Using Application
Services Library Services

vRealize Automation 6.2

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Contents

Using Application Services Library Services

The Application Services library provides a list of pre-populated standard logical templates, predefined applications and services, and customizable scripts for users to create and deploy an application blueprint.

The Application Services library lets you specify definitions for installable custom services on logical templates using install, configure, start, update, rollback, and tear down scripts. An application catalog administrator can add a service using logical templates or scripts to support custom application infrastructure and operating systems required by IT.

Intended Audience

This information is intended for anyone who wants to better understand the sample infrastructure and software services, supported operating systems, and supported application components available in Application Services. This audience includes application architects and application catalog administrators who work in collaboration with application infrastructure administrators and cloud administrators.

Sample Library Services

Application Services includes predefined components, such as services, in its library that are reusable components in several applications. These services are available to all business groups in Application Services.

Library Services

On the Application Services title bar, you can click the drop-down menu and select **Library > Services** to view the available sample services. The Library menu also includes standard logical templates, tasks, operating systems, tags, policies and external services.

An application architect can create an application blueprint and add the sample services to the applicable nodes and configure them. The sample services can also be configured when deploying a predefined application.

In the application blueprint, these sample services are grouped into Application Servers, Database Servers, Web Servers, Windows Services, Monitoring, Puppet Services, and Other.

The property values for all of the services are case-sensitive. A new property value does not take effect if the value is typed incorrectly.

Note   Use the predefined sample library services only in a test environment.

The following concepts appear frequently in topics relating to library services.

application	Logical deployment unit, which defines the relationship between operating system templates, application components and their dependent services that can be distributed across multiple virtual machines.
actions	Life cycle stages for the install, configure, start, update, rollback, and teardown scripts for services and application components to be installed.
application components	Custom code used as a template for components such as EAR files, WAR files, and so on. They are custom script packages for the install, configure, start, update, rollback, and teardown actions on a node or service.
node	Virtual machine defined in the blueprint.
clustered node	Cluster of virtual machines defined in the blueprint.

application blueprint	Logical topology of an application for deployment. A blueprint captures the structure of an application with logical nodes, their corresponding services and operating systems, dependencies, default configurations, and network and storage topology requirements.
library	Library that contains logical templates, which are pointers to cloud templates. Reusable services that can be used in multiple applications and installed on a virtual machine. Tasks that can perform additional customized tasks in an application deployment.
logical template	A predefined virtual machine definition in Application Services. A logical template can be mapped to an actual cloud template in the cloud library and supported services. Logical templates allow an application blueprint to remain cloud agnostic.
service	Scripted software that can be installed on a virtual machine and reused in multiple applications.
properties	Configuration name-value pairs for services and application components. These are variables used by the scripts to set parameters on a script and run various configurations. For example, you can set the installation_path property value and configure installation scripts to use this property to specify the path to use to install a service during the application deployment process.
operating system	Specifies an operating system that the IT organization for logical templates and services supports. A list of operating systems appears in the **Operating systems** menu, and you can add to the list.
tag	Organizes the lists of logical templates and services to enhance readability in the blueprint editor. A list of tags appears in the **Tags** menu, and you can add new tags to the list.
custom tasks	From the execution plan, you can add custom tasks to perform additional customized tasks such as run security patches in an application deployment. You can create a custom task in the library and add it to an application deployment. Application Services also provides predefined tasks in the library that you can use to configure an APT repository, a YUM repository, register a machine with a Red Hat Network, or Join Domain.

Using and Configuring Sample Application Server Services

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The predefined applications, such as Clustered Dukes Bank, Clustered Dot Shopping Cart, Nanotrader, RadiantCMS, and jPetStore, include many of the sample application server services. You can configure the application server services to customize them for your application.

Sample Application Server Services

Application Services provides samples of application server services that a catalog administrator can use to create or update an existing application.

Use the predefined sample catalog service only in a test environment.

