequisites

- Select a download method and download the update. See [“Downloading Virtual Appliance Updates,”](#) on page 17.
- [“关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务,”](#) on page 17.

Procedure

- 1 Log in to the Identity Appliance management console and open the **Update** tab.
 - a 通过使用完全限定域名 (<https://va-hostname.domain.name:5480>) 转到虚拟设备的管理控制台。
 - b Log in with the user name root and the password you specified when the appliance was deployed.
 - c Click the **Update** tab.

- 2 单击**检查更新**，确认更新可访问。

- 3 Click **Install Updates**.

- 4 Click **OK** to confirm that you want the update to proceed.

The time it takes for the update to finish is dependent on your site environment.

- 5 After the update is installed, reboot the virtual appliance.

- a Click the **System** tab.
- b Click **Reboot** and confirm your selection.

- 6 Clear the cache of the Web browser used to access the management console.

What to do next

“[Install the Update on the vRealize Automation Appliance](#),” on page 24.

Install the Update on the vRealize Automation Appliance

You install the update on the vRealize Appliance after you upgrade and reboot the Identity Appliance. Apply the update to each instance of vRealize Appliance in your installation.

NOTE If your deployment uses a load balancer, disable all but one vRealize Appliance for load balancer traffic. The first appliance you plan to upgrade must be connected to the load balancer. All other instances of vRealize Appliance must be disabled for load balancer traffic when you upgrade them.

If you are using a vRealize Appliance as a dedicated appliance database server, update it before you update a vRealize Appliance used as an application server.

Wait for the reboot to complete on one appliance before starting the upgrade on another.

Prerequisites

- Select a download method and download the update. See “[Downloading Virtual Appliance Updates](#),” on page 17.
- For high-availability deployments, “[为当前部署关闭服务](#),” on page 16.
- Verify that the identity server is running.
- Before you apply the appliance upgrade for deployments that use load balancers, disable traffic for all nodes except the first node you that you plan to upgrade in order to prevent cache errors.

Procedure

- 1 Log in to the vRealize Appliance management console and click the **Update** tab.
 - a 通过使用完全限定域名 (<https://va-hostname.domain.name:5480>) 转到虚拟设备的管理控制台。
 - b Log in with the user name root and the password you specified when the appliance was deployed.
 - c Click the **Update** tab.
- 2 单击**状态**。
- 3 单击**检查更新**，确认更新可访问。
- 4 (Optional) 对于 vRealize Appliance 的实例，请单击“设备版本”区域中的**详细信息**，查看发行说明的位置信息。
- 5 Read the note about participation in the Customer Experience Improvement Program.

When you upgrade, you are joined to the VMware Customer Experience Improvement Program. For information about the program, click the Telemetry tab in the product management console.

For more information about setting parameters for data collection and joining or leaving the Customer Experience Improvement Program, see 《[系统管理](#)》。
- 6 Click **Install Updates**.
- 7 单击**确定**。

An informational message stating that the update is in progress appears. The time it takes for the update to finish depends on your site environment.

- 8 Reboot the virtual appliance.
 - a Click the **System** tab.
 - b Click **Reboot** and confirm your selection.
- 9 Clear the cache of the Web browser that you use to access the management console.
- 10 Verify that services are running.
 - a Log in to the vRealize Appliance management console.
 - b Click the **Services** tab on the console.
 - c Click the **Refresh** tab to monitor the progress of service startup.

You should see a minimum of twenty-one services.
- 11 If your deployment uses a load balancer, repeat these steps for each vRealize Appliance.

Leave the second and subsequent vRealize Appliance disabled for load balance traffic when you apply the update.
- 12 Reconnect all virtual appliances to the load balancer.

What to do next

Upgrade the IaaS database and servers. See [Chapter 8, “升级 IaaS 服务器,”](#) on page 27.

