

## Installation Guide

# Novell<sup>®</sup> Vibe<sup>™</sup> OnPrem

3.1

June 27, 2011

[www.novell.com](http://www.novell.com)



## Legal Notices

Novell, Inc., makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc., makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

Any products or technical information provided under this Agreement may be subject to U.S. export controls and the trade laws of other countries. You agree to comply with all export control regulations and to obtain any required licenses or classification to export, re-export or import deliverables. You agree not to export or re-export to entities on the current U.S. export exclusion lists or to any embargoed or terrorist countries as specified in the U.S. export laws. You agree to not use deliverables for prohibited nuclear, missile, or chemical biological weaponry end uses. See the [Novell International Trade Services Web page \(http://www.novell.com/info/exports/\)](http://www.novell.com/info/exports/) for more information on exporting Novell software. Novell assumes no responsibility for your failure to obtain any necessary export approvals.

Copyright © 2008-2011 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

Novell, Inc.  
1800 South Novell Place  
Provo, UT 84606  
U.S.A.  
[www.novell.com](http://www.novell.com)

*Online Documentation:* To access the latest online documentation for this and other Novell products, see the [Novell Documentation Web page \(http://www.novell.com/documentation\)](http://www.novell.com/documentation).

## Novell Trademarks

For Novell trademarks, see [the Novell Trademark and Service Mark list \(http://www.novell.com/company/legal/trademarks/tmlist.html\)](http://www.novell.com/company/legal/trademarks/tmlist.html).

## Third-Party Materials

All third-party trademarks are the property of their respective owners.





# Contents

<b>About This Guide</b>	<b>11</b>
<b>Part I Product Overview</b>	<b>13</b>
<b>1 What Is Novell Vibe OnPrem?</b>	<b>15</b>
1.1 Vibe Capabilities	15
1.1.1 Content Consumers	15
1.1.2 Content Providers	15
1.1.3 Administrators	16
1.2 Vibe Components	16
1.2.1 Vibe Software	16
1.2.2 Vibe Database	16
1.2.3 Vibe File Repository	17
1.2.4 Lucene Index	17
1.3 Vibe Configurations	17
<b>2 Vibe OnPrem System Requirements</b>	<b>19</b>
2.1 Vibe Server Requirements	19
2.2 Vibe User Requirements	21
2.3 Mobile Device Requirements	21
2.3.1 Supported Mobile Devices	21
2.3.2 Device Browser Requirements	22
2.4 Supported Environments	22
2.4.1 File Viewer Support	22
2.4.2 IPV6 Support	22
2.4.3 Clustering Support	22
2.4.4 Xen Virtualization Support	23
2.4.5 VMware Support	23
2.4.6 Single Sign-On Support	23
2.4.7 Linux File System Support	23
2.5 Recommended Hardware Configurations	23
<b>Part II Basic Installation</b>	<b>25</b>
<b>3 Planning a Basic Vibe Installation</b>	<b>27</b>
3.1 What Is a Basic Vibe Installation?	27
3.2 Selecting the Operating Environment for Your Vibe Server	28
3.2.1 Vibe Server Platform	28
3.2.2 Vibe Server Architecture	28
3.2.3 Vibe Server Memory	29
3.2.4 Vibe Installation Locations	30
3.2.5 TrueType Font Location (Linux Only)	31
3.3 Selecting a Java Development Kit	31
3.4 Gathering Network Information for Your Vibe Site	32
3.4.1 Host Identification	32
3.4.2 Port Numbers	32

3.5	Planning the WebDAV Authentication Method . . . . .	35
3.5.1	Understanding WebDAV . . . . .	35
3.5.2	Choosing the WebDAV Authentication Method . . . . .	35
3.6	Planning the Vibe Database . . . . .	36
3.6.1	Database Type . . . . .	36
3.6.2	Database Setup Method . . . . .	37
3.6.3	Database Location . . . . .	37
3.6.4	Database Credentials . . . . .	38
3.6.5	Database Encryption Algorithm . . . . .	39
3.7	Gathering Outbound E-Mail Information . . . . .	39
3.7.1	Outbound E-Mail Protocol . . . . .	40
3.7.2	Outbound E-Mail Host . . . . .	40
3.7.3	Outbound E-Mail Authentication . . . . .	41
3.7.4	Outbound E-Mail Send Restriction . . . . .	41
3.8	Enabling Inbound E-Mail . . . . .	41
3.8.1	Internal Mail Host for Inbound E-Mail . . . . .	42
3.8.2	Inbound E-Mail Port Number . . . . .	42
3.8.3	Inbound E-Mail IP Address . . . . .	42
3.8.4	Inbound E-Mail Security . . . . .	43
3.9	Planning Site Security . . . . .	43
3.9.1	Vibe Site Administrator Password . . . . .	43
3.9.2	Linux User ID for Vibe . . . . .	43
3.10	Gathering Directory Services Information . . . . .	44
3.10.1	LDAP Directory Service . . . . .	44
3.10.2	LDAP Connections . . . . .	45
3.10.3	LDAP Synchronization Options . . . . .	48
3.11	Accommodating Multiple Languages . . . . .	50

## **4 Installing and Setting Up a Basic Vibe Site 53**

4.1	Linux: Installing and Setting Up a Basic Vibe Site . . . . .	53
4.1.1	Performing Pre-Installation Tasks on Linux . . . . .	53
4.1.2	Running the Linux Vibe Installation Program . . . . .	55
4.1.3	Installing Missing Libraries . . . . .	58
4.1.4	Configuring Vibe to Start Automatically on Reboot . . . . .	58
4.1.5	Setting Up Port Forwarding . . . . .	58
4.1.6	Starting Vibe on Linux . . . . .	60
4.1.7	Checking the Status of the Vibe Server . . . . .	60
4.1.8	Restarting Vibe . . . . .	61
4.1.9	Stopping Vibe . . . . .	61
4.1.10	Uninstalling Vibe . . . . .	61
4.2	Windows: Installing and Setting Up a Basic Vibe Site . . . . .	61
4.2.1	Performing Pre-Installation Tasks on Windows . . . . .	62
4.2.2	Running the Windows Vibe Installation Program . . . . .	63
4.2.3	Running Vibe as a Windows Service . . . . .	64
4.2.4	Running Vibe as a Windows Application . . . . .	66
4.2.5	Uninstalling Vibe . . . . .	66

## **5 Adding Users to Your Vibe Site 67**

5.1	Accessing Your Basic Vibe Site as the Site Administrator . . . . .	67
5.2	Creating a User . . . . .	69
5.3	Adding Vibe Users from Your LDAP Directory . . . . .	70

<b>6</b>	<b>Updating Your Vibe License</b>	<b>73</b>
<b>7</b>	<b>Setting Up Vibe</b>	<b>75</b>
<b>8</b>	<b>Basic Vibe Installation Summary Sheet</b>	<b>77</b>
<b>Part III Advanced Installation and Reconfiguration</b>		<b>83</b>
<b>9</b>	<b>Planning an Advanced Vibe Installation</b>	<b>85</b>
9.1	What Is an Advanced Installation? . . . . .	85
9.2	Distributing Different Data Types to Different Locations . . . . .	86
9.3	Using Advanced Network Information Settings . . . . .	87
9.3.1	Changing the Vibe Session Timeout . . . . .	87
9.3.2	Providing a Secure Keystore File . . . . .	88
9.4	Configuring Web Services . . . . .	88
9.5	Changing Your Lucene Index Server Configuration. . . . .	89
9.5.1	Understanding Indexing. . . . .	89
9.5.2	Changing Lucene Configuration Settings . . . . .	89
9.5.3	Running the Lucene Index Server in Its Own JVM . . . . .	90
9.5.4	Running the Lucene Index Server on a Remote Server . . . . .	90
9.5.5	Running Multiple Lucene Index Servers . . . . .	90
9.6	Managing RSS Feeds . . . . .	91
9.6.1	Configuring RSS Feeds. . . . .	91
9.6.2	Disabling RSS Feeds. . . . .	91
9.7	Configuring Presence. . . . .	91
9.8	Configuring Conferencing . . . . .	92
9.9	Configuring Single Sign-On with Novell Access Manager . . . . .	93
9.10	Configuring Single Sign-On with Internet Information Services for Windows. . . . .	94
9.10.1	System Requirements . . . . .	94
9.10.2	Planning Your IIS Installation and Configuration . . . . .	95
9.10.3	Configuring the Vibe Server to Support Windows Authentication . . . . .	96
9.10.4	Running the Vibe Installation Program . . . . .	103
9.10.5	Configuring Your Browser to Allow Access to the Vibe Site . . . . .	103
9.10.6	Bypassing Windows Authentication to Configure LDAP and Perform Other Tasks . . . . .	104
9.10.7	Logging In to the Vibe Site through Windows Authentication . . . . .	105
9.10.8	Editing Files through WebDAV with Windows Authentication . . . . .	105
9.10.9	Configuring IIS to Load Balance in a Clustered Environment . . . . .	106
9.11	Configuring Mirrored Folder Resource Drivers. . . . .	107
9.11.1	File System Type . . . . .	108
9.11.2	File System Directory. . . . .	108
9.11.3	File System Access . . . . .	108
9.11.4	Mirrored Folder Setup . . . . .	109
9.12	Installing the Vibe Software in a Clustered Environment . . . . .	109

<b>10 Performing an Advanced Vibe Installation</b>	<b>111</b>
<b>11 Setting Configuration Options after Installation</b>	<b>113</b>
<b>12 Advanced Vibe Installation Summary Sheet</b>	<b>115</b>
<b>Part IV Multi-Server Configurations and Clustering</b>	<b>119</b>
<b>13 Creating the Vibe Database on a Remote Server</b>	<b>121</b>
13.1 Preparing to Manually Create a Database . . . . .	121
13.2 Creating a MySQL Database . . . . .	122
13.3 Creating a Microsoft SQL Database . . . . .	123
13.4 Creating an Oracle Database. . . . .	124
13.5 Installing Vibe with a Remote Database . . . . .	125
<b>14 Installing the Lucene Index Server on a Remote Server</b>	<b>127</b>
14.1 Installing the Lucene Software . . . . .	127
14.2 Updating Your Vibe Site. . . . .	128
14.3 Managing a Remote Lucene Index Server. . . . .	129
14.3.1 Linux: Managing a Remote Lucene Index Server . . . . .	129
14.3.2 Windows: Managing a Remote Lucene Index Server . . . . .	129
<b>15 Running Vibe on Multiple Servers</b>	<b>131</b>
15.1 Planning a Multi-Server Vibe Configuration . . . . .	131
15.1.1 Lucene Index Server Considerations. . . . .	131
15.1.2 Vibe File Repository Considerations . . . . .	131
15.2 Installing the Vibe Software on Multiple Servers . . . . .	132
15.3 Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site . . . . .	133
15.3.1 Configuring Tomcat and Apache as a Load Balancer . . . . .	134
15.3.2 Configuring Linux Virtual Server as a Load Balancer . . . . .	135
15.4 Configuring Internet Information Services to Support Multiple Vibe Servers . . . . .	135
<b>16 Running Multiple Lucene Index Servers</b>	<b>137</b>
16.1 Planning a High Availability Lucene Configuration. . . . .	137
16.2 Setting Up a High Availability Lucene Configuration . . . . .	138
16.2.1 Changing from a Local Lucene Index Server . . . . .	138
16.2.2 Changing from a Single Remote Lucene Index Server . . . . .	141
16.2.3 Expanding an Existing High Availability Lucene Configuration . . . . .	144
16.2.4 Changing Your Lucene Configuration without Vibe Site Down Time. . . . .	146
16.3 Testing Your Lucene High Availability Configuration . . . . .	150
16.3.1 Configuring Vibe to Log Lucene Node Activity . . . . .	151
16.3.2 Observing Lucene Node Activity . . . . .	151
16.4 Synchronizing a High Availability Lucene Configuration . . . . .	152



<b>17 Running Multiple Database Servers</b>	<b>155</b>
<b>Part V Update</b>	<b>157</b>
<b>18 What's New in Novell Vibe OnPrem 3.x</b>	<b>159</b>
18.1 Vibe 3.x User Enhancements . . . . .	159
18.2 Vibe 3.x Installation Enhancements . . . . .	159
18.3 Vibe 3.x Administration Enhancements . . . . .	159
<b>19 Updating from Novell Vibe 3 to Novell Vibe 3.1</b>	<b>163</b>
19.1 Understanding the Update Process . . . . .	163
19.2 Updating a Single-Server System from Vibe 3 to Vibe 3.1 . . . . .	163
19.2.1 Updating an Oracle Database from 3 to 3.1 . . . . .	165
19.3 Updating a Multiple-Server System from Vibe 3 to Vibe 3.1 . . . . .	165
19.3.1 Manual Vibe Database Update . . . . .	165
19.3.2 Remote Lucene Index Server Update . . . . .	166
19.4 Performing Post-Update Tasks . . . . .	167
19.4.1 Resetting Your Definitions . . . . .	167
19.4.2 Resetting the Search Index . . . . .	168
19.4.3 Resetting the Standard Templates . . . . .	168
<b>20 Updating the Operating System Where Vibe Is Running</b>	<b>169</b>
<b>21 Migrating Existing Novell Vibe Data into a New Vibe 3.1 System</b>	<b>171</b>
21.1 Linux Migration with a MySQL Database . . . . .	171
21.1.1 Preparing the Target Linux Server . . . . .	171
21.1.2 Preparing the Source Linux Server . . . . .	172
21.1.3 Transferring Data from the Source Server to the Target Server . . . . .	172
21.1.4 Importing the Vibe Database to the Target Server . . . . .	173
21.1.5 Updating the Vibe Database on the Target Server . . . . .	173
21.1.6 Finalizing Your New Vibe 3.1 Site . . . . .	173
21.2 Windows Migration with an MS SQL Database . . . . .	173
21.2.1 Preparing the Target Windows Server . . . . .	174
21.2.2 Preparing the Source Windows Server . . . . .	174
21.2.3 Transferring Data from the Source Server to the Target Server . . . . .	174
21.2.4 Importing the Database to the Target Server . . . . .	175
21.2.5 Updating the Vibe Database on the Target Server . . . . .	175
21.2.6 Finalizing Your New Vibe 3.1 Site . . . . .	176
<b>22 Migrating from SiteScape Forum or Other Collaboration Software</b>	<b>177</b>
<b>Part VI Appendixes</b>	<b>179</b>
<b>A Vibe System Requirements Assistance</b>	<b>181</b>
A.1 Java Development Kit . . . . .	181
A.1.1 Sun JDK on Linux . . . . .	181
A.1.2 IBM JDK on Linux . . . . .	182
A.1.3 Sun JDK on Windows . . . . .	183
A.2 MySQL Database Server . . . . .	183

A.2.1	MySQL on Linux .....	183
A.2.2	MySQL on Windows .....	185

**B Third-Party Materials 187**

B.1	ANTLR 3 License .....	187
B.2	Colt License Agreement .....	188
B.3	Dom4j License .....	188
B.4	iCal4j License .....	189
B.5	ICU4J license (ICU4J 1.3.1 and later) .....	189
B.6	JAXEN License .....	190
B.7	Jung .....	191
B.8	ASM .....	191
B.9	Firebug Lite .....	192

# About This Guide

The *Novell Vibe OnPrem 3.1 Installation Guide* covers the installation and configuration of the Novell Vibe OnPrem software. The guide is divided into the following sections:

- ♦ Part I, “Product Overview,” on page 13
- ♦ Part II, “Basic Installation,” on page 25
- ♦ Part III, “Advanced Installation and Reconfiguration,” on page 83
- ♦ Part IV, “Multi-Server Configurations and Clustering,” on page 119
- ♦ Part V, “Update,” on page 157
- ♦ Part VI, “Appendixes,” on page 179

## Audience

This guide is intended for Novell Vibe OnPrem administrators.

## Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to [www.novell.com/documentation/feedback.html](http://www.novell.com/documentation/feedback.html) and enter your comments there.

## Documentation Updates

For the most recent version of this manual, visit the [Novell Vibe OnPrem 3.1 Documentation Web site \(http://www.novell.com/documentation/vibe\\_onprem31\)](http://www.novell.com/documentation/vibe_onprem31).

## Additional Documentation

You can find more information in the Novell Vibe documentation, which is accessible from the [Novell Vibe OnPrem 3.1 Documentation Web site \(http://www.novell.com/documentation/vibe\\_onprem31\)](http://www.novell.com/documentation/vibe_onprem31).

To access the *Novell Vibe OnPrem User Guide* from within Vibe, click the *Help* icon (question mark).



# Product Overview

- ♦ [Chapter 1, “What Is Novell Vibe OnPrem?”](#) on page 15
- ♦ [Chapter 2, “Vibe OnPrem System Requirements,”](#) on page 19



# What Is Novell Vibe OnPrem?

# 1

Novell Vibe OnPrem 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.

- ◆ [Section 1.1, “Vibe Capabilities,” on page 15](#)
- ◆ [Section 1.2, “Vibe Components,” on page 16](#)
- ◆ [Section 1.3, “Vibe Configurations,” on page 17](#)

## 1.1 Vibe Capabilities

Novell Vibe users fall into three basic groups:

- ◆ [Section 1.1.1, “Content Consumers,” on page 15](#)
- ◆ [Section 1.1.2, “Content Providers,” on page 15](#)
- ◆ [Section 1.1.3, “Administrators,” on page 16](#)

### 1.1.1 Content Consumers

Content consumers use Novell 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 [Novell Vibe OnPrem 3.1 User Guide](#).

In many cases, content consumers quickly become content providers.

### 1.1.2 Content Providers

Content providers use Novell 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 [Novell Vibe OnPrem 3.1 Advanced User Guide](#).

