Kablink® Vibe™ 4.0.1

Installation Guide

March 2016

Novell

Legal Notice

For information about legal notices, trademarks, disclaimers, warranties, export and other use restrictions, U.S. Government rights, patent policy, and FIPS compliance, see https://www.novell.com/company/legal/.

Copyright © 2016 Novell, Inc. All Rights Reserved.

Contents

About This Guide

The *Kablink Vibe 4 Installation Guide* covers the installation and configuration of Kablink Vibe. The guide is divided into the following sections:

Audience

This guide is intended for Kablink Vibe administrators.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the **comment on this topic** feature at the bottom of each page of the online documentation.

Documentation Updates

For the most recent version of this manual, visit the Kablink Vibe 3.3 Documentation Web site (http://www.novell.com/documentation/kablinkvibe33).

Additional Documentation

You can find more information in the Kablink Vibe documentation, which is accessible from the Kablink Vibe 3.3 Documentation Web site (http://www.novell.com/documentation/kablinkvibe33).

To access the *Kablink Vibe User Guide* from within Vibe, click the **Settings** icon, then click **Help**.

Product Overview

1 What Is Kablink Vibe?

Kablink Vibe is an enterprise collaboration tool designed to increase individual productivity, team effectiveness, and organizational success by providing the right set of tools to the right people.

1.1 Vibe Capabilities

Kablink Vibe users fall into three basic groups:

1.1.1 Content Consumers

Content consumers use Kablink Vibe to work with important information that pertains to them. Content consumers:

- Maintain their personal workspaces, including setting up a personal Blog, Calendar, Files, Guestbook, Photo Album, and Tasks folder
- Participate in team workspaces set up for content providers, in order to better collaborate with colleagues and facilitate their work assignments
- Search the Vibe site for people, places, and other information that pertains to their personal work assignments
- Identify subject-matter experts to assist them in their personal work assignments

The typical tasks performed by content consumers are covered in the *Kablink Vibe 4.0.1 User Guide*.

In many cases, content consumers quickly become content providers.

1.1.2 Content Providers

Content providers use Kablink Vibe to create and manage teams, customize the Vibe environment, and import data into the Vibe site for use by other Vibe users. Content providers:

- Create and manage team workspaces and folders
- Control user access to their team workspaces
- Establish unique branding for workspaces and folders to clearly differentiate them from other places on the Vibe site
- Create landing pages for workspaces that consolidate the most necessary workspace information into a single page

- Customize data entry forms for gathering information from users
- Create workflows to automate otherwise time-consuming manual processes

The typical tasks performed by content providers are covered in the *Kablink Vibe 4.0.1 User Guide*.

1.1.3 Administrators

A Kablink Vibe administrator is responsible for installing the Vibe software and setting up the Vibe site. This *Kablink Vibe 3.4 Installation Guide* provides instructions for Vibe software installation. After installation, the Vibe site administrator can:

- Set up user access to the Vibe site
- Create initial workspaces and populate them with information that is of interest to Vibe users
- Control user access to workspaces and folders
- Configure email integration, so that Vibe users can receive notifications of updated information on the Vibe site and post to the Vibe site by using email messages
- Set up mirrored folders to make large sets of data that are already available on disk more easily available through the Vibe site
- Set up software extensions (add-ons) that enhance the power and usefulness of the Vibe site
- Set up remote applications that deliver data from a remote location, such as a remote database, for easy access on your Vibe site
- Manage users, workspaces, and folders as the Vibe site grows and evolves
- Perform regular backups to safeguard the data stored in the Vibe site

The typical tasks performed by Vibe site administrators are covered in the *Kablink Vibe 4.0.1 Administration Guide*.

1.2 Vibe Components

A Kablink Vibe site consists of four major components:

- Section 1.2.1, “Vibe Software,” on page 14
- Section 1.2.2, “Vibe Database,” on page 14
- Section 1.2.3, “Vibe File Repository,” on page 15
- Section 1.2.4, “Lucene Index,” on page 15

1.2.1 Vibe Software

The Vibe software is a customized version of Apache Tomcat. This software provides the web-based functionality you use as you access the Vibe site through your web browser.

1.2.2 Vibe Database

The Vibe database is used for storing the following information about the Vibe site and its users:

- Structural information about workspaces, folders, and entries (for example, their location in the workspace tree)

- Identification information about workspaces, folders, and entries (for example, titles, descriptions, dates of creation/modification, and users associated with creation/modification)
- User profile information (for example, full name, phone number, and email address)

The Vibe database disk space requirements are relatively modest, because the database is not used for storing files.

1.2.3 Vibe File Repository

The Vibe file repository holds all files that are imported into Vibe, information related to the imported files (such as thumbnails and HTML renderings), and the search engine index.

The Vibe file repository disk space requirements depend on the size of the Vibe site. For a large Vibe site, disk space requirements can be substantial.

1.2.4 Lucene Index

The Lucene Index Server is a high-performance Java search engine. The Lucene index contains pointers to the actual data stored in the Vibe file repository. The index enables the Lucene search engine to perform very fast searches through large quantities of Vibe data.

1.3 Vibe Configurations

You can configure Kablink Vibe to run on a single server or multiple servers, depending on the size and needs of your Vibe site.

Configuration	Description
Single Server	By default, the Vibe Installation program installs all Vibe components on the same server.
Remote Database Server	For better performance and scalability, you can install the Vibe database on a remote server.
Remote Lucene Index Server	For better performance and scalability, you can install the Lucene index on a remote server. **NOTE:** This configuration is not available with Kablink Vibe.
Multiple Vibe Servers	By running Novell Vibe on multiple servers, you can achieve high availability, including failover and load balancing, depending on how you configure your servers. **NOTE:** This configuration is not available with Kablink Vibe.
Multiple Remote Lucene Servers	Your Novell Vibe site depends on the Lucene Index Server for full functionality. Running multiple Lucene Index Servers provides high availability, so that if one Lucene Index Server goes down, Vibe users can still access the Vibe site because other Lucene Index Servers are still available. **NOTE:** This configuration is not available with Kablink Vibe.
Multiple Remote Database Servers	Each of the three databases supported by Vibe has its own approach to clustering the database server. Information about clustering database servers is available on the Internet.

For more information about which configuration type will best achieve the needs of your organization, see Section 2.6, “Recommended Hardware Configurations Based on System Performance,” on page 24.

For more information about how to set up these configurations, see Part V, “Multi-Server Configurations and Clustering,” on page 105.

2 Vibe System Requirements

You, as a Kablink Vibe site administrator, must ensure that your system meets Vibe system requirements, so that your Vibe site can be set up successfully. After your Vibe site is set up, you must ensure that users' browsers and office applications meet Vibe user requirements, so that users can access the Vibe site successfully.

For the latest system requirements details, see the Kablink Vibe 4.0.1 Release Notes.

2.1 Vibe Server Requirements

2.1.1 Hardware Requirements

Item	Requirement
Processor	◆ x86-32 or x86-64 ◆ Minimum 2 GHz ◆ Multi-CPU systems preferred
Server Memory	◆ At least 3 GB RAM for an x86-32 processor ◆ At least 4 GB RAM for an x86-64 processor See Section 2.6, "Recommended Hardware Configurations Based on System Performance," on page 24 and Section 5.2.3, "Vibe Server Memory," on page 43.

2.1.2 Operating System Requirements

Platform	Requirement
Linux	◆ Novell Open Enterprise Server 11 or later, plus the latest Support Pack ◆ SUSE Linux Enterprise Server (SLES) 11 or SLES 12, plus the latest Support Pack MariaDB is the default SQL database for SLES 12. When using the MySQL database on SLES 12, MySQL is not automatically patched. In this environment, you need to patch MySQL manually. **NOTE:** On SLES, the X Window System is required by the GUI Vibe installation program. However, it is not required in order to run Vibe after installation, or for text-based installations or silent installations. Kablink Vibe can be run on additional Linux and Windows operating systems. For more information, see the Kablink Open Collaboration Web site (http://www.kablink.org).
Windows	◆ Windows Server 2008, or Windows Server 2012, plus the latest Service Pack ◆ Windows Server 2008R2, or Windows Server 2012R2, plus the latest Service Pack

See Section 2.5.4, “Virtualization Support,” on page 23 for information about support for running Vibe in a virtualized environment.

2.1.3 Database Server Requirements

Platform	Requirement
Linux	◆ MariaDB on SLES 12 server and client ◆ MySQL 5.1 or later server and client **NOTE:** MySQL is included with SLES, but you need to install and configure it. For more information, see Section A.3, “MySQL or MariaDB SQL Database Server,” on page 158. ◆ Oracle 11g or Oracle 12c
Windows	◆ MariaDB 5.2.6 or later server and tools ◆ MySQL 5.1 or later server and tools ◆ Microsoft SQL Server 2012 or SQL Server 2014, plus the latest Service Pack ◆ Microsoft SQL Server 2008R2 or SQL Server 2012R2, plus the latest Service Pack ◆ Oracle 11g or Oracle 12c

More information about MySQL is available in Section A.3, “MySQL or MariaDB SQL Database Server,” on page 158.

2.1.4 Java Developer Kit (JDK) Requirements

Platform	Requirement
Linux	◆ IBM JDK (latest version) Java scripting must be enabled for proper Vibe site functionality. ◆ Oracle JDK (latest version)
Windows	◆ Oracle JDK (latest version)

More information about JDKs is available in "Java Development Kit (JDK)" in Appendix A, "Vibe System Requirements Assistance," on page 155.

2.1.5 Java Cryptography Extension (JCE) Requirements

Platform	Requirement
Linux	◆ Unrestricted SDK JCE policy files
Windows	◆ Unrestricted SDK JCE policy files

More information about JDKs is available in "Java Cryptography Extension (JCE)" in Appendix A, "Vibe System Requirements Assistance," on page 155.

2.1.6 Directory Service Requirements

Platform	Requirement
Linux	Novell eDirectory 8.8 or later, plus the latest Support Pack For information about eDirectory, see the Novell eDirectory 8.8 Documentation website (http://www.novell.com/documentation/edir88).
Windows	Microsoft Active Directory, plus the latest Service Pack; or Novell eDirectory 8.8 or later, plus the latest Support Pack For information about Active Directory, see Windows Server 2003 Active Directory (http://www.microsoft.com/windowsserver2003/technologies/directory/activedirectory) or Windows Server 2008 Active Directory (http://www.microsoft.com/windowsserver2008/en/us/active-directory.aspx).

2.1.7 Disk Space Requirements

Item	Requirement
Vibe software	At least 500 MB for a new installation When you update an existing Vibe system, ensure that your server has at least twice the amount of disk space available in the following directory, plus an additional 500 MB: **Linux:** `/var/opt/novell/teaming` **Windows:** c:\Program Files\Novell\Teaming
Database server software	At least 500 MB for a new installation When you update an existing Vibe system, ensure that your server has at least twice the amount of disk space available in the following directory, plus an additional 500 MB: **Linux:** `/var/opt/novell/teaming` **Windows:** c:\Program Files\Novell\Teaming
Vibe file repository	Depends on the anticipated size of the Vibe site
Database content	Substantially less than the Vibe file repository See Section 5.6, “Planning the Vibe Database,” on page 49 to plan for the disk space needs of your Vibe site.

2.1.8 Other Requirements

Requirement	Additional Information
Tomcat 7.0.55	Tomcat 7.0.55 is included with Vibe on Linux and Windows.

2.2 Vibe User Requirements

2.2.1 Browser Requirements

Platform	Requirement
Linux	Mozilla Firefox (latest version); Google Chrome (latest version)
Windows	Microsoft Internet Explorer 11 or later (must not have the Google Chrome Frame plug-in installed); Mozilla Firefox (latest version); Google Chrome (latest version)

Platform	Requirement
Mac	Safari (latest version); Mozilla Firefox (latest version); Google Chrome (latest version)

IMPORTANT: When using the Google Chrome browser, the following functionality is not available:

- The ability to edit documents in place (as described in "Editing Files" in the *Kablink Vibe 4.0.1 User Guide*)
- The workflow graphical designer

2.2.2 Office Application Requirements

Platform	Requirement
Linux	OpenOffice.org/LibreOffice (latest version)
Windows	Microsoft Office 2010 or later; OpenOffice.org/LibreOffice (latest version)
Mac	Microsoft Office for Mac 2011; OpenOffice.org/LibreOffice (latest version)

OpenOffice and LibreOffice are used synonymously throughout the Kablink Vibe documentation. Functionality and issues that apply to OpenOffice also apply to LibreOffice.

2.2.3 Collaboration Client Requirements

Platform	Requirement
Linux	◆ GroupWise 2014 with the latest Support Pack ◆ GroupWise 2012 with the latest Support Pack
Windows	◆ GroupWise 2014 with the latest Support Pack ◆ GroupWise 2012 with the latest Support Pack

2.3 Desktop Requirements

You can download Windows and Mac desktop applications that allow you to work with Vibe files directly from the file system on your computer. The following operating systems are supported:

Platform	Requirement
Windows	Windows 7, 8.1, and 10
Mac	Mac OSX 10.10 and later

2.4 Mobile Requirements

You can download a native application for your iPhone, iPad, Android, or BlackBerry device. These applications have a more polished user interface and don't require you to sign in each time you access Vibe. However, the mobile app for Vibe does not store information on your device; information can be viewed only when you have an Internet connection.

Other devices can access the Vibe mobile interface by using a mobile browser that meets the requirements listed in Section 2.4.2, "Mobile Browser Requirements," on page 22.

2.4.1 Mobile App Requirements

Kablink Vibe mobile apps are available for the following mobile operating systems:

- iOS (native application is available for both the iPhone and iPad for a free download in the Apple App Store--for iOS 7 or later)
- Android (native application is available for a free download in the Google Play App Store--formerly known as the Android Market--for Android 2.3 or later)
- Windows Phone 8.1
- Kindle Fire (native application is available for a free download in the Amazon Appstore for Android)
- BlackBerry Z10 and PlayBook (native application is available for a free download in the BlackBerry World store)

Ensure that your device's browser meets the requirements described in Section 2.4.2, "Mobile Browser Requirements," on page 22.

2.4.2 Mobile Browser Requirements

To access Vibe from a browser on a mobile device, your device's browser must support the following:

- HTML 4
- JavaScript

2.5 Supported Environments

2.5.1 File Viewer Support

In Kablink Vibe, file viewing capabilities are provided by OpenOffice.org (http://www.openoffice.org) viewer technology. For more information, see:

- “Configuring the Document Converter on Linux” on page 69
- “Configuring the Document Converter on Windows” on page 78

The file viewers also support data indexing by the Lucene Index Server.

2.5.2 IPV6 Support

Kablink Vibe supports the IPV6 protocol when it is available on the server. If the protocol is available, Vibe detects it and supports IPV6 by default, along with IPV4.

2.5.3 Clustering Support

You can install Vibe components on multiple servers to provide failover support, as described in Part V, “Multi-Server Configurations and Clustering,” on page 105.

2.5.4 Virtualization Support

Novell tests the Vibe software on both Xen and VMware platforms. Vibe is supported on these platforms, as well as other virtualization platforms, such as Microsoft Hyper-V. If you encounter an issue that cannot be duplicated in a Novell test environment, you may be responsible for following up with the provider of your virtualization software.

For more information about XEN virtualization support, see the Open Enterprise Server 2 Virtualization Documentation website (http://www.novell.com/documentation/oes11/virtualization.html#virtualization) and the SLES Virtualization Technology Documentation website (http://www.novell.com/documentation/vmserver).

For more information about VMware virtualization support, see the VMWare website (http://www.vmware.com).

2.5.5 Linux File System Support

The following file systems are supported for Vibe running on Linux:

- ext3 (recommended in most cases)

  NOTE: The maximum number of file entries in a Vibe File folder cannot exceed 31,998 when using the ext3 file system.

- NSS (recommended if you are running OES Linux and need the feature-rich environment of NSS)
- reiser3

2.6 Recommended Hardware Configurations Based on System Performance

Because of the wide variety of ways you can use Vibe, the recommendations given in this section are only guidelines.

The hardware configuration that you set up for your Kablink Vibe site should be based on the following considerations:

- **Number of active users that the Vibe site must support:** Users who have accounts in the Vibe system but do not log in to the system should not be considered in this number. For example, if there are 1,000 users in the Vibe system but only 300 access the system on a regular basis, the number of active users is 300.
- **Content the users will add:** The type of content that is shared and stored on your Vibe site. The number of active users in the system is a good indicator of what the hardware configuration of your system should be, but you should also keep in mind that the type of content that is shared and stored on your Vibe site has a significant effect on the amount of disk space and memory that is required.

  For example, your users might add the following types of content:

  - Multimedia documents, such as CAD and PowerPoint documents (requires the most system resources)
  - Other documents, such as text documents and photos
  - Vibe entries that do not contain attachments, such as blog entries and discussion entries (requires the least amount of system resources)

For example, if you have a Vibe installation with only 400 active users, but those users often upload and share CAD files, you might want to configure a dedicated SQL server where those files can be stored. In addition, provide a larger CPU, increased memory, and a larger Java heap to more efficiently upload and search for the files.

NOTE: Kablink Vibe does not support the following features and configurations:

- Vibe Desktop or the Vibe Add-in
- SQL database on a remote server
- File repository on a remote server

To access these features, you must upgrade your system to Novell Vibe.

Server machines can be physical or virtual.

2.6.1 Configuration Based on Installation Size

The following table shows the recommended hardware configuration based on the size of the Vibe installation. For more detailed information about each type of installation, click the installation size in the column header.

	Test Installation	Small Installation	Medium Installation	Large Installation	Very Large Installation
Single Server Only	X	X			
Remote Database Server			X		
Remote Vibe Desktop Server		X	X		
Remote Vibe Add-In or WebDAV Server					
Remote Lucene Index Server				X	
Remote File Repository				X	X
Multiple Vibe (Tomcat) Servers				X	X
Multiple Remote Lucene Servers					X
Multiple Remote Database Servers				X	X
Multiple Remote Vibe Desktop Servers					X
Multiple Remote Vibe Add-In Servers					X

2.6.2 Test Installation

Tomcat
Lucene Index
SQL Database
File System
Vibe Desktop

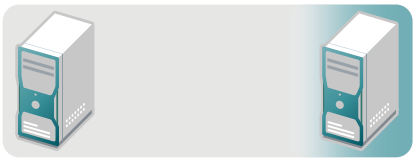
This deployment is suitable for a single-person evaluation or minimal usage by a small group.

Vibe Components	CPU	Memory	Java Heap
1 dedicated Vibe (Tomcat) server with: ◆ Lucene ◆ SQL ◆ File System ◆ Vibe Desktop ◆ Vibe Add-In	3Ghz x86 or x64, single-core or dual-core	4–8 GB	2–6 GB

For more information about installing a basic, single-server Vibe site, see Part III, “Basic Installation,” on page 39.

You can perform a Basic installation to set up a single-server configuration, as described in Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and Chapter 6, “Installing and Setting Up a Basic Vibe Site,” on page 61.

2.6.3 Small Installation



Tomcat
Lucene Index
SQL Database
File System

Tomcat
(for Vibe Desktop if more than 100 active users)

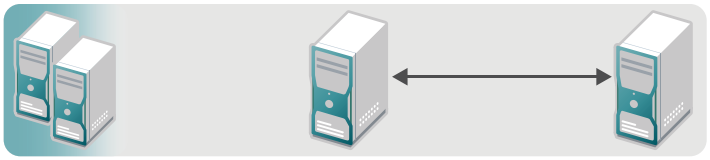
This deployment is suitable for a workgroup, department, or small company. All components are on a single server but are running typical memory allocations. If Vibe Desktop is being used with more than 100 active users, it must be running on one or more separate Vibe (Tomcat) servers.

Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 1 dedicated Vibe (Tomcat) server with SQL and file system ◆ 1 dedicated Vibe (Tomcat) server with Vibe Desktop for 100 or fewer active users; 2 dedicated Vibe (Tomcat) servers with Vibe Desktop for more than 100 active users	3Ghz x86 or x64, dual-core or quad-core	4–8 GB	2–6 GB

For more information about installing a basic, single-server Vibe site, see Part III, “Basic Installation,” on page 39.

You can perform a Basic installation to set up a single-server configuration, as described in Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and Chapter 6, “Installing and Setting Up a Basic Vibe Site,” on page 61.

2.6.4 Medium Installation



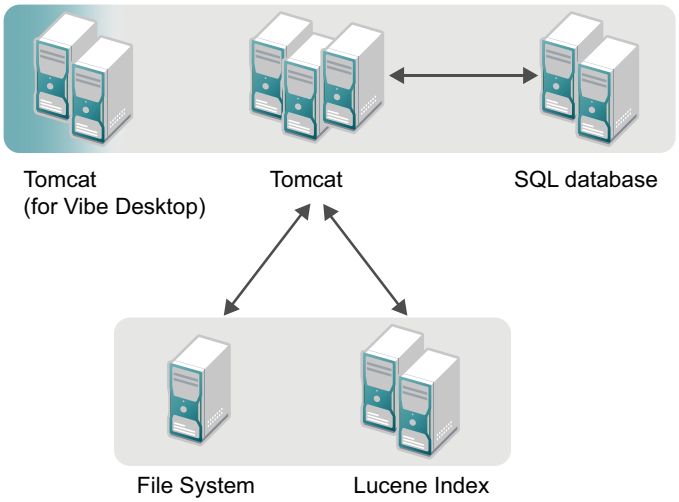
This deployment is suitable for a medium-to-large business. The database server is separate, to increase the amount of parallel processing in the system. The database can be a single server or a cluster of database servers. More memory is also allocated to the Vibe server. If Vibe Desktop is being used with more than 100 active users, it must be running on multiple separate Vibe (Tomcat) servers.

Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 1 dedicated Vibe (Tomcat) server with file system ◆ 1 or more dedicated SQL servers ◆ 2 dedicated Lucene servers ◆ 2 or more dedicated Vibe (Tomcat) servers with Vibe Desktop	3Ghz x86 or x64 quad-core	4–8 GB	6 GB

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

You can perform a Basic installation to set up a multiple-server configuration (as described in Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and Chapter 6, “Installing and Setting Up a Basic Vibe Site,” on page 61); however, the remote database must be created manually and in advance of performing the installation, as described in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

2.6.5 Large Installation



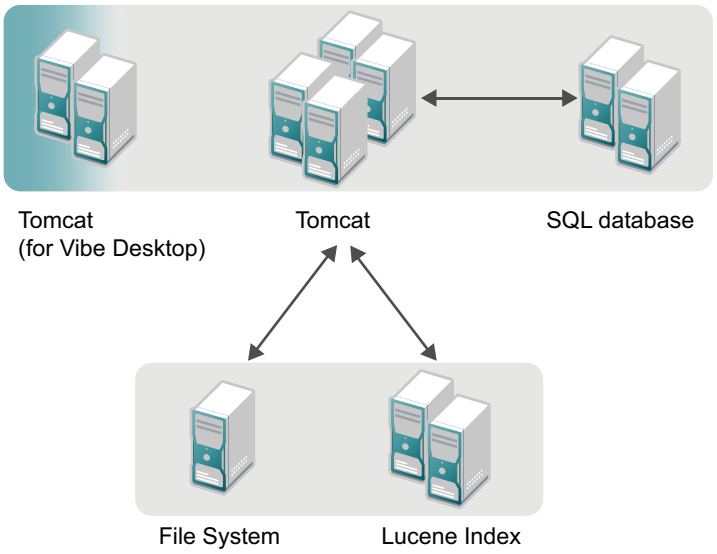
This deployment is suitable for a large business. This deployment uses load balancing across all servers. The database server is separate, to increase the amount of parallel processing in the system. As the number and size of documents and entries that are stored increases, you should increase the amount of memory accordingly. If Vibe Desktop is being used with more than 100 active users, it must be running on multiple separate Vibe (Tomcat) servers.

Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 3–5 dedicated Vibe (Tomcat) servers ◆ 2 dedicated Lucene servers ◆ 2 dedicated SQL servers ◆ 1 dedicated file system server (SAN is recommended) ◆ 2 or more dedicated Vibe (Tomcat) servers with Vibe Desktop	3Ghz x64 quad-core or 8-core	4–8 GB	6 GB

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

You must perform an Advanced installation to achieve this type of deployment. For more information, see Part IV, “Advanced Installation and Reconfiguration,” on page 91.

2.6.6 Very Large Installation



This deployment is suitable for a large business. This deployment uses load balancing across all servers. The database server is separate, to increase the amount of parallel processing in the system. As the number and size of documents and entries that are stored increases, you should increase the amount of memory accordingly. If Vibe Desktop is being used with more than 100 active users, it must be running on multiple separate Vibe (Tomcat) servers.

Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 4–8 dedicated Vibe (Tomcat) servers ◆ 2 dedicated Lucene servers ◆ 2 dedicated SQL servers ◆ 1 dedicated file system server (SAN is recommended) ◆ 2 or more dedicated Vibe (Tomcat) servers with Vibe Desktop	3Ghz x64 quad-core or 8-core	4–8 GB	6 GB

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

You must perform an Advanced installation to achieve this type of deployment. For more information, see Part IV, “Advanced Installation and Reconfiguration,” on page 91.