Table 2-1. Application Server Services

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric tc Server 2.7.1	Installs and configures vFabric tc Server, the application server component of vFabric Suite, and creates an instance that Application Services uses to deploy WAR files. To deploy Web applications, you must specify the Web application names in the app_name property. The vFabric tc Server includes the following properties to customize services in your application: ■ use_ajp. Set this property to **Yes** to configure the vFabric tc Server instance with the AJP Connector rather than the default HTTP Connector. If you use the vFabric Web Server as a load balancer, the two services communicate using the AJP protocol. ■ java_home. Specifies the required directory where the JRE is installed. By default,Application Services installs the JRE in the `/opt/vmware-jre` directory. You can also set this property to use a custom JRE installation. ■ instance_name. Specifies the internal name of the tc Runtime instance. The default name value is instance1. You can also use this property to create a custom name. ■ instance_root_dir. Specifies the directory where vFabric tc Server is installed. The default directory value is `/opt/vmware/vfabric-tc-server-standard`. This property allows you to specify a different directory. ■ templates. Specifies an array of vFabric tc Server templates that are applied to the new instance, such as elastic-memory, bio-s, nio, or jmx-ssl. By default, only the bio	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit	■ JAR ■ WAR ■ SCRIPT	Application Servers

Table 2-1. Application Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
	template is applied. For the list of the available predefined templates, see the vFabric tc Server 2.7 documentation. ■ app_name. Specifies the name of the Web application to deploy to the vFabric tc Server instance. The application name is the name of the WAR file minus the `.war` suffix. Use commas to separate multiple applications. For example, myapp1,mytestapp2. ■ external_template. Specifies the URL of a `*.tgz` file that contains a custom vFabric tc Server template to apply to the tc Runtime instance. ■ port. Specifies the HTTP port that the vFabric tc Server listens to for incoming requests. The default port value is 8080. To monitor the vFabric tc Server service, drag a vFabric Hyperic Agent to the same node and use the vFabric Hyperic Server to discover the vFabric tc Server instance. If you include the vFabric Web Server 5.1.1 service in your application and create a dependency between it and the vFabric tc Server service, Application Services uses the Auto-Bind Consume and Expose properties of the two services to configure the Web Server service as a load balancer and proxy to the vFabric tc Server service.			
JBoss 5.1.0 on Windows	Installs and configures JBoss Enterprise components for Windows operating systems. The 5.1.0 version of JBoss requires JRE 1.6.0 u31 or later to work properly on Windows.	Windows Server 2008 R2 Enterprise SP1 64-bit	■ JAR ■ WAR ■ EAR	■ Windows Services ■ Application Servers

Table 2-1. **Application Server Services (Continued)**

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
	You can apply the JBoss service to a clustered node. For persistent or sticky sessions, set the JVM_ROUTE property value to self:node_array_index in the expression drop-down menu and configure the load balancing server to use the JVM_ROUTE property. For the JAVA_INSTALL_DIR property, set a JRE installation path with respect to the Windows virtual machine template for the JBoss service.			
JBoss 5.1.0 on Linux	Installs and configures JBoss Enterprise components for Linux operating systems. You can apply the JBoss service to a clustered node. For persistent or sticky sessions, set the JVM_ROUTE property value to self:node_array_index in the expression drop-down menu and configure the load balancing server to use the JVM_ROUTE property. The JBoss service installation scripts use the YUM package management tool to install dependencies.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit	■ JAR ■ WAR ■ EAR	Application Servers
Microsoft IIS with .NET Framework on Windows Server 2008 R2 1.0.0	Installs and enables the Microsoft IIS Server 7 and .NET Framework 3.5 on Windows Server 2008 R2.	Windows Server 2008 R2 Enterprise SP1 64-bit	SCRIPT	■ Windows Services ■ Web Servers ■ Application Servers
Microsoft .NET Framework 4.0 1.0.0	The Microsoft .NET Framework 4.0 service downloads and installs the .NET Framework components.	Windows Server 2008 R2 Enterprise SP1 64-bit	SCRIPT	■ Windows Services ■ Application Servers
Rails 2.3.18	Downloads and installs Ruby On Rails. The Rails service INSTALL scripts use the YUM package management tool to install dependencies. **Important** The Hyperic Agent service does not monitor the Rails service.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit	■ SCRIPT ■ RUBY_GEM	Application Servers

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.

