Technical Note

Command-Line Deployment of VMware vCenter Server Appliance 6.0

vCenter Server Appliance 6.0

This technical note describes the command-line deployment process of the VMware vCenter Server™ Appliance™.

The vCenter Server Appliance is a preconfigured Linux-based virtual machine that is optimized for running vCenter Server.

The command-line installer is intended for advanced users who are familiar with vSphere. The main purpose of the command-line installer is to enable automation, and prevent user input errors.

Overview

The command-line deployment process includes downloading the ISO installer, setting the deployment templates using the command parameters, and following the procedure described in this technical note.

Software Included in the vCenter Server Appliance Package

The vCenter Server Appliance package contains the following software:

- SUSE Linux Enterprise Server 11 Update 3 for VMware, 64-bit edition
- PostgreSQL
- vCenter Server 6.0 and vCenter Server 6.0 components

vCenter Server Appliance Components

The vCenter Server Appliance consists of the following components.

- **VMware Platform Services Controller**

  A group of infrastructure services such as vCenter Single Sign-On, License service, and VMware Certificate Authority

- **vCenter Server**

  A group of services such as vCenter Server, vSphere Web Client, Inventory Service, vSphere Auto Deploy, vSphere ESXi Dump Collector, and vSphere Syslog Service for vCenter Server Appliance

vCenter Server Appliance Deployment Models

You can deploy the vCenter Server Appliance in one of the following two deployment models - a vCenter Server Appliance with an embedded Platform Services Controller, or a vCenter Server Appliance with an external Platform Services Controller.

Table 1. summarizes the characteristics of the two deployment models.

Table 1. vCenter Server Appliance Deployment Models

vCenter Server Appliance Deployment Model	Description
vCenter Server Appliance with an embedded Platform Services Controller	All services bundled with the Platform Services Controller are deployed together with vCenter Server in the same appliance. **IMPORTANT** vCenter Server with an embedded Platform Services Controller is standalone. You cannot use it to replicate vCenter Single Sign-On data. Setting up replication partners between multiple vCenter Server instances with embedded Platform Services Controllers is not supported in this release.
vCenter Server Appliance with an external Platform Services Controller	All services bundled with the Platform Services Controller are deployed as one appliance and vCenter Server is deployed as another appliance. **IMPORTANT** You must first deploy the Platform Services Controller.

For more information about vCenter Server Appliance deployment models, see the *vSphere Installation and Setup* documentation at http://pubs.vmware.com.

Requirements

Supported Operating Systems for the Command-Line Installer

You can run the vCenter Server Appliance command-line installer from any virtual or physical server in the vSphere network. The vCenter Server Appliance command-line deployment is supported on the following operating systems:

- Windows 7
- Windows Server 2008/2012
- Windows 8
- SUSE Linux 11 SP3
- Mac OS 10.9

Hardware Requirements

When you deploy the vCenter Server Appliance, select to deploy an appliance that is suitable for the size of your vSphere environment.

The hardware requirements, such as the number of CPUs and memory, depend on the size of your vSphere inventory.

Table 2. Hardware Requirements

Resources	Number of CPUs	Memory
Platform Services Controller	2	2 GB RAM
Tiny environment up to 10 hosts, 100 virtual machines	2	8 GB RAM
Small environment up to 100 hosts, 1,000 virtual machines	4	16 GB RAM
Medium environment up to 400 hosts, 4,000 virtual machines	8	24 GB RAM
Large environment up to 1,000 hosts, 10,000 virtual machines	16	32 GB RAM

NOTE For instances of vCenter Server Appliance with an embedded Platform Services Controller, the required memory size and number of CPUs are the sum of the values for the Platform Services Controller and the values for the environment you want to deploy.

Storage Requirements

The host on which the vCenter Server Appliance is to be deployed must meet minimum storage requirements, depending on the selected deployment model.