What’s New in Vibe 4

This section describes new features and enhancements that have been added to Kablink Vibe 4.

3 New in Vibe 4.0.1

Vibe 4.0.1 User Enhancements

See What's New in the Novell Vibe Desktop 2.0.1 Release Notes.

Vibe 4.0.1 Administration Enhancements

- **Customized Email Notifications:** "Customizing Email Templates" in the*Kablink Vibe 4.0.1 Administration Guide*.
- **User Visibility Management Enhancements:** "Limiting User Visibility " in the*Kablink Vibe 4.0.1 Administration Guide*.
- **LDAP for External Users:** When defining an LDAP resource, you can now specify whether the imported users are treated as internal or external by Vibe. See "Synchronizing Users and Groups from an LDAP Directory" in the*Kablink Vibe 4.0.1 Administration Guide*.
- **MariaDB Support:** See "Section A.3, "MySQL or MariaDB SQL Database Server," on page 158."

4 New in Vibe 4.0

Vibe 4.0 User Enhancements

For a list of Kablink Vibe user enhancements and instructions for use, see:

- "What's New in Kablink Vibe 4.0" in the *Kablink Vibe 4.0.1 User Guide*
- "What's New in Vibe 4.0" in the *Kablink Vibe 4.0.1 Advanced User Guide*

Vibe 4.0 Installation Enhancements

- **Database Changes:** Vibe now requires you to create the database.

  For more information about creating the database on Linux, see Section 6.1.3, "Creating the Vibe Database," on page 65.

  For more information about creating the database on Windows, see Section 6.2.3, "Creating the Vibe Database," on page 74.

- **Specify File Types for Document Conversions during Installation:** Previous versions of Vibe allowed you to configure the file formats that could be converted to HTML by editing configuration files. Vibe 4.0 provides a graphical interface during installation for configuring the file formats that can be converted to HTML and viewed from Vibe.

  For more information, see Section 5.9, "Adding File Types for HTML Conversions," on page 56.

  For more generic information on document conversions in Vibe, see "Understanding and Configuring Document Conversions with OpenOffice" in the *Kablink Vibe 4.0.1 Administration Guide*.

- **Ability to specify a From email address for outbound email:** You can specify an email address to be used as the From address of emails sent from Vibe.

  For more information, see Section 5.7.5, "Outbound Email From Address," on page 54.

Vibe 4.0 Administration Enhancements

- **LDAP Synchronization Improvements:** The following improvements were made to LDAP synchronization:
  - Synchronization performance improvements

    Performance improvements in Vibe 4.0 as compared with Vibe 3.4:
    - When synchronizing 1 to 10,000 users - 3x improvement
    - When synchronizing 10,000 to 30,000 users - 5x improvement
    - When synchronizing 30,00 to 60,000 users - 10x improvement
  - Improved interface, with a tabbed view
  - LDAP browser for selecting users and containers in your directory for LDAP configuration
  - Support for non-unique group names
  - Ability to preview an LDAP synchronization (display the users and groups that will be added, deleted, or disabled in Vibe) before the LDAP synchronization runs
  - Filter users and groups on Sync Results pages

For more information, see “Synchronizing Users and Groups from an LDAP Directory” in the *Kablink Vibe 4.0.1 Administration Guide*.

- **Sharing:** The following administration improvements were made for sharing:
  - **Ability to determine whether LDAP groups can be used when sharing:** New option to allow you to control whether groups that were imported from the LDAP directory are displayed in the **Share with** field when users are sharing an item.
  - **Whitelist or blacklist for sharing:** You can create a whitelist or blacklist for sharing with certain email addresses and domains.
  - **New sharing option for File Link:** Grant users the ability to share files by distributing a link to the file. Any person with access to the link then has access to the file.

  For more information about sharing, see “Setting Up Sharing” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Ability to Reset the Administrator User ID:** You can reset the user ID for the Vibe administrator.

  For more information, see “Changing the Vibe Administrator User ID or Password” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Improved Method for Resetting Passwords:** It is easier than ever for local and external users to reset their passwords. This method also applies to the Vibe administrator.

  For information about how to reset the password for the Vibe administrator, see “Changing the Vibe Administrator User ID or Password” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **New user interface for granting administrator privileges:** It is now easier to grant administrator rights to users and groups.

  For more information, see Creating Additional Vibe Administrators.
- **Team management administration:** You can more easily view and manage team workspaces across your Vibe site.

  For more information, see “Managing Team Workspaces” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Enhanced user and group management interface:** For information, see “Managing Users” and “Managing Groups” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Improved handling of external users:** In Vibe 3.4, marking a user as external was a manual process. External user accounts are now created automatically when a workspace, folder, or entry is shared with someone outside of the organization.

  External user accounts from Vibe 3.4 are maintained after upgrading to Vibe 4.

  For more information, see “Setting Up Sharing” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Ability to disable access to the web client:** You can disable users’ ability to access Vibe via a web browser. Users can then access Vibe only through Vibe Desktop or through the Vibe mobile app.

  For more information, see “Disabling User Access to the Vibe Site on the Web” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Support for multiple groups with the same name:** In the Type-to-Find drop-down list, Vibe now includes the group name or group title, as well as secondary information about the group (either the group description or the Fully Qualified DN). This secondary information helps distinguish between multiple groups that have the same name.
- **Ability to specify a maximum number of REST requests:** You can specify the maximum number of concurrent upload and download requests made by Vibe Desktop and mobile applications.

For more information, see Section 10.4, “Configuring Requests and Connections Configuration,” on page 96.

- **Centralized Trash Management:** All items that have been sent to the trash are now visible in one location and can be restored or permanently deleted.

  For more information, see “Permanently Deleting Files from the Trash” in the *Kablink Vibe 4.0.1 Administration Guide*.

- **Data Quota on Outgoing Mail Messages:** You can set a data quota on outgoing mail messages. The combined size of all attachments in a single outgoing email cannot exceed the quota that you set.

  For more information, see “Enabling/Disabling Outbound Emailing of Folder Digests” in the *Kablink Vibe 4.0.1 Administration Guide*.

- **Download Vibe Desktop and Add-In from the Web Client:** You can make the Vibe Desktop and Vibe Add-In available to users from the Vibe web client.

- **Exporting and Importing Folders Includes Global Filters:** When you export and import folders out of and into Vibe, all global filters are included in the export and import. (Personal filters are not included.)

- **Workspace Templates Can Be Created at a Non-Global Level:** You can create workspace templates and make them available to only specific workspaces, rather than making them available at a global level.

- **Automatically Delete or Archive Audit Trail and Change Log Entries:** You can configure Vibe to automatically delete or archive Audit Trail and Change Log entries after a given number of months. This is helpful if these logs are consuming a lot of disk space.

  For more information, see “Managing Database Logs and File Archives” in the *Kablink Vibe 4.0.1 Administration Guide*.

- **Ability to Deter Brute-Force Attacks with CAPTCHA:** By default, CAPTCHA (http://en.wikipedia.org/wiki/CAPTCHA) is now enabled on the Vibe site, securing the Vibe web application against brute-force attacks.

  For information about how to customize when CAPTCHA is used on the Vibe site, see “Securing against Brute-Force Attacks with CAPTCHA” in the *Kablink Vibe 4.0.1 Administration Guide*.

  For information about how to enable CAPTCHA and set various configuration options, see Securing against Brute-Force Attacks with CAPTCHA.

- **Ability to Secure User Passwords:** You can require the passwords of local and external users to meet certain password requirements.

  For more information, see “Securing User Passwords” in the *Kablink Vibe 4.0.1 Administration Guide*.

III Basic Installation

5 Planning a Basic Vibe Installation

The installation program for Kablink Vibe helps you install the Vibe software and file repository to the appropriate locations.

5.1 What Is a Basic Vibe Installation?

The Kablink Vibe installation program provides two installation types: Basic and Advanced. When you perform a Basic installation, the result is a fully functional Vibe site with all required options configured and with typical defaults in use for optional settings.

If you are new to Vibe, the easiest way to get started is to perform a Basic installation first, with all Vibe components installed on the same server. Then you can add advanced configuration options to your Vibe site after the Basic installation has been successfully tested. However, experienced Vibe administrators can choose to perform an Advanced installation immediately, which includes all installation and configuration options, as described in Part IV, “Advanced Installation and Reconfiguration,” on page 91.

IMPORTANT: The following Vibe configurations require that you perform an Advanced installation as your initial installation of the Vibe software:

- Setting up the Vibe file repository so that some types of files are located outside the Vibe file repository root directory. See Section 10.2, “Distributing Different Data Types to Different Locations,” on page 94 for Advanced installation instructions. You cannot move subdirectories within the Vibe file repository after they have been created.

If you want to implement an Advanced installation option, you should perform a Basic installation first, in a test environment, before performing the Advanced installation to set up your permanent Vibe site.

This section helps you make informed decisions about the required options for a Basic installation:

- Server platform (Linux or Windows)
- Server architecture (32-bit or 64-bit)

- Physical server memory requirements
- File locations (Vibe software and data)
- Java Development Kit (JDK) version (Sun or IBM)
- Database type (MySQL/MariaDB, Microsoft SQL Server, or Oracle)
- Database creation (during installation or before installation)
- Database authentication (user name and password)
- Network information (Vibe server hostname or fully qualified domain name, and ports)
- Outbound email configuration (SMTP vs. SMTPS, hostname, SMTP port, time zone, authentication)
- Inbound email configuration (SMTP address, SMTP port, and TLS support)
- User and group for running the Vibe software (Linux only)

Before performing a Basic installation, ensure that all system requirements are met, as listed in Chapter 2, “Vibe System Requirements,” on page 17.

As you proceed with planning, you can use the Basic Vibe Installation Summary Sheet to record your decisions about the options you want to use.

5.2 Selecting the Operating Environment for Your Vibe Server

5.2.1 Vibe Server Platform

Kablink Vibe can run on the versions of Linux and Windows listed in Section 2.1, “Vibe Server Requirements,” on page 17.

BASIC VIBE INSTALLATION SUMMARY SHEET
Under **Vibe Server Platform**, mark your operating system of choice.

5.2.2 Vibe Server Architecture

Vibe can run on 32-bit or 64-bit processors. A 64-bit processor is recommended for a large Vibe site where the processor load is heavy and data storage requires a large amount of disk space.

BASIC VIBE INSTALLATION SUMMARY SHEET
Under **Processor Architecture**, mark the processor capacity required for the size of Vibe site that you want to set up.

5.2.3 Vibe Server Memory

If a 32-bit processor is sufficient for your Vibe server, the server needs at least 3 GB of memory. If you plan to use a 64-bit processor in your Vibe server, the server needs more.

Vibe server memory usage is significantly affected by some factors and less affected by others:

- **Number of users logged in:** No significant effect.
- **Number of concurrent active sessions:** No significant effect.
- **Database server caches:** Significant memory usage.

  When you follow the instructions for a Basic installation, the database is located on the same server as the Vibe software. After you have successfully tested your Basic installation, you can reconfigure Vibe to have its database on a remote server, so that the database uses separate memory resources, as described in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.
- **Vibe internal data caches:** Significant memory usage.

  When you follow the instructions for a Basic installation, the Vibe internal data caches are subdirectories of the `teamingdata` directory, described in Section 5.2.4, “Vibe Installation Locations,” on page 44. The Vibe internal data caches are separate from any caching or memory usage by the database server itself.
- **Lucene index cache:** Significant memory usage.

  The Lucene Index Server is a high-performance Java search engine. Large file repositories (particularly with large files or a large number of files) can create a very large data index. When you perform a Basic installation, the Lucene index is created on the same server where the Vibe software is installed.

  BASIC VIBE INSTALLATION SUMMARY SHEET

  Under **Memory Requirements**, specify the amount of physical memory you plan to have for your Vibe server.

When you perform a Basic installation, the default amount of memory allocated to the Java Virtual Machine (JVM) where the Vibe software runs is 1 GB, which is adequate for a medium-sized Vibe site running on a 32-bit server. This memory allocation, called the Java “heap size,” does not include memory used by your database server or by the Lucene Index Server when these programs are running on the same server as the Vibe software.

A general rule is that no more than 75% of the available physical memory should be allocated to the JVM. Memory not allocated to the JVM must be sufficient to support the operating system, the database server, and the Lucene Index Server if they are also running on the Vibe server, and any other processes running on the Vibe server.

IMPORTANT: A JVM on a 32-bit server should not be configured to take more than 1.5 G of memory. However, large numbers of users and documents often need memory settings higher than 2 GB to provide adequate performance. This type of Vibe system should be set up on 64-bit hardware.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java JDK Location**, specify the amount of memory to allocate to the JVM where Vibe runs.

Although it is possible to run Vibe with less than 1 GB of memory for the JVM, this applies only to very small test configurations, and is not suitable for production systems. In a test configuration, 512 MB is the minimum amount of memory required to produce a functioning Vibe installation.

5.2.4 Vibe Installation Locations

The default file location for the Vibe software varies by platform:

Linux: `/opt/novell/teaming`

Windows: `c:\Program Files\Novell\Teaming`

Included under the main Vibe software directory are subdirectories for Tomcat and file viewer software.

The default file location for the Vibe file repository also varies by platform:

Linux: `/var/opt/novell/teaming`

Windows: `c:\Novell\Teaming`

IMPORTANT: On Windows, the Vibe installation program displays the Windows pathname with forward slashes (/) rather than the traditional backslashes (\). This syntax is necessary in the installation program.

The Vibe file repository holds all files that are imported into Vibe, information related to the imported files, such as HTML renderings, and the search engine index.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **File Locations**, specify the directories where you want to install the Vibe software and data if you prefer not to use the default locations.

A Basic installation allows you to change the root directory for the Vibe software and the Vibe file repository.

IMPORTANT: If you want to organize the Vibe file repository so that some file types are not under the Vibe file repository root directory, you must perform an Advanced installation as your initial Vibe installation. You cannot move directories out of the Vibe file repository root directory after the initial installation has been performed. To perform an Advanced installation in order to organize the Vibe file repository to meet your needs, complete the planning steps for a Basic installation and complete the Basic Vibe Installation Summary Sheet, then follow the additional instructions in Section 10.2, “Distributing Different Data Types to Different Locations,” on page 94.

5.3 Selecting a Java Development Kit

As listed in Section 2.1, “Vibe Server Requirements,” on page 17, you need to install a Java Development Kit (JDK) before you install Kablink Vibe. You can use either the Sun JDK or the IBM JDK for the platform where you are installing Vibe (Linux or Windows).

If you want to use an SSL connection between your Kablink Vibe site and a WebDAV server, and if the WebDAV server has a self-signed certificate rather than a certificate provided by a certificate authority, you must use the Sun JDK. The existing Vibe functionality for handling self-signed certificates is not compatible with the way the IBM JDK handles self-signed certificates.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java Development Kit**, mark the JDK that you want to use with Vibe.

You must install the JDK on the Vibe server before you install the Vibe software. If you are not familiar with installing a JDK, see “Java Development Kit (JDK)” in Appendix A, “Vibe System Requirements Assistance,” on page 155.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java Development Kit**, specify the directory where you have installed the JDK.

The Vibe Installation program uses this path as if you had set the JAVA_HOME environment variable. The path is stored for future reference in the `installer.xml` file so that you need to specify the path to the JDK only once.

5.4 Gathering Network Information for Your Vibe Site

When you perform a Basic installation, the Kablink Vibe installation program needs hostname and HTTP port information about the server where you are installing Vibe.

5.4.1 Host Identification

When you install Vibe, the Vibe installation program needs to know the name of the server where you are installing the Vibe software. The default is `localhost`. Do not use the default.

For internal use, you can use the DNS hostname of the Vibe server. However, if you want your Vibe site to be accessible from the Internet, you must specify the fully qualified domain name for the Vibe server in order to allow external access.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Network Information**, specify the hostname or fully qualified domain name to use for the Vibe server.

5.4.2 Port Numbers

When you install Vibe, Tomcat is installed along with the Vibe software. Vibe uses Tomcat as a standalone web server for delivering data to Vibe users in their web browsers. For more information about Tomcat, see the Apache Tomcat website (http://tomcat.apache.org).

IMPORTANT: If the server where you want to install Vibe already has a web server running on it, shut it down while you install and test Vibe. The instructions for a Basic Vibe installation assume that no other web server is running on the Vibe server. If you want to maintain another web server on the Vibe server, you are responsible for resolving any port conflicts that might arise.

On the command line, use the `netstat` command to see what ports are currently in use on the server where you plan to install Vibe:

Linux: `netstat -tan`

Windows: `netstat -a -n -p tcp`

Ensure that the port numbers that you specify during Vibe installation do not conflict with ports that are already in use on the server.

- "HTTP/HTTPS Ports" on page 46
- "HTTP/HTTPS Ports When You Use Novell Access Manager with Vibe" on page 47
- "Shutdown Port" on page 48
- "AJP Port" on page 48

HTTP/HTTPS Ports

By default, standard web servers such as Apache and Microsoft Internet Information Services (IIS) use port 80 for non-secure HTTP (Hypertext Transfer Protocol) connections and port 443 for secure HTTPS connections. HTTPS connections use SSL (Secure Sockets Layer) for added security. As a result, web browsers default to port 80 when no port is specified in a non-secure HTTP URL and to port 443 when no port is specified in a secure HTTPS URL.

Tomcat defaults to port 8080 for non-secure HTTP connections and to port 8443 for secure HTTPS connections, so that it does not conflict with the standard web server port numbers. If you configure Vibe with the Tomcat default port numbers, users must include the appropriate port number when providing the Vibe site URL. Typically, users prefer not to do this.

Unfortunately, the situation is not as simple as just configuring Vibe to use the default port numbers of 80 and 443. On Linux, non-`root` processes are not allowed access to port numbers lower than 1024 and you are counseled against running Vibe as `root` in Section 5.10.2, "Linux User ID for Vibe," on page 57. Also on Linux and Windows, the default Tomcat installation expects ports 8080 and 8443.

For a Basic installation, you can use the default port numbers as presented by the Vibe Installation program:

HTTP port: 80
Secure HTTP port: 443
Listen port: 8080
Secure listen port: 8443

IMPORTANT: If you are installing Vibe on Novell Open Enterprise Server 2, port 80 is already in use by iManager. In order for Vibe to listen on port 80 (which is the standard port), you need to change iManager to listen on a non-standard port, such as 81.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Network Information**, the default port numbers have been provided for you. You need to specify different port numbers only if you anticipate port conflicts with other software on the Vibe server. Resolving port conflicts is beyond the scope of this Vibe documentation.

After you install Vibe on Linux, you need to complete the steps in “Setting Up Port Forwarding” on page 67 so that users are not required to include the port number in the Vibe URL.

If you want to use secure HTTPS connections for your Vibe site, you must obtain signed certificate files as described in “Preparing for Secure HTTP Connections” in “Site Security” in the *Kablink Vibe 4.0.1 Administration Guide* either before or after you install Vibe.

HTTP/HTTPS Ports When You Use Novell Access Manager with Vibe

If you are fronting Vibe with Novell Access Manager, ensure that you have configured the HTTP/HTTPS ports as described in the following sections, depending on the operating system where Vibe is running.

Configuring Vibe in this way configures Novell Access Manager to access Vibe over port 80, which is the standard port.

Windows Port Configuration

Use the following port configuration when Novell Access Manager is fronting your Vibe system on Windows:

HTTP Port: 80

Secure HTTP Port: 443

Listen Port: 80

Secure Listen Port: 443

Linux Port Configuration

Use the following port configuration when Novell Access Manager is fronting your Vibe system on Linux:

HTTP Port: 80

Secure HTTP Port: 443

Listen Port: 8080

Secure Listen Port: 8443

With this suggested configuration on Linux, you also need to set up port forwarding, as described in “Setting Up Port Forwarding” on page 67.

Shutdown Port

By default, Vibe uses 8005 as its shutdown port. For an explanation of the shutdown port, see *Tomcat - Shutdown Port* (http://www.wellho.net/mouth/837_Tomcat-Shutdown-port.html).

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Network Information**, specify the port you want Vibe to use as its shutdown port if the default of 8005 is already in use on the Vibe server.

AJP Port

By default, Vibe uses 8009 as its AJP port. For an explanation of the Apache JServ Protocol port, see *The AJP Connector* (http://tomcat.apache.org/tomcat-6.0-doc/config/ajp.html).

IMPORTANT: If you are installing Vibe on Novell Open Enterprise Server 2, port 8009 is already in use, so you need to select a different port, such as 8010.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Network Information**, specify the port you want Vibe to use as its AJP port if the default of 8009 is already in use on the Vibe server.

5.5 Planning the WebDAV Authentication Method

5.5.1 Understanding WebDAV

WebDAV is a standard collaborative editing and file management protocol. Kablink Vibe relies on the WebDAV protocol for two key features:

- Edit-in-Place for using tools such as OpenOffice and Microsoft Office, as described in “Editing Files” in the *Kablink Vibe 4.0.1 User Guide*.
- Mapping Vibe folders as a web folder on the client computer, which allows access to Vibe files from a WebDAV-compliant file navigation tool such as Windows Explorer or Nautilus, as described in “Creating a Mapped Drive to the Vibe Folder” in the *Kablink Vibe 4.0.1 Advanced User Guide*.

IMPORTANT: When Vibe users are running Windows 7 as the client operating system, various issues can be introduced because of WebDAV limitations in Windows 7. If your Vibe users are using the Windows 7 operating system, see “Configuring Vibe to Support WebDAV on Windows 7” in the *Kablink Vibe 4.0.1 Administration Guide*.

5.5.2 Choosing the WebDAV Authentication Method

The WebDAV authentication method determines how user credentials are passed from Vibe to the WebDAV server. Vibe 3 and later supports three types of WebDAV authentication methods:

- “Choosing Basic Authentication” on page 49
- “Choosing Digest Authentication” on page 49

Choosing Basic Authentication

Basic authentication encodes the user name and password with the Base64 algorithm. The Base64-encoded string is unsafe if transmitted over HTTP, and therefore should be combined with SSL/TLC (HTTPS).

Select this type of authentication when you plan to use Novell Access Manager or Internet Information Services (IIS) to authenticate users.

For more information about encryption algorithms, see Section 5.6.5, “Database Encryption Algorithm,” on page 52.

Choosing Digest Authentication

Digest authentication applies MD5 cryptographic, one-way hashing with usage of nonce values to a password before sending it over the network. This option is more safe than Basic Authentication when used over HTTP.

Select this type of authentication when client users are using Windows 7 as their operating system and Microsoft Office as their text editor.

For more information about encryption algorithms, see Section 5.6.5, “Database Encryption Algorithm,” on page 52.

5.6 Planning the Vibe Database

Kablink Vibe database disk space requirements are relatively modest. Files that are imported into Vibe are saved in the Vibe file repository, as described in Section 5.2.4, “Vibe Installation Locations,” on page 44.

The Vibe database is primarily used for storing the following information:

- Structural information about workspaces, folders, and entries (for example, their location in the workspace tree)
- Identification information about workspaces, folders, and entries (for example, titles, descriptions, dates of creation/modification, and users associated with creation/modification)
- User profile information (for example, full name, phone number, and email address)

You or your database administrator must make the following decisions about the Vibe database:

- Section 5.6.1, “Database Type,” on page 50
- Section 5.6.2, “Database Setup Method,” on page 50
- Section 5.6.3, “Database Location,” on page 50
- Section 5.6.4, “Database Credentials,” on page 51
- Section 5.6.5, “Database Encryption Algorithm,” on page 52

5.6.1 Database Type

Vibe supports the following database types:

On Linux: MariaDB, MySQL, and Oracle

On Windows MariaDB, MySQL, Microsoft SQL, and Oracle

BASIC VIBE INSTALLATION SUMMARY SHEET
Under **Database Type**, mark the type of database that you want to use with Vibe.

Ensure that a supported version of the database server, as listed in Section 2.1, “Vibe Server Requirements,” on page 17, is installed and running before you install Vibe.

5.6.2 Database Setup Method

You or your database administrator must manually create the Vibe database. This is a requirement, regardless of which type of database you are using.

- “Basic Setup” on page 50
- “Remote Server Setup” on page 50

Basic Setup

If you plan to deploy the Vibe database as a basic installation, with the database running on the same server as the Vibe software, you first install the Vibe software, and then create the database, as described in Chapter 6, “Installing and Setting Up a Basic Vibe Site,” on page 61.

Remote Server Setup

If you plan to deploy the Vibe database on a remote server, follow the instructions in Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

BASIC VIBE INSTALLATION SUMMARY SHEET
Under **Database Setup Method**, mark whether you are setting up the database as a basic installation (with the database running on the same server as the Vibe software), or whether you are performing a remote server setup, with the database server on a remote server.

5.6.3 Database Location

Creating the database on the same server where you install the Vibe software is the preferable location for your Basic installation. The default database name is `sitescape` (a reference to the company that previously developed the Vibe software).