### 1.1.3 Administrators

A Novell Vibe administrator is responsible for installing the Vibe software and setting up the Vibe site. This [Novell Vibe OnPrem 3.1 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 e-mail integration, so that Vibe users can receive notifications of updated information on the Vibe site and post to the Vibe site by using e-mail 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 [Novell Vibe OnPrem 3.1 Administration Guide](#).

## 1.2 Vibe Components

A Novell Vibe site consists of four major components:

- ♦ [Section 1.2.1, “Vibe Software,” on page 16](#)
- ♦ [Section 1.2.2, “Vibe Database,” on page 16](#)
- ♦ [Section 1.2.3, “Vibe File Repository,” on page 17](#)
- ♦ [Section 1.2.4, “Lucene Index,” on page 17](#)

### 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 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 e-mail 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 Novell 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.
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.
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.
Multiple Remote Database Servers	Each of the three databases supported by Vibe each has its own approach to clustering the database server. Information about clustering database servers is available on the Internet.

For more information, see [Part IV, “Multi-Server Configurations and Clustering,”](#) on page 119.



# Vibe OnPrem System Requirements

# 2

You, as a Novell Vibe OnPrem 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.

- ◆ [Section 2.1, “Vibe Server Requirements,” on page 19](#)
- ◆ [Section 2.2, “Vibe User Requirements,” on page 21](#)
- ◆ [Section 2.3, “Mobile Device Requirements,” on page 21](#)
- ◆ [Section 2.4, “Supported Environments,” on page 22](#)
- ◆ [Section 2.5, “Recommended Hardware Configurations,” on page 23](#)

For the latest system requirements details, see the [Novell Vibe OnPrem 3.1 Readme \(http://www.novell.com/documentation/vibe\\_onprem31/vibeprem31\\_readme\\_novell/data/vibeprem31\\_readme\\_novell.html\)](http://www.novell.com/documentation/vibe_onprem31/vibeprem31_readme_novell/data/vibeprem31_readme_novell.html).

## 2.1 Vibe Server Requirements

- ◆ Hardware for the Novell Vibe server:
  - ◆ x86-32 processor or x86-64 processor
  - ◆ Minimum 2 GHz processor
  - ◆ Multi-CPU systems preferred
  - ◆ Minimum server memory:
    - ◆ At least 3 GB RAM for an x86-32 processor
    - ◆ At least 4 GB RAM for an x86-64 processor

See [Section 2.5, “Recommended Hardware Configurations,” on page 23](#) and [Section 3.2.3, “Vibe Server Memory,” on page 29](#).
- ◆ Any of the following supported server operating systems for the Vibe server:
  - ◆ Novell Open Enterprise Server (OES) 2, plus the latest Support Pack
  - ◆ Novell Open Enterprise Server 11, plus the latest Support Pack
  - ◆ SUSE Linux Enterprise Server (SLES) 10 or SLES 11, plus the latest Support Pack

---

**NOTE:** On SLES, the X Window System is required by the Vibe installation program. It is not required to run Vibe after installation.

---

- ◆ Windows Server 2003 or Windows Server 2008, plus the latest Service Pack
- ◆ Windows Server 2003R2 or Windows Server 2008R2, plus the latest Service Pack
- ◆ Database server:
  - ◆ Linux:
    - ◆ MySQL 5.0.26 or later server and client, or MySQL 5.1 server and client

---

**NOTE:** MySQL 5.0.26 is included with SLES 10 SP1 and OES 2 Linux. MySQL 5.0.67 is included with SLES 11.

---

- ♦ Oracle 10g or Oracle 11g
- ♦ Windows:
  - ♦ MySQL 5.0.26 or later server and tools, or MySQL 5.1 server and tools
  - ♦ Microsoft SQL Server 2005 or SQL Server 2008, plus the latest Service Pack
  - ♦ Oracle 10g or Oracle 11g

More information about MySQL is available in [Section A.2, “MySQL Database Server,”](#) on [page 183](#).

- ♦ Tomcat 6.0.18

---

**NOTE:** Tomcat 6.0.18 is included with Vibe on Linux and Windows.

---

- ♦ Java Developer Kit (JDK):

- ♦ Sun JDK 6.0
- ♦ IBM JDK 6.0

Java scripting must be enabled for proper Vibe site functionality.

More information about JDKs is available in “[Java Development Kit](#)” in [Appendix A, “Vibe System Requirements Assistance,”](#) on [page 181](#).

- ♦ Directory service:

- ♦ Linux: Novell eDirectory 8.8 or later, plus the latest Support Pack

For information about eDirectory, see the [Novell eDirectory 8.8 Documentation Web site \(http://www.novell.com/documentation/edir88\)](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 \(http://www.microsoft.com/windowsserver2003/technologies/directory/activedirectory\)](http://www.microsoft.com/windowsserver2003/technologies/directory/activedirectory) or [Windows Server 2008 Active Directory \(http://www.microsoft.com/windowsserver2008/en/us/active-directory.aspx\)](http://www.microsoft.com/windowsserver2008/en/us/active-directory.aspx).

- ♦ Adequate server disk space:

- ♦ Vibe software: At least 500 MB for a new installation

When you upgrade an existing Vibe system, ensure that your server has at least twice the amount of disk space available as is 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 upgrade an existing Vibe system, ensure that your server has at least twice the amount of disk space available as is 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 3.6, “Planning the Vibe Database,”](#) on page 36 to plan for the disk space needs of your Vibe site.

## 2.2 Vibe User Requirements

- ♦ Web browser:
  - ♦ Linux: Mozilla Firefox 3 or later; Google Chrome (latest version)
  - ♦ Windows: Microsoft Internet Explorer 6 or later; Mozilla Firefox 3 or later; Google Chrome (latest version)

When you use Internet Explorer 6, some functionality might not be available.

  - ♦ Mac: Safari 4 or later; Mozilla Firefox 3 or later
- ♦ Office applications:
  - ♦ Linux: OpenOffice.org 3.1.1 or later
  - ♦ Windows: Microsoft Office 2007 or later; OpenOffice.org 3.1.1 or later
  - ♦ Mac: OpenOffice.org 3.1.1 or later
- ♦ Collaboration clients:
  - ♦ Linux:
    - ♦ GroupWise 8 with the latest Support Pack
  - ♦ Windows:
    - ♦ GroupWise 8 with the latest Support Pack
    - ♦ Outlook 2007 with iCal support enabled
    - ♦ Notes 7 with iCal support enabled

## 2.3 Mobile Device Requirements

- ♦ [Section 2.3.1, “Supported Mobile Devices,”](#) on page 21
- ♦ [Section 2.3.2, “Device Browser Requirements,”](#) on page 22

### 2.3.1 Supported Mobile Devices

The Novell Vibe mobile interface is supported on the following mobile devices:

- ♦ iPhone
- ♦ BlackBerry

---

**NOTE:** The BlackBerry Curve has issues with JavaScript, so it does not work with the Vibe mobile interface. For more information, see [“Your BlackBerry Curve Does Not Work with the Mobile Interface”](#) in [“Troubleshooting”](#) in the *Novell Vibe OnPrem 3.1 User Guide*.

---

- ♦ Any other mobile device that provides an HTTP/HTML-based interface

Ensure that your device's browser meets the requirements that are discussed in [Section 2.3.2, "Device Browser Requirements,"](#) on page 22.

## 2.3.2 Device Browser Requirements

To use Vibe from a mobile device, your device's browser must support:

- ♦ HTML 4
- ♦ JavaScript

## 2.4 Supported Environments

- ♦ [Section 2.4.1, "File Viewer Support,"](#) on page 22
- ♦ [Section 2.4.2, "IPV6 Support,"](#) on page 22
- ♦ [Section 2.4.3, "Clustering Support,"](#) on page 22
- ♦ [Section 2.4.4, "Xen Virtualization Support,"](#) on page 23
- ♦ [Section 2.4.5, "VMware Support,"](#) on page 23
- ♦ [Section 2.4.6, "Single Sign-On Support,"](#) on page 23
- ♦ [Section 2.4.7, "Linux File System Support,"](#) on page 23

### 2.4.1 File Viewer Support

In Novell Vibe, file viewing capabilities are provided by Oracle Outside In viewer technology. See ["Oracle Outside In Technology 8.3 Supported Formats"](http://www.oracle.com/technology/products/content-management/oit/ds_oitFiles.pdf) ([http://www.oracle.com/technology/products/content-management/oit/ds\\_oitFiles.pdf](http://www.oracle.com/technology/products/content-management/oit/ds_oitFiles.pdf)) for a list of the supported file formats. See ["Oracle Outside In Technology"](http://www.oracle.com/technologies/embedded/outside-in.html) (<http://www.oracle.com/technologies/embedded/outside-in.html>) for background information about the Oracle viewer technology included in Vibe.

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

### 2.4.2 IPV6 Support

Novell 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.

### 2.4.3 Clustering Support

You can install Vibe components on multiple servers to provide failover support, as described in [Part IV, "Multi-Server Configurations and Clustering,"](#) on page 119.

## 2.4.4 Xen Virtualization Support

You can install Vibe in virtual environments where a software program enables one physical server to function as if it were two or more physical servers. Xen virtualization technology in Novell Open Enterprise Server (Linux version) and SUSE Linux Enterprise Server is supported. For more information, see:

- ◆ [Open Enterprise Server 2 Virtualization Documentation Web site \(http://www.novell.com/documentation/oes2/virtualization.html#virtualization\)](http://www.novell.com/documentation/oes2/virtualization.html#virtualization)
- ◆ [SLES Virtualization Technology Documentation Web site \(http://www.novell.com/documentation/vmserver\)](http://www.novell.com/documentation/vmserver).

## 2.4.5 VMware Support

Vibe is supported on the following versions of VMware:

- ◆ VMware Server (formally GSX Server), an enterprise-class virtual infrastructure for x86-based servers
- ◆ VMware ESX Server, a data-center-class virtual infrastructure for mission-critical environments

For more information, see the [VMWare Web site \(http://www.vmware.com\)](http://www.vmware.com).

## 2.4.6 Single Sign-On Support

Novell Access Manager can be used to provide single sign-on capabilities for your Vibe site. For setup instructions, see [Section 9.9, “Configuring Single Sign-On with Novell Access Manager,” on page 93](#).

## 2.4.7 Linux File System Support

For best Vibe performance on Linux, the ext3 file system is recommended. If you are running OES Linux and need the feature-rich environment of the NSS file system, Vibe is also supported there. The reiser3 file system is also supported.

# 2.5 Recommended Hardware Configurations

The hardware configuration that you set up for your Novell Vibe site should be based on the number of active users that the Vibe site must support. Server machines can be physical or virtual.

Active Users	Vibe Components	CPU	Memory	Java Heap
10	1 dedicated Vibe server with: <ul style="list-style-type: none"><li>◆ Tomcat</li><li>◆ Lucene</li><li>◆ SQL</li></ul>	x86	2 GB	1 GB

Active Users	Vibe Components	CPU	Memory	Java Heap
50	1 dedicated Vibe server with: <ul style="list-style-type: none"> <li>◆ Tomcat</li> <li>◆ Lucene</li> <li>◆ SQL</li> </ul>	x64 dual core	4 GB	2 GB
100	Multiple Vibe servers: <ul style="list-style-type: none"> <li>◆ 1 dedicated Tomcat server</li> <li>◆ 1 dedicated Lucene server</li> <li>◆ 1 dedicated SQL server</li> </ul>	x64 dual core	4 GB	2 GB
500	Multiple Vibe servers: <ul style="list-style-type: none"> <li>◆ 3 dedicated Tomcat servers with an L4 load balancer</li> <li>◆ 2 dedicated Lucene servers</li> <li>◆ 2 dedicated SQL servers</li> </ul>	x64 quad core	8 GB	6 GB
1000	Multiple Vibe servers: <ul style="list-style-type: none"> <li>◆ 5 dedicated Tomcat servers with an L4 load balancer</li> <li>◆ 4 dedicated Lucene servers</li> <li>◆ 2 dedicated SQL servers</li> </ul>	x64 quad core	8 GB	6 GB

The Novell 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.

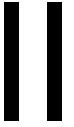
If you are new to Vibe, the easiest way to get started is to perform a Basic installation first, with all Vibe components installed on the same server, then add advanced configuration options to your Vibe site after the Basic installation has been successfully tested. However, experienced Vibe administrators can choose to perform an Advanced installation immediately, which includes all installation and configuration options, as described in [Part III, “Advanced Installation and Reconfiguration,” on page 83](#).

You can perform a Basic installation to set up a single-server configuration, as described in [Chapter 3, “Planning a Basic Vibe Installation,” on page 27](#) and [Chapter 4, “Installing and Setting Up a Basic Vibe Site,” on page 53](#).

You can perform a Basic installation to set up a multiple-server configuration, but the remote database must be created manually and in advance of performing the installation, as described in [Part IV, “Multi-Server Configurations and Clustering,” on page 119](#).



# Basic Installation



- ♦ [Chapter 3, “Planning a Basic Vibe Installation,” on page 27](#)
- ♦ [Chapter 4, “Installing and Setting Up a Basic Vibe Site,” on page 53](#)
- ♦ [Chapter 5, “Adding Users to Your Vibe Site,” on page 67](#)
- ♦ [Chapter 6, “Updating Your Vibe License,” on page 73](#)
- ♦ [Chapter 7, “Setting Up Vibe,” on page 75](#)
- ♦ [Chapter 8, “Basic Vibe Installation Summary Sheet,” on page 77](#)



# Planning a Basic Vibe Installation

# 3

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

- ◆ [Section 3.1, “What Is a Basic Vibe Installation?,” on page 27](#)
- ◆ [Section 3.2, “Selecting the Operating Environment for Your Vibe Server,” on page 28](#)
- ◆ [Section 3.3, “Selecting a Java Development Kit,” on page 31](#)
- ◆ [Section 3.4, “Gathering Network Information for Your Vibe Site,” on page 32](#)
- ◆ [Section 3.5, “Planning the WebDAV Authentication Method,” on page 35](#)
- ◆ [Section 3.6, “Planning the Vibe Database,” on page 36](#)
- ◆ [Section 3.7, “Gathering Outbound E-Mail Information,” on page 39](#)
- ◆ [Section 3.8, “Enabling Inbound E-Mail,” on page 41](#)
- ◆ [Section 3.9, “Planning Site Security,” on page 43](#)
- ◆ [Section 3.10, “Gathering Directory Services Information,” on page 44](#)
- ◆ [Section 3.11, “Accommodating Multiple Languages,” on page 50](#)

## 3.1 What Is a Basic Vibe Installation?

The Novell 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 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 III, “Advanced Installation and Reconfiguration,” on page 83](#).

---

**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 9.2, “Distributing Different Data Types to Different Locations,” on page 86](#) for Advanced installation instructions. You cannot move subdirectories within the Vibe file repository after they have been created.
- ◆ Installing the Vibe software on multiple servers to create a clustered environment. See [Chapter 15, “Running Vibe on Multiple Servers,” on page 131](#) for Advanced installation instructions. The option to enable a clustered environment is available only during an Advanced installation.

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, Microsoft SQL Server, or Oracle)
- ♦ Database creation (during installation or before installation)
- ♦ Database authentication (username and password)
- ♦ Network information (Vibe server hostname or fully qualified domain name, and ports)
- ♦ Outbound e-mail configuration (SMTP vs. SMTPS, hostname, SMTP port, time zone, authentication)
- ♦ Inbound e-mail configuration (SMTP address, SMTP port, and TLS support)
- ♦ User and group for running the Vibe software (Linux only)

Before performing a Basic installation, make sure all system requirements are met, as listed in [Chapter 2, “Vibe OnPrem System Requirements,” on page 19](#).

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.

## 3.2 Selecting the Operating Environment for Your Vibe Server

- ♦ [Section 3.2.1, “Vibe Server Platform,” on page 28](#)
- ♦ [Section 3.2.2, “Vibe Server Architecture,” on page 28](#)
- ♦ [Section 3.2.3, “Vibe Server Memory,” on page 29](#)
- ♦ [Section 3.2.4, “Vibe Installation Locations,” on page 30](#)
- ♦ [Section 3.2.5, “TrueType Font Location \(Linux Only\),” on page 31](#)

### 3.2.1 Vibe Server Platform

Novell Vibe can run on the versions of Linux and Windows listed in [Section 2.1, “Vibe Server Requirements,” on page 19](#).

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Vibe Server Platform*, mark your operating system of choice.

---

### 3.2.2 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.

---

### 3.2.3 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 13, “Creating the Vibe Database on a Remote Server,”](#) on page 121.

- ♦ **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 3.2.4, “Vibe Installation Locations,”](#) on page 30. 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. After you have successfully tested your Basic installation, you can reconfigure Vibe to have its Lucene index on a remote server, so that it uses separate memory resources, as described in [“Installing the Lucene Index Server on a Remote Server”](#) on page 127.

---

**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.

### 3.2.4 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 thumbnails and 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 9.2, “Distributing Different Data Types to Different Locations,”](#) on page 86.

---

### 3.2.5 TrueType Font Location (Linux Only)

The Oracle Outside In viewer technology used by Novell Vibe to render various file formats into HTML for viewing requires access to TrueType fonts. Typical locations for these fonts are:

```
/usr/X11R6/lib/X11/fonts/truetype  
/usr/share/fonts/truetype
```

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *TrueType Font*, specify the directory that contains the TrueType font location.

---

## 3.3 Selecting a Java Development Kit

As listed in [Section 2.1, “Vibe Server Requirements,”](#) on page 19, you need to install a Java Development Kit (JDK) before you install Novell 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 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 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](#)” in [Appendix A, “Vibe System Requirements Assistance,”](#) on page 181 for instructions.