Table 3. Storage Requirements

	vCenter Server Appliance with an Embedded Platform Services Controller	vCenter Server Appliance with an External Platform Services Controller	External Platform Services Controller Appliance
Tiny environment up to 10 hosts, 100 virtual machines	101 GB	86 GB	25.5 GB
Small environment up to 100 hosts, 1,000 virtual machines	146 GB	108 GB	25.5 GB
Medium environment up to 400 hosts, 4,000 virtual machines	270 GB	220 GB	25.5 GB
Large environment up to 1,000 hosts, 10,000 virtual machines	445 GB	280 GB	25.5 GB

Database Requirements

Each vCenter Server Appliance must have its own database to store and organize server data.

You can use the embedded PostgreSQL database that is included in the vCenter Server Appliance. The PostgreSQL database supports up to 1,000 hosts and 10,000 virtual machines.

For external databases, the vCenter Server Appliance supports only Oracle database. The Oracle database is of the same version shown in the VMware Product Interoperability Matrix for the version of the vCenter Server 6.0. See the VMware Product Interoperability Matrix at http://www.vmware.com/resources/compatibility/sim/interop_matrix.php.

ESXi Host Requirements

You can deploy vCenter Server Appliance on a host running ESXi 5.0 or later.

Command-Line Deployment Steps

You can run the command-line deployment of the vCenter Server Appliance from a virtual or physical machine that is running Windows, Linux, or Mac operating systems that meets the operating system requirements. See section "Supported Operating Systems for the Command-Line Installer" on page 2.

Command-Line Deployment of the vCenter Server Appliance from a Windows Machine

You can deploy the vCenter Server Appliance from a machine that is running on Microsoft Windows.

Prerequisites:

- Download the ISO installer file from the VMware Web site.
- Prepare the deployment templates as described in section "Prepare the Templates" on page 6.

To deploy the vCenter Server Appliance from a machine with a Windows OS:

1 At the command prompt, navigate to the `vcsa-cli-installer\win32` directory.

2 Deploy the appliance.

- Deploy the appliance from the template:

  ```
  vcsa-deploy path-to-templates-directory\name-of-the-template.json
  ```

- Deploy the appliance from the template by using command-line options:

  ```
  vcsa-deploy Optional_Argument path-to-templates-directory\name-of-the-template.json
  ```

  For example, the following command string deploys the appliance as specified in the JSON template. If the vCenter Single Sign-On password that you enter in the command string is different from the vCenter Single Sign-On password in the template, the command-line installer sets up vCenter Single Sign-On with the password provided in the command string.

  ```
  vcsa-deploy --sso-password SSO-PASSWORD
                path-to-templates-directory\name-of-the-template.json
  ```

Command-Line Deployment of the vCenter Server Appliance from a Linux Machine

You can deploy the vCenter Server Appliance from a machine that is running on Linux.

Prerequisites:

- Download the ISO installer file from the VMware Web site.
- Prepare the deployment templates as described in section "Prepare the Templates" on page 6.

To deploy the vCenter Server Appliance from a machine with Linux OS:

1 At the command prompt, navigate to the `vcsa-cli-installer/lin64` directory.

2 Deploy the appliance.

- Deploy the appliance from the template:

  ```
  ./vcsa-deploy path-to-temlpates-directory/name-of-the-template.json
  ```

- Deploy the appliance from the template by using command-line options:

  ```
  vcsa-deploy Optional_Argument path-to-templates-directory/name-of-the-template.json
  ```

  For example, the following command string deploys the appliance as specified in the JSON template. If the vCenter Single Sign-On password that you enter in the command string is different from the vCenter Single Sign-On password in the template, the command-line installer sets up vCenter Single Sign-On with the password provided in the command string.

  ```
  vcsa-deploy --sso-password SSO-PASSWORD
                path-to-templates-directory/name-of-the-template.json
  ```

Command-Line Deployment of the vCenter Server Appliance from a Mac Machine

You can deploy the vCenter Server Appliance from a machine that is running on Mac.