升级 IaaS 服务器

系统管理员可升级 IaaS 服务器组件和 SQL 数据库。

您可以使用 DBUpgrade 命令升级 IaaS 的 SQL 数据库，并使用 IaaS 安装程序升级 IaaS 服务器组件。

注意 您必须先升级该数据库，然后再升级 IaaS 服务器及其组件。

本章讨论了以下主题：

- “Upgrade the Database,” on page 27
- “下载 IaaS 安装程序”第 29 页，
- “Upgrade the IaaS Components,” on page 29

Upgrade the Database

An administrator must upgrade the database with the DBUpgrade.exe command before upgrading the IaaS components.

The DBUpgrade command requires the names of the SQL Server database instance and the vRealize Automation database and the port number if you are using a port other than the default SQL port. It can use Windows authentication or it accepts credentials to access the database using SQL authentication. It creates a log file named dbupgrade.log in the current directory if you do not provide a path name for a different log file.

IMPORTANT Run this command only once during an upgrade.

If the correct Java version is not installed, or if the JAVA_HOME environment is set incorrectly, you see a message similar to the following one:

```
Upgrading VMware vCAC or vCloud Automation Center IaaS SQL database
fails with the error: Java version 1.7(64-bit) must be installed,
the environment variable JAVA_HOME must be set to the Java install folder, and
%JAVA_HOME%\bin\java.exe (2089329)
```

For information about resolving the error, see the VMware Knowledge Base article at <http://kb.vmware.com/kb/2089329>.

Prerequisites

- Verify that the machine on which you run the DBUpgrade command meets the following Java-related requirements.
 - 64-bit Java version 1.7 or later is installed. 32-bit versions are not supported.
 - The environment variable JAVA_HOME is set to the Java install folder.

- The %JAVA_HOME%\bin\java.exe file is available.

Procedure

- 1 Navigate to the Windows installer download page by using <https://vcac-va-hostname.domain.name:5480/installer/>, the host name of the vRealize Appliance.
- 2 Click **database upgrade scripts** from the list of options under IaaS Installation.
- 3 Extract the contents of the DBUpgrade.zip archive file to a local folder on the vRealize Automation database host, or to another location with network access to the database host.
- 4 In an elevated Windows command prompt window, set your current directory to the folder where you extracted the contents of the DBUpgrade.zip archive file.
- 5 Enter a DBUpgrade command string in the following format.

```
DBUpgrade [-S dbserver [,port number] [\SQLinstance]] [-d dbname] [{-E | -U username}] [-l logfilepath]
```

| Option | Description |
|--|---|
| -S <i>dbserver</i> [,<i>portnumber</i>] [<i>\SQLinstance</i>] | Identifies the database server instance by server name, port number and SQL instance name. Allowable values for <i>dbserver</i> are localhost or a fully qualified domain name for the database server. If you are using an SQL port number other than the default, 1433, you must specify the port number as part of the FQDN. If no port number is specified, the 1433 port is used. If you are using a named SQLinstance, specify the instance name. If no name is specified, the default, unnamed SQL instance is used. |
| -d <i>dbname</i> | Identifies the vRealize Automation database <i>dbname</i> . |
| -E | Requires a Windows Authentication trusted connection to access the database and connects using the Windows credentials of the user who is running the command. |
| -U <i>username</i> | Specifies the user name for the database owner account. |
| -l <i>logfilepath</i> | Specifies the full pathname of the upgrade log file. By default, the command creates the <i>dbupgrade.log</i> log file in the current directory. |

- 6 (Optional) At the prompt, enter the password for the database owner account.

You are prompted for this information only when you specify a username with the *-U username* argument to the DBUpgrade command.

The command upgrades the database to the latest release.

Example: DBUpgrade.exe

The following examples illustrate uses of command syntax.

- DBUpgrade

With no options, displays usage information.

- DBUpgrade -S localhost -d VCAC -E

Upgrades the VCAC database in the default, unnamed SQL instance running on the local host on the default port 1433 and connects using your Windows credentials over a Windows Authentication trusted connection.

- DBUpgrade -S dbhost.mydomain.local,5555 -d VCAC -E

Upgrades the VCAC database in the default, unnamed SQL instance running on dbhost on the non-default port 5555 and connects using your Windows credentials over a Windows Authentication trusted connection.