---

#### 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.

## 3.4 Gathering Network Information for Your Vibe Site

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

- ♦ [Section 3.4.1, “Host Identification,” on page 32](#)
- ♦ [Section 3.4.2, “Port Numbers,” on page 32](#)

### 3.4.1 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.

---

### 3.4.2 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 Web site \(http://tomcat.apache.org\)](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`

Make sure 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 33](#)
- ♦ [“HTTP/HTTPS Ports When You Use Novell Access Manager with Vibe OnPrem” on page 33](#)
- ♦ [“Shutdown Port” on page 34](#)
- ♦ [“AJP Port” on page 34](#)



## 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 3.9.2, “Linux User ID for Vibe,” on page 43](#). 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. To have Vibe 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 58](#) 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 *Novell Vibe OnPrem 3.1 Administration Guide* either before or after you install Vibe.

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

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” on page 34
- ◆ “Linux Port Configuration” on page 34

### Windows Port Configuration

Use the following port configuration when Novell Access Manager is fronting your Vibe OnPrem 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 OnPrem 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 [Section 4.1.5, “Setting Up Port Forwarding,” on page 58.](#)

### Shutdown Port

By default, Vibe uses 8005 as its shutdown port. For an explanation of the shutdown port, see [Tomcat - Shutdown Port \(http://www.wellho.net/mouth/837\\_Tomcat-Shutdown-port.html\)](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 \(http://tomcat.apache.org/tomcat-6.0-doc/config/ajp.html\)](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.

---

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.

---

## 3.5 Planning the WebDAV Authentication Method

- ♦ [Section 3.5.1, “Understanding WebDAV,” on page 35](#)
- ♦ [Section 3.5.2, “Choosing the WebDAV Authentication Method,” on page 35](#)

### 3.5.1 Understanding WebDAV

WebDAV is a standard collaborative editing and file management protocol. Novell 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 [“Using WebDAV to Edit Individual Files”](#) in the *Novell Vibe OnPrem 3.1 Advanced 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 *Novell Vibe OnPrem 3.1 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 *Novell Vibe OnPrem 3.1 Administration Guide*.

---

### 3.5.2 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 35](#)
- ♦ [“Choosing Digest Authentication” on page 36](#)
- ♦ [“Choosing Windows Authentication” on page 36](#)

#### Choosing Basic Authentication

Basic authentication uses a one-way encryption algorithm known as asymmetric encryption. 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 3.6.5, “Database Encryption Algorithm,” on page 39](#).

## Choosing Digest Authentication

Digest authentication uses a reversible two-way encryption algorithm known as symmetric encryption. 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 3.6.5, “Database Encryption Algorithm,”](#) on page 39.

## Choosing Windows Authentication

Windows Authentication provides Windows users with a single sign-on experience, enabling users to automatically authenticate to Vibe after they are logged in to their individual workstations. Internet Information Services (IIS) provides this capability.

To configure Vibe to use Windows Authentication as the WebDAV authentication method, select *basic* in the *WebDAV authentication method* field during the Vibe installation program, then configure Windows Authentication as described in [Section 9.10, “Configuring Single Sign-On with Internet Information Services for Windows,”](#) on page 94.

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *WebDAV authentication method*, specify the authentication method you want Vibe to use when authenticating to WebDAV.

---

## 3.6 Planning the Vibe Database

Novell 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 3.2.4, “Vibe Installation Locations,”](#) on page 30.

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 e-mail address)

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

- ♦ [Section 3.6.1, “Database Type,”](#) on page 36
- ♦ [Section 3.6.2, “Database Setup Method,”](#) on page 37
- ♦ [Section 3.6.3, “Database Location,”](#) on page 37
- ♦ [Section 3.6.4, “Database Credentials,”](#) on page 38
- ♦ [Section 3.6.5, “Database Encryption Algorithm,”](#) on page 39

### 3.6.1 Database Type

By default, Vibe uses open source MySQL as its database on Linux and on Windows. On Linux, Vibe also supports Oracle. On Windows, Vibe also supports Microsoft SQL Server and Oracle.

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *Database Type*, mark the type of database that you want to use with Vibe.

---

Make sure that a supported version of the database server, as listed in [Section 2.1, “Vibe Server Requirements,”](#) on page 19, is installed and running before you install Vibe.

### 3.6.2 Database Setup Method

If you plan to use a MySQL database or a Microsoft SQL database, the Vibe installation program can automatically set up the database for you. This is the easiest way to get started.

If you plan to use an Oracle database, you must have your database administrator set up the database for you. Instructions for your database administrator are provided in [Section 13.4, “Creating an Oracle Database,”](#) on page 124.

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *Database Setup Method*, mark whether you want the Vibe Installation program to automatically set up a MySQL or Microsoft SQL database, or whether you need your database administrator to manually set up an Oracle database before you install Vibe.

---

### 3.6.3 Database Location

When you have the Vibe Installation program create the database for you, the database is created on the same server where you install the Vibe software. This 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	<code>/var/lib/mysql</code>	<code>c:\Documents and Settings\All Users\Application Data\MySQL\MySQL Server version\Data</code>
Microsoft SQL	N/A	<code>c:\Program Files\Microsoft SQL Server\MSSQL\Data</code>
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 13, “Creating the Vibe Database on a Remote Server,”](#) on page 121.

If you need to have your database administrator create an Oracle database, you must decide before installation whether you want the database on the Vibe server or on a remote server. See [Section 13.4, “Creating an Oracle Database,”](#) on page 124.

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	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.

---

### 3.6.4 Database Credentials

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

---

Database	Default Administrative Username
MySQL	root
	<b>IMPORTANT:</b> The MySQL <code>root</code> username is not the same as the Linux <code>root</code> user on a Linux server.
Microsoft SQL	sa (system administrator)
Oracle	(no default) For an Oracle database, your database administrator establishes the administrator username and password for the database server.

---

For an Oracle database, your database administrator establishes the administrator username and password for the database server.

Check with your database administrator to see if the default administrator username 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 username and password for the database server so that Vibe can access its database.

---

## 3.6.5 Database Encryption Algorithm

Different encryption algorithms provide differing encryption strength. The supported algorithms for encrypting the Vibe database password are listed below, in order from least strength to most strength.

- ♦ MD5
- ♦ SHA

This is the default option when you use Basic Authentication for WebDAV authentication, as described in [Section 3.5, “Planning the WebDAV Authentication Method,” on page 35](#)

- ♦ SHA-256
- ♦ PBEWithMD5AndDES

This is the only available option when you select Digest Authentication for WebDAV authentication, as described in [Section 3.5, “Planning the WebDAV Authentication Method,” on page 35](#)

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

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

---

## 3.7 Gathering Outbound E-Mail Information

Your Novell Vibe site can be configured to send outbound e-mail through an existing e-mail system. E-mail from the Vibe site is useful for the following activities:

- ♦ Vibe users can subscribe to e-mail 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 *Novell Vibe OnPrem 3.1 User Guide*.
- ♦ From the Vibe site, users can send e-mail messages to individual users or to teams. For more information, see “[Sending E-Mail from within Vibe](#)” in “[Connecting With Your Co-Workers](#)” in the *Novell Vibe OnPrem 3.1 User Guide*.
- ♦ If your e-mail client is iCal-enabled, appointments created in a Vibe Calendar folder can be sent to your e-mail client for posting in your e-mail client Calendar. For example, if you are using GroupWise, see “[Accepting or Declining Internet Items](#)” in “[Calendar](#)” in the *GroupWise 8 Windows Client User Guide* [GroupWise 8 Windows Client Help](#).

In order for your Vibe site to communicate with your e-mail system, you need to gather the following information about your e-mail system.

- ♦ [Section 3.7.1, “Outbound E-Mail Protocol,” on page 40](#)
- ♦ [Section 3.7.2, “Outbound E-Mail Host,” on page 40](#)
- ♦ [Section 3.7.3, “Outbound E-Mail Authentication,” on page 41](#)
- ♦ [Section 3.7.4, “Outbound E-Mail Send Restriction,” on page 41](#)

After installation, outbound e-mail can be disabled and enabled again on the Vibe site, as described in “[Configuring E-Mail Integration](#)” in “[Site Setup](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*. However, you must configure outbound e-mail in the Vibe installation program.

## 3.7.1 Outbound E-Mail Protocol

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

For GroupWise, you can check how the Internet Agent is configured:

- 1 In ConsoleOne, browse to and right-click the Internet Agent object, then click *Properties*.
- 2 Click *GroupWise > Network Address*.  
In the *SMTP* field, if the *SSL* column displays *Disabled*, GroupWise is using SMTP. If the *SSL* column displays *Enabled*, GroupWise is using SMTPS.
- 3 Click *Cancel* to close the Network Address page.

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Outbound E-Mail Protocol*, mark SMTP or SMTPS to match the e-mail system that you want Vibe to communicate with.

---

If the e-mail system requires SMTPS, see “[Securing E-Mail Transfer](#)” in “[Site Security](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

## 3.7.2 Outbound E-Mail Host

In order to send messages to your e-mail 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.

For GroupWise, this is the hostname of a server where the Internet Agent is running. GroupWise always uses port 25, even when SSL is enabled.

When the Vibe site sends e-mail 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 e-mail 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 are:

---

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 E-Mail 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.

---

### 3.7.3 Outbound E-Mail Authentication

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

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

By default, the GroupWise Internet Agent does not require authentication in order to receive inbound messages. However, the `/forceinboundauth` startup switch is available for use in the Internet Agent startup file (`gwia.cfg`) to configure the Internet Agent to refuse SMTP connections where a valid e-mail username and password are not provided. The Internet Agent can accept just the username or the full e-mail address.

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *Outbound E-Mail Authentication*, indicate whether or not authentication is required for the Vibe site to communicate with your e-mail system. If it is, specify the username or e-mail address, and if necessary, the password for the e-mail account.

---

### 3.7.4 Outbound E-Mail 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 e-mail messages. If desired, you can prevent messages from being sent to the All Users group.

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *Allow Sending E-Mail to All Users*, mark whether or not you want users to be able to send messages to the All Users group.

---

## 3.8 Enabling Inbound E-Mail

You can configure your Novell Vibe site so that users can post comments by e-mailing them to the folder where they want to post the comment. In order to receive e-mail postings, folders must be properly configured, as described in “[Enabling Folders to Receive Entries through E-Mail](#)” in “[Managing Folders](#)” in the *Novell Vibe OnPrem 3.1 User Guide*. Also, users must know the e-mail address of the folder where they want to post their comment.

- ♦ [Section 3.8.1, “Internal Mail Host for Inbound E-Mail,”](#) on page 42
- ♦ [Section 3.8.2, “Inbound E-Mail Port Number,”](#) on page 42

- ◆ [Section 3.8.3, “Inbound E-Mail IP Address,”](#) on page 42
- ◆ [Section 3.8.4, “Inbound E-Mail Security,”](#) on page 43

After installation, inbound e-mail can be disabled and enabled again on the Vibe site, as described in [“Disabling/Enabling Inbound E-Mail Postings”](#) in [“Site Setup”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*. However, you must configure inbound e-mail in the Vibe installation program.

### 3.8.1 Internal Mail Host for Inbound E-Mail

Inbound e-mail 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 e-mail 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 E-Mail Configuration*, mark whether or not you want users to be able to post to the Vibe site from their e-mail clients.

---

### 3.8.2 Inbound E-Mail 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 33. 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 [Section 4.1.5, “Setting Up Port Forwarding,”](#) on page 58 so that requests incoming on port 25 are forwarded to port 2525.

Windows:   Specify port 25 for incoming e-mail in the Vibe Installation program.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

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

---

### 3.8.3 Inbound E-Mail 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 E-Mail 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.

---

### 3.8.4 Inbound E-Mail 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 E-Mail Transfer](#)” in “[Site Security](#)” in the *Novell Vibe OnPrem 3.1 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 E-Mail Configuration*, mark whether or not 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 e-mail does not work until the certificate is available on the Vibe server.

## 3.9 Planning Site Security

- ♦ [Section 3.9.1, “Vibe Site Administrator Password,” on page 43](#)
- ♦ [Section 3.9.2, “Linux User ID for Vibe,” on page 43](#)

### 3.9.1 Vibe Site Administrator Password

When you first log in to the Novell Vibe site, you use `admin` as the Vibe administrator username and `admin` as the password. You should immediately change the password to one of your own choosing.

---

**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.

---

### 3.9.2 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 username and group for Vibe, you can use the existing `wwwrun` username and the `www` group. This account is typically used to start Web server processes.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Linux Username and Group*, specify the non-`root` Linux username 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 username and group must exist before you start the Vibe Installation program. Instructions for creating the username and group are provided in [Section 4.1.1, “Performing Pre-Installation Tasks on Linux,”](#) on page 53.

---

## 3.10 Gathering Directory Services Information

Unless you are planning a very small Novell 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.

---

**IMPORTANT:** The following limitations apply when synchronizing user information to Vibe from an LDAP directory service:

- ♦ Vibe performs one-way synchronization from the LDAP directory to your Vibe site. If you change user information on the Vibe site, the changes are not synchronized back to your LDAP directory.
  - ♦ Vibe does not support multi-value attributes. If your LDAP directory contains multi-value attributes, Vibe recognizes only the first attribute. For example, if your LDAP directory contains multiple e-mail addresses for a given user, only the first e-mail address is synchronized to Vibe.
- 

- ♦ [Section 3.10.1, “LDAP Directory Service,”](#) on page 44
- ♦ [Section 3.10.2, “LDAP Connections,”](#) on page 45
- ♦ [Section 3.10.3, “LDAP Synchronization Options,”](#) on page 48

### 3.10.1 LDAP Directory Service

You can synchronize initial Vibe user information from any LDAP directory. This guide provides instructions for synchronizing user information from eDirectory and Active Directory. If you are using another LDAP directory, use the instructions as guidelines for the tasks you need to perform.

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *LDAP Directory Service*, mark the LDAP directory service from which you want to synchronize Vibe user information.

---

### 3.10.2 LDAP Connections

You can configure one or more LDAP connections. Each connection requires the following configuration information:

- ♦ “LDAP Server” on page 45
- ♦ “LDAP Attribute to Identify a User or Group” on page 46
- ♦ “LDAP Attribute for Vibe Name” on page 46
- ♦ “User and Group Object Locations” on page 47

#### LDAP Server

In order to synchronize initial user information, Vibe needs to access an LDAP server where your directory service is running. You need to provide the hostname of the server, using a URL with the following format:

```
ldap://hostname
```

If the LDAP server requires a secure SSL connection, use the following format:

```
ldaps://hostname
```

If the LDAP server is configured with a default port number (389 for non-secure connections or 636 for secure SSL connections), you do not need to include the port number in the URL. If the LDAP server uses a different port number, use the following format for the LDAP URL:

```
ldap://hostname:port_number  
ldaps://hostname:port_number
```

In addition, Vibe needs the username and password of a user on the LDAP server who has sufficient rights to access the user information stored there. You need to provide the username, along with its context in your LDAP directory tree, in the format expected by your directory service.

---

Directory Service	Format for the Username
eDirectory	<code>cn=username,ou=organizational_unit,o=organization</code>
Active Directory	<code>cn=username,ou=organizational_unit,dc=domain_component</code>

---

---

**BASIC VIBE INSTALLATION SUMMARY SHEET**

---

Under *LDAP Server URL*, specify the LDAP URL of the server, a fully qualified username with sufficient rights to read the user information, and the password for that user.

---

If the LDAP server requires a secure SSL connection, additional setup is required. You must complete the steps in “[Securing LDAP Synchronization](#)” in “[Site Security](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide* to import the root certificate for your LDAP directory into the Java keystore on the Vibe server before you configure Vibe for LDAP synchronization.

### LDAP Attribute to Identify a User or Group

The LDAP attribute that uniquely identifies a user or group helps facilitate renaming and moving Vibe users and groups in the LDAP directory. If this attribute is not set, and you rename or move a user in the LDAP directory, Vibe assumes that the new name (or the new location of the same name) represents a new user, not a modified user, and creates a new Vibe user.

For example, suppose you have a Vibe user with a given name of William Jones. If William changes his name to Bill, and you make that change in the LDAP directory, Vibe creates a new user named Bill Jones.

To ensure that Vibe modifies the existing user instead of creating a new user when the user is renamed or moved in the LDAP directory, map each user to a binary attribute, such as the `GUID` or `objectGUID` attribute in the LDAP directory. This attribute always has a unique value that does not change when you rename or move a user in the LDAP directory. If you want to map users to a different attribute, you must ensure that the attribute that you use is a binary attribute. For example, the `cn` attribute cannot be used because it is not a binary attribute.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *LDAP that uniquely identifies a user or group*, mark `GUID` or `objectGUID`, depending on whether your LDAP directory is eDirectory or Active Directory.

---

### LDAP Attribute for Vibe Name

LDAP directories differ in the LDAP attribute used to identify a User object. eDirectory and Active Directory both use the `cn` (common name) attribute. Other LDAP directories might use the `uid` (unique ID) attribute. Vibe needs to know which attribute to look for in order to find User objects.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *LDAP attribute used for Vibe name*, mark `cn` or `uid`, based on the convention used by your LDAP directory service for User objects. Ensure that users have a value for the attribute that you mark.

---

Vibe calls the User object attribute `screenName`, so when you configure LDAP synchronization, you map `screenName` to either `cn` or `uid`.

As needed, other LDAP attributes can be used for logging in to the Vibe site, as long as the attribute is unique for each User object. For example, the `mail` LDAP attribute on User objects could be used to enable Vibe users to log in to the Vibe site by using their e-mail addresses.

---

**NOTE:** Because the login name becomes part of the user’s workspace URL, the at sign (@) in the e-mail address is replaced with an underscore (\_) in the workspace URL because @ is not a valid character in a URL.