Prerequisites:

- Download the ISO installer file from the VMware Web site.
- Prepare the deployment templates as described in section "Prepare the Templates" on page 6.

To deploy the vCenter Server Appliance from a machine with Mac OS:

1 At the command prompt, navigate to the `vcsa-cli-installer/mac` directory.

2 Deploy the appliance.

- Deploy the appliance from the template:

```
./vcsa-deploy path-to-templates-directory/name-of-the-template.json
```

- Deploy the appliance from the template by using command-line options:

  ```
  vcsa-deploy Optional_Argument path-to-templates-directory/name-of-the-template.json
  ```

  For example, the following command string deploys the appliance as specified in the JSON template. If the vCenter Single Sign-On password that you enter in the command string is different from the vCenter Single Sign-On password in the template, the command-line installer sets up vCenter Single Sign-On with the password provided in the command string.

```
vcsa-deploy --sso-password SSO-PASSWORD path-to-templates-directory/name-of-the-template.json
```

Options and Arguments That the Command-Line Installer Supports

Table 4. Optional Arguments Supported by the Command-Line Installer

Optional Argument	Description
-h, --help	Displays the help message.
--template-help	Displays the help for template settings.
`-v, --verbose`	Adds debug information in the log file.
`-l LOG, --log LOG`	Shows the file path to the log file.
`--esx-host-password` *`your-esx-password`*	Sets the ESXi password. After it is set, the `esx.passsword` setting in the JSON template is ignored.
`--sso-password` *`password`*	Sets the vCenter Single Sign-On password. Once set, the vCenter Single Sign-On `password` setting in the JSON template is ignored.
`--db-password` *`database-password`*	The external database password, if applicable. After it is set, the database `password` setting in the JSON template is ignored.
`--appliance-root-password` *`linux-os-password`*	The root account password of the deployed appliance. After it is set, the `root.password` setting in the JSON template is ignored.
`--no-esx-ssl-verify`	Skips the SSL verification for ESXi connections. Do not use this option because it might cause problems during deployment or after deployment because of invalidated values passed to the appliance.
`--verify-only`	Performs parameter verification but does not deploy the template.
`--skip-verification`	Deploys the template without performing parameter verification. Do not use this option because it might cause problems during deployment or after deployment because of invalidated values passed to the appliance.

Preparing the Deployment Templates

This section provides details about the vCenter Server Appliance deployment templates. You must prepare the templates to deploy the vCenter Server Appliance.

The vCenter Server Appliance ISO installer file contains five JSON templates:

Table 5. vCenter Server Appliance Template JSON Files

Template JSON File	Description
`full_conf.json`	The `full_conf.json` file lists all deployment parameters that are used in the templates.
`embedded.example.json`	The `embedded.example.json` is a sample template with the minimum required configuration settings for deployment of the vCenter Server Appliance with an embedded Platform Services Controller. The template is displayed in Example 1.
`VC.example.json`	The `VC.example.json` is a sample template with the minimum required configuration settings for deployment of vCenter Server. The template is displayed in Example 2.
`PSC.example.json`	The `PSC.example.json` is a sample template with the minimum required configuration settings for deployment of the Platform Services Controller. The template is displayed in Example 3.
`PSC_replication.example.json`	The template is displayed in Example 4.

NOTE The deployment templates are located in the `templates` subfolder in the `vcsa-cli-installer` directory.

You use the template JSON files to provide the parameters needed for the customization and deployment of the vCenter Server Appliance.

Template Files for Common Setup

You can deploy the vCenter Server Appliance with minimum configuration settings by using the predefined deployment templates included in the ISO installer file. The settings not included in the template files are set to their default values.

NOTE Before you start the deployment procedure, you must enter the values of parameters in the template files.

Template Files for Custom Setup

You can deploy the vCenter Server Appliance with custom configuration settings by adding command parameters in the predefined deployment templates included in the ISO installer file. The settings not included in the template files are set to their default values.