Sample Database Server Services

<div style="text-align: right; font-size: large;">3</div>

Application Services provides samples of database server services that a catalog administrator can use to create or update an existing application.

Many of the sample services are available in the predefined applications such as Clustered Dukes Bank, Clustered Dot Shopping Cart, Nanotrader, Radiant CMS, and jPetStore.

Use the predefined sample catalog service only in a test environment.

Table 3-1. Database Server Services

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric GemFire 6.6.0-vFabric51	Installs the service and makes the vFabric GemFire libraries available for use. You can set the properties such as VERSION, REPO_RPM to set the version and name for the vFabric package. The Hyperic Agent service does not monitor this version of the vFabric GemFire service.	■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit	SCRIPT	Database Servers
vFabric SQLFire 1.0.0	Installs the server and starts an instance of the service using the values that you defined in the client_port and multicast_port properties. The Hyperic Agent service does not monitor the vFabric SQLFire service.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit ■ Ubuntu 12.04.2 32-bit ■ Ubuntu 12.04.2 64-bit	SCRIPT	Database Servers

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric SQLFire Server 1.0.3	Installs the server and starts an instance of the service using the values that you defined in the client_port and multicast_port properties. The Auto-Bind feature binds the vFabric SQLFire Server and Locator services to each other when they are added to an application blueprint. The vFabric SQLFire Server service should be on a clustered node, and the vFabric SQLFire Locator service should be on a single node. The vFabric SQLFire Server service includes the following properties to customize a service in your application: ■ username. Specifies the SQLFire user name. This property is exposed for other services such as tc Server, to use when they connect to SQLFire server. ■ password. Specifies the user password that is set in the username property. ■ multicast_port. Specifies the port used for multicast communication with other members of the distributed system. The default port value is 12333. ■ number_of_servers. Specifies the number of SQLFire servers to start. The default server value is 1. ■ client_port. Specifies the port that the network controller listens on for client connections. The default port value is 1528. ■ initial_heap. Specifies the initial heap size of the JVM in which the SQLFire Server runs. The default size value is 512MB. ■ java_home. Specifies the required directory where the JRE is installed. By default, vCloud Automation Center Application Services installs the	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit	SCRIPT	Database Servers

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
	JRE in the `/opt/vmware-jre` directory. You can also set this property to use a custom JRE installation. ■ max_heap. Specifies the maximum heap size of the JVM in which the SQLFire Server runs. The default size value is 1024MB. ■ dataload_file. Specifies the URL to a SQL file that contains the SQL commands for loading initial data to the schema that you set in the schema_file property. This SQL file runs only once when the vFabric SQLFire service is created. ■ schema_file. Specifies the URL to a SQL file that contains the SQL commands for creating a schema such as tables and indices. This SQL file runs only once when the vFabric SQLFire service is created.			

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric SQLFire Locator 1.0.3	Installs the server and starts an instance of the service using the values that you defined in the client_port and multicast_port properties The Auto-Bind feature binds the vFabric SQLFire Server and Locator services to each other when they are added to an application blueprint. The vFabric SQLFire Server service should be on a clustered node, and the vFabric SQLFire Locator service should be on a single node. The vFabric SQLFire Locator service includes the following properties to customize a service in your application: ■ peer_discovery_port. Specifies the port on which the locator listens for peer discovery, which includes servers and other locators. Default port value is 10101. ■ install_path. Specifies the directory where the vFabric SQLFire locator is installed. The default directory is `/opt/vmware/darwin/sqlfire`. You can also use this property to designate a different directory. ■ java_home. Specifies the required directory where the JRE is installed. By default,Application Services installs the JRE in the `/opt/vmware-jre` directory, you can also set this property to use a custom JRE installation. ■ locator_client_port. Specifies the port that the locator listens on. The default port value is 1527. ■ multicast_port. Specifies the port used for multicast communication with other members of the distributed system. The default port value is 12333.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit	SCRIPT	Database Servers