- `DBUpgrade -S dbhost.mydomain.local\MySQLInstance -d VCAC -U SqlUser -l %SystemDrive %\VCACDBUpgrade\Log_30Apr.log`

Logs in as the user named SqlUser and prompts you for the password for the SqlUser account. Then, upgrades the VCAC database in the named instance MySQLInstance running on dbhost on the default port, and creates the Log_30Apr.log upgrade log file in the VCACDBUpgrade folder on the system drive.

- `DBUpgrade -S dbhost.mydomain.local,5555\MySQLInstance -d VCAC -E -l %SystemDrive %\VCACDBUpgrade\Log_30Apr.log`

Upgrades the database VCAC in the named instance MySQLInstance running on dbhost and the non-default port 5555, logs in using your Windows credentials over a Windows Authentication trusted connection, and creates the Log_30Apr.log upgrade log file in the VCACDBUpgrade folder on the system drive.

下载 IaaS 安装程序

您将 IaaS 安装程序下载到安装待升级 IaaS 组件的计算机中。

如果在此过程中看到证书警告，则可将其忽略。

前提条件

- 确认 IaaS 安装计算机上已安装 Microsoft .NET Framework 4.5.1 或更高版本。您可以从 vRealize Automation 安装程序网页中下载 .NET 安装程序。
- 如果使用 Internet Explorer 进行下载，请确认未启用“增强型安全配置”。请参见 <res://iesetup.dll/SoftAdmin.htm>。
- 以本地管理员身份登录到已安装一个或多个待升级 IaaS 组件的 Windows 服务器。
- 要升级的 IaaS 组件必须是 vRealize Automation 6.0.1 的一部分。如果它们来自 vRealize Automation 6.0，则必须先将其升级到 vRealize Automation 6.0.1，然后才能继续进行此升级。

步骤

- 1 打开 Web 浏览器。
- 2 输入 Windows 安装程序下载页面的 URL。
例如，<https://vcac-va-hostname.domain.name:5480/installer>，其中，*vcac-va-hostname.domain.name* 是 vRealize Appliance 主机的名称。
- 3 单击 IaaS 安装程序链接。
- 4 出现提示时，将安装程序文件 `setup__vcac-va-hostname.domain.name@5480.exe` 保存到桌面。
请勿更改文件名。它用于将安装连接到 vRealize Appliance。

Upgrade the IaaS Components

You must upgrade the database and configure all systems that have IaaS components installed. You can use these steps for minimal and distributed installations.

If you have multiple IaaS servers, perform the upgrade so that services are upgraded in the following order:

- 1 Websites

If you are using a load balancer, disable all Websites for load balancer traffic except the Website on which Model Manager data is installed. Upgrade the Website on which Model Manager data is installed first.

Finish the upgrade on one server before upgrading the next server that is running a Website service.

2 Manager services

Upgrade the active manager service before you upgrade the passive manager service and reboot the system where the passive manager service is installed.

3 DEM orchestrator and workers

Upgrade all DEM orchestrators and workers. Finish the upgrade on one server before you upgrade the next server.

4 Agents

Finish the upgrade on one server before you upgrade the next server that is running an agent.

If you are using different services on one server, the upgrade updates the services in the proper order. For example, if your site has Website and manager services on the same server, select both for update. The upgrade installer applies the updates in the proper order. You must complete the upgrade on one server before you begin an upgrade on another.

NOTE If your deployment uses a load balancer, the first appliance you plan to upgrade must be connected to the load balancer. All other instances of vRealize Appliance appliances must be disabled for load balancer traffic before you apply the upgrade to avoid caching errors.

Prerequisites

- “关闭 IaaS Windows 服务器上的 vCloud Automation Center 服务,” on page 17
- “下载 IaaS 安装程序,” on page 29.
- “Upgrade the Database,” on page 27.

Procedure

- 1 If you are using a load balancer, prepare your environment.
 - a Verify that the Website on which Model Manager data is installed is enabled for load balancer traffic.

You can identify this node by the presence of the <vCAC Folder>\Server\ConfigTool folder.
 - b Disable all other Websites for load balancer traffic.
- 2 右键单击 `setup__vra-va-hostname.domain.name@5480.exe` 安装程序文件，然后选择以管理员身份运行。
- 3 单击下一步。
- 4 接受许可协议并单击下一步。
- 5 Type the administrator credentials for your current deployment on the Log In page.