NOTE Before you start the deployment procedure, you must enter the additional parameters and the parameter values in the template files.

Prepare the Templates

The process for editing and preparing deployment templates is the same for common and custom setups.

To prepare the deployment templates:

1. Open the `templates` subfolder that is located in the `vsca-cli-installer` directory.
2. Copy the template files to your workspace.
3. Open a template file in a text editor.
4. Fill in the required fields and, optionally, add new parameters to the template.

5 Save and close the file.

You can create and save an unlimited number of templates.

vCenter Server Appliance Sample Deployment Files

The following examples display the sample deployment JSON files included in the vCenter Server Appliance ISO file.

Example 1. Content of embedded.example.json Template

```
{
    "__comments":
    [
        "Sample template to deploy a vCenter Server with an embedded Platform Services
               Controller. Please see full_conf.json for the complete list of vCSA deployment
               configurations."
    ],

    "deployment":
    {
        "esx.hostname":"<esx host name or ip>",
        "esx.datastore":"<esx datastore>",
        "esx.username":"root",
        "esx.password":"<esx password>",
        "deployment.option":"tiny",
        "deployment.network":"VM Network",
        "appliance.name":"embedded-node",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {

        "system":
        {
            "root.password":"<vCSA root password>",
            "ssh.enable":true
        },

        "sso":
        {
            "password":"<SSO password>",
            "domain-name":"vsphere.local",
            "site-name":"Default-First-Site"
        }
    }
}
```

Example 2. Content of VC.example.json Template

```
{
    "__comments":
    [
        "Sample template to deploy a vCenter Server."
    ],

    "deployment":
    {
        "esx.hostname":"<esx host name or ip>",
        "esx.datastore":"<esx datastore>",
        "esx.username":"root",
        "esx.password":"<esx password>",
        "deployment.network":"VM Network",
        "deployment.option":"management-tiny",
        "appliance.name":"management-node",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"<vCSA root password>",
            "ssh.enable":true,
            "platform.service.controller":"<system name of the platform.service.controller>"
        },

        "sso":
        {
            "password":"<SSO password>",
            "domain-name":"vsphere.local",
            "site-name":"Default-First-Site"
        }
    }
}
```

Example 3. Content of PSC.example.json Template

```
{
    "__comments":
    [
        "Sample template to deploy a platform service controller"
    ],

    "deployment":
    {
        "esx.hostname":"<esx host name or ip>",
        "esx.datastore":"<esx datastore>",
        "esx.username":"root",
        "esx.password":"<esx password>",
        "deployment.network":"VM Network",
        "deployment.option":"infrastructure",
        "appliance.name":"platform-service-controller",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"<vCSA root password>",
            "ssh.enable":true
        },

        "sso":
        {
            "password":"<SSO password>",
            "domain-name":"vsphere.local",
            "site-name":"Default-First-Site"
        }
    }
}
```

Example 4. Content of PSC_replication.example.json Template

```
{
    "__comments":
    [
        "Sample template to deploy a Platform Services controller joining an existing Single
               Sign-On"
    ],

    "deployment":
    {
        "esx.hostname":"<esx host name or ip>",
        "esx.datastore":"<esx datastore>",
        "esx.username":"root",
        "esx.password":"<esx password>",
        "deployment.network":"VM Network",
        "deployment.option":"infrastructure",
        "appliance.name":"platform-service-controller",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"<vCSA root password>",
            "ssh.enable":true
        },

        "sso":
        {
            "password":"<SSO password>",
            "domain-name":"vsphere.local",
            "site-name":"Default-First-Site",
            "first-instance":false,
            "replication-partner-hostname":"<replication partner host name>"
        }
    }
}
```

vCenter Server Appliance Deployment Parameters

Table 6, Table 7, Table 8, Table 9, andTable 10 list the parameters that you can use to set up the deployment templates according to your needs. The information you provide depends on your specific deployment. For example, you must provide database parameters if you want to deploy the appliance with an external database.