---

## User and Group Object Locations

Vibe can find and synchronize initial user information from User objects located in one or more containers in the LDAP directory tree. A container under which User objects are located is called a base DN (distinguished name). The format you use to specify a base DN depends on your directory service.

---

Directory Service	Format for the User Container
eDirectory	<i>ou=organizational_unit,o=organization</i>
Active Directory	<i>ou=organizational_unit,dc=domain_component</i>

---

To identify potential Vibe users, Vibe by default filters on the following LDAP directory object attributes:

- ◆ Person
- ◆ orgPerson
- ◆ inetOrgPerson

If you want to create Vibe groups based on information in your LDAP directory, Vibe filters on the following LDAP directory object attributes:

- ◆ group
- ◆ groupOfNames
- ◆ groupOfUniqueNames

You can add attributes to the user or group filter list if necessary. You can use the following operators in the filter:

- ◆ | OR (the default)
- ◆ & AND
- ◆ ! NOT

You can choose whether you want Vibe to search for users (and optionally, groups) in containers underneath the base DN (that is, in subtrees).

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *LDAP User Context*, specify a base DN, along with object attributes if any, and mark whether you want subtrees searched for Vibe users.

Under *LDAP Group Context*, specify a base DN, along with object attributes if any, and mark whether you want subtrees searched for Vibe groups.

---

You might find it convenient to create a group that consists of all the users that you want to set up in Vibe, regardless of where they are located in your LDAP directory. After you create the group, you can use the following filter to search for User objects that have the specified group membership attribute:

```
(groupMembership=cn=group_name,ou=organizational_unit,o=organization)
```

---

**IMPORTANT:** Be sure to include the parentheses in your filter.

---

### 3.10.3 LDAP Synchronization Options

The following synchronization options apply to all LDAP configurations within the same Vibe zone:

- ♦ [“Synchronization Schedule” on page 48](#)
- ♦ [“User Synchronization Options” on page 48](#)
- ♦ [“Group Synchronization Options” on page 50](#)

---

**NOTE:** Because the synchronization options apply to all LDAP configurations within the same zone, you cannot have customized synchronization settings for each LDAP configuration. However, the Novell Vibe site can have multiple zones. For more information about zones, see [“Setting Up Zones \(Virtual Vibe Sites\)”](#) in [“Site Setup”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

---

#### Synchronization Schedule

When you enable LDAP synchronization, you can set up a schedule for when it is convenient for synchronization to occur. In planning the schedule, take into account how often your LDAP directory user (and, optionally, group) information changes and the server resources required to perform the synchronization for the number of users (and, optionally, groups) that you have.

You can choose to have LDAP synchronization performed every day, or you can select specific days of the week when you want it performed (for example, on Monday, Wednesday, and Friday). You can choose to have it performed once a day at a specified time (for example, at 2:00 a.m.), or you can set a time interval, so that it is performed multiple times each day (for example, every four hours). The smallest time interval you can set is .25 hours (every 15 minutes).

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Synchronization Schedule*, record the schedule for when you want LDAP synchronization to take place.

---

#### User Synchronization Options

The following options are available for enabling and configuring user synchronization from your LDAP directory to your Vibe site:

- ♦ **Synchronize User Profiles:** Select this option to synchronize user information whenever the LDAP directory information changes after initial Vibe site setup. The attributes that are synchronized are the attributes that are found in the map box in the *Users* section on the Configure LDAP Synchronization page.



**Users**

LDAP attribute used for Vibe name:

In the box below, map the internal identifiers to the LDAP attribute names of the user record. Use the following syntax: internalID=ldapAttName

```

firstName=gn
emailAddress=mail
lastName=sn
description=description
phone=telephoneNumber
lastName=surname
firstName=givenName

```

By default, Vibe synchronizes the following attributes from the LDAP directory:

- ◆ First name
- ◆ Last name
- ◆ Phone number
- ◆ E-mail address
- ◆ Description

For information about how to add additional attributes to be automatically synchronized, see “[Synchronizing Additional LDAP Attributes](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

- ◆ **Register LDAP User Profiles Automatically:** Select this option to automatically add LDAP users to the Vibe site. However, workspaces are not created until users log in to the Vibe site for the first time.
- ◆ **Delete Users That Are Not in LDAP:** Select this option to delete users that exist on the Vibe site but do not exist in your LDAP directory. Use this option under the following conditions:
  - ◆ You have deleted users from your LDAP directory and you want the LDAP synchronization process to delete them from Vibe as well.
  - ◆ In addition to the users synchronized from LDAP, you create some Vibe users manually, as described in [Section 5.2, “Creating a User,” on page 69](#), and you want the LDAP synchronization process to delete the manually created users.
- ◆ **When Deleting Users, Delete Associated User Workspaces and Content:** Select this option to remove obsolete information along with the user accounts.
- ◆ **Time Zone for New Users** Select this option to set the time zone for user accounts that are synchronized from the LDAP directory into your Vibe site. 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 are:

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

- ♦ **Locale for New Users:** Select this option to set the locale for user accounts that are synchronized from the LDAP directory into your Vibe site. The locale list is sorted alphabetically by language.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *LDAP User Options*, mark the synchronization options you want to use.

---

### Group Synchronization Options

The following options are available for enabling and configuring user and group synchronization from your LDAP directory to your Vibe site:

- ♦ **Synchronize Group Profiles:** Select this option to synchronize group information, such as the group description, to the Vibe site whenever this information changes in LDAP.
- ♦ **Register LDAP Group Profiles Automatically:** Select this option to automatically add LDAP groups to the Vibe site.
- ♦ **Synchronize Group Membership:** Select this option so that the Vibe group includes the same users (and possibly groups) as the group in your LDAP directory. If you do not select this option, and you make changes to group membership in the LDAP directory, the changes are not reflected on your Vibe site.
- ♦ **Delete Local Groups That Are Not in LDAP:** Select this option to delete groups that exist on the Vibe site but do not exist in your LDAP directory. Use this option under the following conditions:
  - ♦ You have deleted groups from your LDAP directory and you want the LDAP synchronization process to delete them from Vibe as well.
  - ♦ In addition to the groups synchronized from LDAP, you create some Vibe groups manually, as described in “[Creating Groups of Users](#)” in “[Site Setup](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*, and you want the LDAP synchronization process to delete the manually created groups.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *LDAP Group Options*, mark the synchronization options you want to use.

---


## 3.11 Accommodating Multiple Languages

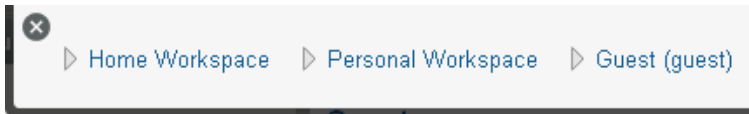
The Novell Vibe installation program runs in English only. When you install the Vibe software, you can choose to have the primary language of the Vibe site to be any of the following languages:

- ♦ 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 *Novell Vibe OnPrem 3.1 Administration Guide*.



# Installing and Setting Up a Basic Vibe Site

# 4

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

- ♦ [Section 4.1, “Linux: Installing and Setting Up a Basic Vibe Site,” on page 53](#)
- ♦ [Section 4.2, “Windows: Installing and Setting Up a Basic Vibe Site,” on page 61](#)

## 4.1 Linux: Installing and Setting Up a Basic Vibe Site

You should already have reviewed [Chapter 3, “Planning a Basic Vibe Installation,” on page 27](#) and filled out the [Basic Vibe Installation Summary Sheet](#). The following sections step you through the process of installing and starting Novell Vibe on Linux.

- ♦ [Section 4.1.1, “Performing Pre-Installation Tasks on Linux,” on page 53](#)
- ♦ [Section 4.1.2, “Running the Linux Vibe Installation Program,” on page 55](#)
- ♦ [Section 4.1.3, “Installing Missing Libraries,” on page 58](#)
- ♦ [Section 4.1.4, “Configuring Vibe to Start Automatically on Reboot,” on page 58](#)
- ♦ [Section 4.1.5, “Setting Up Port Forwarding,” on page 58](#)
- ♦ [Section 4.1.6, “Starting Vibe on Linux,” on page 60](#)
- ♦ [Section 4.1.7, “Checking the Status of the Vibe Server,” on page 60](#)
- ♦ [Section 4.1.8, “Restarting Vibe,” on page 61](#)
- ♦ [Section 4.1.9, “Stopping Vibe,” on page 61](#)
- ♦ [Section 4.1.10, “Uninstalling Vibe,” on page 61](#)

### 4.1.1 Performing Pre-Installation Tasks on Linux

- 1 Make sure that the Linux server where you plan to install Vibe meets the system requirements listed in [Section 2.1, “Vibe Server Requirements,” on page 19](#).
- 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 54](#)
  - ♦ [“Creating a Vibe User and Group” on page 54](#)

## 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 make sure 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 3.9.2, “Linux User ID for Vibe,”](#) on page 43 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, username, 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.

## 4.1.2 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” on page 55
- ♦ “Using the Text-Based Installation Program” on page 56
- ♦ “Performing a Silent Installation” on page 57

### 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 Make sure that you have a `license-key.xml` file in the same directory with the Vibe installation program.

```
more license-key.xml
```

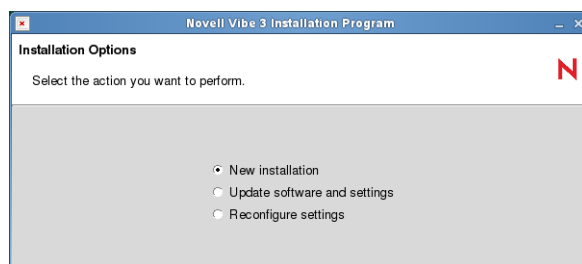
The Vibe installation program does not start without a license file in the same directory. If you have not already, rename the license file to be called `license-key.xml`.

For more information about licensing, see [Chapter 6, “Updating Your Vibe License,”](#) on [page 73](#).

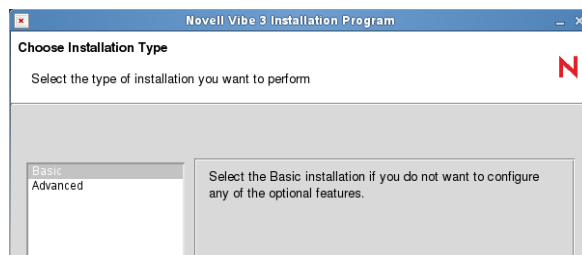
4 Enter the following command to start the Vibe installation program:

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

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



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



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

- 8 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](#)

[Location of TrueType Fonts for Stellent Converters](#)

[Default Locale for Novell Vibe](#)

[User ID for Novell Vibe](#)

[Network Information](#)

[Database Selection](#)

[Database Type](#)

[JDBC URL](#)

[Credentials](#)

[Setup](#)

[Encryption Algorithm](#)

[Java JDK Location](#)

[Outbound E-Mail Configuration](#)

[Protocol](#)

[Host, Port, and Time Zone](#)

[Username, Password, and Authentication](#)

[Allow Sending E-Mail to All Users](#)

[Inbound E-Mail Configuration](#)

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

- 9 After you have provided all the requested information, click *Install* to begin the Vibe installation.
- 10 When the installation is completed, 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.
- 11 Continue with [Section 4.1.4, “Configuring Vibe to Start Automatically on Reboot,”](#) on page 58.

## 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.



```
Checking license key...

License Summary

Product:  Novell Vibe
Version:  3.0
UID:      1
Effective: 10/27/2010
Expires:  never
Users:    unlimited

Installing this software requires agreement to the
terms and conditions set forth in the:
  Novell EULA and Export Compliance Notice

You can review this agreement again at the download site or
type "REVIEW" below.

Note: You must answer "YES" to install the software.

Have you read and agree with the license? :
```

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
```

---

**IMPORTANT:** The text-based Vibe installation program must be run in the same directory where the Vibe license file is located. If the license file is not in the same directory, the text-based installation program cannot find it.

---

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. 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. 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.

### 4.1.3 Installing Missing Libraries

After you install Vibe on SLES 10 SP3, 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, and 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++33-32bit`.

### 4.1.4 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
```

### 4.1.5 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 or not you are using the Vibe server as a firewall.

- ♦ [“Using the SuSEfirewall2 File” on page 58](#)
- ♦ [“Using iptables Commands” on page 59](#)

#### 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.

## 4.1.6 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 3.9.2, “Linux User ID for Vibe,” on page 43](#) 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_TMPDIR: /opt/teaming/apache-tomcat/temp
Using JRE_HOME:        /use/java/jdk1.6.0_02/jre
```

- 3 To make sure 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.

## 4.1.7 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.

## 4.1.8 Restarting Vibe

You need to restart Vibe whenever you use the Vibe installation program to make configuration changes, as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

- 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.

## 4.1.9 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.

## 4.1.10 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 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.

## 4.2 Windows: Installing and Setting Up a Basic Vibe Site

You should already have reviewed [Chapter 3, “Planning a Basic Vibe Installation,”](#) on page 27 and filled out the [Basic Vibe Installation Summary Sheet](#). The following sections step you through the process of installing and starting Novell Vibe on Windows.

- ♦ [Section 4.2.1, “Performing Pre-Installation Tasks on Windows,”](#) on page 62
- ♦ [Section 4.2.2, “Running the Windows Vibe Installation Program,”](#) on page 63
- ♦ [Section 4.2.3, “Running Vibe as a Windows Service,”](#) on page 64
- ♦ [Section 4.2.4, “Running Vibe as a Windows Application,”](#) on page 66
- ♦ [Section 4.2.5, “Uninstalling Vibe,”](#) on page 66

## 4.2.1 Performing Pre-Installation Tasks on Windows

- ♦ “Verifying System Requirements” on page 62
- ♦ “Stopping an Existing Web Server” on page 62
- ♦ “Setting Environment Variables” on page 62
- ♦ “Copying Executable and Library Files” on page 63

### Verifying System Requirements

Make sure that the Windows server where you plan to install Vibe meets the system requirements listed in [Section 2.1, “Vibe Server Requirements,”](#) on page 19.

### 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

Make sure 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*.

## Copying Executable and Library Files

During the initial installation of Vibe, Vibe fails to copy certain .exe and .dll files from the `apache-tomcat/bin/windows/architecture` directory into the `apache-tomcat/bin/windows` directory. You must manually perform this process.

- 1 Navigate to the following directory on the Vibe server:

```
apache-tomcat/bin/windows/architecture
```

For example, if you are running a 64-bit server, navigate to the `apache-tomcat/bin/windows/x64` directory.

- 2 Copy the .exe and .dll files in the directory.
- 3 Paste the .exe and .dll files that you copied in [Step 2](#) into the following directory on the Vibe server:

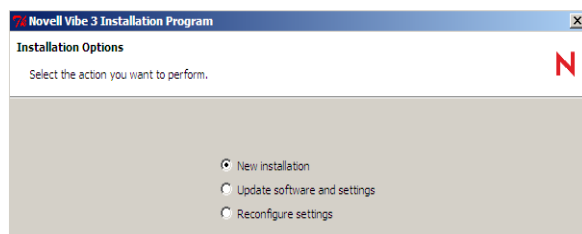
```
apache-tomcat/bin/windows
```

## 4.2.2 Running the Windows Vibe Installation Program

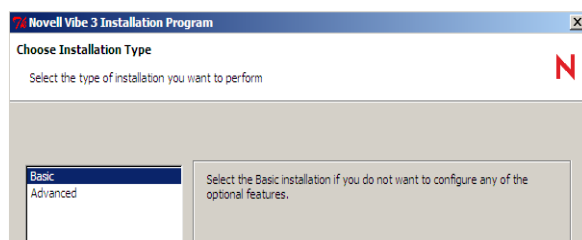
- 1 Log in to the Windows server as a user with Administrator rights.
- 2 In Windows Explorer, browse to the directory where you downloaded and extracted the Vibe software.
- 3 Make sure that there is a `license-key.xml` file in the directory.  
The Vibe installation program does not start without a license file, and it has a different name when you download it.

For more information about licensing, see [Chapter 6, “Updating Your Vibe License,”](#) on [page 73](#).

- 4 Double-click the `installer-teaming.exe` file to start the Vibe installation program.
- 5 Accept the License Agreement, then click *Next*.



- 6 Click *Next* to accept the default of *New installation*.



- 7 Click *Next* to accept the default of *Basic*.

- 8 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 Novell Vibe](#)

[Network Information](#)

[Database Selection](#)

[Database Type](#)

[JDBC URL](#)

[Credentials](#)

[Setup](#)

[Encryption Algorithm](#)

[Java JDK Location](#)

[Outbound E-Mail Configuration](#)

[Protocol](#)

[Host, Port, and Time Zone](#)

[Username, Password, and Authentication](#)

[Allow Sending E-Mail to All Users](#)

[Inbound E-Mail Configuration](#)

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

- 9 After you have provided all the requested information, click *Install* to begin the Vibe installation.
- 10 When the installation is completed, 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.
- 11 Continue with one of the following sections, depending on how you want to run the Vibe software:
  - ♦ [Section 4.2.3, “Running Vibe as a Windows Service,” on page 64](#)
  - ♦ [Section 4.2.4, “Running Vibe as a Windows Application,” on page 66](#)

## 4.2.3 Running Vibe as a Windows Service

- ♦ [“Configuring Vibe as a Windows Service” on page 64](#)
- ♦ [“Starting Vibe as a Windows Service” on page 65](#)
- ♦ [“Configuring the Vibe Service to Start Automatically on Reboot” on page 65](#)
- ♦ [“Restarting the Vibe Service” on page 65](#)
- ♦ [“Stopping the Vibe Service” on page 65](#)

### 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 (Conditional) If Vibe is running on a supported 64-bit Windows operating system and you have a 64-bit JDK, complete the following steps:

- 4a Change to the `c:\Program Files\Novell\Teaming\apache-tomcat\bin\windows\x64` directory.

- 4b Copy any 64-bit `.exe` files and paste them into the `c:\Program Files\Novell\Teaming\apache-tomcat\bin` directory, overwriting any existing files.

- 5 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 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

- 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.

## 4.2.4 Running Vibe as a Windows Application

- ♦ “Starting Vibe as an Application” on page 66
- ♦ “Stopping Vibe as an Application” on page 66

### 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.

## 4.2.5 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.

# Adding Users to Your Vibe Site

# 5

After you have installed Novell Vibe OnPrem and made sure that Vibe starts successfully, you are ready to access your Vibe site from your Web browser and add users.

- ♦ [Section 5.1, “Accessing Your Basic Vibe Site as the Site Administrator,” on page 67](#)
- ♦ [Section 5.2, “Creating a User,” on page 69](#)
- ♦ [Section 5.3, “Adding Vibe Users from Your LDAP Directory,” on page 70](#)

## 5.1 Accessing Your Basic Vibe Site as the Site Administrator

- 1 In your Web browser, specify one of the following URLs, depending on whether or not you are using a secure SSL connection:

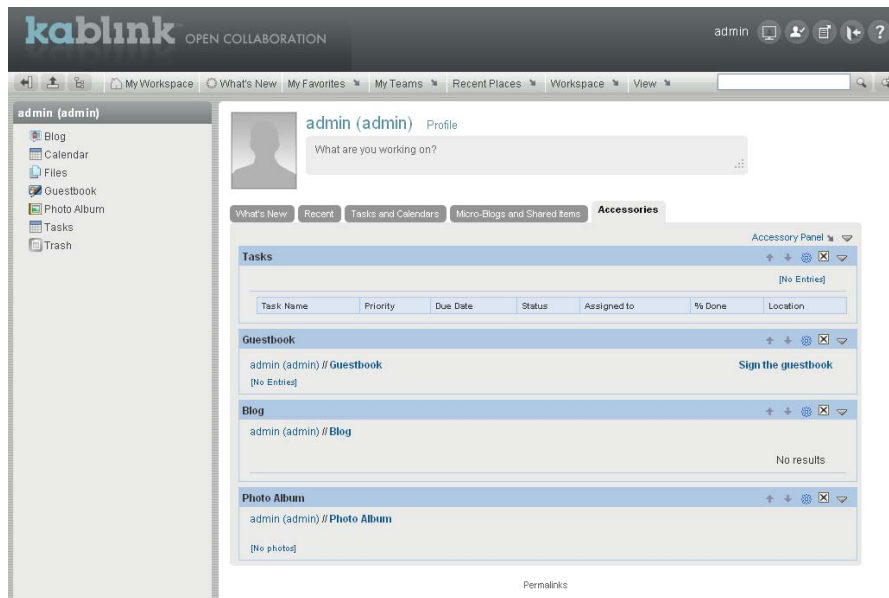
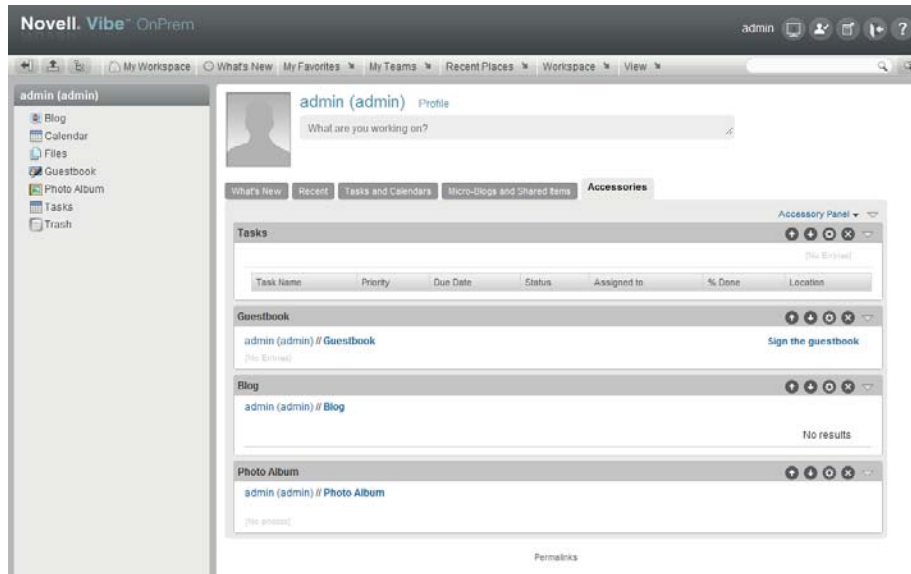
`http://vibe_server`  
`https://vibe_server`

Replace `vibe_server` with the DNS hostname or fully qualified domain name of the Novell Vibe server. If you have configured the HTTP ports correctly, you do not need to include the port number in the Vibe URL.



- 2 Log in using `admin` as the login name and `admin` as the password.
- 3 Click *My Workspace* in the Action toolbar.

The Vibe administrator’s personal workspace is displayed.





**4** Change the default administrator password to a secure password:


- 4a** Click *Profile*, then in the upper right corner of the Profile page, click *Edit*.
- 4b** Specify your own password for the Vibe administrator in the *New Password* and *Confirm New Password* fields.
- 4c** (Optional) Provide useful information in the additional fields of the Vibe administrator's profile.
- 4d** Click *OK* to return to the administrator's profile.

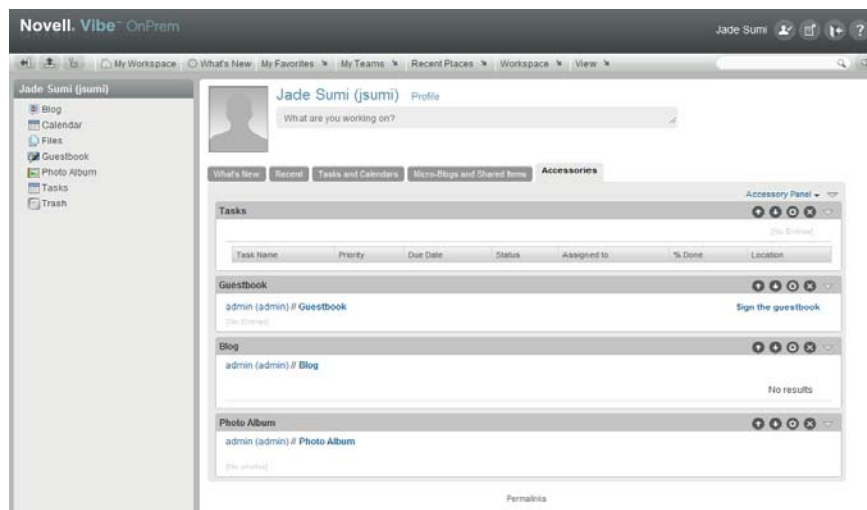
## 5.2 Creating a User

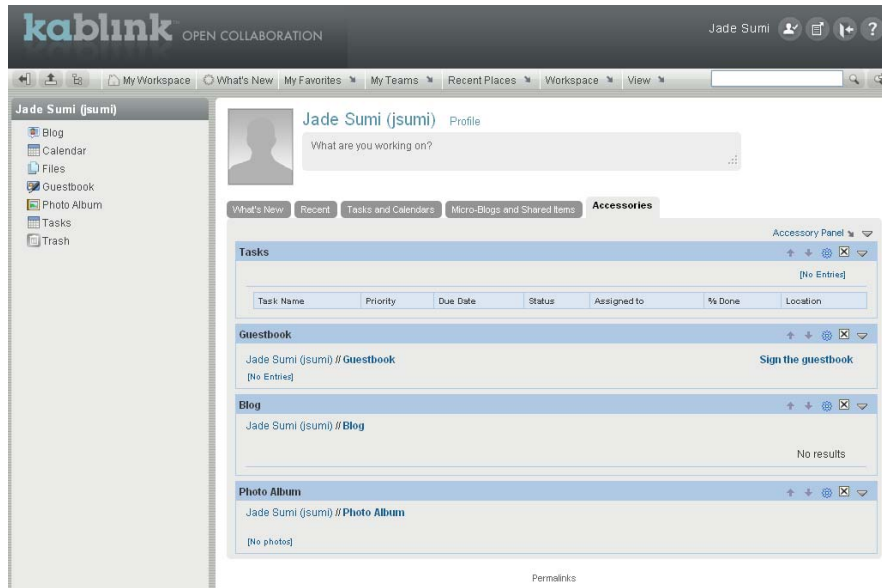
For testing purposes or for a very small Novell Vibe site, you can create each Vibe user manually.

- 1 Log in as the Vibe administrator.
- 2 Click the *Administration* icon  in the upper right corner of the page.
- 3 In the *Management* section, click *User Accounts*.
- 4 In the *Add Account* tab, provide the user's information, then click *OK*.
- 5 Specify at least the user ID, password, first name, and last name.
- 6 (Optional) Provide useful information in the additional fields for the new user.
- 7 Click *OK*, then click *Close* to return to the administrator's workspace.


If you click the *Workspace tree* icon , then expand *Personal Workspaces*, you see that the workspace for the user you just created does not exist yet. Workspaces are not created for users until the users log in for the first time.

- 8 Click the *Log Out* icon  to log out as the Vibe administrator.
- 9 On the login page, provide the username and password for the Vibe user you just created, then click *OK* to log in to the Vibe site.
- 10 Click *My Workspace* in the Action toolbar to see the workspace for the new user.





As each new user logs into the Vibe site, a personal workspace is created.

- 11 Click the *Log Out* icon  to leave the new user's personal workspace.

## 5.3 Adding Vibe Users from Your LDAP Directory

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


---

**IMPORTANT:** 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.

---

- 1 If the LDAP server requires a secure SSL connection in order to access the directory service, create a public key certificate for the Vibe server.

For instructions, see “[Securing LDAP Synchronization](#)” in “[Site Security](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

- 2 In a Web browser, log in to the Vibe site as the Vibe administrator, then click the *Administration* icon .
- 3 Under *System*, click *Configure LDAP*, then click *Add a New LDAP Connection*.
- 4 Fill in the following fields based on the information you gathered on the [Basic Vibe Installation Summary Sheet](#):

**Configure LDAP Synchronization**

Add a New LDAP Connection

**New LDAP connection** Apply Close

Configuration for: **New LDAP connection** Delete This Configuration

The LDAP server URL format is, ldap://host:port For example, ldap://localhost:389

LDAP server URL:

User DN:

Password:

LDAP attribute that uniquely identifies a user or group:  For eDirectory use GUID. For Active Directory use objectGUID.

**Users**

LDAP attribute used for Vibe name:

In the box below, map the internal identifiers to the LDAP attribute names of the user record. Use the following syntax:  
 internalID=ldapAttrName  
 emailAddress=mail  
 firstName=gn  
 firstName=givenName  
 lastName=sn  
 lastName=surname  
 phone=telephoneNumber  
 description=description

Base DN:

Filter:

Search Subtree

Delete

Add

LDAP Server URL

User DN

Password

LDAP attribute that uniquely identifies a user or group

LDAP attribute used for Vibe name

Base DN

- 5 Set the following synchronization options based on the information you gathered on the [Basic Vibe Installation Summary Sheet](#):

Enable Schedule  
 Run Immediately  
 Schedule

Every Day  
 Weekly (on selected days)

Sun  Mon  Tue  Wed  Thu  Fri  Sat

---

At Time 20 : 15 MDT  
 Repeat Every 0.25 Hours

---

Users

Synchronize User Profiles  
 Register LDAP User Profiles Automatically  
 Delete Users That are not in LDAP  
 When Deleting Users, Delete Associated User Workspaces and Content

Use the following time zone when creating new users.

(GMT -7:00) Mountain Standard Time (Boise)

Use the following locale when creating new users.

English (United States) [English (United States)]

---

Groups

Synchronize Group Profiles  
 Register LDAP Group Profiles Automatically  
 Synchronize Group Membership  
 Delete Local Groups That Are Not in LDAP

---

Local user accounts

Allow Login for Local User Accounts, (i.e., user accounts not in LDAP)

Apply Close

### Enable Schedule

### Synchronize User Profiles

### Register LDAP User Profiles Automatically

- Click *Apply* to save the information and settings.
- Select *Run Immediately*, then click *Apply* to test LDAP synchronization.

A status box displays the users and groups that have been added, modified, or deleted on the Vibe site.

---

**IMPORTANT:** If you used an LDAP user attribute of `uid` and some users were not synchronized from the LDAP directory to Vibe, repeat the procedure and use `cn` instead of `uid`.

The usernames `admin` and `guest` are reserved for use by Vibe. If your LDAP directory includes users with these names, LDAP information for these reserved usernames is not imported into the Vibe site.

- Click *Close* to close the status box, then click *Close* to close the Configure LDAP Synchronization page.

Vibe performs one-way synchronization from the LDAP directory to your Vibe site. If you change user information on the Vibe site, the changes are not synchronized back to your LDAP directory.

---

**IMPORTANT:** At this point, users could log into the Vibe site by using their eDirectory or Active Directory usernames and passwords. However, you should not invite users to visit the Vibe site until after you have finished setting up the Vibe site, as described in “[Site Setup](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

---



# Updating Your Vibe License


# 6

Several different Vibe licenses are available:

- ◆ **Evaluation License:** Available from [Novell Downloads \(http://download.novell.com\)](http://download.novell.com).  
You receive your 60-day evaluation license when you download the evaluation version of Vibe.
- ◆ **Starter Pack License:** Available from [Novell Downloads \(http://download.novell.com\)](http://download.novell.com) and from the [Novell Vibe Starter Pack Web page \(http://www.novell.com/products/teaming/starterpack.html\)](http://www.novell.com/products/teaming/starterpack.html).  
You receive your 10-user starter pack license when you download the 10-user starter pack.
- ◆ **Standard Vibe License:** Purchased through a Novell sales representative or Novell partner.  
The Standard Vibe License gives full Vibe functionality on a per-user basis. It includes Guest user functionality for Vibe users who are covered by a Standard Vibe License. However, if non-licensed Vibe users are accessing the Vibe site through the Guest user functionality (as an anonymous user), then you must purchase a [Guest Access Instance License](#) in addition to the Standard Vibe License for each Vibe instance.  
After you purchase the Standard Vibe License, you can access your license key or view your purchase history in the [Novell Customer Center \(http://www.novell.com/customercenter\)](http://www.novell.com/customercenter).
- ◆ **Guest Access Instance License:** Purchased through a Novell sales representative or Novell partner.  
This license must be purchased in addition to the Standard Vibe License. If you purchase 500 or more Standard Vibe Licenses, the Guest Access Instance License is included for free.  
The Guest Access Instance License allows you to provide Guest user access to your Vibe site for non-licensed Vibe users. If you are using Guest user access for licensed Vibe users only, you do not need to purchase this license.  
The Guest Access Instance License is a paper license and does not require a new `license-key.xml` file.  
The Guest Access Instance License can provide added benefit to your site at a manageable cost. For example, suppose that your company employs 500 people. Only 200 are company knowledge-workers whom you expect to actively participate in the Vibe site; the other 300 employees simply need to access information that is already posted on the Vibe site, such as files, news, or other company information. In this case, you would purchase 200 Standard Vibe Licenses. For the remaining 300 employees, who will simply be accessing the site to obtain information, you would purchase a single Guest Access Instance License.  
You must purchase one Guest Access Instance License for each Vibe instance that you are running.  
For more information about the added functionality provided by this license, see “[Allowing Guest Access to Your Vibe Site](#)” and “[Allowing Web Crawler Access to Your Vibe Site](#)” in “[Site Setup](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

If you originally installed Vibe with an Evaluation License or a Starter Pack License, it is easy to update your Vibe site with a new license file.

- 1 Copy the new license file that you downloaded from one of the sources listed above into the directory where you originally ran the Vibe installation program.

- 2** Rename the existing `license-key.xml` file to a different name.
- 3** Rename the new license file to `license-key.xml`.
- 4** Stop Vibe.
- 5** Run the Vibe Installation program, select the *Reconfigure Settings* option, then select the *Basic Installation* option.
- 6** Click *Next* through all the installation program pages, then click *Install* to update your Vibe license.
- 7** Start Vibe.
- 8** Log in to the Vibe site as the Vibe administrator.
- 9** Click the *Administration* icon , then under *Management*, click *License*.  
You should see the contents of the new license file.
- 10** Click *Close*.

At any time, you can generate a report of license usage, as described in “[License Report](#)” in “[Site Maintenance](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

# Setting Up Vibe

# 7

After you have installed and started Novell Vibe OnPrem, 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 *Novell Vibe OnPrem 3.1 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”
- ◆ “Setting Up User Access to the Vibe Site”
- ◆ “Configuring Vibe to Support WebDAV on Windows 7”
- ◆ “Configuring E-Mail 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”
- ◆ “Setting Up Mirrored Folders”
- ◆ “Setting Up Zones (Virtual Vibe Sites)”
- ◆ “Adding Software Extensions to Your Vibe Site”
- ◆ “Using Remote Applications on Your Vibe Site”
- ◆ “Managing a Multiple-Language Vibe Site”



# Basic Vibe Installation Summary Sheet

# 8

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Vibe Server Platform:</b> <ul style="list-style-type: none"><li>◆ Windows</li><li>◆ Linux</li></ul>		See <a href="#">Section 3.2.1, “Vibe Server Platform,”</a> on page 28.
<b>Vibe Server Architecture:</b> <ul style="list-style-type: none"><li>◆ 32-bit</li><li>◆ 64-bit</li></ul>		See <a href="#">Section 3.2.2, “Vibe Server Architecture,”</a> on page 28.
<b>Vibe Server Memory:</b> <ul style="list-style-type: none"><li>◆ 4 GB</li><li>◆ 8 GB</li><li>◆ More</li></ul>		See <a href="#">Section 3.2.3, “Vibe Server Memory,”</a> on page 29.
<b>Java Development Kit (JDK):</b> <ul style="list-style-type: none"><li>◆ Sun JDK</li><li>◆ IBM JDK</li></ul>		See <a href="#">Section 3.3, “Selecting a Java Development Kit,”</a> on page 31.
<b>Vibe Installation Locations:</b> <ul style="list-style-type: none"><li>◆ Software Linux default: <code>/opt/novell/teaming</code> Windows default: <code>c:\Program Files\Novell\Teaming</code></li><li>◆ File repository Linux default: <code>/var/opt/novell/teaming</code> Windows default: <code>c:\Novell\Teaming</code></li></ul>		See <a href="#">Section 3.2.4, “Vibe Installation Locations,”</a> on page 30.
<b>TrueType Font Location:</b> Default: <code>/usr/X11R6/lib/X11/fonts/truetype</code>		See <a href="#">Section 3.2.5, “TrueType Font Location (Linux Only),”</a> on page 31.

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Vibe Site Locale:</b>		See <a href="#">Section 3.11</a> , “Accommodating Multiple Languages,” on page 50.
Language:		
<ul style="list-style-type: none"> <li>◆ Chinese-Simplified</li> <li>◆ Chinese Traditional</li> <li>◆ Danish</li> <li>◆ Dutch</li> <li>◆ English</li> <li>◆ French</li> <li>◆ German</li> <li>◆ Hungarian</li> <li>◆ Japanese</li> <li>◆ Polish</li> <li>◆ Portuguese</li> <li>◆ Russian</li> <li>◆ Spanish</li> <li>◆ Swedish</li> </ul>		
Country:		
<b>User ID for Novell Vibe (Linux only):</b>		See <a href="#">Section 3.9.2</a> , “Linux User ID for Vibe,” on page 43.
<ul style="list-style-type: none"> <li>◆ User ID:</li> </ul> <p>Full name:</p> <p>Password:</p> <ul style="list-style-type: none"> <li>◆ Group ID:</li> </ul>		
<b>Network Information:</b>		<a href="#">Section 3.4</a> , “Gathering Network Information for Your Vibe Site,” on page 32.
<ul style="list-style-type: none"> <li>◆ Host:</li> <li>◆ HTTP port: 80</li> <li>◆ Secure HTTP port: 443</li> <li>◆ Listen port: 8080</li> <li>◆ Secure listen port: 8443</li> <li>◆ Shutdown port:</li> <li>◆ AJP port:</li> </ul>		
<b>Database Type:</b>		See <a href="#">Section 3.6.1</a> , “Database Type,” on page 36.
<ul style="list-style-type: none"> <li>◆ MySQL</li> <li>◆ Microsoft SQL</li> <li>◆ Oracle</li> </ul>		
<b>JDBC URL:</b>		See <a href="#">Section 3.6.3</a> , “Database Location,” on page 37.
<ul style="list-style-type: none"> <li>◆ Hostname:</li> <li>◆ Port number:</li> </ul>		

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Database Credentials:</b>		See <a href="#">Section 3.6.4, "Database Credentials,"</a> on page 38.
<ul style="list-style-type: none"> <li>◆ Username:</li> <li>◆ Password:</li> </ul>		
<b>Database Setup Method:</b>		See <a href="#">Section 3.6.2, "Database Setup Method,"</a> on page 37.
<ul style="list-style-type: none"> <li>◆ During installation (automatically by the Vibe Installation program)</li> <li>◆ Before installation (manually by your database administrator)</li> </ul>		
<b>Database Encryption Algorithm:</b>		See <a href="#">Section 3.6.5, "Database Encryption Algorithm,"</a> on page 39.
<ul style="list-style-type: none"> <li>◆ SHA</li> <li>◆ SHA-256</li> <li>◆ MD5</li> <li>◆ PBEWithMD5AndDES</li> </ul>		
<b>Java JDK Location:</b>		See <a href="#">Section 3.3, "Selecting a Java Development Kit,"</a> on page 31.
<ul style="list-style-type: none"> <li>◆ Java home:</li> <li>◆ JVM heap size:</li> </ul>		
<b>Outbound E-Mail Protocol:</b>		See <a href="#">Section 3.7.1, "Outbound E-Mail Protocol,"</a> on page 40.
<ul style="list-style-type: none"> <li>◆ SMTP</li> <li>◆ SMTPS</li> </ul>		
<b>Outbound E-Mail Host:</b>		See <a href="#">Section 3.7.2, "Outbound E-Mail Host,"</a> on page 40.
<ul style="list-style-type: none"> <li>◆ Hostname:</li> <li>◆ SMTP port: Default: 25</li> <li>◆ Time zone <ul style="list-style-type: none"> <li>◆ Continent/region:</li> <li>◆ Country/state:</li> <li>◆ City:</li> </ul> </li> </ul>		
<b>Outbound E-Mail Authentication:</b>		See <a href="#">Section 3.7.3, "Outbound E-Mail Authentication,"</a> on page 41.