The user name is root and the password is the password that you specified when you deployed the appliance.
- 6 选择接受证书。
- 7 Select **Upgrade** on the Installation Type page and click **Next**.

8 Configure the upgrade settings.

| Option | Action |
|--|---|
| If you are upgrading the Model Manager Data | Select the Model Manager Data check box in the vCAC Server section. The check box is selected by default. Upgrade the Model Manager data only once. If you are running the setup file on multiple machines to upgrade a distributed installation, the Web servers stop functioning while there is a version mismatch between the Web servers and the Model Manager data. When you have upgraded the Model Manager data and all of the Web servers, all of the Web servers should function. |
| If you are not upgrading the Model Manager Data | Unselect the Model Manager Data check box in the vCAC Server section. |
| To preserve customized workflows as the latest version in your Model Manager Data | If you are upgrading the Model Manager Data, select the Preserve my latest workflow versions check box in the Extensibility Workflows section. The check box is selected by default. Customized workflows are always preserved. The checkbox determines version order only. If you used vRealize Automation Designer to customize workflows in the Model Manager, select this option to maintain the most recent version of each customized workflow before upgrade as the most recent version after upgrade. If you do not select this option, the version of each workflow provided with vCloud Automation Center Designer 6.1 becomes the most recent after upgrade, and the most recent version before upgrade becomes the second most recent. For information about vRealize Automation Designer, see <i>Extensibility</i> . |
| If you are upgrading a Distributed Execution Manager or a proxy agent | Enter the credentials for the administrator account in the Service Account section. All of the services that you upgrade run under this account. |
| To specify your Microsoft SQL Server database | If you are upgrading the Model Manager Data, enter the names of the database server and database instance in the Server text box in the Microsoft SQL Server Database Installation Information section. Use a fully qualified domain name (FQDN) for the database server name. If the database instance is on a non-default SQL port, include the port number in the server instance specification. The Microsoft SQL default port number is 1433. |

9 单击下一步。

10 Confirm that all services to upgrade appear on the Ready to Upgrade page, and click **Upgrade**.

The Upgrading page and a progress indicator appear. When the upgrade process finishes, the **Next** button is enabled.

11 单击下一步。

12 单击完成。

13 Verify that all services restarted.

14 If the DEM orchestrator, DEM workers, or agents are installed on the same server where Model Manager Data has been upgraded, reboot the appliance.

15 Repeat these steps for each IaaS server in your deployment in the recommended order.

16 If your deployment uses a load balancer, reenable load balancer traffic for any unconnected nodes.

17 After all components are upgraded, log in to the management console for the appliance and verify that all services, including IaaS, are now registered.

All of the selected components are upgraded to the new release.

vRealize Automation 的升级后任务

升级 vRealize Automation 之后，请执行所需的任何升级后任务。

本章讨论了以下主题：

- “应用 vRealize Automation 品牌”第 33 页，
- “高可用性部署的端口配置”第 34 页，
- “Enabling the Connect to Remote Console Action for Consumers,” on page 34
- “Update Customized Workflows,” on page 34

应用 vRealize Automation 品牌

从 vCloud Automation Center 6.1 升级到 vRealize Automation 6.2 之后，vCloud Automation Center 品牌保留在控制台登录页面上。

您可以将登录控制台更新为使用 vRealize Automation 品牌。请注意，此过程将设置默认的 vRealize Automation 品牌，而不是客户特定的品牌。

前提条件

在开始此过程之前，请先升级到 vRealize Automation 6.2。

步骤

- 1 通过使用完全限定域名 (<https://vra-va-hostname.domain.name:5480>) 导航到 vRealize Appliance 管理控制台
- 2 使用您在部署设备时指定的 root 用户名和密码登录。
- 3 单击 vRA 设置选项卡。
- 4 单击 SSO。
- 5 输入 SSO 服务器的设置。这些设置必须与您在配置 SSO 设备时输入的设置匹配。
 - a 在 SSO 主机文本框中以 `sso-va-hostname.domain.name` 格式键入 SSO 设备的完全限定域名。不要使用 `https://` 前缀。例如，`vra-sso-mycompany.com`。
 - b 默认端口号 7444 将显示在 SSO 端口文本框中。如果使用非默认端口，请编辑此值。
 - c 不要修改默认租户名称 `vsphere.local`。
 - d 在 SSO 管理员用户文本框中键入默认管理员名称 `administrator@vsphere.local`。
 - e 在 SSO 管理员密码文本框中键入 SSO 管理员密码。
- 6 选择应用品牌。