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric Postgres 9.0.4	Installs and configures the service for use. Set the property allow_connection_ips value to **All** to allow any host to connect to the database. Set the property allow_connection_ips value to **None** to allow only local connections. You can also set an array of IP addresses to selectively allow remote access.	■ CentOS 6.3.0 64-bit ■ CentOS 6.4.0 64-bit ■ RHEL 6.1.0 64-bit ■ RHEL 6.4.0 64-bit	SQL SCRIPT	Database Servers
MySQL 5.0.0	Installs the MySQL server software. Set the property db_port value to the appropriate port. Application components use the database port value for configuration. Set the property db_root_password value to the password assigned to the database administrator. The default database administrator password is **root**. On Ubuntu, the default server configuration does not allow remote connections for security reasons. To remotely connect to the Ubuntu server, append **sed -ie "s/^bind-address/#bind-address/g" $my_cnf_file** to the configuration action script. This change to the action script causes the server to bind to all interfaces allowing remote hosts to connect. On Ubuntu, the db_port property is not supported. The MySQL service INSTALL scripts use the YUM package management tool and APT-GET packaging tool to install dependencies.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ Ubuntu 12.04.2 32-bit	SQL SCRIPT	Database Servers

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Microsoft SQL Server 2008 Express 1.0.0	The Microsoft SQL Server 2008 Express service installs the Microsoft SQL Server 2008 Express and creates a database instance. The default SA_PWD property value is SQLserverdb1. If you change the property value, follow the Microsoft SQL Server strong password requirements. The default password is **AqOj4V2w@whxuU!**.	Windows Server 2008 R2 Enterprise SP1 64-bit	SQL SCRIPT	■ Windows Services ■ Database Servers
Microsoft SQL Server 2012 Enterprise Edition	SQL Server 2012 Enterprise Edition service supports the provision, update, and rollback operations in a Windows node. The provision operation installs SQL Server 2012 Enterprise Edition binary and creates a database instance in the database node. This edition uses the Flexible Disk Layout feature to put different database files in different storage options to improve the database performance. This service also lets the user configure the admin password and the basic SQL Server database parameters such as service properties in the provision, update, and rollback operations.	Windows Server 2008 R2 Enterprise SP1 64-bit	SQL SCRIPT	■ Windows Services ■ Database Servers
MongoDB 2.0.1	Installs the MongoDB server and configures the server according to all of the parameters. By default, if this property is not set, the service binds to all network interfaces on the system. If this property is set, then the service binds only with the IP you provide. Use the wget tool to download MongoDB installation files. You might have to configure the http_proxy property. **Note** The Hyperic Agent service does not monitor the MongoDB service.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ Ubuntu 12.04.2 32-bit ■ RHEL6.1 32 bit ■ RHEL 6.4.0 32-bit	SQL SCRIPT	Database Servers

Table 3-1. **Database Server Services (Continued)**

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Oracle11g 11.2.0	Installs and configures Oracle to start and use the server. The default system administrator password is blank (no password). The installer requires the installation files to be available on a NFS server. Set the server NFS path in the `NFSPATH` parameter and make sure the files are available. For 32-bit installations, download the `linux_11gR2_database_1of2.zip` and `linux_11gR2_database_2of2.zip` files from the Oracle Web site. For 64-bit installations, download the `linux.x64_11gR2_database_1of2.zip` and `linux.x64_11gR2_database_2of2.zip` files from the Oracle Web site. The Oracle11g service `INSTALL` scripts use the YUM package management tool to install dependencies. **Important** The logical template with the Oracle11g service must have at least 10GB of hard disk space to successfully deploy the application. By default, the oracle_base and inventory_location properties values are set to the `/disk2` directory.	■ RHEL 6.4.0 32-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit	SQL SCRIPT	Database Servers