Database Server	Default Linux Location	Default Windows Location
MySQL/MariaDB	N/A	N/A
Microsoft SQL	N/A	N/A
Oracle	N/A	N/A

You can have your database administrator create a database on a remote server later, after you have successfully tested your Basic installation. See Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

You must decide before installation whether you want the database on the Vibe server or on a remote server. See Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

Vibe knows where to find its database from the JDBC (Java Database Connectivity) URL that you provide during installation. For a database that is local to the Vibe software, the default JDBC URL that provides `localhost` as the hostname of the Vibe server is appropriate. If the database is on a remote server, the JDBC URL must provide the hostname of the remote database server.

The JDBC URL also includes the port number on which Vibe can communicate with the database server. The default port number depends on the database server you are using:

Database Server	Default Port Number
MySQL/MariaDB	3306
Microsoft SQL	1433
Oracle	1521

Use this port number unless it is already in use by another process on the database server.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **JDBC URL**, specify the appropriate hostname for the database server (`localhost` or the hostname of a remote server) and the port number it will use to communicate with Vibe.

5.6.4 Database Credentials

When you have the Vibe Installation program create the database for you, it defaults to the following administrator user names for the database server:

Database	Default Administrative User Name
MySQL/ MariaDB	`root` **IMPORTANT:** The database `root` user name is not the same as the Linux `root` user on a Linux server.
Microsoft SQL	(no default) For a Microsoft SQL database, your database administrator establishes the administrator user name and password for the database server.
Oracle	(no default) For an Oracle database, your database administrator establishes the administrator user name and password for the database server.

For an Oracle database and Microsoft SQL database, your database administrator establishes the administrator user name and password for the database server.

Check with your database administrator to see if the default administrator user name is still in use for your database server, and obtain the administrator password for the database server before you run the Vibe Installation program.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials**, specify the administrator user name and password for the database server so that Vibe can access its database.

5.6.5 Database Encryption Algorithm

Different encryption algorithms provide differing encryption strength. The supported algorithms for encrypting the Vibe database password are listed below.

- SHA-256

  This is the only available option when you use Basic Authentication for WebDAV authentication, as described in Section 5.5, “Planning the WebDAV Authentication Method,” on page 48.

- PBEWITHSHA256AND128BITAES-CBC-BC

  This is the only available option when you select Digest Authentication for WebDAV authentication, as described in Section 5.5, “Planning the WebDAV Authentication Method,” on page 48.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Encryption Algorithm**, mark the encryption algorithm you want to use for Vibe passwords.

5.7 Gathering Outbound Email Information

Your Kablink Vibe site can be configured to send outbound email through an existing email system. Email from the Vibe site is useful for the following activities:

- Vibe users can subscribe to email notifications, so that they automatically receive a message whenever content of interest changes. For more information, see “Subscribing to a Folder or Entry” in “Getting Informed” in the *Kablink Vibe 4.0.1 User Guide*.
- From the Vibe site, users can send email messages to individual users or to teams. For more information, see “Sending Email from within Vibe” in “Connecting With Your Co-Workers” in the *Kablink Vibe 4.0.1 User Guide*.
- If your email client is iCal-enabled, appointments created in a Vibe Calendar folder can be sent to your email client for posting in your email client Calendar.

In order for your Vibe site to communicate with your email system, you need to gather the following information about your email system:

- Section 5.7.1, “Outbound Email Protocol,” on page 53
- Section 5.7.2, “Outbound Email Host,” on page 53
- Section 5.7.3, “Outbound Email Authentication,” on page 54

- Section 5.7.4, “Outbound Email Send Restriction,” on page 54
- Section 5.7.5, “Outbound Email From Address,” on page 54

After installation, outbound email can be disabled and enabled again on the Vibe site, as described in “Configuring Email Integration” in “Site Setup” in the *Kablink Vibe 4.0.1 Administration Guide*. However, you must configure outbound email in the Vibe installation program.

5.7.1 Outbound Email Protocol

Email systems communicate by using SMTP (Simple Mail Transfer Protocol). You need to determine whether the email system that you want your Vibe site to communicate with is using SMTP or SMTPS (secure SMTP).

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Outbound Email Protocol**, mark SMTP or SMTPS to match the email system that you want Vibe to communicate with.

If the email system requires SMTPS, see “Securing Email Transfer” in “Site Security” in the *Kablink Vibe 4.0.1 Administration Guide*.

5.7.2 Outbound Email Host

In order to send messages to your email system, Vibe needs to know the hostname of your SMTP mail server.

The default SMTP port of 25 is typically appropriate, unless the SMTP mail server requires port 465 or 587 for SMTPS connections.

When the Vibe site sends email notifications for scheduled events, the messages are time-stamped according to the time zone you specify here during installation. This setting allows you to use a time zone for email notifications that is different from the time zone where the server is located. The time zone list is grouped first by continent or region, optionally by country or state, and lastly by city. Some common selections for United States time zones include the following:

Time Zone	Continent/City
Pacific Time	America/Los Angeles
Mountain Time	America/Denver
Central Time	America/Chicago
Eastern Time	America/New York

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Outbound Email Host**, specify the name of the mail host, the SMTP port number it uses, and the time zone for the time stamp you want on scheduled event notifications.

5.7.3 Outbound Email Authentication

Many SMTP mail hosts require a valid email address before they establish the SMTP connection. Some email systems can construct a valid email address if you specify only a valid user name; other email systems require that you specify the full email address for successful authentication. You should provide a user name (email address) to ensure a successful connection. Email notifications from the Vibe system are sent using this email address in the **From** field.

Some email systems also require a password. Some do not. If authentication is required, you should also provide a password.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Outbound Email Authentication**, indicate whether or not authentication is required for the Vibe site to communicate with your email system. If it is, specify the user name or email address, and if necessary, the password for the email account.

5.7.4 Outbound Email Send Restriction

By default, the Vibe site allows Vibe users to send messages to all Vibe users by using the All Users group on the Vibe site. On a very large Vibe site, this generates a very large number of email messages. If desired, you can prevent messages from being sent to the All Users group.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Allow Sending Email to All Users**, mark whether you want users to be able to send messages to the All Users group.

5.7.5 Outbound Email From Address

You can specify an email address to be used as the From address of emails sent from Vibe.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **From email address override**, specify the email address to be used as the From address for emails sent from Vibe.

Under **Use this from email address for all outbound email**, mark whether you want this address to be used for all outbound email.

5.8 Enabling Inbound Email

You can configure your Kablink Vibe site so that users can post comments by emailing them to the folder where they want to post the comment. In order to receive email postings, folders must be properly configured, as described in "Enabling Folders to Receive Entries through Email" in "Managing Folders" in the *Kablink Vibe 4.0.1 Advanced User Guide*. Also, users must know the email address of the folder where they want to post their comment.

- Section 5.8.3, “Inbound Email IP Address,” on page 55
- Section 5.8.4, “Inbound Email Security,” on page 56

After installation, inbound email can be disabled and enabled again on the Vibe site, as described in “Disabling/Enabling Inbound Email Postings” in “Site Setup” in the *Kablink Vibe 4.0.1 Administration Guide*. However, you must configure inbound email in the Vibe installation program.

5.8.1 Internal Mail Host for Inbound Email

Inbound email is disabled by default. When you enable it, the Vibe site starts an internal SMTP mail host to receive incoming messages and post them to the folders associated with the email addresses to which the messages are addressed. By default, the internal SMTP mail host uses port 2525, so that it does not conflict with another mail host that might be running on the Vibe server.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Inbound Email Configuration**, mark whether you want users to be able to post to the Vibe site from their email clients.

5.8.2 Inbound Email Port Number

Selecting the port number for the Vibe internal SMTP mail host presents the same issue that needs to be dealt with for the HTTP port numbers, as described in “HTTP/HTTPS Ports” on page 46. You might want to configure the Vibe internal SMTP mail host to use the standard SMTP port of 25. How you handle the issue depends on whether you are installing on Linux or on Windows.

Linux: Keep the default port number (2525) in the Vibe Installation program, then complete the steps in “Setting Up Port Forwarding” on page 67 so that requests incoming on port 25 are forwarded to port 2525.

Windows: Specify port 25 for incoming email in the Vibe Installation program.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Inbound Email Configuration**, specify the port number for the Vibe internal SMTP host to listen on.

5.8.3 Inbound Email IP Address

If you want to install Vibe on a server where an SMTP mail host is already running, you can do so if the server has multiple IP addresses. The existing SMTP mail host can use port 25 on one IP address and Vibe can use port 25 on another IP address. During installation, you need to specify an IP address only if the server has multiple IP addresses and you want Vibe to bind to a specific IP address rather than all of them.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Inbound Email Configuration**, specify the IP address for the Vibe internal SMTP host to listen on, if you are installing Vibe on a server with multiple IP addresses and you want Vibe to bind to just one of them.

5.8.4 Inbound Email Security

You can choose whether the Vibe internal mail host uses TLS (Transport Layer Security) when it communicates with other SMTP mail hosts. In order for TLS to function properly, you must have a certificate on the Vibe server, as described in "Securing Email Transfer" in "Site Security" in the *Kablink Vibe 4.0.1 Administration Guide*. When an SMTP mail host queries the Vibe mail host, the Vibe mail host communicates its ability or inability to handle TLS. The other SMTP mail host then communicates appropriately, taking into account how the Vibe internal mail host is configured. The default is to use TLS, because this provides more secure communication between mail hosts.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Inbound Email Configuration**, mark whether you want the Vibe server to announce that it can use TLS.

You can install Vibe with **Announce TLS** selected, and then set up the certificate afterwards. However, if you select **Announce TLS**, inbound email does not work until the certificate is available on the Vibe server.

5.9 Adding File Types for HTML Conversions

Many file formats in Kablink Vibe can be viewed as HTML by default, as described in "Viewing the File in HTML Format" in the *Kablink Vibe 4.0.1 User Guide*. File formats that can be viewed as HTML by default are: `.123`, `.bmp`, `.db`, `.doc`, `.docx`, `.dotm`, `.drw`, `.dxf`, `.htm`, `.html`, `.lwp`, `.odf`, `.odf`, `.odp`, `.ods`, `.odt`, `.pct`, `.ppt`, `.pptx`, `.prz`, `.qpw`, `.rtf`, `.sdw`, `.shw`, `.sxw`, `.tif`, `.txt`, `.vsd`, `.wpd`, `.xls`, `.xlsx`, `.sxi`

Some file formats cannot be viewed as HTML by default. This is because the quality of these files is lessened when viewed as HTML. However, if you choose, you can enable non-default file formats to be viewed as HTML.

Not all file formats can be enabled to be viewed as HTML in Vibe, but many can be. If you are unsure whether Vibe supports a particular file format to be viewed as HTML, try it and see. Kablink Vibe provides a significantly smaller set of formats that can be converted than Novell Vibe.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Vibe File Types for HTML Conversions**, specify the file types (in addition to the default file types) that you want users to be able to view as HTML.

5.10 Planning Site Security

5.10.1 Vibe Site Administrator Password

When you first log in to the Kablink Vibe site, you use `admin` as the Vibe administrator user name and `admin` as the password. You should immediately change the password to one of your own choosing when you are prompted to do so. If you do not immediately change the password, you can change the Vibe adminsitrator user name and password at any time, as described in "Changing the Vibe Administrator User ID or Password" in the *Kablink Vibe 4.0.1 Administration Guide*.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Vibe Administrator Credentials**, specify the password that you want to use whenever you log in as the Vibe site administrator.

5.10.2 Linux User ID for Vibe

For optimum security, Vibe should not run as the Linux `root` user. For example, if an intruder manages to assume the identity of the Vibe program, the intruder gains all the privileges of the commandeered process. If the process is running with `root` user privileges, the intruder has `root` access to your system. If the process is running as a user with minimal privileges, the intruder has only restricted access to your system. Therefore, your system is more secure if the Vibe program does not run as `root`. For example, you might want to create a user named `vibeadmin` for the Vibe program to run as. Linux users require a full name and a password.

In addition to creating a Linux user for the Vibe program to run as, you can also create a Linux group for that user to belong to. This enables the Vibe program to create directories and files with consistent ownership and permissions. For example, you might want to create a group named `vibeadmin` for the `vibeadmin` user to belong to. Groups do not require passwords.

As an alternative to creating a custom Linux user name and group for Vibe, you can use the existing `wwwrun` user name and the `www` group. This account is typically used to start web server processes.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Linux User Name and Group**, specify the non-`root` Linux user name and group name to use for running the Vibe program. If you are creating a new Linux user, specify its full name and password.

IMPORTANT: The non-`root` Linux user name and group must exist before you start the Vibe Installation program. Instructions for creating the user name and group are provided in Section 6.1.1, "Performing Pre-Installation Tasks on Linux," on page 61.

5.10.3 Administrator Name for Novell Vibe

This is the administrator user ID that is used when logging in to the Vibe system. For enhanced security, you might want to change the user ID.

In the **Default Administrator Name** field, specify a new user ID for the vibe administrator.

5.11 Gathering Directory Services Information

Unless you are planning a very small Kablink Vibe site, the most efficient way to create Vibe users is to synchronize initial user information from your network directory service (Novell eDirectory, Microsoft Active Directory, or other LDAP directory service) after you have installed the Vibe software. Over time, you can continue to synchronize user information from the LDAP directory to your Vibe site.

"Synchronizing Users and Groups from an LDAP Directory" in the*Kablink Vibe 4.0.1 Administration Guide* provides instructions for synchronizing user information via LDAP. Use this section when planning your LDAP configuration.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under the **LDAP** sections, mark the information specific for your environment.

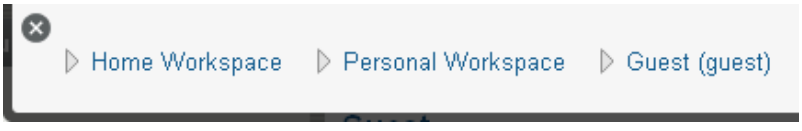
5.12 Accommodating Multiple Languages

The Kablink Vibe installation program runs in English only. When you install the Vibe software, you can choose to have the primary language of the Vibe site be any of the following languages:

- Chinese-Simplified
- Chinese Traditional
- Danish
- Dutch
- English
- French
- German
- Hungarian
- Italian
- Japanese
- Polish
- Portuguese
- Russian
- Spanish
- Swedish

Some languages have an additional distinction by locale (the country where the language is spoken).

The language you select during installation establishes the language of the global text that displays in locations where all Vibe users see it, such as in the Workspace tree when you click the Workspace tree icon :



The language you select also establishes the default interface language and locale for creating new workspaces.

BASIC VIBE INSTALLATION SUMMARY SHEET
Under **Default Locale**, mark the default language and specify the default country for your Vibe site.

Additional language customization can be done after installation, as described in “Managing a Multiple-Language Vibe Site” in “Site Setup” in the *Kablink Vibe 4.0.1 Administration Guide*.

6 Installing and Setting Up a Basic Vibe Site

Follow the setup instructions for the platform where you are installing Kablink Vibe:

- Section 6.1, “Linux: Installing and Setting Up a Basic Vibe Site,” on page 61
- Section 6.2, “Windows: Installing and Setting Up a Basic Vibe Site,” on page 72

6.1 Linux: Installing and Setting Up a Basic Vibe Site

You should already have reviewed Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and filled out the Basic Vibe Installation Summary Sheet. The following sections step you through the process of installing and starting Kablink Vibe on Linux:

- Section 6.1.1, “Performing Pre-Installation Tasks on Linux,” on page 61
- Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62
- Section 6.1.3, “Creating the Vibe Database,” on page 65
- Section 6.1.4, “Performing Post-Installation Tasks on Linux,” on page 66

6.1.1 Performing Pre-Installation Tasks on Linux

1. Ensure that the Linux server where you plan to install Vibe meets the system requirements listed in Section 2.1, “Vibe Server Requirements,” on page 17.
2. In a terminal window, become `root` by entering `su -` and the `root` password.
3. Set the Linux open file limit to meet the needs of the Vibe software:
   - **3a** Open the `/etc/security/limits.conf` file in an ASCII text editor.
   - **3b** Add the following lines to the bottom of the list, following the format of the example lines:

     ```
     *    hard    nofile    65535
     *    soft    nofile    4096
     ```

   - **3c** Save the file, then exit the text editor.
4. Perform the following conditional tasks if necessary:
   - “Stopping and Disabling an Existing Web Server” on page 61
   - “Creating a Vibe User and Group” on page 62

Stopping and Disabling an Existing Web Server

If a web server is currently running on the Vibe server, stop it, and preferably disable it.

For example, to stop the Apache web server and its associated instance of Tomcat:

1. Enter the following commands to stop Apache and Tomcat:

```
/etc/init.d/tomcat5 stop
/etc/init.d/apache2 stop
```

2 Enter the following commands to ensure that Apache and Tomcat do not start again when you reboot the server:

```
chkconfig --del apache2
chkconfig --del tomcat5
```

Creating a Vibe User and Group

If the user and group that you want to use for Vibe (as described in Section 5.10.2, “Linux User ID for Vibe,” on page 57) do not exist yet, create them. It is easier if you create the group first.

1 Create the Linux group that you want to own the Vibe software and data store directories:

- **1a** In YaST, click **Security and Users > User and Group Management** to display the User and Group Administration page.
- **1b** Click **Groups**, then click **Add**.
- **1c** Specify the group name, then click **Accept** or **OK**.

  The group does not need a password.

2 Create the Linux user that you want Vibe to run as:

- **2a** Click **Users**, then click **Add**.
- **2b** On the **User Data** tab, specify the user’s full name, user name, and password, then select **Disable User Login**.

  Like any Linux system user, the Vibe Linux user does not need to manually log in. The Vibe Linux user does not need a password, either, but YaST requires you to provide one.
- **2c** Click the **Details** tab.
- **2d** In the **Login Shell** drop-down list, select **/bin/false**, because this user does not need to manually log in.
- **2e** In the **Default Group** drop-down list, select the Linux group that you created in Step 1.
- **2f** In the **Groups** list, select the Linux group that you created in Step 1.
- **2g** Click **Accept** or **OK**.

3 Exit YaST.

6.1.2 Running the Linux Vibe Installation Program

When you run the Vibe installation program for the first time, you typically want to use the GUI interface. However, if you are installing Vibe on a server where the X Window System is not available, a text-based installation program is also available. After you are familiar with the Vibe installation process, you can use a silent installation to automate the process.

Using the GUI Installation Program

1 In a terminal window, enter `su -` to become the `root` user, then enter the `root` password.

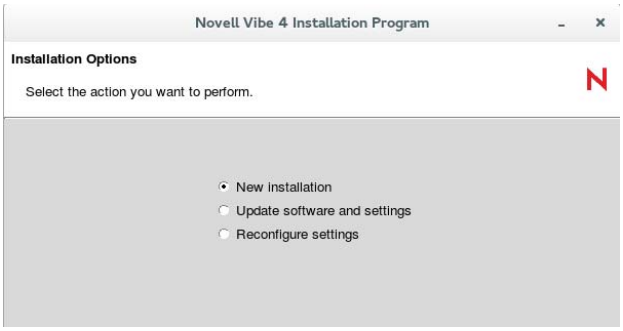
You need `root` permissions in order to install the Vibe software, but you should not run the Vibe software as `root`.

2 Change to the directory where you downloaded and extracted the Vibe software.

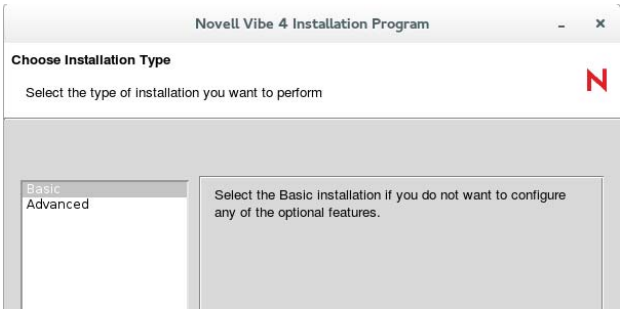
3 Enter the following command to start the Vibe installation program:

```
./installer-teaming.linux
```

4 Accept the License Agreement, then click **Next**.



5 Click **Next** to accept the default of **New installation**.



6 Click **Next** to accept the default of **Basic**.

7 Use the information that you have gathered on the Basic Vibe Installation Summary Sheet to provide the information that the Vibe installation program prompts you for:

- Installation Locations
- Additional Extensions for View as HTML
- Default Locale for Kablink Vibe
- User ID for Kablink Vibe
- Built-In Administrator Name for Novell Vibe
- Network Information
- WebDAV Authentication Method
- Database Selection
  - Database Type
  - JDBC URL
  - Credentials
  - Setup
  - Encryption Algorithm
- Java JDK Location
- Outbound Email Configuration

Protocol

Host, Port, and Time Zone

User Name, Password, and Authentication

Allow Sending Email to All Users

Inbound Email Configuration

The installation program stores the information that it gathers in the `installer.xml` file in the same directory where you started the installation program.

8 After you have provided all the requested information, click **Install** to begin the Vibe installation.

9 When the installation is complete, click **Finish** to exit the Vibe installation program.

Information about the installation process is written to the `installer.log` file in the same directory where you ran the Installation program. If a problem arises during the installation, the `installer.log` file provides information that can help you resolve the problem.

10 Continue with Section 6.1.3, “Creating the Vibe Database,” on page 65.

Using the Text-Based Installation Program

If you try to start the GUI Vibe installation program in an environment where the X Windows System is not running, the text-based Vibe Installation program starts.

If you want to use the text-based installation program in an environment where the GUI starts by default, use the following command in the directory where the installation program is located:

```
./installer-teaming.linux --text
```

The text-based installation program gathers the same configuration information as the GUI installation program does. This information is stored in the `installer.xml` file in the directory where you run the installation program.

The installation program does not write the information it gathers into the `installer.xml` file until you exit the installation program, and you cannot go back when you use the text-based installation program. Therefore, when you use the text-based installation program, you should plan your installation carefully in advance, using the Basic Vibe Installation Summary Sheet or the Advanced Vibe Installation Summary Sheet. If you make a mistake during the installation, continue to the end of the installation process and exit the installation program normally, so that all information is saved. Then run the text-based installation program again. Your previous information is supplied as defaults, and you can change the information as needed.

Performing a Silent Installation

If your Vibe system expands beyond one server, you might need to repeatedly install the same Vibe components. A silent installation makes this an easy process.

1 Edit an existing `installer.xml` file so that it has the hostname of the server where you want to perform the silent installation and copy it to that server.

2 In the directory where the installation program is located, use the appropriate command to run the Vibe installation program, depending on the action that you want the silent installation to perform:

```
./installer-teaming.linux --silent --install
./installer-teaming.linux --silent --upgrade
./installer-teaming.linux --silent --reconfigure
```

The Installation program obtains all the information it needs from the `installer.xml` file and completes the installation without user interaction. If you have manually modified index server scripts, such as the `indexserver-startup.sh` file, all modifications will be lost when you perform a silent upgrade. To retain your modifications, you should upgrade with the GUI installation program, as described in "Using the GUI Installation Program" on page 62.

6.1.3 Creating the Vibe Database

Before you can start Vibe, you need to create the Vibe database.

1. If you haven't done so already, install the database on the Vibe server.

   For single-server installations running on Linux, it is easiest to install the MySQL or MariaDB database. For information about how to install the database on the Vibe server (on Linux), see Section A.3.1, "MySQL (or MariaDB) on Linux," on page 158.

   For more information about installing the database for a multi-server Vibe system, see Chapter 14, "Creating the Vibe Database on a Remote Server," on page 107.

2. Ensure that the database already exists on the server that is running the Vibe software or on the remote server, depending on where you want to install the database.

3. Change to the following directory in your Vibe installation:

   `cd /vibe_installation/temp-installer/db/scripts/sql`

   This directory contains the following scripts for each database type (MySQL/MariaDB, Microsoft SQL, and Oracle):

   - `mysql-create-empty-database.sql`
   - `Oracle-create-empty-database.sql`
   - `sqlserver-create-empty-database.sql`

4. (Optional) If you need to change the default database name from `sitescape` to something else, edit the `.sql` file for your database type to replace `sitescape` with the new name.

5. Use the database utility for your database type to run the corresponding script for your database from the *vibe_installation*`/temp-installer/db/scripts/sql` directory:

   MySQL/ MariaDB:
   ```
   mysql -uusername -ppassword < "mysql-create-empty-database.sql"
   ```

   Microsoft SQL:
   ```
   osql -Uusername -Ppassword -i sqlserver-create-empty-database.sql
   ```
   You can also use the script with the SQL Server Express Utility (http://www.microsoft.com/downloads/details.aspx?familyid=fa87e828-173f-472e-a85c-27ed01cf6b02&displaylang=en) to create the database.

   Oracle:
   ```
   sqlplus "/ as sysdba"
   SQL>spool update-oracle.out;
   SQL>@oracle-create-empty-database
   SQL>quit;
   ```

6. Change to the `db` directory in the Vibe installation:

   `cd /vibe_installation/temp-installer/db`

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

7 In a text editor, open the properties file that corresponds with your database type to make any of the following changes. Save and close the text editor when you are finished making changes.

- Change the database user name and password for accessing the database.
- (Conditional) Specify the IP address for the database if it is running on a remote server.