7 单击保存设置。

几分钟后，将出现一条成功消息，且 SSO 状态更新为“已连接”。

登录控制台使用 vRealize Automation 品牌。

高可用性部署的端口配置

在高可用性部署中完成升级之后，必须对负载均衡器进行配置，使其将端口 8444 上的流量传递给 vRealize Appliance，以便支持远程控制台功能。

Enabling the Connect to Remote Console Action for Consumers

The remote console action for consumers is supported for appliances provisioned by vSphere in vRealize Automation 6.2.1 and later. You must modify blueprints created in 6.2.0 to enable this feature.

Edit the blueprint after you have upgraded the release and select the **Connect to Remote Console** action on the **Action** tab.

If your blueprint was created in 6.1 and the **Connect to Remote Console** action was enabled, the action is automatically reenabled in 6.2.1 and later releases and you are not required to edit the blueprint.

For more information, see [Knowledge Base article 2109706](#).

Update Customized Workflows

After completing the product upgrade, update the .xaml file for customized workflows that were created in a release prior to vRealize Automation 6.1.

WCF data services were upgraded from version 4.0 to 5.6.1 in vRealize Automation 6.1. You must modify the .xaml for workflows you created before this upgrade to work with the new WCF version.

Procedure

- 1 Open the .xaml file for the workflow for editing.
- 2 Locate and replace the line `<AssemblyReference>System.Data.Services.Client</AssemblyReference>` with `<AssemblyReference>Microsoft.Data.Services.Client</AssemblyReference>`
- 3 Locate and replace the line `clr-namespace:System.Data.Services.Client;assembly=System.Data.Services.Client` with `clr-namespace:Microsoft.Data.Services.Client;assembly=Microsoft.Data.Services.Client`.
- 4 Save and close the file.

Your .xaml file is updated to work with the new WCF framework.

升级故障排除

升级故障排除主题将为您在升级 vRealize Automation 时可能遇到的问题提供解决方案。

本章讨论了以下主题：

- [“安装或升级失败且显示负载均衡器超时错误”](#)第 35 页，
- [“在 IaaS 升级期间 Website 组件升级失败”](#)第 35 页，
- [“间歇性出现不正确的选项卡名称”](#)第 36 页，
- [“Changes Made to /etc/hosts Files Might Be Overwritten,”](#) on page 36
- [“vRealize Automation Requires vsphere.local as the Default Tenant Name,”](#) on page 36
- [“After Upgrade, Services on the Services Tab of the vRealize Automation Appliance Management Console Do Not Display Properly,”](#) on page 37

安装或升级失败且显示负载均衡器超时错误

在使用负载均衡器的分布式部署中，vRealize Automation 安装或升级失败并显示 503 服务不可用错误。

问题

由于负载均衡器超时设置未提供足够的时间来完成任务，因此安装或升级失败。

原因

负载均衡器超时设置不足可能会导致失败。通过将负载均衡器超时设置增加到 100 秒或更长时间并重新运行任务，可以解决此问题。

解决方案

- 1 将负载均衡器超时值增加到至少 100 秒。例如，根据使用的负载均衡器，编辑 `ssl.conf`、`httpd.conf` 或其他 Web 配置文件中的负载均衡器超时设置。
- 2 重新运行安装或升级。

在 IaaS 升级期间 Website 组件升级失败

IaaS 升级失败，无法继续升级。

问题

安装程序无法更新 `web.config` 文件。

原因

当 `web.config` 文件的创建日期不早于修改日期时，会出现这种情况。

解决方案

- 1 开始升级之前，使用编辑器从具有提升特权的帐户打开 `web.config` 文件。
- 2 保存该文件，以更改要修改的日期戳。
- 3 确认 `web.config` 文件的文件修改日期晚于创建日期。
- 4 运行 IaaS 升级。