Table 3‑1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Oracle12c 12.1.0	Installs and configures Oracle to start and use the server. The default system administrator password is blank (no password). The installer requires the installation files to be available on a NFS server. Set the server NFS path in the `NFSPATH` parameter and make sure the files are available. For 64-bit installations, download the `linuxamd64_12c_database_1of2.zip` and `linuxamd64_12c_database_2of2.zip` files from the Oracle Web site. The Oracle12c service `INSTALL` scripts use the YUM package management tool to install dependencies. **Important** The logical template with the Oracle12c service must have at least 10GB of hard disk space to successfully deploy the application. By default, the oracle_base and inventory_location properties values are set to the `/disk2` directory.	■ RHEL 6.1.0 64-bit ■ RHEL 6.4.0 64-bit	SQL SCRIPT	Database Servers
Preinstalled MYSQL Server	The Preinstalled MYSQL Server sets the value of db_port to the port to be used. Application components use this value to configure the applications. Set the db_root_password value to the password for the database administrator.	CentOS 6.3.0 32-bit	SQL SCRIPT	Database Servers

Table 3-1. Database Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Preinstalled vFabric GemFire Server	The Preinstalled vFabric GemFire Server sets the value of db_root_username to the root user name to be used for the database. Set the value of max_allowed_packet to the maximum allowed packet size in the server.	Ubuntu 12.4.2 64-bit	SCRIPT	Database Servers
Preinstalled SQL Server 2008 R2 Express	The Preinstalled SQL Server 2008 R2 Express configures a database instance. Set the SAPWD value to the password for the database administrator.	Windows Server 2008 R2 Enterprise SP1 64-bit	SQL SCRIPT	Database Servers

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.

Sample Web Server Services

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Application Services provides sample Web Server services that a catalog administrator can use to create or update an existing application.

The Apache sample Web Server service is included in the Clustered Dukes Bank predefined application.

Use the predefined sample catalog service only in a test environment.

Table 4-1. Web Server Services

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
vFabric Web Server 5.1.1	Installs the vFabric Web Server, which is the HTTP Server and load-balancing component of the vFabric Suite. In the blueprint, drag the service to a node. Set the property value http_node_ips to an array of IP addresses to load balance and bind the webserver_ip property value to **self:ip** . The vFabric Web Server Service includes the following properties to customize services in your application: ■ instance_name. Specifies the internal name of the Web Server instance. The default value is **instance1**. You can also use this property to create a custom name. You cannot override this property when you initiate an update process. ■ load_balancer_method. Specifies the load balancing method that the Web Server uses. The default value is **byrequests**. Other possible values are, **bytraffic** and **bybusiness**. ■ deployment_archive. Specifies the URL of the `*.tgz` archive that contains the static content to deploy to the Web Server. ■ http_port. Specifies the HTTP port that the Web Server listens to for incoming requests. The default port value is **80**. ■ cluster_name. Specifies the internal name of the cluster if you are using cluster load balancing. The default name is mycluster. ■ webserver_conf_file. Specifies the internal name of the Web Server configuration file. The default file name is `httpd-vfabric-webserver-ootb.conf`. If you also include the vFabric tc Server 2.7.1 service in your application and create a dependency between it and the vFabric Web Server service, Application Services uses the Auto-Bind Consume and Expose properties of the two services to configure the Web Server service as a load balancer and proxy to the tc Server service.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit	■ SCRIPT ■ OTHER	Web Servers
Microsoft IIS with .NET Framework on Windows Server 2008 R2 1.0.0	Installs and enables the Microsoft IIS Server 7 and .NET Framework 3.5 on Windows Server 2008 R2.	Windows Server 2008 R2 Enterprise SP1 64-bit	SCRIPT	■ Windows Services ■ Web Servers

Table 4-1. Web Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
				■ Application Servers