Table 6. Network Parameters

Parameter	Default	Conditions
ip.family	None	Network IP address family. Value must be either `ipv4` or `ipv6`.
mode	None	Network mode. Use this parameter to select how to allocate the IP address of the appliance. The following options are available: ■ `static` You are prompted to enter the static IP address and network setting. ■ `dhcp` A DHCP server is used to allocate the IP address. Select this option only if the DHCP server is available in your environment. ■ `autoconf` This option is available for IPv6 only.
ip	None	Network IP address. Required only if the mode is `static`. Can be IPv4 or IPv6 based on the specific address family. An IPv4 address must comply with the RFC 790 guidelines. An IPv6 address must comply with the RFC 2373 guidelines.
prefix	None	Network prefix length. Required only if the mode is `static`. ■ `0–32` for IPv4 ■ `0–128` for IPv6
gateway	None	IP address of the default gateway. Can be default when using IPv6.
dns.servers	None	Comma-separated list of IP addresses of DNS servers.
system.name	None	Primary network identity. Can be either an IP address or a fully qualified domain name (FQDN). After you set it, you cannot change the system name. The FQDN and dotted-decimal numbers must comply with the RFC 1123 guidelines. Use an FQDN whenever possible.

Table 7. vCenter Single Sign-On Parameters

Parameter	Default	Conditions
password	None	For the first instance of the identity domain, this is the administrator account password. For subsequent instances, this is the administrator account password of the replication partner. The password must adhere to the following requirements: ■ At least 8 characters ■ No more than 20 characters ■ At least one uppercase character ■ At least one lowercase character ■ At least one number ■ At least one special character (for example, '!', '(', or '@') ■ Only visible lower-ASCII characters (spaces and non-printing control characters such as BEL, Nul, and so on are not allowed).
domain-name	None	Domain name, for example `vsphere.local`. Must adhere to the RFC 1035 standards: ■ Each character in a label must be alphanumeric or a dash (-). ■ The first character in each label must be a letter and the last character must be alphanumeric. ■ Each label must not exceed 63 characters and the entire name must not exceed 253 characters in textual representation. ■ Must contain at least one dot (.).
site-name	Default-First-Site	Name of the vCenter Single Sign-On site. The site name must adhere to the following requirements: ■ Must include alphanumeric characters or the hyphen (-) ■ Must not include high-ASCII or non-ASCII characters ■ Must not exceed 63 characters.
first-instance	None	A Boolean value. Specifies if this is the first Platform Services Controller you are creating. If you set the value to TRUE, the VMware directory instance is the first instance in the domain. If you set the value to FALSE, this instance is a replication partner. To join a vCenter Single Sign-On domain, you must enter the system name of the Platform Services Controller containing the vCenter Single Sign-On instance to join, and the vCenter Single Sign-On administrator password. You can join an existing vCenter Single Sign-On domain for replication and high availability.
replication-partner-hostname	None	The host name, the IP address or the fully qualified domain name, of the of the Platform Services Controller partner. Ignored, if this instance is the first instance in the domain.

Table 8. System Parameters

Parameter	Default	Conditions
root.password	None	Password of the root user of the Linux operating system of the appliance. If set through the command-line installer, this parameter is ignored.
ssh.enable	None	A Boolean value. If the value is set to TRUE, then SSH-based remote login is enabled. You can change this setting after deployment.
time.tools-sync	None	A Boolean value. If the value is set to TRUE, periodic time synchronization is enabled, and VMware Tools sets the time of the guest operating system to be the same as the time of the ESXi host. This parameter is ignored if `ntp.servers` is set.
ntp.servers	None	A comma-separated list of host names or IP addresses of Network Time Protocol (NTP) servers for time synchronization.
platform.service.controller	None	When deploying a vCenter Server, you must specify the name of the Platform Services Controller. If the system name of the Platform Services Controller is an FQDN, then you must provide the FQDN of the Platform Services Controller.