<ul style="list-style-type: none"> <li>◆ Username:</li> <li>◆ Password:</li> <li>◆ Authentication required? No / Yes</li> </ul>		
<b>Allow Sending E-Mail to All Users</b>		See <a href="#">Section 3.7.4, "Outbound E-Mail Send Restriction,"</a> on page 41.
Yes / No		

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Inbound E-Mail Configuration</b>		See <a href="#">Section 3.8, "Enabling Inbound E-Mail,"</a> on page 41.
◆ Enable: No / Yes		
◆ SMTP bind address:		
◆ SMTP port:		
◆ Announce TLS: Yes / No		
<b>Vibe Site Password:</b>		See <a href="#">Section 3.9.1, "Vibe Site Administrator Password,"</a> on page 43.
◆ Administrator username: admin		
◆ Default password: admin		
◆ Your password:		
<b>LDAP Directory Service:</b>		See <a href="#">Section 3.10, "Gathering Directory Services Information,"</a> on page 44.
◆ Novell eDirectory		
◆ Microsoft Active Directory		
◆ Other LDAP directory		
<b>LDAP Server:</b>		See <a href="#">"LDAP Server"</a> on page 45.
◆ LDAP server URL:		
◆ User DN:		
◆ Password:		
<b>LDAP Attribute to Identify User:</b>		See <a href="#">"LDAP Attribute to Identify a User or Group"</a> on page 46.
◆ GUID		
screenName=GUID		
◆ object GUID		
screenName=objectGUID		
<b>LDAP Attribute for Vibe Name:</b>		See <a href="#">"LDAP Attribute for Vibe Name"</a> on page 46.
◆ cn		
screenName=cn		
◆ uid		
screenName=uid		
<b>LDAP User Search Context:</b>		See <a href="#">"User and Group Object Locations"</a> on page 47.
◆ Base DNs:		
◆ Additional filter attributes:		
◆ Search subtree: Yes / No		
<b>LDAP Group Search Context:</b>		See <a href="#">"User and Group Object Locations"</a> on page 47.
◆ Base DNs:		
◆ Additional filter attributes:		
◆ Search Subtree: Yes / No		



Installation Program Field	Value for Your Vibe Site	Explanation
<b>LDAP Synchronization Schedule:</b>		See <a href="#">“Synchronization Schedule”</a> on page 48.
<ul style="list-style-type: none"> <li>◆ Days <ul style="list-style-type: none"> <li>◆ Every day</li> <li>◆ Weekly <div style="margin-left: 20px;"> Sun Mon Tue Wed Thu Fri  Sat </div> </li> </ul> </li> <li>◆ Hours: <ul style="list-style-type: none"> <li>◆ At time:</li> <li>◆ Repeat every <i>nn</i> hours</li> </ul> </li> </ul>		
<b>LDAP User Options:</b>		See <a href="#">“User Synchronization Options”</a> on page 48.
<ul style="list-style-type: none"> <li>◆ Synchronize user profiles</li> <li>◆ Register LDAP user profiles automatically</li> <li>◆ Delete users that are not in LDAP</li> <li>◆ When deleting a user, delete associated user workspaces and content</li> <li>◆ Time zone for new users</li> </ul>		
<b>LDAP Group Options:</b>		See <a href="#">“User Synchronization Options”</a> on page 48.
<ul style="list-style-type: none"> <li>◆ Synchronize group profiles</li> <li>◆ Register LDAP group profiles automatically</li> <li>◆ Synchronize group membership</li> <li>◆ Delete local groups that are not in LDAP</li> </ul>		



# Advanced Installation and Reconfiguration



- ♦ [Chapter 9, “Planning an Advanced Vibe Installation,” on page 85](#)
- ♦ [Chapter 10, “Performing an Advanced Vibe Installation,” on page 111](#)
- ♦ [Chapter 11, “Setting Configuration Options after Installation,” on page 113](#)
- ♦ [Chapter 12, “Advanced Vibe Installation Summary Sheet,” on page 115](#)



# Planning an Advanced Vibe Installation

# 9

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

- ◆ [Section 9.1, “What Is an Advanced Installation?,” on page 85](#)
- ◆ [Section 9.2, “Distributing Different Data Types to Different Locations,” on page 86](#)
- ◆ [Section 9.3, “Using Advanced Network Information Settings,” on page 87](#)
- ◆ [Section 9.4, “Configuring Web Services,” on page 88](#)
- ◆ [Section 9.5, “Changing Your Lucene Index Server Configuration,” on page 89](#)
- ◆ [Section 9.6, “Managing RSS Feeds,” on page 91](#)
- ◆ [Section 9.7, “Configuring Presence,” on page 91](#)
- ◆ [Section 9.8, “Configuring Conferencing,” on page 92](#)
- ◆ [Section 9.9, “Configuring Single Sign-On with Novell Access Manager,” on page 93](#)
- ◆ [Section 9.10, “Configuring Single Sign-On with Internet Information Services for Windows,” on page 94](#)
- ◆ [Section 9.11, “Configuring Mirrored Folder Resource Drivers,” on page 107](#)
- ◆ [Section 9.12, “Installing the Vibe Software in a Clustered Environment,” on page 109](#)

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.

## 9.1 What Is an Advanced Installation?

In addition to the Basic installation options described in [Section 3.1, “What Is a Basic Vibe Installation?,” on page 27](#), the installation program for Vibe 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
- ◆ 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
- ◆ Enabling presence in conjunction with Novell Messenger
- ◆ Configuring a reverse proxy to accommodate single sign-on
- ◆ Configuring Windows Authentication

- ◆ Configuring mirrored folders
- ◆ 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 9.2, “Distributing Different Data Types to Different Locations,” on page 86](#) for Advanced installation instructions. You cannot move subdirectories within the Vibe file repository after they have been created.
- ◆ Installing the Vibe software on multiple servers to create a clustered environment. See [Chapter 15, “Running Vibe on Multiple Servers,” on page 131](#) for Advanced installation instructions. The option to enable a clustered environment is available only during an Advanced installation.

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.

---

## 9.2 Distributing Different Data Types to Different Locations

The default location for the Novell 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, 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 Web site \(http://jackrabbit.apache.org\)](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 [Novell Vibe OnPrem 3.1 Developer Guide](#).

- ♦ **Archive store:** A large consumer of disk space.  
When entries are deleted, files that were attached to the deleted entries are retained in the archive store in order to meet compliance and archival goals. Previous versions of documents are also retained in the archive store. After files have been archived, they are inaccessible from the Vibe site. Files that accumulate in the archive store must be manually deleted as needed to manage the disk space occupied by the archive store.
- ♦ **Cache store:** Consumes less disk space than the file repository.  
Information derived from the attachments, such as thumbnails, 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, but 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. This is required for a clustered environment, as described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131.

---

#### 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 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.3 Using Advanced Network Information Settings

- ♦ [Section 9.3.1, “Changing the Vibe Session Timeout,”](#) on page 87
- ♦ [Section 9.3.2, “Providing a Secure Keystore File,”](#) on page 88

### 9.3.1 Changing the Vibe Session Timeout

By default, if a user’s Novell 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 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

### 9.3.2 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 *Novell Vibe OnPrem 3.1 Administration Guide*.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.4 Configuring Web Services

When you install and set up your Novell 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://www.oasis-open.org>).
- ♦ **HTTP Basic authentication:** Uses [HTTP Basic Access authentication](http://tools.ietf.org/html/rfc2617) (<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 *Novell Vibe OnPrem 3.1 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 *Novell Vibe OnPrem 3.1 Administration Guide*.



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 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.5 Changing Your Lucene Index Server Configuration

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

- ◆ [Section 9.5.1, “Understanding Indexing,”](#) on page 89
- ◆ [Section 9.5.2, “Changing Lucene Configuration Settings,”](#) on page 89
- ◆ [Section 9.5.3, “Running the Lucene Index Server in Its Own JVM,”](#) on page 90
- ◆ [Section 9.5.4, “Running the Lucene Index Server on a Remote Server,”](#) on page 90
- ◆ [Section 9.5.5, “Running Multiple Lucene Index Servers,”](#) on page 90

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 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

### 9.5.1 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 2.4.1, “File Viewer Support,”](#) on page 22.

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.

### 9.5.2 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.

---

### 9.5.3 Running the Lucene Index Server in Its Own JVM

By default, the Lucene Index Server runs in the same Java Virtual Machine (JVM) as the Vibe software. To leave more memory available for the Novell Vibe software, you can configure the Lucene Index Server to run in a separate JVM. In this configuration, it communicates with the Vibe software using the RMI (**Remote Method Invocation** (<http://java.sun.com/javase/technologies/core/basic/rmi/index.jsp>)) port, which by default is 1199.

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Lucene Configuration*, specify a hostname of `localhost`. Use the default RMI port number unless it is already in use on the server.

---

To change from running the Lucene Index Server in the same JVM with Vibe to running it in its own JVM, you must complete the same steps that you use for setting up the Lucene Index Server on a remote server. This includes manually installing the Lucene Index Server software on the Vibe server, as described in [Chapter 14, “Installing the Lucene Index Server on a Remote Server,” on page 127](#).

### 9.5.4 Running the Lucene Index Server on a Remote Server

If the Lucene Index Server requires more memory, disk space, or CPU resources than are available on the Novell Vibe server, you can move it to a remote server. This requires installing the Lucene Index Server software on that server. For instructions, see [Chapter 14, “Installing the Lucene Index Server on a Remote Server,” on page 127](#).

### 9.5.5 Running Multiple Lucene Index Servers

Because the availability of the index is critical to the functioning of the Novell Vibe site, you can install multiple Lucene Index Servers on multiple remote servers to provide high availability. For instructions, see [Chapter 16, “Running Multiple Lucene Index Servers,” on page 137](#).

## 9.6 Managing RSS Feeds

By default, Novell 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 *Novell Vibe OnPrem 3.1 User Guide*.

- ♦ [Section 9.6.1, “Configuring RSS Feeds,” on page 91](#)
- ♦ [Section 9.6.2, “Disabling RSS Feeds,” on page 91](#)

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 10, “Performing an Advanced Vibe Installation,” on page 111](#).

### 9.6.1 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.

---

### 9.6.2 Disabling RSS Feeds

Some administrators consider RSS feeds to be a security risk because the RSS feed URL includes username 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*.

---

## 9.7 Configuring Presence

If you are using Novell Messenger as your instant messaging solution, you can configure Novell Vibe to display a user’s Messenger presence information. For information about where presence information is displayed in Vibe, see “[Sending an Instant Message from within Vibe](#)” in the *Novell Vibe OnPrem 3.1 User Guide*.

When you click a user’s presence icon, the Profile Quick View is displayed, which enables you to send an instant message to the user, view the user’s personal workspace, follow the user, and more.

In order to configure Messenger presence to be displayed in Vibe, you need the following information about the Messenger system during the Vibe installation:

- ♦ **Server address:** Specify the IP address or DNS hostname of the messaging agent for your Messenger system.
- ♦ **Port:** Specify the port number.
- ♦ **Server user:** Specify the fully typed, comma-delimited context username of the Allowed Service User that you want to log in to the Messenger system and retrieve presence information.

For example, `cn=vibesvc,o=acme`

For more information about the Allowed Service User, see “[Integrating Novell Vibe OnPrem with Novell Messenger](#)” in the *Novell Messenger 2.2 Administration Guide*.

- ♦ **Password:** Specify the password for the Allowed Service User that you want to log in to the Messenger system and retrieve presence information.

For more information about the Allowed Service User, see “[Integrating Novell Vibe OnPrem with Novell Messenger](#)” in the *Novell Messenger 2.2 Administration Guide*.

- ♦ **Server Certificate:** Browse to and select the Messaging Agent’s SSL certificate. Vibe uses this certificate to identify the Messenger server.

If Messenger is installed on a separate server, copy the certificate from the Messenger server and place it in a location on the Vibe server that can be reached from the Vibe installation program.

The certificate is located in the following directory on the Messenger server:

Linux: `/opt/novell/messenger/certs`

Windows: `c:\Novell\Messenger\certs`

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Presence Configuration*, select *Enable Novell Messenger Presence*, then list the information that the Vibe site needs to know in order to communicate with the Messenger system.

---

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

---

**IMPORTANT:** For Messenger presence to display in Vibe when using LDAP, you need to map presenceID to your authentication attribute in the Vibe LDAP configuration page. For example, presenceID=cn. For more information, see “[Configuring Presence](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*

---

## 9.8 Configuring Conferencing

Novell Vibe enables you to integrate with Novell Conferencing, so that Vibe users can easily set up instant conferencing meetings with other Vibe users, as described in “[Using Novell Conferencing with Novell Vibe](#)” in “[Connecting With Your Co-Workers](#)” in the *Novell Vibe OnPrem 3.1 User Guide*.

In order to configure Conferencing to integrate with Vibe, you need the URL of your Conferencing server.

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Conferencing Configuration*, select *Enable Novell Conferencing Integrations*, then list the information that the Vibe site needs to know in order to communicate with the Conferencing system.

---

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.9 Configuring Single Sign-On with Novell Access Manager

Novell Access Manager provides secure single sign-on access to your Novell Vibe site by functioning as a reverse proxy server. Access Manager 3.1 SP1 IR1 is required for use with Novell Vibe. You can download the required version of Access Manager from [Novell Downloads \(http://download.novell.com\)](http://download.novell.com).

For background information about setting up Novell Access Manager 3.1, see the [Access Manager 3.1 Documentation Web site \(http://www.novell.com/documentation/novellaccessmanager31\)](http://www.novell.com/documentation/novellaccessmanager31). For instructions specific to Vibe, see “[Configuring a Protected Resource for a Novell Teaming 2.x Server](http://www.novell.com/documentation/novellaccessmanager31/accessgateway/data/b3nqgsg.html#blpk97e)” (<http://www.novell.com/documentation/novellaccessmanager31/accessgateway/data/b3nqgsg.html#blpk97e>). These instructions are based on the Linux text-based Vibe installation program, as described in “[Using the Text-Based Installation Program](#)” on page 56. They can easily be adapted for running the Linux GUI Vibe installation program, as described in “[Using the GUI Installation Program](#)” on page 55, or when installing on Windows, as described in [Section 4.2.2, “Running the Windows Vibe Installation Program,”](#) on page 63.

After you have configured Novell Access Manager, you must configure your Vibe site with the IP address of one or more Access Gateway servers and with the logout URL. When you configure the Vibe site to use the Access Gateway, the IP addresses that you specify are the only locations from which the Vibe site accepts logins. The logout URL is the location where users find themselves when they log out of the Vibe site.

When you enable the Access Gateway for use with your Vibe site, all Vibe users must log in through the Access Gateway. It is not possible to set up the Vibe site so that some users log in through the Access Gateway and some do not.

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Reverse Proxy Configuration*, list one or more IP addresses of Access Gateway servers that have been configured for use by Vibe. List the logout URL, and if necessary, the Access Gateway hostname for WebDAV connections.

---

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.10 Configuring Single Sign-On with Internet Information Services for Windows

Like Novell Access Manager, Windows Authentication provides Windows users with a single sign-on experience, enabling users to automatically authenticate to Novell Vibe after they log in to their individual workstations. Internet Information Services (IIS) provides this capability.

Before you implement Windows Authentication, consider the following limitations:

- ♦ IIS is best suited for an intranet environment. Because NTLM is a connection-based protocol, it does not work well with HTTP proxy servers.
- ♦ IIS does not support Guest Access.

After you configure the Vibe server to support Windows Authentication, complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

- ♦ [Section 9.10.1, “System Requirements,”](#) on page 94
- ♦ [Section 9.10.2, “Planning Your IIS Installation and Configuration,”](#) on page 95
- ♦ [Section 9.10.3, “Configuring the Vibe Server to Support Windows Authentication,”](#) on page 96
- ♦ [Section 9.10.4, “Running the Vibe Installation Program,”](#) on page 103
- ♦ [Section 9.10.5, “Configuring Your Browser to Allow Access to the Vibe Site,”](#) on page 103
- ♦ [Section 9.10.6, “Bypassing Windows Authentication to Configure LDAP and Perform Other Tasks,”](#) on page 104
- ♦ [Section 9.10.7, “Logging In to the Vibe Site through Windows Authentication,”](#) on page 105
- ♦ [Section 9.10.8, “Editing Files through WebDAV with Windows Authentication,”](#) on page 105
- ♦ [Section 9.10.9, “Configuring IIS to Load Balance in a Clustered Environment,”](#) on page 106

### 9.10.1 System Requirements

Windows Authentication with IIS can be enabled for Vibe only in the following environments:

#### Server

- ♦ Windows 2008 Server
- ♦ Windows 2008 R2 Server

#### IIS

- ♦ IIS 7 with IIS Manager with CGI and ISAPI components
- ♦ IIS 7.5 with IIS Manager with CGI and ISAPI components

#### Authentication Protocol

One of the following authentication protocols:

- ♦ NTLM

- ◆ Kerberos v5
- ◆ Negotiate/SPNEGO (wrapper for NTLM and Kerberos v5)

## Domain Controller

- ◆ Active Directory Service

Vibe needs to be configured and synchronized with your Active Directory directory service. For more information about configuring LDAP synchronization within Vibe, see [Section 3.10, “Gathering Directory Services Information,”](#) on page 44 and [“Synchronizing Users and Groups from an LDAP Directory”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

If you are using Kerberos as your authentication protocol, then Key Distribution Services is also required.

For more information about installing and configuring the domain controller and other domain services to support Windows Authentication, refer to the appropriate Microsoft documentation.