Table 4-1. Web Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Apache HTTP Server 2.2.22 for Windows	Provides an installation of Apache 2.2 to serve static content. The service also provides proxy configuration for mod_proxy and mod_proxy_ajp for application servers. ■ Add a port value for the http_port property to enable the static server configuration. ■ Add an IP or array of IP reference for the http_node_ips property to enable proxy configuration. ■ Set the use_ajp property value to **NO** to configure mod_proxy. ■ Set the use_ajp property value to **YES** to configure mod_proxy_ajp. ■ Set the http_proxy_port property value to **8009** when using Apache JServ Protocol (AJP). Otherwise, set the value to the port on which the application server is running. ■ Set the autogen_sticky_cookie property value to **YES** when using the Apache server for load balancing non-Java application servers such as the Microsoft IIS Server. Otherwise, set the property value to **NO**.	Windows Server 2008 R2 Enterprise SP1 64-bit	SCRIPT	■ Windows Services ■ Web Servers
Apache 2.2.0	Provides a standard installation of Apache to serve static content. The service also provides optional proxy configuration for mod_proxy and mod_proxy_ajp for standard application servers. ■ Add a port value for the http_port property to enable the static server configuration. ■ Add a node IP address value for the http_node_ips property to enable proxy configuration. ■ Set the use_ajp property value to **NO** to configure mod_proxy. ■ Set the use_ajp property value to **YES** to configure mod_proxy_ajp. When you use mod_proxy_ajp, it is optional to add the `tomcat_context` and `ajp_proxy_context` values for the proxy. ■ Set the http_proxy_port property value to **8009** when you use Apache JServ Protocol (AJP). Otherwise, set the value to the port that the application server is running on.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit	SCRIPT	Web Servers

Table 4-1. Web Server Services (Continued)

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
	For Hyperic to properly monitor the Apache service, add the following code to the `/etc/httpd/conf/httd.conf` configuration file and restart, for the changes in the file to take effect.			

```
ExtendedStatus On
<Location /server-status>
SetHandler server-status
Order deny,allow
Deny from all
Allow from localhost
</Location>
```

Additional parameters such as `service_start` are read-only. Application components can use the read-only parameter information to start and stop the Apache server.

The JVM_ROUTES property can be bound to the JVM_ROUTE on clustered application servers.

The Apache service INSTALL scripts use YUM package management tool to install dependencies.

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.

Sample Monitoring Server Services

<div style="text-align: right">5</div>

Application Services provides samples of monitoring server services that a catalog administrator can use to create or update an existing monitoring application.

Use the predefined sample catalog service only in a test environment.

Table 5-1. Monitoring Server Services

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Hyperic HQ Agent 5.0.0	Installs either a 32-bit or a 64-bit Hyperic Agent and configures the agent to connect to the server specified in the HQ_SERVER_IP property. Set the required ip_address property value to **self:ip**. The INSTALL script configures the server to use **hqadmin** as the username and **AqOj4V2w@whxuU!** password to connect to the Hyperic Server. To modify the login credentials, change the username and password in the service INSTALL script.	■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit ■ Ubuntu 12.04.2 32-bit ■ Ubuntu 12.04.2 64-bit		Monitoring
Hyperic HQ Server 5.0.0	Installs, configures, and starts either a 32-bit or a 64-bit Hyperic server. Set the required ip_address property value to **self:ip**. The INSTALL script configures the server to use **hqadmin** as the username and **AqOj4V2w@whxuU!** password to connect to the Hyperic Server. To modify the login credentials, change the username and password in the service INSTALL script. The Hyperic Server service INSTALL scripts use the YUM package management tool and APT-GET packaging tool to install dependencies.	■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 64-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 64-bit		Monitoring

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.

Sample Puppet Services

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Application Services provides sample Puppet services that an application architect can add to the logical template to associate the Puppet module in the node definition to the corresponding node on the Puppet Master.

Use the predefined sample catalog service only in a test environment.

