1.   VMware vCloud Architecture Toolkit R3.1

The VMware® vCloud® Architecture Toolkit (vCAT) provides modular components so that you can design a vCloud reference architecture that supports your cloud use case. It includes design considerations and design patterns to support architects, operators, and consumers of a cloud computing solution based on VMware technologies.

For additional vCAT supporting material, visit the vCloud Architecture Toolkit page on vmware.com (http://www.vmware.com/go/vCAT). This is also where updates to vCAT will be placed.

1.1   vCAT 3.1 Documentation Packages

The following vCAT 3.1 packages are available:

- PDF package (~25MB).

- Documentation Center package (~50MB).

1.1.1 PDF Package

The PDF package is a zipped package that contains PDFs of all of the documents in the toolkit. Use WinZip or a similar application to unzip the package, and a PDF reader such as Adobe Reader to display and read the documents. You can print hardcopy documents from the PDFs.

1.1.2 Documentation Center Package

Click the video icon to view a brief presentation about the documentation center.

The documentation center package is a zipped package that contains a complete online help system that you can use to view all of the documents in the toolkit from an easy to use interface. It offers powerful features such as the ability to search through the collection of vCAT documents, display a pre-generated PDF of a document, and when served from a web server, access to Google Translate to translate displayed pages into dozens of languages.

Note   The vCAT 3.1 Documentation Center is also served from a web site on vmware.com.

1.1.2.1. Browsers

The documentation center works with the following browsers:

- Google Chrome (preferred).

- Safari.

- Internet Explorer. (Search operates differently. Click the magnifying glass to search, enter a search term in the resulting text field, and press Enter or click **Go**).

- Firefox (works well except for Google translate).

1.1.2.2. Installing the Documentation Center

The documentation center package is large, so it is recommended that you download the package over a high-speed link.

To install and display the vCAT 3.1 documentation center

1. Download and unzip the package.

2. Double-click the `index.html` file to run it.

3. Allow blocked content, if prompted.

1.1.2.3. Offline versus Online Capabilities

- If you install the documentation center package on your machine you can use the toolkit offline. For example, you can install it on your laptop computer and review the documents while you are not connected to the Internet.

- If you install the documentation center package on a web server, the interface provides additional capabilities such as access to Google Translate.

- The documentation center also optimizes the display for mobile devices. For example, using Safari on an iPad to access the documentation center works well.

1.1.2.4. Using the Documentation Center

- Click the folder icon to toggle display of the navigation pane on or off.

- Enter text in the search field and click the search icon (magnifying glass) to search for it. This is a client-side search implementation that can be used online or offline. It does not allow Boolean expressions.

- If the documentation center is served from an Internet-connected web server, click the globe to display Google Translate. Select the language you want and click **Translate**. Each page is translated as it is displayed.

- Click a document in the navigation pane to display the sections in the document. Click a section to display content.

- Click the page forward or page back arrows to move from page to page.

- Click the print icon to print the selected page to a printer.

- Select any document section and click the PDF icon to view a pre-generated PDF for the selected document. You can print the entire document from the PDF.

- Click the email (envelope) icon or the link by the logo to send feedback to ipfeedback@vmware.com. The URL of the currently displayed page is automatically populated in the email Subject line.

1.2 vCAT 3.1 Changes

For vCAT 3.1, most documents received additional edits, and graphics were improved for many figures. Content was updated as follows:

- *Introduction:*
  - Links to brief video presentations were added for each document and topic area.
  - Updated Figure 3, vCloud Technology Areas.
- *Service Definitions*:
  - Changes to the service offering examples because of allocation model changes in vCloud Director 5.1.1.
  - Minor updates to the other service offering examples.
  - Other minor edits include:
    - The technology mapping diagram was updated to show VMware vCloud Automation Center™.
    - vCloud API changed to VMware APIs.
    - Enumerated VMware vCenter Operations Management Suite™ components.
- *Architecting a VMware vCloud*:
  - Added information about vCloud Automation Center (a component of the vCloud Suite).
  - Updated section 8, Multisite Considerations
  - Updated security information in Appendix B.
  - Updated allocation models guidance.
  - Updated information about VMware metering in section 6.
  - Updated hybrid vCloud considerations in section 9.
  - Other edits and updates.
- *Operating a VMware vCloud*: Added information about organizational structure and its evolution for vCloud in section 5, Organizing for vCloud Operations section.
- *Consuming a VMware vCloud:*
  - Updates to reflect new network terminology in vCloud Director 5.1
  - Updated to reflect new storage capabilities in vCloud Director 5.1.
  - Updated section 3.2, vCloud Director Allocation Models, to reflect changes in vCloud Director 5.1.
  - Updates and clarifications to section 4.3, Working with Catalogs.
  - Updates to section 5.1.3, vApp Migration, to reflect new capabilities in vCloud Director 5.1.
  - Updates to section 6.3, What's New in the vCloud 5.1 API.
- *Implementation Examples*: The following sections were extensively updated with the latest available information:
  - Section 3, Organization Virtual Datacenter Examples.

- o   Section 4.5, VXLAN ORG Network for Disaster Recovery.

- o   Section 7.3, Implementing Signed Certificates from a Certificate Authority.

- *Workflow Examples*: No content changes.

- *Software Tools*: No content changes.

- *Cloud Bursting*: No content changes.

1.3   vCAT 3.0 Changes (previous release)

This section provides information about the changes that were made for the vCAT 3.0 release.

New documents were added to the toolkit, and in two cases multiple documents were consolidated into one guide. Information about new components has been added and information about other components has been updated.

1.3.1   New and Consolidated documents

- *Workflow Examples*, *Software Tools*, and *Cloud Bursting* are new documents with all new content.

- The vCAT 2.x *Public VMware vCloud Service Definition* and *Private VMware vCloud Service Definition* have been consolidated into one *Service Definitions* document that covers public, private, and hybrid cases.

- The vCAT 2.x documents*, Public VMware vCloud Implementation Examples*, *Private VMware vCloud Implementation Examples*, *and Hybrid Use Cases*, have been consolidated into one document titled *Implementation Examples* that covers public, private, and hybrid use cases. Many new implementation examples are provided.

1.3.2   New and Updated Components

vCAT 3.0 provided new and expanded coverage for architects, operators, and consumers.

- VMware vSphere®.

- VMware vCloud Director®.

- VMware vCenter™ Operations Management Suite™ (new):

  - o   VMware vCenter Chargeback Manager™.

  - o   VMware vCenter Operations Manager™ (new).

  - o   VMware vCenter Infrastructure Navigator™ (new).

  - o   VMware vCenter Configuration Manager™ (new).

- VMware vCloud Networking and Security™ (formerly VMware vShield™):

  - o   VMware vCloud Networking and Security Edge™.

  - o   VMware vCloud Networking and Security App™ (new).

  - o   VMware vCloud Networking and Security Data Security™ (new).

  - o   VMware vShield Endpoint™ (new).

- VMware vCloud Connector™.

- VMware vCenter Orchestrator™.

- VMware vSphere Service Manager™ – Cloud Provisioning (new).

- VMware vCenter Site Recovery Manager™ (new).

- VMware vFabric™ RabbitMQ™ (new).

- VMware vFabric Application Director™ (new).

- VMware vFabric Application Performance Manager™ (new).

  o VMware vFabric Hyperic® (new).

  o VMware vFabric AppInsight™ (new).

1.4 VMware vCloud Networking and Security

VMware vShield has been renamed to VMware vCloud Networking and Security™. Note the following changes:

- VMware vShield Edge™ is now VMware vCloud Networking and Security Edge.

- VMware vShield App™ is now VMware vCloud Networking and Security App.

- VMware vShield Manager™ is now VMware vCloud Networking and Security Manager™.

The vCAT documents usually refer to vCloud Networking and Security in text, but some links to reference documents might still link to vShield documents on vmware.com. The vShield documents are being updated to reflect the new name.

1.5 Known Issues

Firefox generally works with the vCAT Documentation Center, but Google Translate does not work properly.

1.6 Providing Feedback

The usefulness of this architecture toolkit depends upon feedback from customers and our network of partners. Send all feedback and IP submissions to ipfeedback@vmware.com.

From the documentation center interface you can click the link next to the logo or click the email (envelope) icon to send feedback.