Table 9. Database Parameters

Parameter	Default	Conditions
type	`embedded`	The vCenter Server Appliance database type. The following options are available: ■ `embedded` Use this option if you want to use the embedded PostgreSQL database. ■ `external` Use this option if you want to use an external Oracle database. For more information about the database types, see "Database Requirements" on page 3.
user	None	The external database user account name. Ignored if the parameter `type` is `embedded`.
password	None	The external database user password. Ignored if the parameter `type` is `embedded`.
servername	None	The external database server host name. Ignored if the parameter `type` is `embedded`.
serverport	None	The port number on which the external database is running. Ignored if the parameter `type` is `embedded`.
provider	None	The external database provider. The only available option is `oracle`. Ignored if the parameter `type` is `embedded`.
instance	None	The external database instance name. Ignored if the parameter `type` is `embedded`.

For information about or assistance with the external Oracle database configuration, see the Oracle documentation.

Table 10. Deployment Parameters

Parameter	Default	Conditions
esx.host	None	The IP address or the FQDN of the ESXi host.
esx.datastore	None	The name of a datastore on which the deployed vCenter Serve Appliance resides. The datastore must be accessible from the specified host.
esx.username	None	The user name of a user that has administrative, or root, privileges on the ESXi host.
esx.password	None	The ESXi host user password. The password must contain 8 to 20 characters, at least one uppercase and one lowercase letter, one numerical and one special character. You can use the command-line installer to set the password.

deployment.option	tiny	The deployment option.
		The deployment option depends on the deployment architecture.
		■ For vCenter Server Appliance with an embedded Platform Services Controller, the following options are available:
		  ■ `tiny`
		  Suitable for environments consisting of up to 10 hosts and 100 virtual machines.
		  ■ `small`
		  Suitable for environments consisting of up to 100 hosts and 1,000 virtual machines.
		  ■ `medium`
		  Suitable for environments consisting of up to 400 hosts and 4,000 virtual machines.
		  ■ `large`
		  Suitable for environments consisting of up to 1,000 hosts and 10,000 virtual machines.
		■ For the vCenter Server Appliance, the following options are available:
		  ■ `management-tiny`
		  Suitable for environments consisting of up to 10 hosts and 100 virtual machines.
		  ■ `management-small`
		  Suitable for environments consisting of up to 100 hosts and 1,000 virtual machines.
		  ■ `management-medium`
		  Suitable for environments consisting of up to 400 hosts and 4,000 virtual machines.
		  ■ `management-large`
		  Suitable for environments consisting of up to 1,000 hosts and 10,000 virtual machines.
		■ For the Platform Services Controller appliance, the value is `infrastructure`.

deployment network	None	The network of the ESXi host on which the vCenter Server Appliance will be deployed. When the ESXi host has only one network, the parameter is optional, and can be ignored.

Table 10. Deployment Parameters

Parameter	Default	Conditions
appliance.name	None	The deployed virtual machine or inventory name. The name that is displayed from the client when connected to the vCenter or ESXi host that contains the vCenter Server Appliance. The appliance name must not contain the percent sign (%), the backslash (\), or the forward slash (/).
appliance.thin.disk.mode	None	A Boolean value. If the value is set to TRUE, the appliance is deployed with thin mode virtual disks.

vCenter Server Appliance Deployment Example

Use the templates in the following example to deploy four virtual appliances on one ESXi host. The template displayed in Example 5 deploys one Platform Services Controller and the template displayed in Example 6 deploys the replication Platform Services Controller partner. Example 7 and Example 8 deploy two vCenter Server Appliance instances with an external Platform Services Controller. The first vCenter Server Appliance is registered with the first Platform Services Controller, and the second vCenter Server Appliance is registered with the second Platform Services Controller.

Having two or more Platform Services Controllers that replicate their vCenter Single Sign-On data, allows you to ensure high availability of your system.