Table 6-1. Puppet Service Properties

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag
Puppet MYSQL Server	The puppet MYSQL server represents the Puppet class called mysql::server, which is part of the puppetlabs-mysql module created by Puppetlabs. You must complete the following prerequisites to use this service: ■ Register a Puppet Master with Application Services. ■ The registered Puppet Master must have the puppetlabs-mysql module version 0.9.0. The Puppet MYSQL Server service includes the following properties to customize a service in your application: ■ appd_class_name. Indicates the class name. Do not modify the value of this system defined property. ■ enabled. Indicates whether the mysql service is in the started or stopped state. ■ service_provider. Indicates the operating system-specific service provider to manage the mysql daemon. ■ config_hash. Indicates the mysql server configuration specified in the hash syntax as specified by the Puppet Domain Specific Language. For information about possible config values, see the puppetlabs-mysql module documentation. ■ manage_service. Indicates if Puppet should manage the service configuration and life cycle. ■ package_ensure. Indicates that when the property state is set to present, the latest code for the package is downloaded from the repository. ■ package_name. Indicates the operating system specific package name for installing the mysql server. ■ service_name. Indicates the name of the service or daemon.	■ RHEL 6.4.0 32-bit ■ RHEL 6.4.0 64-bit ■ RHEL 6.1.0 32-bit ■ RHEL 6.1.0 64-bit ■ CentOS 6.4.0 32-bit ■ CentOS 6.4.0 64-bit ■ CentOS 6.3.0 32-bit ■ CentOS 6.3.0 64-bit ■ CentOS 5.9.0 32-bit ■ CentOS 5.9.0 64-bit ■ Ubuntu 12.4.2 32-bit ■ Ubuntu 12.4.2 64-bit ■ SLES 11.2.0 64-bit	Script	Puppet Services

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.

Sample Services to Use with an Existing Application

7

Application Services provides sample services such as Microsoft SQL Server Management Tools 2008 Express, and vFabric RabbitMQ that a catalog administrator can use to create or update an existing application.

Use the predefined sample catalog service only in a test environment.

Table 7-1. Catalog Services to Use with an Existing Application

Sample Service	Service Description	Supported Operating Systems	Supported Application Components	Associated Service Tag

vFabric RabbitMQ 2.4.1	Installs and configures the service for use.
	
	The vFabric RabbitMQ service INSTALL scripts use the YUM package management tool and APT-GET packaging tool to install dependencies.
	
	When an application blueprint with vFabric RabbitMQ service and the supported operating system is deployed, the vFabric RabbitMQ 2.7.1 service is installed.
	
	When you install the vFabric RabbitMQ service on the Ubuntu operating system, the rpm packages are not created because the vFabri_RabbitMQ_v2.4.1 INSTALL script attempts to set the http proxy port macros in the /usr/lib/rpm/macros folder, which is not available in Ubuntu.
	
	You can configure the INSTALL script to verify the operating system before setting the http proxy port macro in the /usr/lib/rpm/macros folder. Add the following command to the INSTALL script.
	
	`if [ $DistroBasedOn == "RedHat"; then`
	`if [ ! $proxy_host == "" ]; then`
	
	The Hyperic Agent service can monitor vFabric RabbitMQ only with the management console plug-ins activated. See vFabric RabbitMQ documentation.
		■ CentOS 6.4.0 32-bit
		■ CentOS 6.4.0 64-bit
		■ CentOS 6.3.0 32-bit
		■ CentOS 6.3.0 64-bit
		■ Ubuntu 12.04.2 32-bit
		■ Ubuntu 12.04.2 64-bit
			SCRIPT	OTHER

Microsoft SQL Server Management Tools 2008 Express 1.0.0	Installs the Management Studio for the SQL Server 2008 Express.	Windows Server 2008 R2 Enterprise SP1 64-bit	None	■ Windows Services ■ OTHER

To deploy predefined sample applications or add predefined tasks to an execution deployment plan, see the *Using Application Services* documentation.