  You need to replace `localhost` with the IP address of the remote server.
- (Optional) Change the name of the Vibe database (the default name of the Vibe database is `sitescape`, the name of the company that previously developed the Vibe software).

8 In the same directory, execute the following command to create the database schema:

```
manage-database.sh database_type updateDatabase
```

For example, if you are using a MySQL or MariaDB database:

```
manage-database.sh mysql updateDatabase
```

NOTE: You can safely ignore the following Liquibase log messages:

- `Warning: modifyDataType will lose primary key/autoincrement/not null settings for mysql`
- Any messages that contain the words `info: failure` or `info: failed`, as long as they are associated with a type `INFO` message

---

9 Start the Vibe server as described in “Starting Vibe on Linux” on page 70.

10 For security reasons, delete the password that you specified in Step 7:

10a Change to the following directory in your Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

10b In a text editor, open the database script that corresponds with your database type to delete the password.

10c Save and close the properties file.

11 Continue with Section 6.1.4, “Performing Post-Installation Tasks on Linux,” on page 66.

6.1.4 Performing Post-Installation Tasks on Linux

Installing Missing Libraries

After you install Vibe on SLES, you should check for and install any missing libraries.

1. Change to the following directory:

   ```
   /opt/novell/teaming/stellent-converter/linux/x86
   ```

2. Run the `exporter` program.

   The errors about missing input and output files are expected; you can safely ignore them.

3. Look for errors about missing libraries.
4. If there are library errors, install any libraries that are missing.

   On 64-bit Linux systems, a common missing library is `libstdc++`.

   You can use the following command to install the missing libraries:

   ```
   zypper in library_file
   ```

Checking for Available Hot Patches

After you install Vibe, ensure that you check the Vibe download site where you downloaded the Vibe software for any hot patches that might be available.

Configuring Vibe to Start Automatically on Reboot

You can configure Vibe to start automatically each time you reboot the Linux server.

1. As the Linux `root` user, enter the following command:

   ```
   chkconfig --add teaming
   ```

2. To verify that automatic startup is turned on, enter the following command:

   ```
   chkconfig teaming
   ```

Setting Up Port Forwarding

In order to make Vibe available on the default HTTP/HTTPS ports of 80 and 443, you must set up port forwarding in order to forward the browser default ports (80 and 443) to the Vibe server ports (8080 and 8443). In addition, you must set up port forwarding if you want to forward the default SMTP mail host port (25) to the default Vibe internal mail host port (2525).

You can set up port forwarding in one of two ways, depending on whether you are using the Vibe server as a firewall.

- "Using the SuSEfirewall2 File" on page 67
- "Using iptables Commands" on page 68

Using the SuSEfirewall2 File

To enable port forwarding on a SUSE Linux server that uses `SuSEfirewall2`:

1. As the Linux `root` user, open the following file:

   ```
   /etc/sysconfig/SuSEfirewall2
   ```

2. Find the following line:

```
FW_REDIRECT=""
```

3. Between the quotation marks, copy and insert the following string:

```
0/0,ip_address,tcp,80,8080 0/0,ip_address,tcp,443,8443
                                        0/0,ip_address,tcp,25,2525
```

4. Replace *ip_address* with the IP address of the Vibe server.
5. Save the `SuSEfirewall2` file, then exit the text editor.
6. Use the following command to restart the firewall:

```
/sbin/SuSEfirewall2 start
```

7. Use the following command to verify that the default browser ports (80 and 443) have been forwarded to the Vibe server ports (8080 and 8443) and that the default SMTP mail host port (25) has been forwarded to the Vibe internal mail host:

```
iptables-save | grep REDIRECT
```

Now, users do not need to include a port number in the Vibe site URL.

Using iptables Commands

To use `iptables` commands to enable port forwarding on any type of Linux server:

1. As the Linux `root` user, change to the `/etc/init.d` directory.
2. In a text editor, create a new file for a set of `iptables` commands, for example:

```
gedit vibe-iptables
```

3. Copy and paste the following lines into the `vibe-iptables` file:

```
iptables -t nat -A OUTPUT -d localhost -p tcp --dport 80
                                       -j REDIRECT --to-ports 8080

iptables -t nat -A OUTPUT -d hostname -p tcp --dport 80
                                      -j REDIRECT --to-ports 8080

iptables -t nat -A PREROUTING -d hostname -p tcp --dport 80
                                          -j REDIRECT --to-ports 8080

iptables -t nat -A OUTPUT -d localhost -p tcp --dport 443
                                       -j REDIRECT --to-ports 8443

iptables -t nat -A OUTPUT -d hostname -p tcp --dport 443
                                      -j REDIRECT --to-ports 8443

iptables -t nat -A PREROUTING -d hostname -p tcp --dport 443
                                          -j REDIRECT --to-ports 8443

iptables -t nat -A OUTPUT -d localhost -p tcp --dport 25
                                       -j REDIRECT --to-ports 2525

iptables -t nat -A OUTPUT -d hostname -p tcp --dport 25
                                      -j REDIRECT --to-ports 2525

iptables -t nat -A PREROUTING -d hostname -p tcp --dport 25
                                          -j REDIRECT --to-ports 2525
```

   In this example, the lines are wrapped for readability. When you paste them into the text editor, if the lines are still wrapped, remove the hard returns so that you have six `iptables` commands, each on its own line.

4 Replace *hostname* with the hostname or IP address of the Vibe server.

5 Save the `vibe-iptables` file, then exit the text editor.

6 Use the following command to make the file executable:

```
chmod +x vibe-iptables
```

7 Use the following command to immediately execute the commands in the `vibe-iptables` file:

```
chkconfig vibe-iptables on
```

8 Use the following command to add `vibe-iptables` to future server boot initialization:

```
chkconfig --add vibe-iptables
```

9 Use the following command to verify that the default browser ports (80 and 443) have been forwarded to the Vibe server ports (8080 and 8443) and that the default SMTP mail host port (25) has been forwarded to the Vibe internal mail host:

```
iptables-save | grep REDIRECT
```

Now, users do not need to include a port number in the Vibe site URL.

Configuring the Document Converter on Linux

Kablink Vibe uses OpenOffice.org converters to prepare documents for indexing by the Lucene Index Server. The OpenOffice.org converters are also used on the Vibe site for converting documents to HTML for viewing. OpenOffice.org must be continuously running as a daemon in order for it to perform its document conversion function.

- "Installing OpenOffice.org as the Document Converter for Vibe" on page 69
- "Running OpenOffice.org as the Document Converter for Vibe" on page 70
- "Excluding File Types from Being Indexed and Displayed" on page 70

Installing OpenOffice.org as the Document Converter for Vibe

1 Download the OpenOffice.org software for Linux from OpenOffice.org (http://www.openoffice.org) to a convenient temporary location on the Vibe server.

2 Extract the contents of the downloaded file, then change to the subdirectory into which the software files have been extracted.

3 Run the OpenOffice.org Installation program.

```
./setup
```

4 Click **Next** to begin the installation.

5 Select **Custom**, then click **Next**.

6 Click the blue down-arrow to select all optional components for installation, then click **Next**.

This includes the OpenOffice.org Java Runtime Environment (JRE) and other components required for document conversion.

7 Click **Install Now**.

The OpenOffice.org software is installed to:

```
/opt/openoffice.org3
```

8 Click **Finish**.

9 From the command line, manually start OpenOffice.org as the user who will also start the OpenOffice daemon:

```
/opt/opneoffice.org3/soffice.bin
      -headless -nofirststartwizard
      -accept="socket,host=localhost,port-8100;urp;StarOffice.Service"
```

If you are running OpenOffice.org in a headless environment, you must use the `-nofirststartwizard` option in this command.

If you want to start OpenOffice.org with a wizard that gathers personal information, launch the program from your server's graphical interface.

10 (Conditional) If you started OpenOffice.org with the graphical interface, provide the requested personal information in the wizard, then exit OpenOffice.org.

11 Continue with Running OpenOffice.org as the Document Converter for Vibe.

Running OpenOffice.org as the Document Converter for Vibe

OpenOffice.org must be running as a daemon process on the Vibe server in order for indexing and viewing to take place for Vibe users.

1 Use the following command to start the OpenOffice.org converters:

```
/opt/opneoffice.org3/soffice.bin
      -headless -nofirststartwizard
      -accept="socket,host=localhost,port-8100;urp;StarOffice.Service"
```

IMPORTANT: Execute the command as the same Linux user that runs Vibe.

2 Use the following command to verify that OpenOffice.org is running as a daemon:

```
ps -eaf | grep soffice
```

3 Test HTML conversion on your Vibe site by viewing a document that has been added as a File Entry in your Vibe site.

4 Configure the Vibe server so that OpenOffice.org is always running as a daemon whenever Vibe is running.

Excluding File Types from Being Indexed and Displayed

After Vibe is installed and running, if OpenOffice is crashing with certain file types during either of the conversion processes, you can restrict the problematic file types from being converted.

For more information, see "Understanding and Configuring Document Conversions with OpenOffice" in the *Kablink Vibe 4.0.1 Administration Guide*.

Starting Vibe on Linux

The Vibe Installation program created a `teaming` startup script in the `/etc/init.d` directory.

1 In a terminal window, become `root` by entering `su -` and the `root` password.

2 Enter the following command to start Vibe:

```
/etc/init.d/teaming start
```

You must execute the `teaming` script as `root`, but the script runs Vibe as the user you selected in Section 5.10.2, "Linux User ID for Vibe," on page 57 and specified during installation.

You should see output similar to the following example:

```
Using CATALINA_BASE:    /opt/teaming/apache-tomcat
Using CATALINA_HOME:    /opt/teaming/apache-tomcat
Using CATALINA_TEMPDIR: /opt/teaming/apache-tomcat/temp
Using JRE_HOME:         /use/java/jdk1.6.0_02/jre
```

3 Ensure that Vibe is ready for work:

3a Change to the following directory:

```
/opt/novell/teaming/apache-tomcat/logs
```

3b Enter the following command to display the end of the Tomcat log:

```
tail --f catalina.out
```

At the end of the log file listing, you should see:

```
INFO: Server startup in nnnn ms
```

4 Press Ctrl+C when you finish viewing the `catalina.out` file.

Checking the Status of the Vibe Server

You can see if Vibe is running by checking for its process ID (PID).

1 In a terminal window, enter the following command:

```
ps -eaf | grep teaming
```

You should see the Vibe PID number, along with a listing of configuration settings.

Restarting Vibe

You need to restart Vibe whenever you use the Vibe installation program to make configuration changes, as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

1 As `root` in a terminal window, enter the following command:

```
/etc/init.d/teaming restart
```

You should see the same output as when you originally started Vibe.

Stopping Vibe

1 As `root` in a terminal window, enter the following command:

```
/etc/init.d/teaming stop
```

You should see the same output as when you started Vibe.

2 To verify that Vibe has stopped, check for its PID number:

```
ps -eaf | grep teaming
```

The Vibe PID number, along with a listing of configuration settings, should no longer be displayed.

Uninstalling Vibe

If you move the Vibe site to a different server, you can delete the Vibe files from the original server to reclaim disk space. The default Vibe file locations are:

Vibe Software	`/opt/novell/teaming`

Vibe File Repository and Lucene Index	`/var/opt/novell/teaming`
MySQL or MariaDB Database	`/var/lib/mysql`

For a complete list of your Vibe files, check the `installer.xml` file in the directory where you originally ran the Vibe installation program.

6.2 Windows: Installing and Setting Up a Basic Vibe Site

You should already have reviewed Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and filled out the Basic Vibe Installation Summary Sheet. The following sections step you through the process of installing and starting Kablink Vibe on Windows:

6.2.1 Performing Pre-Installation Tasks on Windows

Verifying System Requirements

Ensure that the Windows server where you plan to install Vibe meets the system requirements listed in Section 2.1, “Vibe Server Requirements,” on page 17.

Stopping an Existing Web Server

If a web server is currently running on the Vibe server, stop it, and preferably disable it.

For example, to stop and disable the Internet Information Services (IIS) web server:

1. On the Windows desktop, click **Start > Administrative Tools > Services**.
2. Right-click **World Wide Web Publishing Service**, then click **Properties**.
3. In the **Startup type** drop-down list, select **Disabled**.
4. Click **Stop**, then click **OK**.

Setting Environment Variables

Ensure that the JAVA_HOME environment variable is set to the path where you installed the JDK and that the Windows PATH environment variable includes the path to your database server.

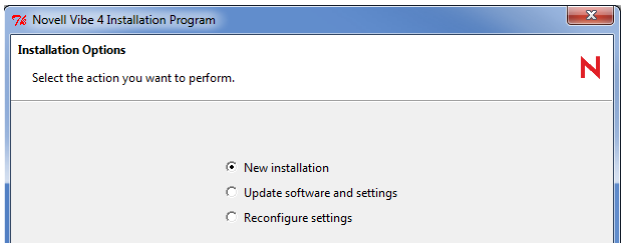
1. Right-click **My Computer**, then click **Properties**.
2. On the **Advanced** tab, click **Environment Variables**.
3. Set the JAVA_HOME environment variable:
   - **3a** In the **System variables** box, click **New**.
   - **3b** In the **Variable name** field, specify JAVA_HOME.
   - **3c** In the **Variable value** field, specify the path where you installed the JDK.
   - **3d** Click **OK** to add the JAVA_HOME environment variable to the list of system variables, then click **OK** again to save the setting and return to the **Advanced** tab.
4. Check the PATH environment variable:
   - **4a** On the **Advanced** tab, click **Environment Variables**.
   - **4b** In the **System variables** list, locate the PATH environment variable.
   - **4c** If the path includes your database server software directory, click **Cancel**.

     or

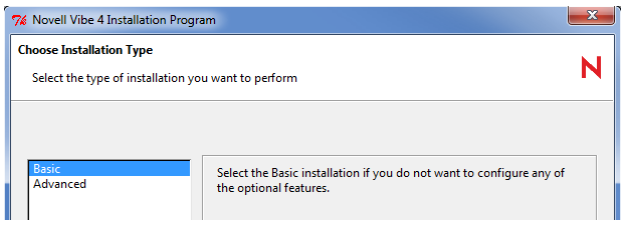
     If the path does not include your database server software directory, add the directory, then click **OK**.

6.2.2 Running the Windows Vibe Installation Program

1. Log in to the Windows server as a user with Administrator rights.
2. In Windows Explorer, browse to the directory where you downloaded and extracted the Vibe software.
3. Double-click the `installer-teaming.exe` file to start the Vibe installation program.
4. Accept the License Agreement, then click **Next**.



5. Click **Next** to accept the default of **New installation**.



6. Click **Next** to accept the default of **Basic**.

7 Use the information that you have gathered on the Basic Vibe Installation Summary Sheet to provide the information that the Vibe installation program prompts you for:

- Installation Locations
- Default Locale for Kablink Vibe
- Network Information
- WebDAV Authentication Method
- Database Selection
  - Database Type
  - JDBC URL
  - Credentials
  - Setup
  - Encryption Algorithm
- Java JDK Location
- Outbound Email Configuration
  - Protocol
  - Host, Port, and Time Zone
  - User Name, Password, and Authentication
  - Allow Sending Email to All Users
- Inbound Email Configuration
- Adding File Types for HTML Conversions

The installation program stores the information that it gathers in the `installer.xml` file in the same directory where you started the installation program.

8 After you have provided all the requested information, click **Install** to begin the Vibe installation.

9 When the installation is complete, click **Finish** to exit the Vibe installation program.

Information about the installation process is written to the `installer.log` file in the same directory where you ran the Installation program. If a problem arises during the installation, the `installer.log` file provides information that can help you resolve the problem.

10 Continue with Section 6.2.3, “Creating the Vibe Database,” on page 74.

6.2.3 Creating the Vibe Database

Before you can start Vibe, you need to create the Vibe database.

1 If you haven’t done so already, install the database on the Vibe server.

For single-server installations running on Windows, install either the MySQL/MariaDB or Microsoft SQL database. (For information about how to install the MySQL or MariaDB database on the Vibe server (on Windows), see Section A.3.2, “MySQL or MariaDB on Windows,” on page 160).

For more information about installing the database for a multi-server Vibe system, see Chapter 14, “Creating the Vibe Database on a Remote Server,” on page 107.

2 Change to the following directory in your Vibe installation:

vibe_installation\temp-installer\db\scripts\sql

This directory contains the following scripts for each database type (MySQL/MariaDB, Microsoft SQL, and Oracle):

- `mysql-create-empty-database.sql`

- `Oracle-create-empty-database.sql`
- `sqlserver-create-empty-database.sql`

3 (Optional) If you need to change the default database name from `sitescape` to something else, edit the `.sql` file for your database type to replace `sitescape` with the new name.

4 Use the database utility for your database type to run the corresponding script for your database from the *`vibe_installation`*`/temp-installer/db/scripts/sql` directory:

MySQL/ MariaDB:
```
mysql -uusername -ppassword < "mysql-create-empty-database.sql"
```

Microsoft SQL:
```
osql -Uusername -Ppassword -i sqlserver-create-empty-database.sql
```
You can also use the script with the SQL Server Express Utility (http://www.microsoft.com/downloads/details.aspx?familyid=fa87e828-173f-472e-a85c-27ed01cf6b02&displaylang=en) to create the database.

Oracle:
```
sqlplus "/ as sysdba"
SQL>spool update-oracle.out;
SQL>@oracle-create-empty-database
SQL>quit;
```

5 Change to the `db` directory in the Vibe installation:

```
vibe_installation\temp-installer\db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

6 In a text editor, open the properties file that corresponds with your database type to make any of the following changes. Save and close the text editor when you are finished making changes.

- Change the database user name and password for accessing the database.
- (Conditional) Specify the IP address for the database if it is running on a remote server.

  You need to replace `localhost` with the IP address of the remote server.
- (Optional) Change the name of the Vibe database (the default name of the Vibe database is `sitescape`, the name of the company that previously developed the Vibe software).

7 In the same directory, execute the following command to create the database schema:

```
manage-database.bat database_type updateDatabase
```

For example, if you are using a Microsoft SQL database:

```
manage-database.bat sqlserver updateDatabase
```

NOTE: You can safely ignore the following Liquibase log messages:

- `Warning: modifyDataType will lose primary key/autoincrement/not null settings for mysql`
- Any messages that contain the words `info: failure` or `info: failed`, as long as they are associated with a type `INFO` message

---

8 Start the Vibe server as described in “Starting Vibe on Linux” on page 70.

9 For security reasons, delete the password that you specified in Step 7:

9a Change to the following directory in your Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

9b In a text editor, open the database script that corresponds with your database type to delete the password.

10 Continue with Section 6.2.4, “Performing Post-Installation Tasks on Windows,” on page 76.

6.2.4 Performing Post-Installation Tasks on Windows

Checking for Available Hot Patches

After you install Vibe, ensure that you check on the Vibe download site where you downloaded the Vibe software for any hot patches that might be available.

Running Vibe as a Windows Service

Removing Vibe as a Windows Service

The Vibe installation program creates a `service.bat` file that you can use to remove the Vibe service.

1. In a Command Prompt window, change to the following directory:

   ```
   c:\Program Files\Novell\Teaming\apache-tomcat\bin\windows
   ```

2. Use the following command to configure Vibe as a Windows service:

   ```
   service.bat remove Teaming
   ```

   This removes a service named Apache Tomcat Teaming.

Configuring Vibe as a Windows Service

The Vibe installation program created a `service.bat` file for configuring Vibe to run as a Windows service.

1. In a Command Prompt window, change to the following directory:

   ```
   c:\Program Files\Novell\Teaming\apache-tomcat\bin\windows
   ```

2. In the `windows` directory, copy the files from the appropriate subdirectory.

   The following subdirectories exist: `x86`, `x64`, `ia64`.

If you are unsure which subdirectory is appropriate for your server, use the `readme.txt` file located in the `c:\Program Files\Novell\Teaming\apache-tomcat\bin\windows` directory as a reference.

3. Paste the files into the `c:\Program Files\Novell\Teaming\apache-tomcat\bin` directory.
4. Use the following command to configure Vibe as a Windows service:

   ```
   service.bat install Teaming
   ```

   This creates a service named Apache Tomcat Teaming.

Starting Vibe as a Windows Service

1. On the Windows desktop, click **Start > Administrative Tools > Services**.
2. Right-click **Apache Tomcat Teaming**, then click **Start**.

Configuring the Vibe Service to Start Automatically on Reboot

When you run Vibe as a Windows service, you can configure Vibe to start automatically each time you reboot the Windows server.

1. On the Windows desktop, click **Start > Administrative Tools > Services**.
2. Right-click **Apache Tomcat Teaming**, then click **Properties**.
3. In the **Startup type** drop-down list, select **Automatic**, then click **OK**.

Restarting the Vibe Service

You need to restart Vibe whenever you use the Vibe installation program to make configuration changes, as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

1. On the Windows desktop, click **Start > Administrative Tools > Services**.
2. Right-click **Apache Tomcat Teaming**, then click **Restart**.
3. Close the Services window.

Stopping the Vibe Service

1. On the Windows desktop, click **Start > Administrative Tools > Services**.
2. Right-click **Apache Tomcat Teaming**, then click **Stop**.
3. Close the Services window.

Running Vibe as a Windows Application

Starting Vibe as an Application

The Vibe installation program created a `startup.bat` file for starting Vibe.

1. In a Command Prompt window, change to the following directory:

   ```
   c:\Program Files\Novell\Teaming\apache-tomcat\bin
   ```

2. Run the `startup.bat` file to start Vibe as an application.

Stopping Vibe as an Application

1. In a Command Prompt window, change to the following directory:

   `c:\Program Files\Novell\Teaming\apache-tomcat\bin`

2. Run the `shutdown.bat` file to stop the Vibe application.

Configuring the Document Converter on Windows

Kablink Vibe uses OpenOffice.org converters to prepare documents for indexing by the Lucene Index Server. The OpenOffice.org converters are also used on the Vibe site for converting documents to HTML for viewing.

Installing OpenOffice.org as the Document Converter for Vibe

1. Download the OpenOffice.org software for Linux from OpenOffice.org (http://www.openoffice.org) to a convenient temporary location on the Vibe server.
2. Run the downloaded executable, then click Next. to unpack the OpenOffice.org software.
3. Browse to or select the destination directory for the unpacked files, then click Unpack.

   This starts the OpenOffice.org Installation program.
4. Click **Next** to begin the installation.
5. Provide your customer information, then click **Next**.
6. Select **Custom**, then click **Next**.
7. In the **Optional Components** drop-down list, select **This feature, and all subfeatures, will be installed on local hard drive**, then click **Next**.

   This includes the OpenOffice.org Java Runtime Environment (JRE) and other components required for document conversion.
8. Click **Install Now**.

   The OpenOffice.org software is installed to:

   `c:\Program Files\OpenOffice.org3`
9. Click **Finish**.
10. Continue with "Configuring OpenOffice.org for Proper HTML Conversion" on page 78.

Configuring OpenOffice.org for Proper HTML Conversion

1. Start OpenOffice.org from the desktop.
2. Proceed through the Welcome pages.
3. Click **Tools** > **Options**.
4. Expand **Load/Save**, then click **HTML Compatibility**.
5. In the **Character Set** field, select **Unicode (UTF-8)**.
6. Click **OK** to save the character set setting, then exit OpenOffice.org.
7. Continue with "Running OpenOffice.org as the Document Converter for Vibe" on page 79.

Running OpenOffice.org as the Document Converter for Vibe

OpenOffice.org must be running as a background process on the Vibe server in order for indexing and viewing to take place for Vibe users.

1. Edit the properties of the OpenOffice.org desktop icon so that the Target field includes the following additional options:

```
"c:\Program Files\OpenOffice.org 3\program\soffice.exe"
      -accept="socket,host=localhost,port-8100;urp;
       StarOffice.Service"
      -nologo -headless
```

2. Double-click the OpenOffice.org desktop icon to start OpenOffice.org as a background process.

   IMPORTANT: Run OpenOffice.org as a user that has full rights to the Vibe file repository.

3. Use Windows Task Manager to observe that the `soffice.exe` and `soffice.bin` processes are running.
4. Test HTML conversion on your Vibe site by viewing a document that has been added as a File Entry in your Vibe site.
5. Configure the Vibe server so that OpenOffice.org is always running as a background process whenever Vibe is running.

Excluding File Types from Being Indexed and Displayed

After Vibe is installed and running, if OpenOffice is crashing with certain file types during either of the conversion processes, you can restrict the problematic file types from being converted.

For more information, see "Understanding and Configuring Document Conversions with OpenOffice" in the *Kablink Vibe 4.0.1 Administration Guide*

Uninstalling Vibe

If you move the Vibe site to a different server, you can delete the Vibe files from the original server to reclaim disk space. The default Vibe file locations are:

Vibe Software	`c:\Program Files\Novell\Teaming`
Vibe File Repository and Lucene Index	`c:\Novell\Teaming`
MS SQL Database	`c:\Program Files\Microsoft SQL Server\MSSQL\Data`

For a complete list of your Vibe files, check the `installer.xml` file in the directory where you originally ran the Vibe Installation program.

7 Adding Users to Your Vibe Site

After you have installed Kablink Vibe and ensured that Vibe starts successfully, you are ready to access your Vibe site from your web browser and add users.

7.1 Accessing Your Basic Vibe Site as the Site Administrator

1 In your web browser, specify one of the following URLs, depending on whether you are using a secure SSL connection:

```
http://vibe_hostname
https://vibe_hostname
```

Replace *vibe_hostname* with the hostname or fully qualified domain name of the Vibe server that you have set up in DNS. If you configured the HTTP ports correctly during installation, you do not need to include the port number in the Vibe URL.

2 If this is the first time you have logged in to the Vibe site, log in using `admin` as the login name and `admin` as the password.

The Change Password dialog box is automatically displayed when you first log in to the Vibe site.

If this is not your first time logging in, log in using `admin` as the login name and your password.

7.2 Creating a User

For information about how to create a local user in the Vibe system, see "Creating a New Local User" in the *Kablink Vibe 4.0.1 Administration Guide*.

7.3 Adding Vibe Users from Your LDAP Directory

Unless you have a very small Kablink Vibe site, you create Vibe users by synchronizing their user information from an LDAP directory service such as Novell eDirectory or Microsoft Active Directory.

For information about how to add users to your Vibe system via LDAP, see "Synchronizing Users and Groups from an LDAP Directory" in the *Kablink Vibe 4.0.1 Administration Guide*.

IMPORTANT: Consider the following before you add users to your Vibe system:

- For a large Vibe site with thousands of users, the synchronization process can consume substantial server resources and can take some time to complete. Perform the initial import from the LDAP directory at a time when this processing does not conflict with other activities on the server.
- After they are added to the Vibe system, users could log into the Vibe site by using their eDirectory or Active Directory user names and passwords. However, you should not invite users to access the Vibe site until after you have finished setting up the Vibe site, as described in "Site Setup" in the *Kablink Vibe 4.0.1 Administration Guide*.

---

8 Setting Up Vibe

After you have installed and started Kablink Vibe, there are still administrative tasks to perform before your Vibe site is ready for users to log in and use Vibe efficiently. Refer to the following sections of the *Kablink Vibe 4.0.1 Administration Guide* as you finish setting up your Vibe site.

- "Setting Up Initial Workspaces"
- "Planning and Controlling User Access to Workspaces and Folders"
- "Setting Up User Access to the Vibe Site"
- "Setting Up Site-Wide Customizations"
- "Configuring Vibe to Support WebDAV on Windows 7"
- "Configuring Email Integration"
- "Configuring Weekends and Holidays"
- "Configuring Real-Time Communication Tools"
- "Enabling Custom JSPs to Be Used on Your Vibe Site"
- "Enabling Custom JAR Files to Be Used on Your Vibe Site"
- "Adding Software Extensions to Your Vibe Site"
- "Using Remote Applications on Your Vibe Site"
- "Managing a Multiple-Language Vibe Site"

9 Basic Vibe Installation Summary Sheet

Installation Program Field	Value for Your Vibe Site	Explanation
Vibe Server Platform: ◆ Windows ◆ Linux		See Section 5.2.1, “Vibe Server Platform,” on page 42.
Vibe Server Architecture: ◆ 32-bit ◆ 64-bit		See Section 5.2.2, “Vibe Server Architecture,” on page 42.
Vibe Server Memory: ◆ 4 GB ◆ 8 GB ◆ More		See Section 5.2.3, “Vibe Server Memory,” on page 43.
Java Development Kit (JDK): ◆ Sun JDK ◆ IBM JDK		See Section 5.3, “Selecting a Java Development Kit,” on page 45.

Vibe Installation Locations:
◆ Software
Linux default:
`/opt/novell/teaming`
Windows default:
`c:\Program Files\Novell\Teaming`
◆ File repository
Linux default:
`/var/opt/novell/teaming`
Windows default:
`c:\Novell\Teaming`
		See Section 5.2.4, “Vibe Installation Locations,” on page 44.

Installation Program Field	Value for Your Vibe Site	Explanation
Vibe Site Locale: Language: ◆ Chinese-Simplified ◆ Chinese Traditional ◆ Danish ◆ Dutch ◆ English ◆ French ◆ German ◆ Hungarian ◆ Japanese ◆ Polish ◆ Portuguese ◆ Russian ◆ Spanish ◆ Swedish Country:		See Section 5.12, “Accommodating Multiple Languages,” on page 58.
User ID for Kablink Vibe (Linux only): ◆ User ID: Full name: Password: ◆ Group ID:		See Section 5.10.2, “Linux User ID for Vibe,” on page 57.
Network Information: ◆ Host: ◆ HTTP port: 80 ◆ Secure HTTP port: 443 ◆ Listen port: 8080 ◆ Secure listen port: 8443 ◆ Shutdown port: ◆ AJP port:		See Section 5.4, “Gathering Network Information for Your Vibe Site,” on page 45.
WebDAV Authenticaiton Method: ◆ basic ◆ digest		See Section 5.5, “Planning the WebDAV Authentication Method,” on page 48.

Installation Program Field	Value for Your Vibe Site	Explanation
Database Type: ◆ MySQL/MariaDB ◆ Microsoft SQL ◆ Oracle		See Section 5.6.1, “Database Type,” on page 50.
JDBC URL: ◆ Hostname: ◆ Port number:		See Section 5.6.3, “Database Location,” on page 50.
Database Credentials: ◆ User name: ◆ Password:		See Section 5.6.4, “Database Credentials,” on page 51.
Database Setup Method: ◆ Basic installation (same server as Vibe software) ◆ Remote installation		See Section 5.6.2, “Database Setup Method,” on page 50.
Database Encryption Algorithm: ◆ SHA-256 ◆ PBEWITHSHA256AND128BITAES-CBC-BC		See Section 5.6.5, “Database Encryption Algorithm,” on page 52.
Java JDK Location: ◆ Java home: ◆ JVM heap size:		See Section 5.3, “Selecting a Java Development Kit,” on page 45.
Outbound Email Protocol: ◆ SMTP ◆ SMTPS		See Section 5.7.1, “Outbound Email Protocol,” on page 53.
Outbound Email Host: ◆ Hostname: ◆ SMTP port: Default: 25 ◆ Time zone ◆ Continent/region: ◆ Country/state: ◆ City:		See Section 5.7.2, “Outbound Email Host,” on page 53.
Outbound Email Authentication: ◆ User name: ◆ Password: ◆ Authentication required? No / Yes		See Section 5.7.3, “Outbound Email Authentication,” on page 54.

Installation Program Field	Value for Your Vibe Site	Explanation
Allow Sending Email to All Users Yes / No		See Section 5.7.4, “Outbound Email Send Restriction,” on page 54.
From email address override ◆ Email address for outbound email **Use this email address for all outbound email** Yes / No		See Section 5.7.5, “Outbound Email From Address,” on page 54.
Inbound Email Configuration ◆ Enable: No / Yes ◆ SMTP bind address: ◆ SMTP port: ◆ Announce TLS: Yes / No		See Section 5.8, “Enabling Inbound Email,” on page 54.
File Types for HTML Conversions ◆ Added HTML Extensions:		See Section 5.9, “Adding File Types for HTML Conversions,” on page 56
Vibe Site Password: ◆ Administrator user name: admin ◆ Default password: admin ◆ Your password:		See Section 5.10.1, “Vibe Site Administrator Password,” on page 57.
LDAP Directory Service: ◆ Novell eDirectory ◆ Microsoft Active Directory ◆ Other LDAP directory		See “Synchronizing Users and Groups from an LDAP Directory” in the*Kablink Vibe 4.0.1 Administration Guide*.
LDAP Server: ◆ LDAP server URL: ◆ User DN: ◆ Password:		See “Server Information” in the*Kablink Vibe 4.0.1 Administration Guide*.

GUID Attribute (to identify the user):
 	
◆ `GUID`
 	
`screenName=GUID`
 	
◆ `object GUID`
 	
`screenName=objectGUID`
		See “Server Information” in the*Kablink Vibe 4.0.1 Administration Guide*.

Installation Program Field	Value for Your Vibe Site	Explanation

LDAP Attribute for Vibe Name:
◆ `cn`
`screenName=cn`
◆ `uid`
`screenName=uid`
		See "Server Information" in the*Kablink Vibe 4.0.1 Administration Guide*.

LDAP User Search Context: ◆ Base DNs: ◆ Additional filter attributes: ◆ Search subtree: Yes / No		See "Configuring User Synchronization Options" in the*Kablink Vibe 4.0.1 Administration Guide*.
LDAP Group Search Context: ◆ Base DNs: ◆ Additional filter attributes: ◆ Search Subtree: Yes / No		See "Configuring Group Synchronization Options" in the*Kablink Vibe 4.0.1 Administration Guide*.
LDAP Synchronization Schedule: ◆ Days ◆ Every day ◆ Weekly Sun Mon Tue Wed Thu Fri Sat ◆ Hours: ◆ At time: ◆ Repeat every *nn* hours		See "Configuring the Synchronization Schedule" in the*Kablink Vibe 4.0.1 Administration Guide*.
LDAP User Options: ◆ Synchronize user profiles ◆ Register LDAP user profiles automatically ◆ Delete users that are not in LDAP ◆ When deleting a user, delete associated user workspaces and content ◆ Time zone for new users		See "Configuring User Synchronization Options" in the*Kablink Vibe 4.0.1 Administration Guide*.
LDAP Group Options: ◆ Synchronize group profiles ◆ Register LDAP group profiles automatically ◆ Synchronize group membership ◆ Delete local groups that are not in LDAP		See "Configuring User Synchronization Options" in the*Kablink Vibe 4.0.1 Administration Guide*.

IV Advanced Installation and Reconfiguration

10 Planning an Advanced Vibe Installation

The Advanced installation provides additional options for you to customize Kablink Vibe.

As you proceed with planning, you can use the Advanced Vibe Installation Summary Sheet to record your decisions about the options you want to use.

10.1 What Is an Advanced Installation?

In addition to the Basic installation options described in Section 5.1, “What Is a Basic Vibe Installation?,” on page 41, the installation program for KablinkVibe provides several advanced installation and configuration alternatives. You can implement the advanced options after performing a Basic installation, or you can have the installation program present all the options together.

Compared to a Basic installation, an Advanced installation offers the following additional options:

- Changing the session timeout
- Specifying a keystore file
- Specifying different directories for different types of data
- Configuring requests and connections configuration
- Disabling and enabling four different web services
- Changing the configuration of the Lucene Index Server
- Configuring a remote Lucene Index Server or a group of high-availability Lucene nodes
- Reconfiguring how RSS feeds are retained or disabling them entirely
- Installing Vibe in a clustered environment

IMPORTANT: The following Vibe configurations require that you perform an Advanced installation as your initial installation of the Vibe software:

- Setting up the Vibe file repository so that some types of files are located outside the Vibe file repository root directory. See Section 10.2, “Distributing Different Data Types to Different Locations,” on page 94 for Advanced installation instructions. You cannot move subdirectories within the Vibe file repository after they have been created.

If you want to implement an Advanced installation option, you should perform a Basic installation first, in a test environment, before performing the Advanced installation to set up your permanent Vibe site.

10.2 Distributing Different Data Types to Different Locations

The default location for the Kablink Vibe file repository varies by platform:

Linux:	`/var/opt/novell/teaming`
Windows:	`c:\Novell\Teaming`

Under the main Vibe file repository root directory are subdirectories for various kinds of data files that are not stored in the Vibe database (MySQL/MariaDB, Microsoft SQL Server, or Oracle). You can use an Advanced installation to store Vibe data files in various locations.

The data files not stored in the Vibe database are divided into several functional areas:

- **Simple file repository:** A large consumer of disk space.

  All attachment files are stored in the file repository. All versions of files are also stored here.

- **Jackrabbit repository:** (Optional) Takes only a fraction of the space consumed by the file repository.

  By default, Vibe stores all data files individually on disk, in the file repository. If you prefer to store data files in the database itself, you can use Apache Jackrabbit with Vibe. See the Apache Jackrabbit website (http://jackrabbit.apache.org) for setup instructions.

- **Extensions repository:** Disk space consumption depends on the number of extensions you add to your Vibe site.

  An extension is a software program that you can incorporate into your Vibe site in order to enhance (extend) Vibe capabilities. Adblock Plus is an example of a Firefox browser extension that filters out advertisements. You or a Java developer can create custom extensions for your Vibe site. For more information about creating and using Vibe extensions, see the *Kablink Vibe 4.0 Developer Guide*.

- **Cache store:** Consumes less disk space than the file repository.

  Information derived from the attachments (such as HTML renderings, scaled images), and word lists for indexing are stored in the cache store.

- **Lucene index:** Takes only a fraction of the space consumed by the file repository.

  The Lucene index contains only pointers to the actual data stored in the file repository. The index enables the Lucene search engine to perform very fast searches through large quantities of data.

The directories for the various types of data can be on the Vibe server or on a remote server. Data access is fastest if the data is local; however, depending on the size of your Vibe site and the types of data you store, the Vibe server might not be the best place to store all the Vibe data. If you want to store any of the data types on a remote server, you must ensure that the remote location of the data appears local to the Vibe server and that it is always available with read/write access.

Linux:	Mount the file repository to the Vibe server.
Windows:	Map a drive from the Vibe server to the file repository.
Linux and Windows	Place the file repository on a SAN (storage area network) with read/write access. This alternative provides the most reliable remote location for the Vibe file repository.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **Data Locations**, specify the directories where you want to store the various types of Vibe data.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.3 Using Advanced Network Information Settings

10.3.1 Changing the Vibe Session Timeout

By default, if a user’s Kablink Vibe session is idle for four hours (240 minutes), Vibe logs the idle user out. For increased convenience to Vibe users, you can make the session timeout interval longer. For increased security for your Vibe site, you can make the session timeout shorter.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **Network Information**, specify the session timeout interval (in minutes) for your Vibe site.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.3.2 Providing a Secure Keystore File

For your convenience, the Vibe software includes a self-signed public certificate that enables you to specify secure HTTP and listen ports during installation. This certificate is stored in the `.keystore` file in the following directory:

Linux: `/opt/novell/teaming/apache-tomcat/conf`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat\conf`

To ensure secure SSL connections for your Vibe site, you should replace the self-signed public certificate with a public certificate issued by a valid certificate authority.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **Network Information**, specify the name and location of the public certificate.

If you do not already have a permanent public certificate for your Vibe server, see “Securing HTTP Browser Connections” in “Site Security” in the *Kablink Vibe 4.0.1 Administration Guide*.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.4 Configuring Requests and Connections Configuration

You can configure the number of client requests and database connections that Vibe is able to support.

If you have an extremely large Vibe site and you need to make numerous client requests and database connections, you might see improved performance by increasing these settings.

- **Max Threads:** The maximum number of simultaneous client request threads that Vibe is able to support. The default is 200 threads.
- **Max Active:** The maximum number of database connections that can be allocated from this pool at the same time.

  If your database server license (for Oracle or MS SQL) restricts you from having more connections than the Vibe default of 50, you must specify a number that does not exceed your database server license.
- **Max Idle:** The maximum number of database connections that can be idle in this pool at the same time. The default is 20 connections.

ADVANCED VIBE INSTALLATION SUMMARY SHEET

Under **Requests and Connections Configuration**, mark the maximum client request threads, maximum active database connections, and maximum idle database connections.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.5 Configuring Web Services

When you install and set up your Kablink Vibe site, three web services are enabled by default; a fourth is available for selection. These web services enable programs to access information on your Vibe site just as users would. Allowing programmatic access to your Vibe site can be useful or can be viewed as a security risk.

- **WSS authentication:** Uses OASIS Web Services Security (WSS) (http://www.oasis-open.org).
- **HTTP Basic authentication:** Uses HTTP Basic Access authentication (http://tools.ietf.org/html/rfc2617).
- **Token-based authentication:** Uses custom Vibe tokens to communicate with Vibe remote applications. For more information, see “Using Remote Applications on Your Vibe Site” in “Site Setup” in the *Kablink Vibe 4.0.1 Administration Guide*.
- **Anonymous access:** Allows access to your Vibe site without authentication. It is similar to the Guest access provided for users, as described in “Allowing Guest Access to Your Vibe Site” in “Site Setup” in the *Kablink Vibe 4.0.1 Administration Guide*.

ADVANCED VIBE INSTALLATION SUMMARY SHEET

Under **Web Services**, mark which web services you want enabled for your Vibe site. The first three are enabled by default. The fourth is disabled by default.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.6 Changing Your Lucene Index Server Configuration

The default Lucene Index Server configuration is appropriate for a medium-sized Kablink Vibe site. If you have a larger Vibe site, you can change its Lucene Index Server configuration.

After planning your Lucene configuration, complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, “Performing an Advanced Vibe Installation,” on page 99.

10.6.1 Understanding Indexing

The Lucene Index Server is responsible for indexing all data on the Vibe site so that Vibe users can easily use the Find and Search features to retrieve the information that they need. Text posted in folder entries is easy to index, because the formatting is simple. However, text in attached files arrives in many different file formats, many of which require conversion before the text in the files can be indexed. Therefore, the Lucene Index Server is dependent on the available file conversion technology in order to perform its indexing function. For information about the file viewers that Vibe uses, see Section 2.5.1, “File Viewer Support,” on page 23.

The Lucene Index Server provides additional services on your Vibe site in addition to indexing. In fact, you cannot access your Vibe site if the Lucene Index Server is not running. For this reason, Novell Vibe provides multi-server Lucene configuration options that are not available in Kablink Vibe.

10.6.2 Changing Lucene Configuration Settings

If you have an extremely large Vibe site and you need to reindex the Vibe data, you might see improved performance by increasing these settings.

- **Max booleans:** The default is 10000. This means that 10,000 Boolean clauses are allowed in a query. You need to increase this only if your Vibe site includes more than 10,000 users, groups, or teams.
- **RAM in MB that may be used for buffering:** The default is 256 MB for remote and high availability Lucene configurations and 32 MB for local Lucene configurations. This is the amount of RAM that is allocated for buffering documents and deletions before they are flushed to the directory. (This setting can be changed only in the Lucene installer; it is not available in the Vibe installer.)
- **Merge factor:** The default is 10. This sets the number of index segments that are created on disk. When additional index segments are needed, existing segments are merged to keep the merge factor constant.
- **Network interface for RMI service:** (Optional) Specify the IP address or hostname for the network interface for the RMI (Remote Method Invocation (http://java.sun.com/javase/technologies/core/basic/rmi/index.jsp)) service.

  This is the hostname of the server where the Lucene Index is installed.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **Lucene Configuration**, specify any Lucene configuration settings that you want to change.

10.7 Managing RSS Feeds

By default, Kablink Vibe users can set up RSS feeds in folders on the Vibe site, as described in "Viewing Folders as RSS or Atom Feeds" in "Getting Informed" in the *Kablink Vibe 4.0.1 User Guide*.

- Section 10.7.1, "Configuring RSS Feeds," on page 98
- Section 10.7.2, "Disabling RSS Feeds," on page 98

After planning the RSS settings, complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 11, "Performing an Advanced Vibe Installation," on page 99.

10.7.1 Configuring RSS Feeds

The following aspects of RSS functionality on your Vibe site are configurable:

- **Max elapsed days:** By default, items from RSS feeds are retained on the Vibe site for 31 days. You can decrease the number of days to reduce the amount of disk space occupied by the RSS files.
- **Max inactive days:** By default, if no one on the Vibe site accesses an RSS feed for 7 days, the feed is no longer updated. Increase or decrease the retention time for inactive feeds to meet the needs of Vibe users and disk space considerations.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **RSS Configuration**, specify the number of days that meet the needs of your Vibe site.

10.7.2 Disabling RSS Feeds

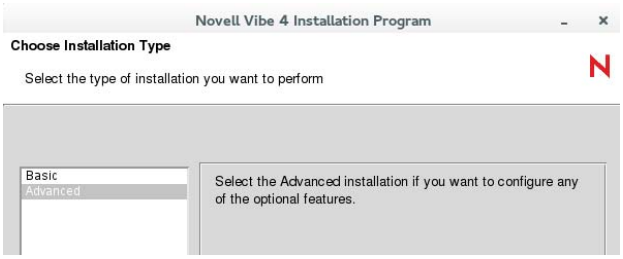
Some administrators consider RSS feeds to be a security risk because the RSS feed URL includes user name and password information. If you do not want Vibe site users to be able to subscribe to RSS feeds from the Vibe site, you can disable this feature.

ADVANCED VIBE INSTALLATION SUMMARY SHEET
Under **RSS Configuration**, mark **No**.

11 Performing an Advanced Vibe Installation

You should already have reviewed Chapter 5, “Planning a Basic Vibe Installation,” on page 41 and filled out the Basic Vibe Installation Summary Sheet. You should also have reviewed Chapter 10, “Planning an Advanced Vibe Installation,” on page 93 and filled out the Advanced Vibe Installation Summary Sheet for those aspects of an Advanced installation that you want to implement for your Kablink Vibe site.

1. Follow the Basic installation instructions provided in Chapter 6, “Installing and Setting Up a Basic Vibe Site,” on page 61 for the platform where you are installing Vibe.
2. When you run the installation program, select **Advanced** on the Choose Installation Type page.



3. Use the information that you have gathered on the Basic Vibe Installation Summary Sheet and the Advanced Vibe Installation Summary Sheet to provide the information that the Vibe Installation program prompts you for:

   Basic Installation Pages:

   Installation Locations
   Default Locale for Kablink Vibe
   User ID for Kablink Vibe (Linux only)
   Network Information
   WebDAV Authentication Method
   Database Selection
   Java JDK Location
   Outbound Email Configuration
   Inbound Email Configuration

   Some Basic installation pages have additional options available when you perform an Advanced installation.

   Advanced Installation Pages:

   Web Services
   Lucene Configuration
   RSS Configuration

   The Installation program stores the information it gathers in the `installer.xml` file in the same directory where you started the Installation program.

4 After you have provided all the requested information, click **Install** to begin the Advanced installation.

5 When the installation is complete, click **Finish** to exit the Vibe installation program.

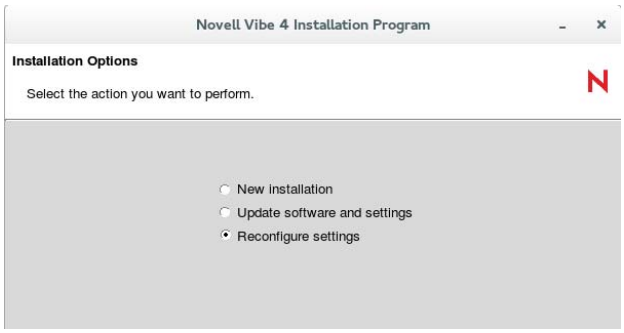
   Information about the installation process is written to the `installer.log` file in the same directory where you ran the Installation program. If a problem occurs during the installation, the `installer.log` file provides information that can help you resolve the problem.

6 After you complete the Advanced installation, continue setting up your Vibe site, as described in Chapter 7, “Adding Users to Your Vibe Site,” on page 81.

12 Setting Configuration Options after Installation

After you install Kablink Vibe, following the instructions in Part III, “Basic Installation,” on page 39 or Part IV, “Advanced Installation and Reconfiguration,” on page 91, you can rerun the Vibe installation program to change configuration options or add new functionality to your Vibe site.

1. Stop Vibe.
2. Start the Vibe installation program as described in Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62 and Section 6.2.2, “Running the Windows Vibe Installation Program,” on page 73.

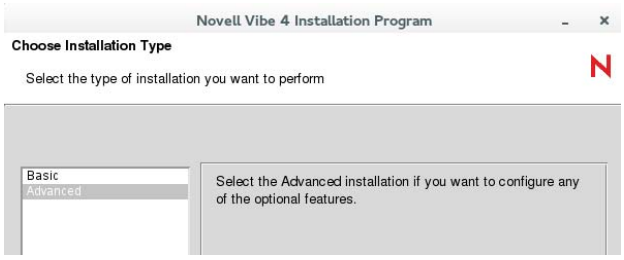


   Because the Installation program finds an existing `installer.xml` file, it defaults to **Reconfigure settings**.

3. Click **Next.**

   The Vibe Installation program asks you to verify that you have stopped Vibe.

4. Click **Yes**.



5. Select **Basic** or **Advanced**, depending on the configuration settings that you want to change, then click **Next**.
6. Click **Next** until you reach an installation page where you want to reconfigure settings.

   Basic Installation Pages:

   Installation Locations
   Default Locale for Kablink Vibe
   User ID for Kablink Vibe (Linux only)
   Network Information

WebDAV Authentication Method
Database Selection
Java JDK Location
Outbound Email Configuration
Inbound Email Configuration

Advanced Installation Pages:

Web Services
Lucene Configuration
RSS Configuration

7 When you reach the Ready to Install page, click **Install** to implement the reconfigured settings.

8 Start Vibe.

13 Advanced Vibe Installation Summary Sheet

Installation Program Field	Value for Your Vibe Site	Explanation

Data Locations:
Linux default:
`/var/opt/novell/teaming`
Windows default:
`c:\Novell\Teaming`
◆ Simple file repository
◆ Jackrabbit repository
◆ Extensions repository
◆ Cache store
◆ Lucene index
		See Section 10.2, “Distributing Different Data Types to Different Locations,” on page 94.

Network Information: ◆ Enable web services: No / Yes ◆ Session timeout Default: 240 minutes ◆ Enable Tomcat access log: No / Yes ◆ Keystore file:		See Section 10.3, “Using Advanced Network Information Settings,” on page 95.
Network Information: ◆ Max Threads Default: 200 ◆ Max Active Default: 50 ◆ Max Idle Default: 20		See Section 10.4, “Configuring Requests and Connections Configuration,” on page 96.
WebDAV Authentication Method ◆ basic ◆ digest		See Section 5.5, “Planning the WebDAV Authentication Method,” on page 48.

Installation Program Field	Value for Your Vibe Site	Explanation
Web Services: ◆ Enable WSS authentication ◆ Enable Basic authentication ◆ Enable token-based authentication ◆ Enable anonymous access		See Section 10.5, “Configuring Web Services,” on page 96.
Lucene Configuration: Configuration type: all ◆ Max booleans: Default: 10000 ◆ Merge factor: 10		See Section 10.6.2, “Changing Lucene Configuration Settings,” on page 97.
RSS Configuration: Enable RSS: No / Yes ◆ Max elapsed days: ◆ Max inactive days:		See Section 10.7, “Managing RSS Feeds,” on page 98.

V Multi-Server Configurations and Clustering

14 Creating the Vibe Database on a Remote Server

The default database location for Kablink Vibe is on the same server with the Vibe software, as described in Section 5.6.3, “Database Location,” on page 50. However, for better performance and scalability, you can install the database server (MySQL, MariaDB, Microsoft SQL, or Oracle) on a remote server, and then use the scripts that are included with the Vibe software to manually create the Vibe database in any location that you prefer.

NOTE: This section assumes that you already have a Basic installation of Vibe up and running successfully. We highly recommend that you follow the instructions in Part III, “Basic Installation,” on page 39 before attempting a more complex Vibe configuration.

14.1 Creating a MySQL/MariaDB Database

Before you begin, you should be familiar with standard database maintenance procedures.

For more information about MySQL, see the following references:

- *MySQL 5.0 Reference Manual* (http://dev.mysql.com/doc/refman/5.0/en)
- *MySQL 5.1 Reference Manual* (http://dev.mysql.com/doc/refman/5.1/en)

For information on installing SLES 12 and using MariaDB, see the SLES 12 Documentation (https://www.suse.com/documentation/sles-12/) and MariaDB (http://www.mariadb.com) web sites.

The following database tools can be helpful:

- MySQL GUI Tools (http://dev.mysql.com/downloads/gui-tools)
- SQLyog (http://www.webyog.com)
- Squirrel SQL Client (http://squirrel-sql.sourceforge.net)

To create the MySQL database:

1. Review the MySQL requirements listed in Section 2.1, “Vibe Server Requirements,” on page 17.
2. Ensure that the MySQL database server and client have been installed and configured, as described in Section A.3, “MySQL or MariaDB SQL Database Server,” on page 158.
3. Ensure that the MySQL database client is also installed on the Vibe server.

   The Vibe installation program needs the MySQL client in order to communicate with the remote MySQL database server.
4. Ensure that you know the password for the MySQL `root` administrator user.
5. Ensure that `innodb` support is enabled.

It is enabled by default. To verify that `innodb` support is enabled:

5a Enter the following command to access the MySQL monitor:

```
mysql -u root -p
```

For information on how to set a password for your MySQL database if you have not already done so, see "Configuring MySQL/MariaDB" on page 159.

5b Specify your password.

5c From the MySQL prompt, enter the following command to display status information about the server's storage engines:

```
SHOW ENGINES\G
```

5d Locate the InnoDB engine, and ensure that `innodb` support is enabled.

6 Update the MySQL configuration file:

6a Locate the MySQL configuration file and open it in a text editor.

Linux: `/etc/my.cnf`

Windows: `c:\Program Files\MySQL\MySQL Server version\my.ini`

6b Under the `[client]` section, add the following line:

```
default_character_set = utf8
```

6c Under the `[mysqld]` section, add the following line:

```
character_set_server = utf8
```

Setting the character set to UTF-8 ensures that extended characters are handled correctly in the database.

6d (Conditional) For a system with multiple network interfaces, in the `[mysqld]` section, add the following line:

```
bind-address = mysql_server_address
```

Replace *`mysql_server_address`* with the IP address that you want MySQL to bind to and to listen on.

6e Save the updated configuration file, then exit the text editor.

7 Copy the `teaming-4.0.n-db.zip` file from the Vibe server where the Vibe installation program is located and copy it to the database server.

or

Download and unzip the Vibe software onto the database server.

8 In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-4.0.n-db.zip` file, unzip the `teaming-4.0.n-db.zip` file.

9 Change to the `db` subdirectory.

10 Change to the `db/scripts/sql` subdirectory.

11 Copy the `mysql-create-empty-database.sql` script to a convenient temporary location on the server where you want to create the database, and ensure that your database management utility is on your path so that you can run it from that directory.

12 Specify the following command to run the MySQL database creation script:

```
mysql -uuser -ppassword < mysql-create-empty-database.sql
```

13 Configure MySQL to allow access from a remote server:

```
mysql -uuser -ppassword
mysql> grant all privileges on *.*
        -> to 'username'@'%'
        -> identified by 'password'
        -> with grant option
        -> ;
```

14 Edit the `mysql-liquibase.properties` file to use your specific credentials.

For example:

```
vi mysql-liquibase.properties
```

15 Populate the database that you just created:

```
./manage-database.sh mysql updateDatabase
```

16 Verify that the database tables were created:

```
mysql -uuser -p
```

17 Specify the password for the MySQL user.

18 Specify the following command to use the default Vibe database:

```
mysql> use sitescape;
```

A message indicating that the database has been changed is displayed.

19 Specify the following command to show that the tables were created:

```
mysql> show tables;
```

14.2 Creating a Microsoft SQL Database

Before you begin, you should be familiar with standard database maintenance procedures.

For more information about Microsoft SQL, see the following references:

- Microsoft SQL Server 2008 Learning Resources (http://www.microsoft.com/sqlserver/2008/en/us/learning.aspx)
- Microsoft SQL Server 2005 Learning Resources (http://www.microsoft.com/sqlserver/2005/en/us/learning-resources.aspx)

The following database tool can be helpful:

- Squirrel SQL Client (http://squirrel-sql.sourceforge.net)

To create a Microsoft SQL database:

1 Review the Microsoft SQL requirements listed in Section 2.1, “Vibe Server Requirements,” on page 17.

2 Ensure that the Microsoft SQL Server and Client have been installed and configured properly.

IMPORTANT: Ensure that TCP/IP is enabled for the Microsoft SQL Server.

For more information, see “Microsoft SQL Server” (http://msdn.microsoft.com/en-us/library/bb545450.aspx).

3 Ensure that the Microsoft SQL database client is also installed on the Vibe server.

The Vibe installation program needs the Microsoft SQL client in order to communicate with the remote Microsoft SQL database server.

4 When you install Microsoft SQL Server, select **SQL Server and Windows** for authentication.

   The default is **Windows Only**, which is not appropriate for Vibe.

5 Copy the `teaming-4.0.n-db.zip` file from the Vibe server where the Vibe installation program is located and copy it to the database server.

   or

   Download and unzip the Vibe software onto the database server.

6 In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-4.0.n-db.zip` file, unzip the `teaming-4.0.n-db.zip` file.

7 Change to the `db` subdirectory.

8 Change to the `db/scripts/sql` subdirectory.

9 Use Microsoft SQL Server Management Studio to create the empty database:

   9a Copy the `sqlserver-create-empty-database.sql` file from the `db/scripts/sql` subdirectory .

   9b Execute the query to create the empty database.

   When the database is created, you should see `Command(s) completed successfully` in the messages window.

10 Edit the `sqlserver-liquibase.properties` file to use your administrator user name and password for the SQL database server.

11 Populate the database that you just created:

```
run manage-database.bat sqlserver updateDatabase
```

12 Verify that the database tables were created by using Microsoft SQL Server Management Studio.

14.3 Creating an Oracle Database

Before you begin, you should be familiar with standard database maintenance procedures.

For more information about your Oracle database, see the following references:

- Oracle Product Documentation (http://www.oracle.com/technetwork/indexes/documentation/)
- Oracle SQL Plus Documentation (http://download.oracle.com/docs/cd/B19306_01/server.102/b14357/toc.htm)

The following database tool can be helpful:

- Squirrel SQL Client (http://squirrel-sql.sourceforge.net)

1 Review the Oracle database requirements listed in Section 2.1, “Vibe Server Requirements,” on page 17.

2 Ensure that the Oracle database server software has been installed and configured properly.

   For more information, see Oracle Database (http://www.oracle.com/database).

3 Set up the Oracle database character set to support Unicode character encodings.

Vibe requires either the UTF-8 or AL32UTF8 character set for proper operation. Oracle recommends AL32UTF8, because it has increased support for certain Asian languages. For more information, see "Choosing a Character Set" (http://download.oracle.com/docs/cd/B19306_01/server.102/b14225/ch2charset.htm) in the *Oracle Database Globalization Support Guide*.

4. Copy the `teaming-4.0.n-db.zip` file from the Vibe server where the Vibe installation program is located and copy it to the database server.

   or

   Download and unzip the Vibe software onto the database server.

5. In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-4.0.n-db.zip` file, unzip the `teaming-4.0.n-db.zip` file.
6. Change to the `db` subdirectory.
7. Change to the `db/scripts/sql` subdirectory.
8. Edit the `oracle-create-empty-database.sql` script with your Oracle database password.

   Original:

   ```
   drop user sitescape cascade;
   create user sitescape identified by sitescape;
   grant connect, resource to sitescape;
   connect sitescape/sitescape;
   ```

   (SiteScape is the name of the company that previously developed the Vibe software.)

   Updated:

   ```
   drop user sitescape cascade;
   create user sitescape identified by your_oracle_password;
   grant connect, resource to sitescape;
   connect sitescape/your_oracle_password;
   ```

   IMPORTANT: Unless you are very familiar with editing scripts, change only the password. Do not attempt to change the name of the database from the legacy default of `sitescape`.

   ---

9. Enter the following commands to run the database creation script:

   ```
   sqlplus "/ as sysdba"
   SQL> spool oracle-create-empty-database.out;
   SQL> @oracle-create-empty-database;
   SQL> quit
   ```

10. Check the resulting `oracle-create-empty-database.out` file for errors and resolve them.
11. Edit the `oracle-liquibase.properties` file to use your administrator user name and password.

    For example:

    ```
    vi oracle-liquibase.properties
    ```

12. Populate the database that you just created:

    ```
    run ./manage-database.sh oracle updateDatabase
    ```

13. Verify that the database tables were created.

15 Running Multiple Database Servers

Each of the four databases supported by Kablink Vibe (MySQL, MariaDB, Microsoft SQL, and Oracle) has its own approach to clustering the database server. Information about clustering database servers is available on the Internet, for example:

- MySQL Cluster (http://www.mysql.com/products/database/cluster)
- MariaDB (https://mariadb.com/kb/en/mariadb/galera-cluster/)
- SQL Server Clustering (http://www.sql-server-performance.com/articles/clustering/clustering_intro_p1.aspx)
- Oracle Real Application Clusters (http://www.oracle.com/technology/products/database/clustering)

NOTE: We highly recommend that you follow the instructions in Part III, “Basic Installation,” on page 39 before attempting a more complex Vibe configuration.

VI Upgrade

16 Upgrading From Kablink Vibe 4.0 to Kablink Vibe 4.0.1

This section describes how to upgrade from Kablink Vibe 4.0 to Kablink Vibe 4.0.1. You can also upgrade from Vibe 3.4. to Vibe 4.0.1, as described in Chapter 17, “Upgrading From Kablink Vibe 3.4 to Kablink Vibe 4.x,” on page 125.

IMPORTANT: If you have not yet upgraded to Vibe 3.3, upgrade to Vibe 3.3 as described in Chapter 19, “Upgrading to Kablink Vibe 3.3 from Previous Versions,” on page 141. You cannot upgrade from a version prior to Vibe 3.3 to Vibe 4.*x*.

After you upgrade your Vibe system, ensure that you check the Vibe download site where you downloaded the Vibe software for any hot patches that might be available.

16.1 Understanding the Upgrade Process

During the upgrade from Kablink Vibe 4 to Vibe 4.0.1, the following aspects of your Vibe system are modified:

- The software is upgraded from Vibe 4 to Vibe 4.0.1.
- A backup copy of your existing Vibe 4 installation is created in the following directory:

  Linux: `/opt/novell/teaming/teaming-backup`

  Windows: `C:\Program Files\Novell\Teaming\teaming-backup`

  If your original Vibe system began with version 1.0 (this version of Kablink Vibe is called Kablink Teaming), the backup copy is located in the following directory:

  Linux: `/opt/icecore`

  Windows: `C:\Program Files\icecore`

16.2 Backing Up Vibe Data

Ensure that your Vibe data is backed up before you begin the upgrade process. For information about the data that needs to be backed up, see "Backing Up Vibe Data" in the *Kablink Vibe 4.0.1 Administration Guide*.

Because of significant changes to the database schema, Novell recommends that you use your database backup software to back up your Vibe database before upgrading to Vibe 4.0.1.

16.3 Updating the Java Development Kit (JDK)

Vibe 4.0.1 requires the latest version of the IBM or Oracle JDK.

Before you begin the upgrade process, update to the latest JDK, as described in Section A.1, "Java Development Kit (JDK)," on page 155.

16.4 Installing the Java Cryptography Extension (JCE)

Vibe 4.0.1 requires that you also install the Java Cryptography Extension (JCE) in addition to the JDK on each server in your Vibe system. (This was not a requirement in Vibe 4 and earlier.)

Before you begin the upgrade process, install the JCE on each server in your Vibe system, as described in Section A.2, "Java Cryptography Extension (JCE)," on page 157.

16.5 Upgrading the Vibe Software

Complete the following steps for each server in your Vibe system that is running the Vibe software:

1. Ensure that you have a current backup of your Vibe 4 system.
2. Stop Vibe.

   Linux: On the Vibe server, specify the following command:

   ```
   /etc/init.d/teaming stop
   ```

   Windows: See "Stopping Vibe as an Application" on page 78.

3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 4 system.
4. Copy the `installer.xml` file from the directory where the Vibe 4 Installation program is located to the directory where you have extracted the Vibe 4.0.1 software.

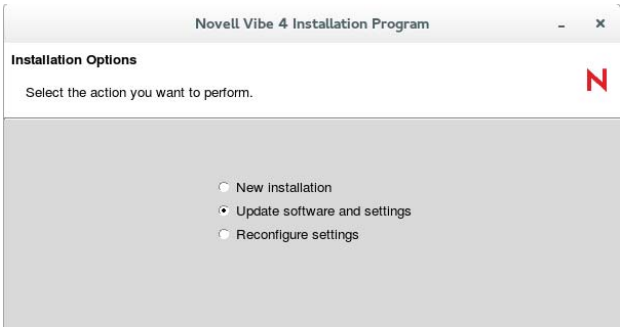
   The `installer.xml` file provides default values when you run the Vibe 4 Installation program.
5. Copy the `license-key.xml` file from the directory where the Vibe 4 Installation program is located to the directory where you have extracted the Vibe 4.0.1 software.

   Alternatively, you can obtain a new license key from the location where you downloaded the Vibe 4.0.1 software, copy it to the directory containing the extracted Vibe 4.0.1 software, and rename it to `license-key.xml`.
6. Start the Vibe 4.0.1 installation program.

If you need assistance with this task, see the detailed installation instructions for the platform where you are upgrading Vibe:

- Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62
- Section 6.2.2, “Running the Windows Vibe Installation Program,” on page 73

7 Accept the License Agreement, then click **Next**.



Because you provided your Vibe 4 `installer.xml` file in the directory with the Vibe 4.0.1 installation program, the **Update software and settings** installation option is selected by default.

8 Click **Next** to continue.

9 Click **Yes** to let the Installation program know that you have stopped Vibe.

10 Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.

11 Select **Basic** or **Advanced**, depending on the type of Vibe installation you are upgrading, then click **Next**.

For more information about the differences between basic and advanced installations, see Section 5.1, “What Is a Basic Vibe Installation?,” on page 41 and Section 10.1, “What Is an Advanced Installation?,” on page 93.

12 Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4.0.1 system.

13 Click **Install** when you are ready to perform the upgrade.

14 Click **Finish** when the upgrade is complete.

15 (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the cache is cleared.

16 Continue with Section 16.6, “Upgrading the Vibe Database from 4.0 to 4.0.1,” on page 119.

16.6 Upgrading the Vibe Database from 4.0 to 4.0.1

Upgrade the Vibe software (as described in Section 16.5, “Upgrading the Vibe Software,” on page 118) before upgrading the Vibe database.

When you upgrade to Vibe 4.0.1, the Vibe Installation program does not update the database as part of the Vibe software upgrade. Therefore, you must manually update the database before you can start Vibe:

1 (Conditional) When upgrading a MySQL database, ensure that the Vibe database character set for the Vibe system is in UTF-8 format.

1a To view the character set format, run the following command:

```
SELECT default_character_set_name FROM information_schema.SCHEMATA S WHERE
schema_name = 'sitescape';
```

In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

1b If the character set format is anything other than UTF-8, run the following command to change it:

In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

```
ALTER DATABASE sitescape CHARACTER SET utf8;
```

2 Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

3 In a text editor, open the properties file that corresponds with your database type to make any of the following changes. Save and close the text editor when you are finished making changes.

- Change the database user name and password for accessing the database.
- (Conditional) Specify the IP address for the database if it is running on a remote server.

  You need to replace `localhost` with the IP address of the remote server.
- (Optional) Change the name of the Vibe database (the default name of the Vibe database is `sitescape`, the name of the company that previously developed the Vibe software).

4 Save your changes and close the properties file.

5 In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

Windows `manage-database.bat` *`databaseType`* `updateDatabase`

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

Linux `./manage-database.sh` *`databaseType`* `updateDatabase`

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

NOTE: Ensure that the `manage-database.sh` file is executable.

NOTE: You can safely ignore the following Liquibase log messages:

- `Warning: modifyDataType will lose primary key/autoincrement/not null settings for mysql`
- Any messages that contain the words `info: failure` or `info: failed`, as long as they are associated with a type `INFO` message

---

6 Start Vibe 4.0.1 in the same way that you have been starting Vibe 4.0.

When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

Linux: On the Vibe server, specify the following command:

```
/etc/init.d/teaming start
```

Windows: See “Starting Vibe as an Application” on page 77.

or

See “Starting Vibe as a Windows Service” on page 77.

NOTE: If you have been starting Vibe as a Windows service, you need to delete your existing Windows service configuration and re-configure Vibe as a Windows service before you can start Vibe. For information about how to configure Vibe as a Windows service, see “Configuring Vibe as a Windows Service” on page 76.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in “Creating the Vibe Database” on page 65.

7a Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

7b In a text editor, open the *`database_type`*`-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with Section 17.7, “Performing Post-Upgrade Tasks,” on page 129.

16.7 Performing Post-Upgrade Tasks

After you start Kablink Vibe, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

16.7.1 Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4.0.1, you need to re-index the search index. Until you reset the search index, the search index and the vibe server are not in a compatible state. The `catalina.out` and `appserver.log` files show errors until the search index is reset.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers.

Depending on the size of your Vibe site, this can be a very time-consuming process.

- "Resetting a Single Search Index" on page 122
- "Resetting the Search Index with Multiple Index Servers" on page 122

Resetting a Single Search Index

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon  .
3. In the **Management** section, click **Search Index**.
4. Select **Re-Index Everything**.
5. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
6. After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	• `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` • `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	• `/opt/novell/teaming/apache-tomcat/logs/catalina.out` • `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon  .
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
7. After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	• `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` • `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	• `/opt/novell/teaming/apache-tomcat/logs/catalina.out` • `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

16.7.2 Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 4. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **System** section, click **Form/View Designers** to display the Form and View Designers page.
4. Click **Reset**.

   The Reset Definitions page is displayed.
5. Click **Select All**.

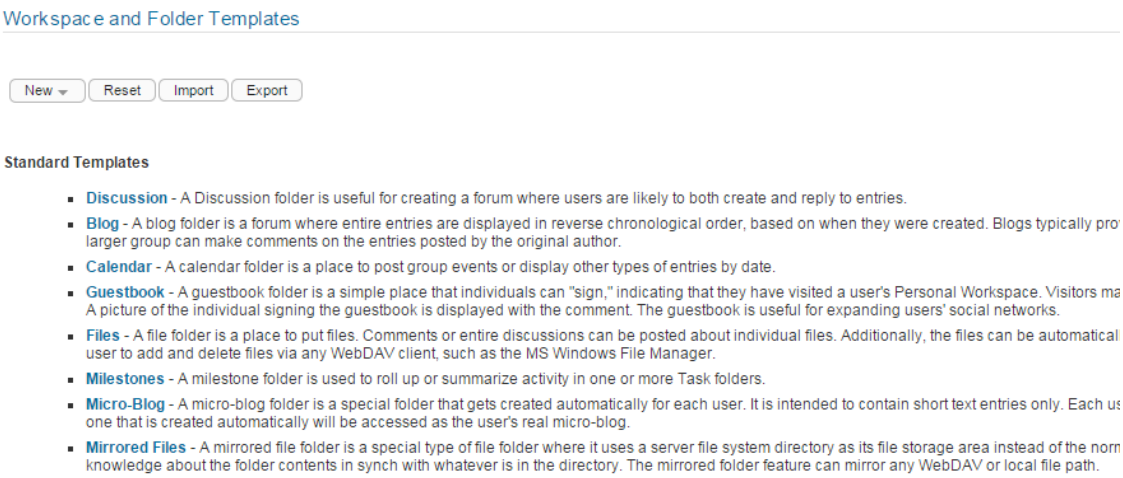
   You can expand each definition to ensure that all definitions have been selected.
6. Click **OK**.

16.7.3 Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

---

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Management** section, click **Workspace and Folder Templates**.



4 Click **Reset**.

5 Click **OK** to confirm, then click **Close**.

Your Vibe site is now ready for use.

16.7.4 Re-Installing the Windows Service

If you installed Vibe as a Windows service (as described in “Running Vibe as a Windows Service” on page 76), you must do the following by using the instructions in the same section.

1. Remove the service as described in “Removing Vibe as a Windows Service” on page 76.
2. Re-install the service as described in “Configuring Vibe as a Windows Service” on page 76.

This is necessary because the original service references an unsupported version of Tomcat.

16.7.5 Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file is overwritten during the upgrade to Vibe 4.0.1. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading Vibe.

For information about how to update the `.keystore` password in the `server.xml` file, see “Changing Your Password for the Keystore File” in the Kablink Vibe 4.0.1 Administration Guide.

17 Upgrading From Kablink Vibe 3.4 to Kablink Vibe 4.*x*

This section describes how to upgrade from Kablink Vibe 3.4 to Kablink Vibe 4.*x*. You can also upgrade from Vibe 3.3 to Vibe 4, as described in Chapter 18, “Upgrading From Kablink Vibe 3.3 to Kablink Vibe 4.x,” on page 133. If you have not yet upgraded to Vibe 3.3, upgrade to Vibe 3.3 as described in Chapter 19, “Upgrading to Kablink Vibe 3.3 from Previous Versions,” on page 141. You cannot upgrade from a version prior to Vibe 3.3 to Vibe 4.

After you upgrade your Vibe system, ensure that you check the Vibe download site where you downloaded the Vibe software for any hot patches that might be available.

17.1 Understanding the Upgrade Process

During the upgrade from Kablink Vibe 3.4 to Vibe 4, the following aspects of your Vibe system are modified:

- The software is upgraded from Vibe 3.4 to Vibe 4.
- A backup copy of your existing Vibe 3.4 installation is created in the following directory:

  Linux: `/opt/novell/teaming/teaming-backup`

  Windows: `C:\Program Files\Novell\Teaming\teaming-backup`

  If your original Vibe system began with version 1.0 (this version of Kablink Vibe is called Kablink Teaming), the backup copy is located in the following directory:

  Linux: `/opt/icecore`

  Windows: `C:\Program Files\icecore`

17.2 Backing Up Vibe Data

Ensure that your Vibe data is backed up before you begin the upgrade process. For information about the data that needs to be backed up, see "Backing Up Vibe Data" in the *Kablink Vibe 4.0.1 Administration Guide*.

Because of significant changes to the database schema, Novell recommends that you use your database backup software to back up your Vibe database before upgrading to Vibe 4.

17.3 Updating the Java Development Kit (JDK)

Vibe 4 requires the latest version of the IBM or Oracle JDK.

Before you begin the upgrade process, update to the latest JDK, as described in Section A.1, "Java Development Kit (JDK)," on page 155.

17.4 Installing the Java Cryptography Extension (JCE)

Vibe 4 requires that you also install the Java Cryptography Extension (JCE) in addition to the JDK on each server in your Vibe system. (This was not a requirement in Vibe 3.4 and earlier.)

Before you begin the upgrade process, install the JCE on each server in your Vibe system, as described in Section A.2, "Java Cryptography Extension (JCE)," on page 157.

17.5 Upgrading the Vibe Software

Complete the following steps for each server in your Vibe system that is running the Vibe software:

1. Ensure that you have a current backup of your Vibe 3.4 system.
2. Stop Vibe.

   Linux: On the Vibe server, specify the following command:

   ```
   /etc/init.d/teaming stop
   ```

   Windows: See "Stopping Vibe as an Application" on page 78.

3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 3.4 system.
4. Copy the `installer.xml` file from the directory where the Vibe 3.4 Installation program is located to the directory where you have extracted the Vibe 4 software.

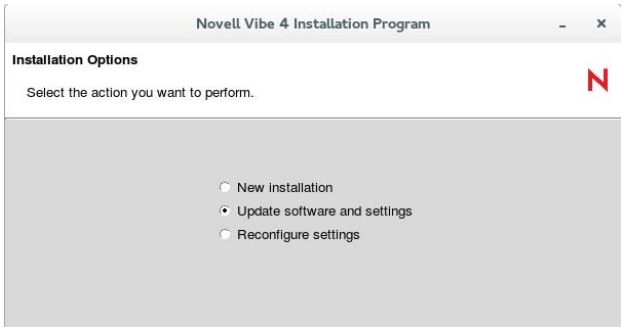
   The `installer.xml` file provides default values when you run the Vibe 3.4 Installation program.
5. Obtain a new license key from the location where you downloaded the Vibe 4 software, then place it in the same directory with the Vibe software. (The Vibe installation program does not start without a license file in the same directory.) Rename the license to `license-key.xml`.

   Vibe 4 requires an updated license. If you use a license from a previous version, not all features are available.
6. Start the Vibe 4 installation program.

If you need assistance with this task, see the detailed installation instructions for the platform where you are upgrading Vibe:

- Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62
- Section 6.2.2, “Running the Windows Vibe Installation Program,” on page 73

7 Accept the License Agreement, then click **Next**.



Because you provided your Vibe 3.4 `installer.xml` file in the directory with the Vibe 4 installation program, the **Update software and settings** installation option is selected by default.

8 Click **Next** to continue.

9 Click **Yes** to let the Installation program know that you have stopped Vibe.

10 Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.

11 Select **Basic** or **Advanced**, depending on the type of Vibe installation you are upgrading, then click **Next**.

For more information about the differences between basic and advanced installations, see Section 5.1, “What Is a Basic Vibe Installation?,” on page 41 and Section 10.1, “What Is an Advanced Installation?,” on page 93.

12 Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4 system.

13 Click **Install** when you are ready to perform the upgrade.

14 Click **Finish** when the upgrade is complete.

15 (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the 3.4 cache is cleared.

16 Continue with Section 17.6, “Upgrading the Vibe Database from 3.4 to 4,” on page 127.

17.6 Upgrading the Vibe Database from 3.4 to 4

Upgrade the Vibe software (as described in Section 18.4, “Upgrading the Vibe Software,” on page 134) before upgrading the Vibe database.

When you upgrade to Vibe 4, the Vibe Installation program does not update the database as part of the Vibe software upgrade. Therefore, you must manually update the database before you can start Vibe:

1 (Conditional) When upgrading a MySQL database, ensure that the Vibe database character set for the Vibe 3.4 system is in UTF-8 format.

1a To view the character set format, run the following command:

```
SELECT default_character_set_name FROM information_schema.SCHEMATA S WHERE
schema_name = 'sitescape';
```

In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

1b If the character set format is anything other than UTF-8, run the following command to change it:

In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

```
ALTER DATABASE sitescape CHARACTER SET utf8;
```

2 Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

3 In a text editor, open the properties file that corresponds with your database type to make any of the following changes. Save and close the text editor when you are finished making changes.

- Change the database user name and password for accessing the database.
- (Conditional) Specify the IP address for the database if it is running on a remote server.

  You need to replace `localhost` with the IP address of the remote server.
- (Optional) Change the name of the Vibe database (the default name of the Vibe database is `sitescape`, the name of the company that previously developed the Vibe software).

4 Save your changes and close the properties file.

5 In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

Windows

```
manage-database.bat databaseType mark33DatabaseAsUpdated
```

```
manage-database.bat databaseType updateDatabase
```

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

Linux

```
./manage-database.sh databaseType mark33DatabaseAsUpdated
```

```
./manage-database.sh databaseType updateDatabase
```

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

NOTE: Ensure that the `manage-database.sh` file is executable.

NOTE: You can safely ignore the following Liquibase log messages:

- `Warning: modifyDataType will lose primary key/autoincrement/not null settings for mysql`
- Any messages that contain the words `info: failure` or `info: failed`, as long as they are associated with a type `INFO` message

---

6 Start Vibe 4 in the same way that you have been starting Vibe 3.4.

When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

Linux: On the Vibe server, specify the following command:

```
/etc/init.d/teaming start
```

Windows: See "Starting Vibe as an Application" on page 77.

or

See "Starting Vibe as a Windows Service" on page 77.

NOTE: If you have been starting Vibe as a Windows service, you need to delete your existing Windows service configuration and re-configure Vibe as a Windows service before you can start Vibe. For information about how to configure Vibe as a Windows service, see "Configuring Vibe as a Windows Service" on page 76.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in "Creating the Vibe Database" on page 65.

7a Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

7b In a text editor, open the *`database_type`*`-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with Section 17.7, "Performing Post-Upgrade Tasks," on page 129.

17.7 Performing Post-Upgrade Tasks

After you start Kablink Vibe 4, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

17.7.1 Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4, you need to re-index the search index. Until you reset the search index, the search index and the vibe server are not in a compatible state. The `catalina.out` and `appserver.log` files show errors until the search index is reset.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers.

Depending on the size of your Vibe site, this can be a very time-consuming process.

- "Resetting a Single Search Index" on page 130
- "Resetting the Search Index with Multiple Index Servers" on page 130

Resetting a Single Search Index

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Management** section, click **Search Index**.
4. Select **Re-Index Everything**.
5. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
6. After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	• `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` • `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	• `/opt/novell/teaming/apache-tomcat/logs/catalina.out` • `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.

7 After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` ◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	◆ `/opt/novell/teaming/apache-tomcat/logs/catalina.out` ◆ `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

17.7.2 Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 3.4. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1 Log in to the Vibe site as the Vibe administrator.

2 Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .

3 In the **System** section, click **Form/View Designers** to display the Form and View Designers page.

4 Click **Reset**.

The Reset Definitions page is displayed.

5 Click **Select All**.

You can expand each definition to ensure that all definitions have been selected.

6 Click **OK**.

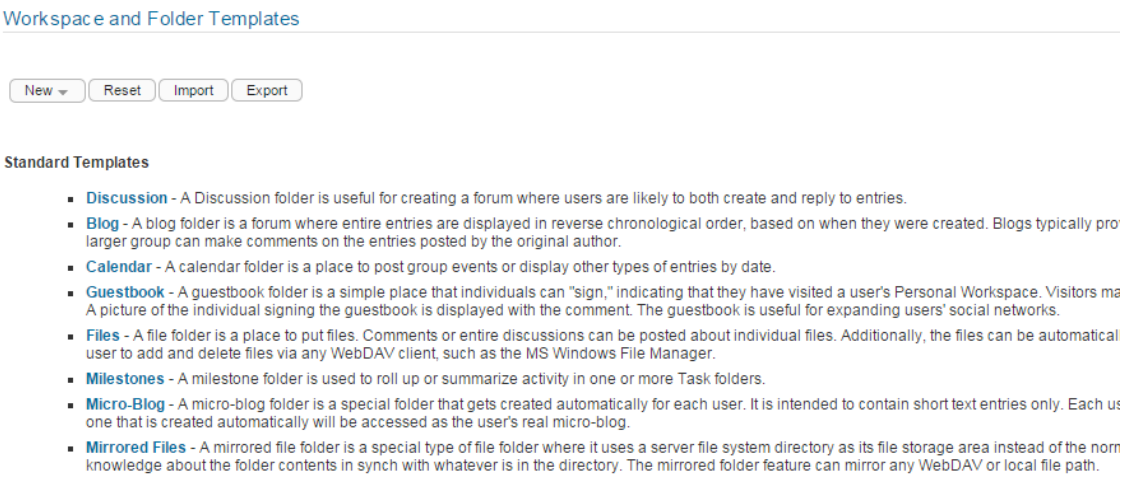
17.7.3 Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

1 Log in to the Vibe site as the Vibe administrator.

2 Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .

3 In the **Management** section, click **Workspace and Folder Templates**.



4 Click **Reset**.

5 Click **OK** to confirm, then click **Close**.

Your Vibe 4 site is now ready for use.

17.7.4 Re-Installing the Windows Service

If you installed Vibe as a Windows service (as described in "Running Vibe as a Windows Service" on page 76), you must remove the service and re-install it. This is necessary because the original service references an unsupported version of Tomcat.

17.7.5 Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file is overwritten during the upgrade to Vibe 4. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading to Vibe 4.

For information about how to update the `.keystore` password in the `server.xml` file, see "Changing Your Password for the Keystore File" in the Kablink Vibe 4.0.1 Administration Guide.

18 Upgrading From Kablink Vibe 3.3 to Kablink Vibe 4.*x*

This section describes how to upgrade from Kablink Vibe 3.3 to Kablink Vibe 4.*x*. You must upgrade to Vibe 3.3 if you have not already, as described in Chapter 19, “Upgrading to Kablink Vibe 3.3 from Previous Versions,” on page 141. You cannot upgrade from a version prior to Vibe 3.3 to Vibe 4.

After you upgrade your Vibe system, ensure that you check the Vibe download site where you downloaded the Vibe software for any hot patches that might be available.

18.1 Understanding the Upgrade Process

During the upgrade from Kablink Vibe 3.3 to Vibe 4, the following aspects of your Vibe system are modified:

- The software is upgraded from Vibe 3.3 to Vibe 4.
- A backup copy of your existing Vibe 3.3 installation is created in the following directory:

  Linux: `/opt/novell/teaming/teaming-backup`

  Windows: `C:\Program Files\Novell\Teaming\teaming-backup`

  If your original Vibe system began with version 1.0 (this version of Kablink Vibe is called Kablink Teaming), the backup copy is located in the following directory:

  Linux: `/opt/icecore`

  Windows: `C:\Program Files\icecore`

18.2 Backing Up Vibe Data

Ensure that your Vibe data is backed up before you begin the upgrade process. For information about the data that needs to be backed up, see “Backing Up Vibe Data” in the *Kablink Vibe 4.0.1 Administration Guide*.

18.3 Installing the Java Cryptography Extension (JCE)

Vibe 4 requires that you also install the Java Cryptography Extension (JCE) in addition to the JDK on each server in your Vibe system. (This was not a requirement in Vibe 3.4 and earlier.)

Before you begin the upgrade process, install the JCE on each server in your Vibe system, as described in Section A.2, “Java Cryptography Extension (JCE),” on page 157.

18.4 Upgrading the Vibe Software

1. Ensure that you have a current backup of your Vibe 3.3 system.
2. Stop Vibe.

   Linux: On the Vibe server, specify the following command:

   ```
   /etc/init.d/teaming stop
   ```

   Windows: See “Stopping Vibe as an Application” on page 78.

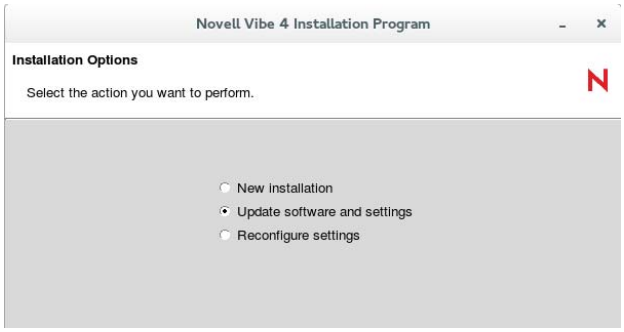
3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 3.3 system.
4. Copy the `installer.xml` file from the directory where the Vibe 3.3 Installation program is located to the directory where you have extracted the Vibe 4 software.

   The `installer.xml` file provides default values when you run the Vibe 3.3 Installation program.
5. Obtain a new license key from the location where you downloaded the Vibe 4 software, then place it in the same directory with the Vibe software. (The Vibe installation program does not start without a license file in the same directory.) Rename the license to `license-key.xml`.

   Vibe 4 requires an updated license. If you use a license from a previous version, not all features are available.
6. Start the Vibe 4 installation program.

   If you need assistance with this task, see the detailed installation instructions for the platform where you are upgrading Vibe:

   - Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62
   - Section 6.2.2, “Running the Windows Vibe Installation Program,” on page 73
7. Accept the License Agreement, then click **Next**.



Because you provided your Vibe 3.3 `installer.xml` file in the directory with the Vibe 4 installation program, the **Update software and settings** installation option is selected by default.

8 Click **Next** to continue.

9 Click **Yes** to let the Installation program know that you have stopped Vibe.

10 Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.

11 Select **Basic** or **Advanced**, depending on the type of Vibe installation you are upgrading, then click **Next**.

For more information about the differences between basic and advanced installations, see Section 5.1, “What Is a Basic Vibe Installation?,” on page 41 and Section 10.1, “What Is an Advanced Installation?,” on page 93.

12 Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4 system.

13 Click **Install** when you are ready to perform the upgrade.

14 Click **Finish** when the upgrade is complete.

15 (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the 3.3 cache is cleared.

16 Continue with Section 18.5, “Updating the Vibe Database from 3.3 to 4,” on page 135.

18.5 Updating the Vibe Database from 3.3 to 4

Upgrade the Vibe software (as described in Section 18.4, “Upgrading the Vibe Software,” on page 134) before upgrading the Vibe database.

When you upgrade to Vibe 4, the Vibe Installation program does not update the database as part of the Vibe software upgrade. Therefore, you must manually update the database before you can start Vibe:

1 (Conditional) When upgrading a MySQL database, ensure that the Vibe database character set for the Vibe 3.4 system is in UTF-8 format.

1a To view the character set format, run the following command:

In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

```
SELECT default_character_set_name FROM information_schema.SCHEMATA S WHERE
schema_name = 'sitescape';
```

1b If the character set format is anything other than UTF-8, run the following command to change it:

```
ALTER DATABASE sitescape CHARACTER SET utf8;
```

In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

2 Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

3 In a text editor, open the properties file that corresponds with your database type to make any of the following changes. Save and close the text editor when you are finished making changes.

- Change the database user name and password for accessing the database.
- (Conditional) Specify the IP address for the database if it is running on a remote server.

  You need to replace `localhost` with the IP address of the remote server.
- (Optional) Change the name of the Vibe database (the default name of the Vibe database is `sitescape`, the name of the company that previously developed the Vibe software).

4 Save your changes and close the properties file.

5 In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

Windows

```
manage-database.bat databaseType mark33DatabaseAsUpdated
```

```
manage-database.bat databaseType updateDatabase
```

Possible database types (*databaseType*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

Linux

```
./manage-database.sh databaseType mark33DatabaseAsUpdated
```

```
./manage-database.sh databaseType updateDatabase
```

Possible database types (*databaseType*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

NOTE: Ensure that the `manage-database.sh` file is executable.

NOTE: You can safely ignore the following Liquibase log messages:

- `Warning: modifyDataType will lose primary key/autoincrement/not null settings for mysql`
- Any messages that contain the words `info: failure` or `info: failed`, as long as they are associated with a type `INFO` message

---

6 Start Vibe 4 in the same way that you have been starting Vibe 3.3.

When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

Linux: On the Vibe server, specify the following command:

```
/etc/init.d/teaming start
```

Windows: See "Starting Vibe as an Application" on page 77.

or

See "Starting Vibe as a Windows Service" on page 77.

NOTE: If you have been starting Vibe as a Windows service, you need to delete your existing Windows service configuration and re-configure Vibe as a Windows service before you can start Vibe. For information about how to configure Vibe as a Windows service, see "Configuring Vibe as a Windows Service" on page 76.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in "Creating the Vibe Database" on page 65.

7a Change to the `db` directory in the Vibe installation:

```
cd /vibe_installation/temp-installer/db
```

This directory contains the following properties files:

- `mysql-liquibase.properties`
- `Oracle-liquibase.properties`
- `sqlserver-liquibase.properties`

7b In a text editor, open the *`database_type`*`-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with Section 18.6, “Performing Post-Upgrade Tasks,” on page 137.

18.6 Performing Post-Upgrade Tasks

After you start Kablink Vibe 4, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

18.6.1 Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4, you need to re-index the search index.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers.

Depending on the size of your Vibe site, this can be a very time-consuming process.

Resetting a Single Search Index

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon  .
3. In the **Management** section, click **Search Index**.
4. Select **Re-Index Everything**.
5. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.

18.6.2 Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 3.3. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **System** section, click **Form/View Designers** to display the Form and View Designers page.
4. Click **Reset**.

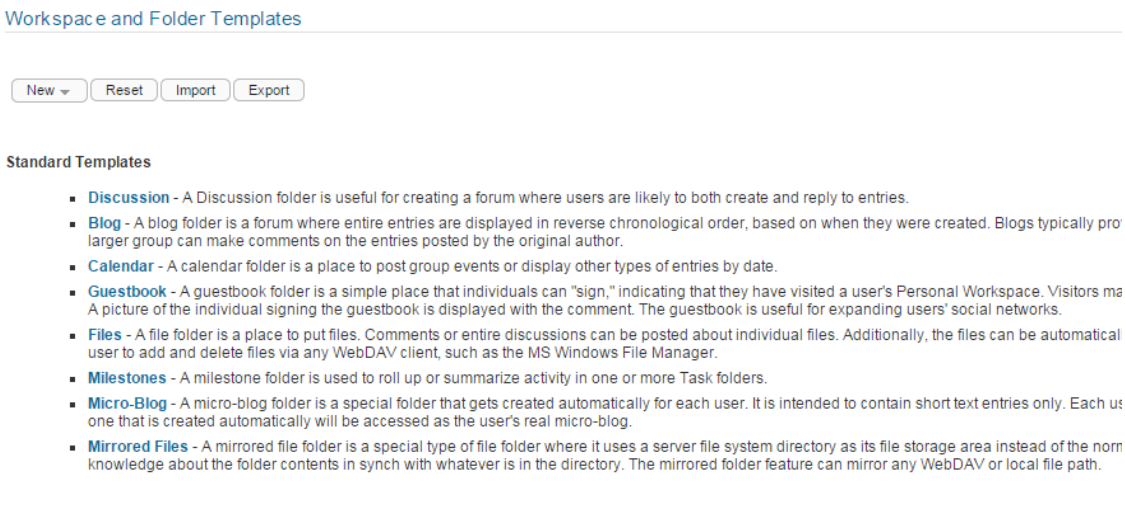
   The Reset Definitions page is displayed.
5. Click **Select All**.

   You can expand each definition to ensure that all definitions have been selected.
6. Click **OK**.

18.6.3 Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Management** section, click **Workspace and Folder Templates**.



4. Click **Reset**.
5. Click **OK** to confirm, then click **Close**.

Your Vibe 4 site is now ready for use.

18.6.4 Re-Installing the Windows Service

If you installed Vibe as a Windows service (as described in “Running Vibe as a Windows Service” on page 76), you must remove the service and re-install it. This is necessary because the original service references an unsupported version of Tomcat.

18.6.5 Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file is overwritten during the upgrade to Vibe 4. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading to Vibe 4.

For information about how to update the `.keystore` password in the `server.xml` file, see “Changing Your Password for the Keystore File” in the Kablink Vibe 4.0.1 Administration Guide.

19 Upgrading to Kablink Vibe 3.3 from Previous Versions

For information about how to upgrade to Vibe 3.3, see “Update” (https://www.novell.com/documentation/vibe33/vibe33_inst/data/bj0kxa6.html)*Kablink Vibe OnPrem 3 Installation Guide* (http://www.novell.com/documentation/kablinkvibe_onprem3/vibeprem3_inst/data/bookinfo.html) in the *Novell Vibe 3.3 Installation Guide* (https://www.novell.com/documentation/vibe33/vibe33_inst/data/bookinfo.html).

20 Updating the Operating System Where Vibe Is Running

You can update the operating system where Vibe is running.

1. Update the Linux or Windows operating system to a version that Vibe supports.

   For information about which versions are supported, see Section 2.1, “Vibe Server Requirements,” on page 17.

   For information about how to update the operating system, view the appropriate documentation for your operating system.

2. (Conditional) If you updated a Linux server, the TrueType font path that Vibe uses for document conversion might be broken after the update. To fix this problem, you need to re-run the Vibe installation after upgrading the Linux operating system.

   For information on how to run the Vibe installation, see Section 6.1, “Linux: Installing and Setting Up a Basic Vibe Site,” on page 61 for a basic installation, or Chapter 11, “Performing an Advanced Vibe Installation,” on page 99 for an advanced installation.

VII Migrate

21 Migrating Existing Kablink Vibe 4 Data into a New Vibe 4 System

IMPORTANT: The term “data migration” as used in this section, is essentially about creating a clone of an existing Vibe system.

Data migration between servers running different versions of Vibe is not supported. However, you can use data migration in conjunction with an upgrade (see Section 21.1, “Using Data Migration in Conjunction with an Upgrade to Vibe 4,” on page 148).

This section describes how to migrate data from an existing Vibe 4 server to a new Vibe 4 server. You might want to do this for any of the following reasons:

- Your existingKablink Vibe system has outgrown the server where you originally set it up.
- You want to move your existing Vibe system to a different operating system.

  In this case, you can install Vibe 4 on a new server, then migrate your existing Vibe 4 data to your new Vibe 4 system.
- You want to preserve your old system in its current state.
- You created your Vibe system by using the Virtual Eval version of the Novell Vibe Starter Pack (http://download.novell.com/Download?buildid=Y7J2HFucjfw~).
- You are upgrading from Kablink Vibe to Novell Vibe.

NOTE: In the instructions that follow, “target server” refers to the server where you install the Vibe 4 software, and “source server” refers to the existing server from which you are migrating Vibe data.

The instructions in this section are based on a single-server Vibe configuration. If you have a multi-server Vibe configuration, the single-server instructions can serve as a foundation to get you started with your more complex migration process.

This section does not include instructions for migrating an Oracle database. Use the instructions for your Vibe platform as a guideline for the tasks that are involved in migrating Vibe data, then apply these guidelines to your Oracle database migration.

21.1 Using Data Migration in Conjunction with an Upgrade to Vibe 4

As stated above, data migration between servers running different versions of Vibe is not supported.

If you want to migrate data from Vibe 3.4 to a new Vibe 4 system, you have two basic choices:

- You can
  1. Upgrade the Vibe 3.4 server to Vibe 4.
  2. Install a new Vibe 4 server
  3. Migrate the data from the old Vibe 4 server to the new Vibe 4 system.

  Or
- You can
  1. Install Vibe 3.4 on the new server.
  2. Migrate the data from the existing Vibe 3.4 server to the new Vibe 3.4 server
  3. When you are assured that everything is running as expected, upgrade the new server to Vibe 4.

21.2 Linux Migration with a MySQL Database

21.2.1 Preparing the Target Linux Server

On the target server:

1. Install the Vibe 4 software on the target server, as described in Part III, “Basic Installation,” on page 39, paying special attention to these important details:
   - Set up the same Linux user to run the Vibe software that has been used to run the Vibe software in the source Vibe server.
   - Select the same encryption algorithm for the Vibe database that was used for the source Vibe server.

     IMPORTANT: If the database encryption algorithms do not match between the source and target Vibe systems, you cannot log in to the new Vibe 4 site.
2. Start Vibe on the target server.
3. Verify that the new Vibe site is working as expected.
4. Stop Vibe on the target server.
5. Rename the `teaming` directory to `teaming_backup`. In a future step, you will copy the `teaming` directory from the source server to the target server.

   The location of the `teaming` directory varies by platform:

Linux: `/var/opt/novell/teaming`

Windows: `c:\novell\teaming`

6 Continue with Section 21.2.2, “Preparing the Source Linux Server,” on page 149.

21.2.2 Preparing the Source Linux Server

On the source server:

1 Stop Vibe.

2 Back up your existing database:

```
mysqldump -uusername -ppassword sitescape > sitescape.sql
```

This creates a file named `sitescape.sql` in the directory where you executed the `mysqldump` command.

3 Ensure that you have a recent backup of your entire Vibe system.

4 Continue with Section 21.2.3, “Transferring Data from the Source Server to the Target Server,” on page 149.

21.2.3 Transferring Data from the Source Server to the Target Server

On the source server:

1 Mount the target server to the source server so that data can be copied from one server to the other.

2 In a terminal window on the source server, become the Linux user that runs the Vibe software.

3 Copy the database backup of your existing Vibe database (`sitescape.sql` file) that you created in Step 2 in Section 21.2.2, “Preparing the Source Linux Server,” on page 149 to a convenient temporary location on the target server.

4 Copy the entire data area from `/var/opt/novell/teaming` on the source server to the same location on the target server.

5 (Conditional) If you are using secure LDAP (LDAPS), you need to copy the `cacerts` file to the same location on the target server.

6 Continue with Section 21.2.4, “Importing the Vibe Database to the Target Server,” on page 149.

21.2.4 Importing the Vibe Database to the Target Server

On the target server:

1 Remove the empty Vibe database that was created when you installed the Vibe 4 software:

```
mysql>drop database sitescape;
```

2 Change to the directory where you copied the `sitescape.sql` file in Step 3 in Section 21.2.3, “Transferring Data from the Source Server to the Target Server,” on page 149.

3 Create an empty database called `sitescape`:

```
mysql -uusername -ppassword -e "create database sitescape"
```

4 Manually re-create the Vibe database with the data that you copied from the source server:

```
mysql -uusername -ppassword sitescape < sitescape.sql
```

21.2.5 Finalizing Your New Vibe 4 Site

1 Start Vibe 4, as described in "Starting Vibe on Linux" on page 70.

2 Reindex the Vibe site, as described in "Rebuilding the Lucene Index" in "Site Maintenance" in the *Kablink Vibe 4.0.1 Administration Guide*.

Your Vibe site should now function just as it did on the original source server.

21.3 Windows Migration with an MS SQL Database

21.3.1 Preparing the Target Windows Server

On the target server:

1 Install the Vibe 4 software, as described in Part III, "Basic Installation," on page 39.

IMPORTANT: Select the same encryption algorithm for the Vibe 4 database that you selected for the source Vibe server. If the database encryption algorithms do not match between the source and target systems, you cannot log in to the new Vibe 4 site.

---

2 Start Vibe on the target server.

3 Verify that the new Vibe site is working as expected.

4 Stop Vibe on the target server.

5 Rename the `teaming` directory to `teaming_backup`. In a future step you will copy the `teaming` directory from the source server to the target server.

The location of the teaming directory varies by platform:

Linux: `/var/opt/novell/teaming`

Windows: `c:\Program Files\Novell\Teaming`

6 Continue with Section 21.3.2, "Preparing the Source Windows Server," on page 150.

21.3.2 Preparing the Source Windows Server

On the source server:

1 Stop Vibe.

2 Back up your existing database:

2a In Microsoft SQL Server Management Studio, browse to and right-click the existing database (named `sitescape`), then click **Tasks > Back Up**.

2b For **Backup type**, select **Full**.

2c Set other backup options as desired, then click **OK**.

This creates a file named `sitescape.bak` in the following directory:

```
c:\Program Files\Microsoft SQL Server\MSSQL\Backup
```

3 Ensure that you have a recent backup of your entire system.

4 Continue with Section 21.3.3, “Transferring Data from the Source Server to the Target Server,” on page 151.

21.3.3 Transferring Data from the Source Server to the Target Server

On the source server:

1 Map a drive from the target server to the source server so that data can be copied from one server to the other.

2 Copy your existing software extensions to the target server:

From:	`c:\home\icecoredata\extensions`
To:	`c:\novell\teaming\extensions`

Beginning with Vibe 3, the `extensions` directory now contains `kablink` and `liferay.com` directories.

3 Delete the empty `kablink` directory.

4 Delete or rename the following directories to make room for the corresponding directories that you are copying from the source server:

```
c:\novell\teaming
c:\novell\teaming\lucene
c:\novell\teaming\extensions
```

5 Copy the entire data area from `c:\novell\teaming` on the source server to the same location on the target server.

6 (Conditional) If you are using secure LDAP (LDAPS), you need to copy the `cacerts` file to the same location on the target server.

7 Continue with Section 21.3.4, “Importing the Database to the Target Server,” on page 151.

21.3.4 Importing the Database to the Target Server

On the target server:

1 In Microsoft SQL Server Management Studio, browse to and right-click the existing Vibe database (named `sitescape`) that was created when you installed the Vibe 4 software, then click **Delete**.

2 To import the data from your source database, browse to and right-click **Databases**, then click **Tasks > Restore**.

3 In the **To database** field, specify `sitescape`.

4 In the **From device** field, browse to and select the `sitescape.bak` file that you transferred to the target server.

5 Set other restore options as desired, then click **OK**.

This creates the `sitescape` database in the following directory on the target server:

```
c:\Program Files\Microsoft SQL Server\MSSQL
```

Backed-up data from the source database is imported into the database for your new Vibe 4 system.

21.3.5 Finalizing Your New Vibe 4 Site

1 Start Vibe 4, as described in “Starting Vibe on Linux” on page 70.

2 Reindex the Vibe site, as described in “Rebuilding the Lucene Index” in “Site Maintenance” in the *Kablink Vibe 4.0.1 Administration Guide*.

Your Vibe site should now function just as it did on the original source server.

VIII Appendixes

A Vibe System Requirements Assistance

The system requirements for Kablink Vibe include supporting components that might or might not already be installed on your Vibe server. This section helps you meet the Vibe system requirements if you are not familiar with how to install these supporting components.

A.1 Java Development Kit (JDK)

The Kablink Vibe software runs inside a Java Virtual Machine (JVM). At present, Vibe requires a Java Development Kit (JDK), not a Java Runtime Environment (JRE), in order to run properly. You can use either the Oracle JDK or the IBM JDK. Follow the instructions in the section below for your operating system and JDK preference:

If you want to use an SSL connection between your Novell Vibe site and a WebDAV server, and if the WebDAV server has a self-signed certificate rather than a certificate provided by a certificate authority, you must use the Oracle JDK. The existing Vibe functionality for handling self-signed certificates is not compatible with the way the IBM JDK handles self-signed certificates.

A.1.1 Oracle JDK on Linux

This section describes how to install the Java Development Kit (JDK) for 64-bit Linux, using the following archive binary file: `jdk-version-linux-x64.tar.gz`.

1. Go to the following URL:

   Java SE Downloads (http://www.oracle.com/technetwork/java/javase/downloads/index.html)
2. Download the `jdk-version-linux-x64.tar.gz` file to the `/usr/java` directory on your Linux server.
3. Accept the License Agreement.
4. As the `root` user, change to the `/usr/java` directory where you downloaded the file, then use the following command to ensure that the download arrived safely:

   ```
   ls -l
   ```

   You should see a file named `jdk-version-linux-x64.tar.gz`.
5. Extract the file:

   ```
   tar -xvf jdk-version-linux-x64.tar.gz
   ```

The Oracle JDK is now installed on your Linux server.

6 (Conditional) You might need to remove a symbolic link and create a new one:

```
rm /usr/java/latest
ln -s /usr/java/jdkversion /usr/java/latest
```

7 Run the following two commands:

```
chmod -R 755 /usr/java/jdkversion
chown -R root:root /usr/java/jdkversion
```

8 Install the JCE, as described in Section A.2, “Java Cryptography Extension (JCE),” on page 157.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java JDK Location** on the Basic Vibe Installation Summary Sheet, specify the directory where you plan to install the JDK. The Vibe installation program prompts you for this location.

A.1.2 IBM JDK on Linux

The IBM JDK is available with SUSE Linux Enterprise Server (SLES). You can install it by using YaST.

1 Enable the SDK online repositories.

For information about how to enable the SDK repositories on SLES, see TID 7015337 (https://www.novell.com/support/kb/doc.php?id=7015337) in the Novell Support Knowledgebase (https://www.novell.com/support/kb/).

2 In YaST, click **Software > Software Management**.

3 In the **Search** field, type `java`, then click **Search**.

4 Select **Java *version* SDK, Standard Edition** (`java-version-ibm-devel`), then click **Accept**.

5 Click **Continue** to accept the suggested dependencies, then click **No** (because you don’t need any more packages).

6 Exit YaST.

This creates a directory named `/usr/lib/jvm/java-version-ibm-version_sr3` with the IBM JDK software in it.

7 Install the JCE, as described in Section A.2, “Java Cryptography Extension (JCE),” on page 157.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java JDK Location** on the Basic Vibe Installation Summary Sheet, specify the directory where you plan to install the JDK. The Vibe installation program prompts you for this location.

A.1.3 Oracle JDK on Windows

1 Go to the following URL:

Java SE Downloads (http://www.oracle.com/technetwork/java/javase/downloads/index.html)

2 Download the latest Java SE version that is appropriate for your operating system.

3 Accept the license agreement.

4 Click the `jdk-version-windows-version.exe` file in the **Download** column, then save the file to an empty temporary directory on your Windows server.

5 Change to that temporary directory, then run the downloaded executable.

   This creates a directory named `c:\Program Files\Java\jdk`*version* with the Oracle JDK software in it.

   The Oracle JDK is now installed on your Windows server.

6 Install the JCE, as described in Section A.2, “Java Cryptography Extension (JCE),” on page 157.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Java JDK Location** on the Basic Vibe Installation Summary Sheet, specify the directory where you plan to install the JDK. The Vibe installation program prompts you for this location.

A.2 Java Cryptography Extension (JCE)

You must install the Java Cryptography Extension (JCE) in addition to the JDK.

A.2.1 Oracle JCE on Linux and Windows

1 On your management workstation, download the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy files (http://www.oracle.com/technetwork/java/javase/downloads/jce8-download-2133166.html) from Oracle.

2 Follow the instructions from the Readme that is downloaded with the Oracle JCE.

A.2.2 IBM JCE on Linux

To install the JCE on Linux:

1 On the Vibe server, verify that the following files exist:

```
/etc/alternatives/jce_version_ibm_local_policy
/etc/alternatives/jce_version_ibm_us_export_policy
```

2 On your management workstation, download the Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy files (https://www14.software.ibm.com/webapp/iwm/web/reg/pick.do?source=jcesdk&lang=en_US) from IBM.

3 Log in to the Vibe server as the root user (or equivalent), then create the following directory:

```
mkdir -p /usr/lib64/jvm-private/java-version-ibm/jce/unrestricted
```

4 Copy the JCE Unlimited Strength Jurisdiction Policy `ZIP` file to the folder on the Vibe server that you created in Step 3.

```
cp ~/Downloads/unrestrictedpolicyfiles.zip /usr/lib64/jvm-private/java-
version-ibm/jce/urestricted
```

5 Unzip the files:

```
unzip /usr/lib64/jvm-private/java-version-ibm/jce/unrestricted/
urestrictedpolicyfiles.zip
```

6 Stop Vibe.

```
/etc/init.d/teaming stop
```

7 Remove the existing links:

```
rm /etc/alternatives/jce_version_ibm_local_policy
```

```
rm /etc/alternatives/jce_version_ibm_us_export_policy
```

8 Create a new link to the JCE that you downloaded:

```
ln -s /usr/lib64/jvm-private/java-version-ibm/jce/unrestricted/
local_policy.jar /etc/alternatives/jce_version_ibm_local_policy
```

```
ln -s /usr/lib64/jvm-private/java-version-ibm/jce/unrestricted/
US_export_policy.jar /etc/alternatives/jce_version_ibm_us_export_policy
```

9 Verify that the links were created:

```
ls -l /etc/alternatives/jce*
```

10 Start Vibe.

```
/etc/init.d/teaming start
```

```
tailf /opt/novell/teaming/apache-tomcat/logs/catalina.out
```

```
tailf /opt/novell/teaming/apache-tomcat/logs/appserver.log
```

A.3 MySQL or MariaDB SQL Database Server

A.3.1 MySQL (or MariaDB) on Linux

IMPORTANT: The steps in this section are optimized for installing MYSQL on SUSE Linux Enterprise Server (SLES) 11.

For information regarding the installation of MySQL on other versions of SLES or other flavors of Linux, see Installing and Upgrading MySQL (http://dev.mysql.com/doc/refman/5.1/en/installing.html) in the MySQL documentation (http://dev.mysql.com/doc/).

In SLES 12, the default database changed from MySQL to MariaDB. Installation and management procedures, etc. are basically unchanged. For information on installing SLES 12 and using MariaDB, see the SLES 12 Documentation (https://www.suse.com/documentation/sles-12/) and MariaDB (http://www.mariadb.com) web sites.

Depending on the options you select when installing Open Enterprise Server 2 and SUSE Linux Enterprise Server (SLES), the MySQL or MariaDB database server might be installed along with the operating system. Check for the following directory:

```
/usr/bin/mysql
```

If the `/usr/bin/mysql` directory does not exist, you need to install the MySQL or MariaDB database server. If MySQL or MariaDB is already installed, you still need to configure it for use with Vibe.

Installing MySQL/MariaDB

1. Ensure you have access to your operating system installation media.
2. In YaST, click **Software > Software Management**.
3. In the **Search** field, type `mysql`, then click **Search**.
4. Select **mysql**, then click **Accept**.
5. Click **Continue** to resolve dependencies.
6. Click **Continue** to acknowledge package support status.

   MySQL is then installed from the SLES media.
7. Continue with "Configuring MySQL/MariaDB" on page 159.

Configuring MySQL/MariaDB

When MySQL or MariaDB is initially installed, it is not configured with an administrator password, nor is it configured to start automatically. Follow the steps below to set up the MySQL or MariaDB database server for use with Vibe:

1. In YaST, click **System > System Services**.
2. Scroll to and select the service, then click **Enable**.
3. Click **Continue** to install dependencies, then click **OK** to close the status box.
4. Click **OK > Yes** to finish the installation, then exit YaST.
5. In a terminal window, become the `root` user.
6. To verify that the database server has started, use the following command:

   ```
   ps -eaf | grep mysql
   ```

   You should see the processes running.
7. Set the administrator password for the database server:

   ```
   mysqladmin -u root password new_password
   ```

   This command changes the password for the database `root` user, which is the default administrator user name for the MySQL or MariaDB database server. This command is part of the database client package.

IMPORTANT: The database `root` user name is not the same as the Linux `root` user. The Linux `root` user has a password established for it when you install Linux. In a parallel fashion, the database `root` user needs to have a password established for it when you install MySQL or MariaDB.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Vibe Installation Summary Sheet, specify the database administrator password. The Vibe installation program prompts you for this information.

Learning More about MySQL/MariaDB

The following table includes some basic and useful MySQL or MariaDB commands:

Action	Command
Stop MySQL	`/etc/initd/mysql stop`
Start MySQL	`/etc/initd/mysql start`
Show MySQL status	`mysqladmin -u root -p extended-status`

If you want to administer MySQL or MariaDB through a GUI interface, you can download tools from:

MySQL GUI Tools Downloads (http://dev.mysql.com/downloads/gui-tools/5.0.html)

For more information about MySQL, see:

MySQL Documentation (http://dev.mysql.com/doc)

A.3.2 MySQL or MariaDB on Windows

1. In your web browser, go to the MySQL or MariaDB download site.
2. Scroll down if necessary, then click the type of Windows operating system you are using (32-bit or 64-bit).
3. On the **Windows Essentials** line, click **Download**.
4. Click **Save File**, browse to and select a convenient temporary directory, then click **Save**.
5. In Windows Explorer, browse to the directory where you saved the MySQL `.exe` file.
6. Double-click the `.exe` file to start the Setup Wizard.
7. Follow the online instructions to install the software on the Windows server, then continue with Step 8 to configure the server.
8. Unless you are already familiar with configuring MySQL or MariaDB on a Windows server, select **Standard Configuration**, then click **Next**.
9. Select **Include Bin Directory in Windows PATH**, then click **Next**.
10. Set the database `root` user password, then click **Next**.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Vibe Installation Summary Sheet, specify the database administrator password. The Vibe installation program prompts you for this information.

11. Click **Execute** to configure the database server, then click **Finish**.

    Some messages report the status of your installation.
12. To monitor the database server, click **Start > All Programs**, then click **MySQL > MySQL Server 5.1 > MySQL Command Line Client** or the equivalent MariaDB options.

B Memcached Caching with Novell Vibe

Novell Vibe contains two caching options for the hibernate caching provider: ehcache and memcached. Kablink Vibe contains only one caching option: ehcache. For more information about ehcache, see Ehcache (http://ehcache.sourceforge.net).

B.1 About Memcached

Memcached is a high-performance, distributed memory object caching system used by a number of large Internet sites such as Wikipedia, Flickr, Twitter, and Youtube, as well as enterprise systems.

B.1.1 Advantages for Using Memcached

Memcached offers the following advantages over other caching systems:

- Better utilization of memory resources from the server farm.
- No replication (and therefore no overhead involved in replication). This results in a reduction of 60 or more threads per Vibe node in a two-node cluster.
- The number of servers and the size of data scale together.
- Scales out much better than replication-based cluster cache.

B.1.2 Hardware Requirements and Configurations

Novell Vibe supports memcached only on the SUSE Linux operating system. For detailed hardware requirements and layouts, see Memcached Hardware Requirements and Layouts (http://code.google.com/p/memcached/wiki/NewHardware).

B.2 Downloading and Installing Memcached

NOTE: You should run memcached only on a SUSE Linux operating system. 64-bit is recommended.

Memcached is included with the SUSE Linux Enterprise High Availability Extension. You simply need to install it on the server where the Lucene search index is running as you would any other Linux package.

If you do not have the SUSE Linux Enterprise High Availability Extension, you can download and install memcached by completing the following steps on the Lucene search index server:

1. Navigate to the openSUSE Software Download page (http://software.opensuse.org).
2. In the **Search** field, type `memcached`, then click **Search**.
3. Download the `RPM` file after it is returned in the search results.
4. Install the downloaded `RPM` file.
5. Repeat Step 1 through Step 4 on the Lucene search index server.
6. Continue with Section B.3, “Configuring Memcached,” on page 162.

B.3 Configuring Memcached

After you have downloaded and installed memcached on the server where the Lucene search index is running, as described in Section B.2, “Downloading and Installing Memcached,” on page 161, you need to configure it on each node.

You configure memcached by adding the desired switches to the `MEMCACHED_PARAMS` variable.

1. Navigate to the `etc/sysconfig` directory.
2. Open the `memcached` file in a text editor.
3. Uncomment the `MEMCACHED_PARAMS` variable and add any switches that you feel are appropriate. When you uncomment the `MEMCACHED_PARAMS` variable, the following switches are already present:
   - **-d:** Runs as a daemon. This is recommended.
   - **-l:** Determines the interface to listen on. The default value is the localhost. You should either delete this switch with its default address (this is recommended for a simple setup) or change the default address to the address that you want memcached to listen on. For example, `-l 172.17.2.3`.

   To see a complete list of switches that are available with memcached, type `memcached -h` from the command line of a machine where memcached is installed.
4. (Recommended) Increase the maximum memory to use for items to 1024 MB. You do this by adding the `-m` switch to the `MEMCACHED_PARAMS` variable. For example:

   ```
   -m 1024
   ```
5. (Recommended) You should configure memcached to start automatically each time you reboot the server where the Lucene search index is running. To configure memcached to start automatically, enter the following command from the command line:

   ```
   chkconfig --add memcached
   ```

   To verify that automatic startup is enabled, enter the following command from the command line:

   ```
   chkconfig memcached
   ```
6. Validate that memcached is running from the local server by typing the following command:

   ```
   netstat -ap|grep memcached
   ```

7 After you have verified that memcached is running on the local server, log in to a remote server, then validate that memcached is running to ensure that no networking problems exist:

7a From the command line of a remote server, make a network connection to the server where memcached is running. For example, you can use the `telnet` command.

```
telnet 172.17.2.3 11211
```

7b Type a simple memcached command, such as `stats` and `stats settings`.

7c After you have verified that memcached is running as expected, type `quit` to exit `telnet`.

Following is an example of what you see:

```
07309:~/Desktop # telnet xxx.xxx.xxx.xx 11211
Trying xxx.xxx.xxx.xx...
Connected to xxx.xxx.xxx.xx.
Escape character is '^]'.
stats
STAT pid 2486
STAT uptime 313
STAT time 1334337169
STAT version 1.2.6
STAT pointer_size 64
STAT rusage_user 0.028001
STAT rusage_system 0.000000
STAT curr_items 10
STAT total_items 17
STAT bytes 7971
STAT curr_connections 4
STAT total_connections 6
STAT connection_structures 5
STAT cmd_get 79
STAT cmd_set 17
STAT get_hits 62
STAT get_misses 17
STAT evictions 0
STAT bytes_read 14249
STAT bytes_written 67674
STAT limit_maxbytes 67108864
STAT threads 1
END
quit
Connection closed by foreign host.
07309:~/Desktop #
```

8 Continue with Section B.4, “Configuring Memcached in the Vibe Installation Program,” on page 163.

B.4 Configuring Memcached in the Vibe Installation Program

After you have installed and configured memcached, you need to configure the Vibe installation program to use memcached as the hibernate caching provider. For more information, see Section 6.1.2, “Running the Linux Vibe Installation Program,” on page 62.

B.5 Memcached Logging

To trace activities on the Vibe server that are related to memcached:

1. Navigate to the following directory: `/opt/novell/teaming/apache-tomcat/webapps/ssf/WEB-INF`
2. Open the `log4j.properties` file in a text editor.
3. Uncomment the following lines in the `log4j.properties` file:

```
# Tracing of memcached
#log4j.category.net.spy.memcached=DEBUG
#log4j.category.net.rubyeye.xmemcached=DEBUG
#log4j.category.com.googlecode.hibernate.memcached=DEBUG
#log4j.category.com.novell.teaming.memcached=DEBUG
#log4j.category.com.novell.teaming.hibernate.memcached=DEBUG
```

4. Save and close the `log4j.properties` file.
5. Restart the Vibe server.

C Third-Party Materials

C.1 ANTLR 3 License

Copyright (c) 2003-2008, Terence Parr

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

C.2 Colt License Agreement

Packages cern.colt*, cern.jet*, cern.clhep

Copyright (c) 1999 CERN - European Organization for Nuclear Research.

Permission to use, copy, modify, distribute and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation. CERN makes no representations about the suitability of this software for any purpose. It is provided “as is” without expressed or implied warranty.

Packages hep.aida.*

Written by Pavel Binko, Dino Ferrero Merlino, Wolfgang Hoschek, Tony Johnson, Andreas Pfeiffer, and others. Check the FreeHEP home page for more info. Permission to use and/or redistribute this work is granted under the terms of the LGPL License, with the exception that any usage related to military applications is expressly forbidden. The software and documentation made available under the terms of this license are provided with no warranty.

C.3 Dom4j License

Copyright 2001-2005 (C) MetaStuff, Ltd. All Rights Reserved.

Redistribution and use of this software and associated documentation (“Software”), with or without modification, are permitted provided that the following conditions are met:

1. 1.Redistributions of source code must retain copyright statements and notices. Redistributions must also contain a copy of this document.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. The name “DOM4J” must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact dom4j-info@metastuff.com.
4. The name “DOM4J” must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact dom4j-info@metastuff.com.
5. Products derived from this Software may not be called “DOM4J” nor may “DOM4J” appear in their names without prior written permission of MetaStuff, Ltd. DOM4J is a registered trademark of MetaStuff, Ltd.
6. Due credit should be given to the DOM4J Project (http://www.dom4j.org).

THIS SOFTWARE IS PROVIDED BY METASTUFF, LTD. AND CONTRIBUTORS “AS IS”' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL METASTUFF, LTD. OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Copyright 2001-2005 (C) MetaStuff, Ltd. All Rights Reserved.

C.4 iCal4j License

Copyright (c) 2008, Ben Fortuna

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Ben Fortuna nor the names of any other contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

C.5 ICU4J license (ICU4J 1.3.1 and later)

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2001 International Business Machines Corporation and others

All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, provided that the above copyright notice(s) and this permission notice appear in all copies of the Software and that both the above copyright notice(s) and this permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization of the copyright holder.

C.6 JAXEN License

Copyright (C) 2000-2002 Bob McWhirter & James Strachan.

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions, and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions, and the disclaimer that follows these conditions in the documentation and/or other materials provided with the distribution.
3. The name “Jaxen” must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact license@jaxen.org.
4. Products derived from this software may not be called “Jaxen,” nor may “Jaxen” appear in their name, without prior written permission from the Jaxen Project Management (pm@jaxen.org).

In addition, we request (but do not require) that you include in the end-user documentation provided with the redistribution and/or in the software itself an acknowledgement equivalent to the following:

“This product includes software developed by the Jaxen Project (http://www.jaxen.org).”

Alternatively, the acknowledgment may be graphical using the logos available at http://www.jaxen.org.

THIS SOFTWARE IS PROVIDED “AS IS” AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE Jaxen AUTHORS OR THE PROJECT CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This software consists of voluntary contributions made by many individuals on behalf of the Jaxen Project and was originally created by bob mcwhirter (bob@werken.com) and James Strachan (jstrachan@apache.org). For more information on the Jaxen Project, please see http://www.jaxen.org.

C.7 Jung

THE JUNG LICENSE

Copyright (c) 2003-2004, Regents of the University of California and the JUNG Project

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the University of California nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

C.8 ASM

Copyright (c) 2000-2005, INRIA, France Telecom

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright holders nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

C.9 Firebug Lite

Copyright (c) 2006-2007, Joe Hewitt

All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright holders nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS “AS IS” AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.