Table 11 summarizes the values of the common parameters used in the example templates.

Table 11. Parameters Used in the Deployment Templates

ESXi host IP address	10.100.100.1
ESXi root password	P@ss!w0rd
Password of the root user of the appliance Linux OS	Admin?61
vCenter Single Sign-On domain	vsphere.local
vCenter Single Sign-On password	Admin?61

Example 5 displays the content of the first Platform Services Controller template.

Example 5. Template for Deployment of the First Platform Services Controller

```
{
    "__comments":
    [
        "Example- First platform service controller"
    ],

    "deployment":
    {
        "esx.hostname":"10.100.100.1",
        "esx.datastore":"datastore1",
        "esx.username":"root",
        "esx.password":"P@ss!w0rd",
        "deployment.network":"VM Network",
        "deployment.option":"infrastructure",
        "appliance.name":"platform-service-controller-1",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"Admin?61",
            "time.tools-sync":true,
            "ssh.enable":true
        },

        "sso":
        {
            "password":"Admin?61",
            "domain-name":"vsphere.local",
            "first-instance":true,
            "site-name":"Default-First-Site"
        }
    }
}
```

Example 6 displays the content of the second Platform Services Controller template.

Example 6. Template for Deployment of the Second Platform Services Controller

```
{
    "__comments":
    [
        "Example- Second platform service controller"
    ],

    "deployment":
    {
        "esx.hostname":"10.100.100.1",
        "esx.datastore":"datastore1",
        "esx.username":"root",
        "esx.password":"P@ss!w0rd",
        "deployment.network":"VM Network",
        "deployment.option":"infrastructure",
        "appliance.name":"platform-service-controller-2",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"Admin?61",
            "time.tools-sync":true,
            "ssh.enable":true
        },

        "sso":
        {
            "password":"Admin?61",
            "domain-name":"vsphere.local",
            "site-name":"Default-second-Site",
            "first-instance":false,
            "replication-partner-hostname":"platform_services_controller1.my.company.com"
        }
    }
}
```

Example 7 displays the content of the template for deployment of the first vCenter Server Appliance instance.

Example 7. Template for Deployment of the First vCenter Server Appliance Instance

```
{
    "__comments":
    [
        "Example - First  Management node"
    ],

    "deployment":
    {
        "esx.hostname":"10.100.100.1",
        "esx.datastore":"datastore1",
        "esx.username":"root",
        "esx.password":"P@ss!w0rd",
        "deployment.network":"VM Network",
        "deployment.option":"management-tiny",
        "appliance.name":"management-node-1",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"Admin?61",
            "ssh.enable":true,
            "time.tools-sync":true,
            "platform.service.controller":"platform_services_controller1.my.company.com"
        },

        "sso":
        {
            "password":"Admin?61",
            "domain-name":"vsphere.local",
            "site-name":"Default-First-Site"
        }
    }
}
```

Example 8 displays the content of the template for deployment of the second vCenter Server Appliance instance.

Example 8. Template for Deployment of the Second vCenter Server Appliance Instance

```
{
    "__comments":
    [
        "Example – Second  Management node"
    ],

    "deployment":
    {
        "esx.hostname":"10.100.100.1",
        "esx.datastore":"datastore1",
        "esx.username":"root",
        "esx.password":"P@ss!w0rd",
        "deployment.network":"VM Network",
        "deployment.option":"management-tiny",
        "appliance.name":"management-node-2",
        "appliance.thin.disk.mode":true
    },

    "vcsa":
    {
        "system":
        {
            "root.password":"Admin?61",
            "ssh.enable":true,
            "time.tools-sync":true,
            "platform.service.controller":"platform_services_controller2.my.company.com"
        },

        "sso":
        {
            "password":"Admin?61",
            "domain-name":"vsphere.local",
            "site-name":"Default-Second-Site"
        }
    }
}
```

If you have comments about this documentation, submit your feedback to: docfeedback@vmware.com

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