间歇性出现不正确的选项卡名称

IaaS 选项卡和其他选项卡可能未正确标记。

问题

将高可用性环境从 vCloud Automation Center 6.0.x 或 6.1 升级到 vRealize Automation 6.2 后，选项卡可能会间歇性出现不正确的名称。

解决方案

重新启动所有 vRealize Automation 虚拟设备，还原正确的选项卡名称。

Changes Made to /etc/hosts Files Might Be Overwritten

Problem

If you made changes to the `/etc/hosts` file, they might be overwritten when any of the following actions occur:

- Reboot
- Network changes
- Changes made in the **Management console**-> **Network** tab
- Upgrade

Solution

To make a permanent change to the `/etc/hosts` file, you must make the change outside of the `VAMI_EDIT_BEGIN` to `VAMI_EDIT_END` section because this section is overwritten when a network change is detected.

vRealize Automation Requires vsphere.local as the Default Tenant Name

vSphere 6.0 permits assignment of a tenant name other than `vsphere.local`. However, alternate names cannot be used for the vRealize Automation default tenant name.

Problem

If you specify a tenant name other than `vsphere.local` with vSphere 6.0 Platform Service Control (PSC), you cannot configure the default tenant for vRealize Automation.

Cause

vRealize Automation requires that the default tenant name be `vsphere.local`. Input is for other tenant names is disabled on the **SSO** tab of the management console.

Solution

Rename the tenant to `vsphere.local`.

After Upgrade, Services on the Services Tab of the vRealize Automation Appliance Management Console Do Not Display Properly

Services are missing or incompletely displayed.

Problem

After upgrade to VMware vRealize™ Automation 6.2.5, the services shown on the **Services** tab of the vRealize Automation Appliance Management console are in an infinite loading state.

Cause

Upgrade was performed without a valid license installed for the embedded vRealize Orchestrator.

Solution

- ◆ Log in to the Cafe host virtual machine and run this command: `vcac-vami vco-service-reconfigure`.

Index

Symbols

/etc/hosts file, overwritten in error **36**

B

不正确的选项卡名称 **36**

C

CD-ROM 驱动器更新 **18**

CEIP program **24**

Customized workflows, when to update **34**

D

DBUpgrade command **27**

default tenant name, vsphere.local **36**

F

服务, 关闭服务 **17**

G

glossary **5**

I

laaS 安装程序, 下载 **29**

laaS 服务器

关闭服务 **17**

升级 **27**

laaS server

obtaining updates **29**

updating **29**

laaS 数据库, 升级 **27**

Identity Appliance

obtaining updates **17**

upgrading to PSC **19**

identity server, install the update **23**

intended audience **5**

M

MSSQL 数据库, 升级 **27**

P

Platform Service Controller, upgrading to **19**

Platform Services Controller, upgrading to **21**

PSC, upgrading to from Identity Appliance **19**

R

root passwords, expiration **15**

S

升级, 故障排除 **35**

升级路径, supported **9**

SQL Server database, upgrading **27**

T

troubleshooting, services are missing or
incompletely displayed **37**

U

updated information in this revision **7**

Updates, installing **23**

upgrade paths, supported **13**

Upgrading, prerequisites **13**

V

vCenter SSO 6.0, upgrading to **21**

vCloud Automation Center, upgrade
overview **11**

vCloud Automation Center Appliance
installing updates **24**

obtaining updates **17**

为高可用性安装关闭服务 **16**

virtual appliances, obtaining updates **17**

vRealize Automation 品牌 **33**

vSphere remote console support, modifying
blueprints **34**

W

Website 升级失败 **35**

X

选项卡名称, 不正确 **36**

虚拟设备

从 VMware 存储库更新 **17**

使用 ISO 文件更新 **18**

Y

远程控制台支持, 端口配置 **34**

Z

在完成之前负载均衡器超时, 更改负载均衡器超时
设置 **35**