## Client

One of the following clients:

- ◆ Windows 7
- ◆ Windows XP

## Browser

One of the following browsers, configured to support Windows Authentication:

- ◆ Internet Explorer
- ◆ Firefox

For information on how to configure your browser to support Windows Authentication, see [Section 9.10.5, “Configuring Your Browser to Allow Access to the Vibe Site,”](#) on page 103.

## 9.10.2 Planning Your IIS Installation and Configuration

Use the information in the following table as you consider your IIS installation.

---

**Directory:** The default installation directory for the IIS plug-in is C:\Program Files\Novell. This is the recommended directory. If for some reason you choose to install the IIS plug-in in a directory other than the C:\Program Files\Novell directory, then you need to modify the `isapi_redirect.properties` files, as described in [“Installing the Vibe IIS Plug-In”](#) on page 97.

---

---

**External or Local Server:** You can install the IIS plug-in on the same server where you are running Vibe, or you can install it on an external server. Installing IIS on an external server can have several benefits, such as:

- ◆ Performance improvement
- ◆ Ability to integrate with several Vibe servers in a clustered environment
- ◆ Ability to run Vibe from a non-Windows server

If you are running IIS from an external server, then you need to edit the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties` file, as described in [“Installing the Vibe IIS Plug-In” on page 97](#).

**64-bit/32-bit:** You can install the IIS plug-in on a 64-bit or 32-bit operating system. However, Vibe should run on a 64-bit operating system, so if you install IIS on a 32-bit operating system, you should use an external server.

**HTTP Ports:** Regardless of whether IIS and Vibe are located on the same server or separate servers, the HTTP port and secure HTTP port for Vibe should always be 80 and 443. This ensures that when links are generated, they contain the correct hostname and port number.

These are the ports that Vibe uses to refer to the browser. In a very basic Vibe system (single server without Windows Authentication), the HTTP ports can be the same as the listen ports. However, in a Vibe system with Windows Authentication enabled, the HTTP ports correspond with the ports that the IIS server is configured to use.

**Listen Ports:** If you plan to run IIS on the same server as the Vibe server, you need to set the listen port and secure listen port for Vibe to something other than 80 and 443.

By default, Vibe listens on ports 80 and 443. Because IIS also uses these ports to listen on, you must reconfigure the Vibe listen ports to ports that are not currently in use, such as 8080 for the listen port and 8443 for the secure listen port.

You configure Vibe ports during the Vibe installation, as described in [Chapter 10, “Performing an Advanced Vibe Installation,” on page 111](#).

---

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Network Information*, specify the HTTP ports and listen ports.

Under *Integration with IIS for Windows Authentication*, select *Enable Integration with IIS for Windows Authentication*, then list the logout URL.

---

### 9.10.3 Configuring the Vibe Server to Support Windows Authentication

To configure the Vibe server to support Windows Authentication, you must first configure IIS. You can set up IIS on the same server where Vibe is running, or on a separate server. See [Section 9.10.2, “Planning Your IIS Installation and Configuration,” on page 95](#) for more information.

Complete the following sections to ensure that IIS is configured correctly to work with Vibe.

- ◆ [“Installing the Vibe IIS Plug-In” on page 97](#)
- ◆ [“Installing IIS Manager” on page 98](#)



- ♦ “Installing Windows Authentication Role Service” on page 98
- ♦ “Creating and Managing Vibe Resources with IIS Manager” on page 99

## Installing the Vibe IIS Plug-In

- 1** Locate the `teaming-version-iis-plugin.zip` file from the Vibe distribution, then unzip it into the `C:\Program Files\Novell` directory.

This creates a directory called Vibe IIS Plugin.

- 2** If in [Step 1](#) you chose to unzip the `teaming-version-iis-plugin.zip` file into the `C:\Program Files\Novell` directory, continue with [Step 3](#).

or

If in [Step 1](#) you chose to unzip the `teaming-version-iis-plugin.zip` file into a location other than `C:\Program Files\Novell`, you must complete the following steps:

- 2a** Locate the `isapi_redirect.properties` file in each of the following directories:
    - ♦ `Vibe IIS Plugin\resources1\bin`
    - ♦ `Vibe IIS Plugin\resources2\bin`
  - 2b** In each of the directories, open the `isapi_redirect.properties` file in a text editor.
  - 2c** Adjust the values of the `log_file`, `worker_file`, and `worker_mount_file` properties to reflect the directory where you chose to unzip the `teaming-version-iis-plugin.zip` file.
  - 2d** Save your changes and close both of the `isapi_redirect.properties` files.
  - 3** If IIS and the Vibe server are located on the same server, continue with [Step 4](#).
- or
- If IIS and the Vibe server are located on separate servers, complete the following steps:
- 3a** Locate the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties` file.
  - 3b** Open the `workers.properties` file in a text editor.
  - 3c** Adjust the value of the `worker.worker1.host` property from `localhost` to the hostname or IP address of the Vibe server.
  - 3d** Save your changes and close the editor.
- 4** (Conditional) If you are running IIS on a 64-bit server, complete the following steps:
    - 4a** Locate the `C:\Program Files\Novell\Vibe IIS Plugin\library\win64` directory.
    - 4b** Copy the appropriate version of the `.dll` library and paste it into each of the following directories:
      - ♦ `C:\Program Files\Novell\Vibe IIS Plugin\resources1\bin`
      - ♦ `C:\Program Files\Novell\Vibe IIS Plugin\resources2\bin`
 Ensure that you copy the correct version of the `.dll` library. If you copy the incorrect version, you receive a 500 error when you try to access the Vibe site.
    - 4c** Delete the existing `isapi_redirect.dll` files from the `C:\Program Files\Novell\Vibe IIS Plugin\resources1\bin` directory, as well as from the `C:\Program Files\Novell\Vibe IIS Plugin\resources2\bin` directory.

- 4d** Rename the .dll library files that you copied in [Step 4b](#) to `isapi_redirect.dll`.  
For example, if Vibe is running on an AMD64/EM64T platform, copy `C:\Program Files\Novell\Vibe IIS Plugin\library\win64\amd64\isapi_redirect-version.dll` into the `C:\Program Files\Novell\Vibe IIS Plugin\resources1\bin` and `C:\Program Files\Novell\Vibe IIS Plugin\resources2\bin` directories, then delete the original `isapi_redirect.dll` file and rename `isapi_redirect-version.dll` to `isapi_redirect.dll`.

## Installing IIS Manager

If Internet Information Services (IIS) Manager is not already installed on your server, you need to download and install it. You also need to install the CGI and ISAPI components.

- 1** Install the IIS 7 Administration Pack:
  - 1a** Navigate to [Microsoft IIS Download Site \(http://www.iis.net/download/Manage\)](http://www.iis.net/download/Manage).
  - 1b** Click the *Manage* tab.
  - 1c** Under *Administration Pack*, click *Install*.
  - 1d** (Conditional) If you have not yet installed the Microsoft Web Platform, click *Get the Microsoft Web Platform* to download the .exe file, install the Microsoft Web Platform, then click *Finish your installation*.  
The Launch Application dialog box is displayed.
  - 1e** Select *Web Platform Installer*, then click *OK*.  
The Web Platform Installer 2.0 dialog box is displayed.
  - 1f** Click *Install* to install the Administration Pack, then accept the terms of the license agreement.
- 2** Install the ISAPI and CGI components:
  - 2a** Launch the Web Platform Installer.
  - 2b** From the Web Platform Installer, select *Web Platform*.
  - 2c** Under *Web Server*, click *Customize*.
  - 2d** In the *Application Development* section, select *CGI*, *ISAPI Extensions*, and *ISAPI Filters*.
  - 2e** Click *Install*, then accept the terms of the license agreement.
  - 2f** Click *Finish* after the components have been installed successfully.

## Installing Windows Authentication Role Service

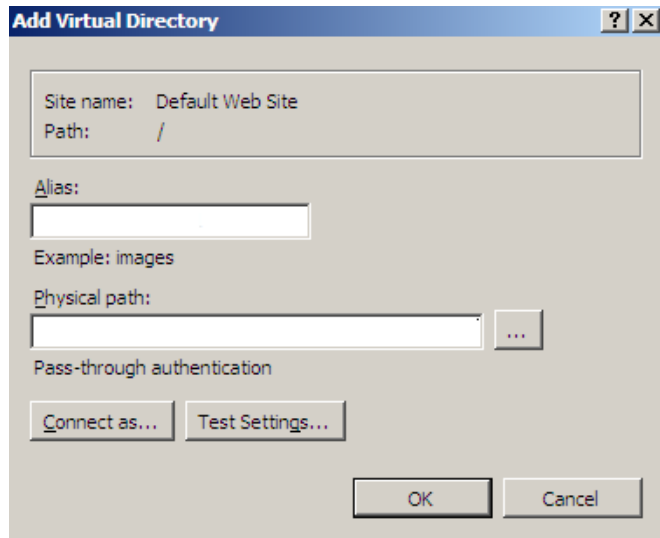
If the Windows Authentication Role Service is not already installed, you need to install it.

- 1** On the Windows 2008 server, click *Start > Administrative Tools > Server Manager*.
- 2** Expand *Roles*, then right-click *Web Server (IIS)*.
- 3** Click *Add Role Services*.  
The Add Role Services window is displayed.
- 4** Scroll to the *Security* section, then select *Windows Authentication*.
- 5** Click *Next*, then complete the installation.

## Creating and Managing Vibe Resources with IIS Manager

- 1 Click *Start > Administrative Tools > Internet Information Services (IIS) Manager*.
- 2 In the *Connections* pane on the left side of the window, expand your server, then expand *Sites*.
- 3 Right-click *Default Web Site*, then click *Add Virtual Directory*.

The Add Virtual Directory dialog box is displayed.



- 4 In the dialog box, specify the following information:

**Alias:** VibeResources1.

**Physical path:** C:\Program Files\Novell\Vibe IIS Plugin\Resources1\bin.

- 5 Click *OK*.

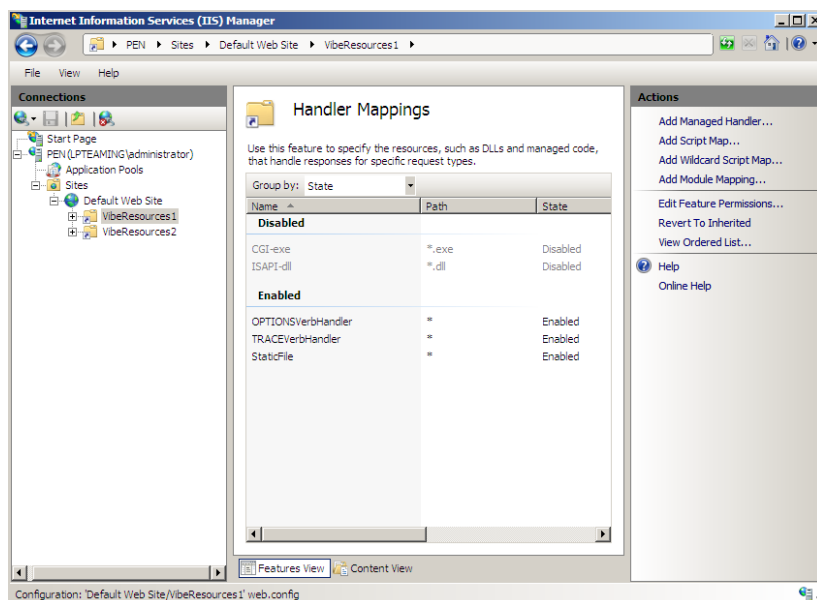
- 6 Repeat [Step 3](#) through [Step 5](#) to add another virtual directory.

This time, specify the following information in the Add Virtual Directory dialog box:

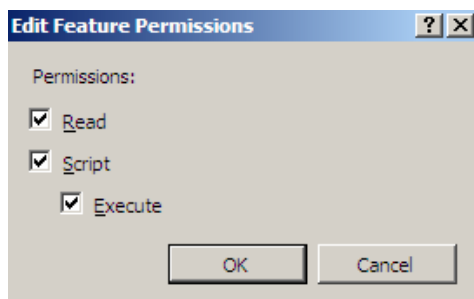
**Alias:** VibeResources2

**Physical path:** C:\Program Files\Novell\Vibe IIS Plugin\Resources2\bin

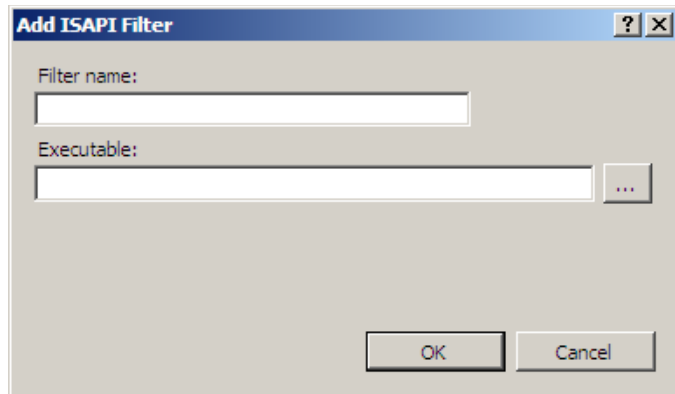
7 In the *Connections* panel, select *VibeResources1*, then double-click *Handler Mappings*.



8 In the *Actions* pane, click *Edit Feature Permissions*.  
The Edit Feature Permissions dialog box is displayed.



- 9 Select *Execute*, then click *OK*.
- 10 Repeat [Step 7](#) through [Step 9](#) for the *VibeResources2* virtual directory.
- 11 In the *Connections* pane, select *Default Web Site*, then double-click *ISAPI Filters*.
- 12 In the *Actions* panel, click *Add*.  
The Add ISAPI Filter dialog box is displayed.



**13** In the dialog box, specify the following information:

**Filter name:** VibeResources1.

You must name the filter VibeResources1 for Windows Authentication to work successfully.

**Executable:** C:\Program Files\Novell\Vibe IIS  
Plugin\Resources1\bin\isapi\_redirect.dll.

**14** Click *OK*.

**15** Repeat [Step 12](#) through [Step 14](#) to add another ISAPI filter.

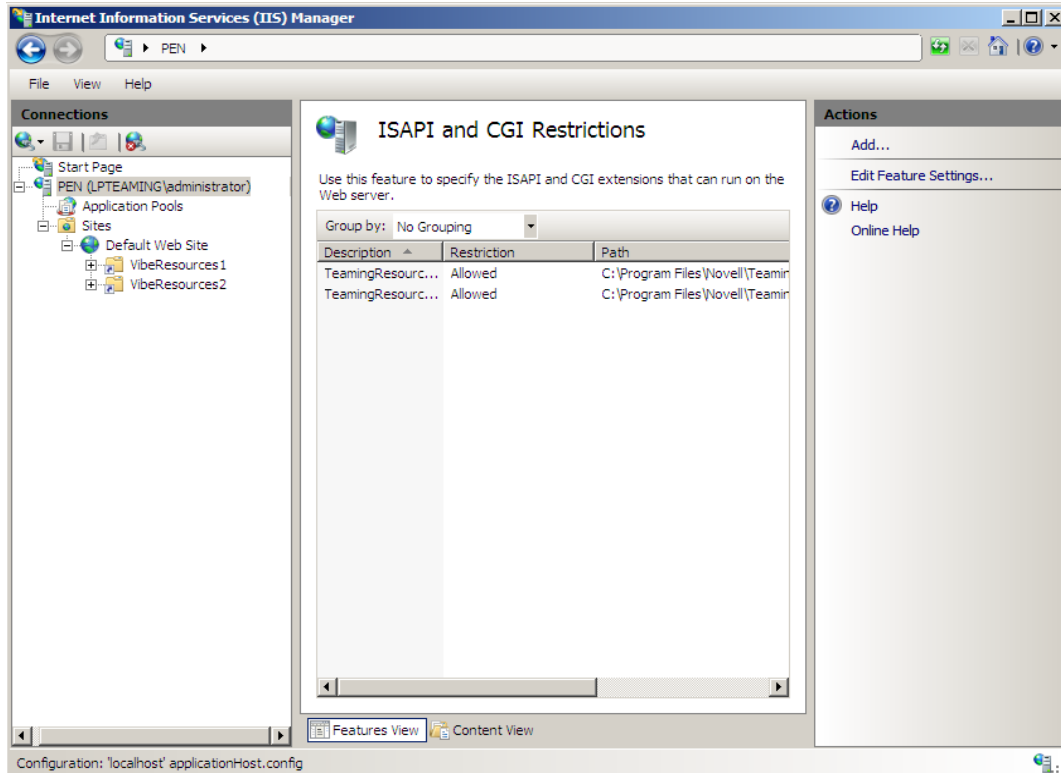
This time, specify the following information in the Add ISAPI Filter dialog box:

**Filter name:** VibeResources2.

You must name the filter VibeResources2 for Windows Authentication to work successfully.

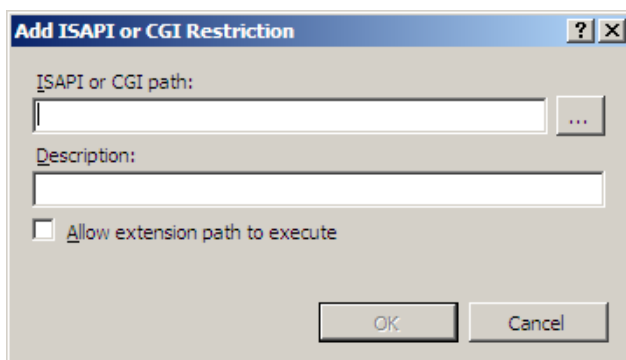
**Executable:** C:\Program Files\Novell\Vibe IIS  
Plugin\Resources2\bin\isapi\_redirect.dll.

**16** In the *Connections* pane, select the server, then double-click *ISAPI and CGI Restrictions*.



17 In the *Actions* pane, click *Add*.

The Add ISAPI or CGI Restriction dialog box is displayed.



18 In the dialog box, specify the following information:

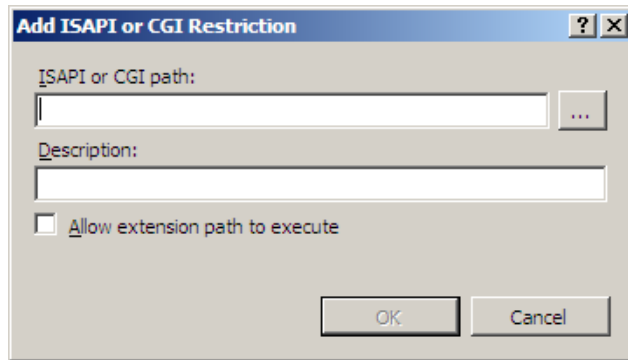
**ISAPI or CGI path:** Specify C:\Program Files\Novell\Vibe IIS Plugin\Resources1\bin\isapi\_redirect.dll.

**Description:** VibeResources1.

**Allow extension path to execute:** Select this option to allow the path to execute.

19 In the *Actions* pane, click *Add*.

The Add ISAPI or CGI Restriction dialog box is displayed.



**20** In the dialog box, specify the following information:

**ISAPI or CGI path:** Specify `C:\Program Files\Novell\Vibe IIS Plugin\Resources2\bin\isapi_redirect.dll`.

**Description:** `VibeResources2`.

**Allow extension path to execute:** Select this option to allow the path to execute.

**21** In the *Connections* pane, select *VibeResources1*, then double-click *Authentication*.

**22** Select *Anonymous Authentication*, then click *Disable* in the *Actions* panel.

**23** Select *Windows Authentication*, then click *Enable* in the *Actions* panel.

**24** Exit the Internet Information Services Manager.

**25** Perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

## 9.10.4 Running the Vibe Installation Program

See [“Choosing Windows Authentication”](#) on page 36 for information about how to configure the Vibe installation program to support Windows Authentication, then follow the instructions for the advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111. Return here and continue with additional configuration steps.

## 9.10.5 Configuring Your Browser to Allow Access to the Vibe Site

After Windows Authentication has been enabled on the server, you need to configure the client browser to allow access to the Vibe site.

- ♦ [“Internet Explorer”](#) on page 103
- ♦ [“Firefox”](#) on page 104

### Internet Explorer

**1** In an Internet Explorer window, click *Tools* > *Internet Options*.

The Internet Options dialog box is displayed.

**2** Click the *Security* tab, select *Local intranet*, then click *Sites*.

The Local Intranet dialog box is displayed.

- 3 Click *Advanced*.
- 4 In the *Add this website to the zone* field, specify the Vibe Web site.
- 5 Click *Add > Close*.

## Firefox

- 1 In Firefox, specify `about:config` in the URL field.
- 2 Specify `ntlm` in the *Filter* window, then locate and select the `network.automatic-ntlm-auth.trusted-uris` entry.  
The Enter String Value dialog box is displayed.
- 3 Specify the DNS name of your Vibe site, then click *OK*.  
For example, `vibe.mycompany.com`.
- 4 Repeat [Step 2](#) through [Step 3](#) for `network.negotiate-auth.trusted-uris` and `network.negotiate-auth.delegation-uris`.

## 9.10.6 Bypassing Windows Authentication to Configure LDAP and Perform Other Tasks

After Windows Authentication is working on your Vibe server, you can bypass the Windows Authentication functionality by including the Vibe listening port in the Vibe URL.

You need to do this in order to configure your LDAP directory.

- 1 In a Web browser, specify your Vibe URL with the Vibe listening port.  
For example, `http://vibe:8080`.  
The Vibe login page is displayed.



- 2 Log in to the Vibe site as the Vibe administrator.
- 3 Configure LDAP, as described in [Section 5.3, “Adding Vibe Users from Your LDAP Directory,”](#) on page 70.

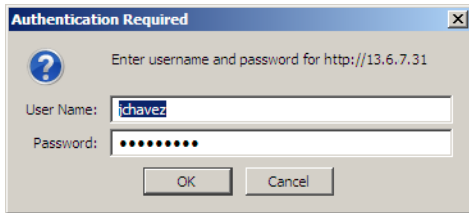
You might also need to bypass Windows Authentication to access Vibe for the following reasons:

- ♦ To access a specific Vibe node in a clustered environment.
- ♦ To troubleshoot the Vibe system.



## 9.10.7 Logging In to the Vibe Site through Windows Authentication

After you have performed the configuration steps described in [Section 9.10.3, “Configuring the Vibe Server to Support Windows Authentication,”](#) on page 96 through [Section 9.10.5, “Configuring Your Browser to Allow Access to the Vibe Site,”](#) on page 103, users can access the Vibe site through Windows Authentication. Users who have been configured through LDAP and are already logged in to their individual workstations do not need to log in again to access the Vibe site. Users who are not already logged in before they access Vibe see the following dialog box:



## 9.10.8 Editing Files through WebDAV with Windows Authentication

- ♦ [“Achieving Single Sign-On When Editing Files through WebDAV”](#) on page 105
- ♦ [“Enabling Basic Authentication for WebDAV”](#) on page 105

### Achieving Single Sign-On When Editing Files through WebDAV

By default, when you edit a file in Vibe through WebDAV, you are prompted for your system login credentials before you can edit the file. However, when Windows Authentication is enabled on your Vibe server, you are no longer prompted for your system login credentials before you edit a file through WebDAV.

This functionality is supported only when you use Microsoft Office as your default document editor. When you use OpenOffice 3.1 or later as your default document editor, Vibe allows you to edit files through WebDAV, but it still requires you to enter your system login credentials. The single sign-on experience is only available when you use Microsoft Office.

### Enabling Basic Authentication for WebDAV

If you are using OpenOffice 3.0 or earlier, or any other document editor that requires basic authentication (it does not support Windows Authentication), you need to configure your IIS server to support basic authentication. Supporting basic authentication enables Vibe users to edit files through WebDAV when using a document editor other than Microsoft Office or OpenOffice 3.1 or later.

---

**NOTE:** If you enable basic authentication on your IIS server, all users who access the Vibe site through Firefox are prompted for their login credentials. Single sign-on to the Vibe server no longer functions. However, users who access the Vibe site using Internet Explorer retain the single sign-on experience.

---

To enable basic authentication on your IIS server, you need to install the Basic Authentication Role Service.

- 1 On the Windows 2008 server, click *Start > Administrative Tools > Server Manager*.
- 2 Expand *Roles*, then right-click *Web Server (IIS)*.
- 3 Click *Add Role Services*.  
The Add Role Services window is displayed.
- 4 Scroll to the *Security* section, then select *Basic Authentication*.
- 5 Click *Next*, then complete the installation.
- 6 Click *Start > Administrative Tools > Internet Information Services (IIS) Manager*.
- 7 In the *Connections* pane on the left side of the window, expand your server, expand *Sites*, then expand *Default Web Site*.
- 8 Select *VibeResources1*, then double-click *Authentication*.
- 9 Select *Basic Authentication*, then click *Enable* in the *Actions* panel.
- 10 Close the Internet Information Services (IIS) Manager.

## 9.10.9 Configuring IIS to Load Balance in a Clustered Environment

If you have Vibe installed in a clustered environment where there are multiple Vibe nodes, you can configure IIS to balance the load of user requests from the multiple Vibe nodes, while still supporting Windows Authentication.

- 1 On the IIS server, locate the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties.clustered.template` file, then open the file in a text editor.
- 2 Copy the contents of the file.
- 3 Locate the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties` file, then open the file in a text editor.
- 4 Paste the contents of the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties.clustered.template` that you copied in [Step 2](#) and into the `C:\Program Files\Novell\Vibe IIS Plugin\conf\workers.properties` file, overwriting the content that was previously there.
- 5 Replace the value of `worker.worker1.host` from `first_hostname_or_ip` with the hostname or IP address of your first Vibe node.
- 6 Repeat [Step 5](#) for each additional Vibe node that is running in your environment. If you have more than two Vibe nodes, you should add an additional section to the `workers.properties` file for each additional node.
- 7 For each Vibe node that you specified in [Step 5](#) and [Step 6](#), locate the corresponding Vibe directory and open the `tomcat\conf\server.xml` file in a text editor.
- 8 Locate the `<Engine...>` element and modify the value of the `jvmRoute` attribute to the value of the worker that you used in the `workers.properties` file.

For example, the modified `<Engine...>` XML element for the Vibe node that corresponds to `worker1` should look like this:

```
<Engine name="Catalina" defaultHost="localhost" jvmRoute="worker1">
```

Repeat this step for each Vibe node.

- 9** Locate the C:\Program Files\Novell\Vibe IIS Plugin\Resources1\conf\uriworkermap.properties file, then open the file in a text editor.
- 10** Replace all instances of worker1 with balancer.
- 11** Repeat [Step 9](#) and [Step 10](#) for each Vibe node.
- 12** Locate the C:\Program Files\Novell\Vibe IIS Plugin\Resources2\conf\uriworkermap.properties file, then open the file in a text editor.
- 13** Replace all instances of worker1 with balancer.
- 14** Repeat [Step 12](#) and [Step 13](#) for each Vibe node.
- 15** Restart each Vibe node.
- 16** Restart the IIS server:
  - 16a** Click *Start > Administrative Tools > Internet Information Services (IIS) Manager*.
  - 16b** Select your server in the *Connections* panel, then click *Restart* in the *Actions* panel.

## 9.11 Configuring Mirrored Folder Resource Drivers

A mirrored folder is a directory, either local or shared on a SAN (storage area network), that is directly accessible from the Novell Vibe site. The files on the file system are accessed by the Novell Vibe program through a resource driver, not directly by individual Vibe users. A resource driver defines how the Vibe program accesses the file system.

During installation, you define the users and groups that can access the mirrored folder resource drivers. After installation, from the Vibe site, you associate resource drivers with specific Vibe folders and use folder access controls to govern which users and groups can access the data in the mirrored folder. As a result, you can set up a small number of users who can create mirrored folders, and allow a larger number of users to access the mirrored folders.

Vibe attempts to keep the metadata about each mirrored folder synchronized with the contents of the actual file system. Therefore, mirrored folders are most appropriate for large sets of relatively static data. Mirrored folders are also useful for making extremely large files available from your Vibe site without including them in the Vibe file repository.

Although the installation program allows you to set up three mirrored folder resource drivers during installation, you can set up and test just one to start with, then set up additional resource drivers later.

- ◆ [Section 9.11.1, “File System Type,” on page 108](#)
- ◆ [Section 9.11.2, “File System Directory,” on page 108](#)
- ◆ [Section 9.11.3, “File System Access,” on page 108](#)
- ◆ [Section 9.11.4, “Mirrored Folder Setup,” on page 109](#)

After planning mirrored folders, complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in [Chapter 10, “Performing an Advanced Vibe Installation,” on page 111](#).

## 9.11.1 File System Type

Vibe provides resource drivers for two different types of file systems:

- ♦ **file:** A directory in a regular file system on a Linux or Windows server.
- ♦ **webdav:** A directory on a Web server that supports WebDAV (Web-based Distributed Authoring and Versioning). The WebDAV server must support [HTTP Basic Authentication](http://en.wikipedia.org/wiki/Basic_access_authentication) ([http://en.wikipedia.org/wiki/Basic\\_access\\_authentication](http://en.wikipedia.org/wiki/Basic_access_authentication)) so that Vibe can provide a username and a password when making a request from the WebDAV server.

---

### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Mirrored Folder Resource Driver Configuration*, mark the type of directory that you want to mirror in your Vibe site.

---

## 9.11.2 File System Directory

The file system that a Vibe mirrored folder uses can be on Linux, NetWare, or Windows, as long as the following conditions are met:

- ♦ The file system is accessible from the Vibe server by using a directory path specification that the Vibe server operating system understands.
- ♦ The file system is accessible through the standard `java.io` package interface.

---

**IMPORTANT:** On Windows, you must use forward slashes (/) in the pathname, not the typical Windows backslashes (\). For example, use `c:/Documents` rather than `c:\Documents`.

---

---

### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Mirrored Folder Resource Driver Configuration*, specify the full path for the directory that you want to mirror in your Vibe site. Also, provide a title for the mirrored folder resource driver that indicates what directory or data is being mirrored. For WebDAV mirrored folders, you must also specify the URL of the WebDAV host where the data is located.

---

If you need to eventually set up more than three directories as mirrored folders in your Vibe site, you can edit the `installer.xml` file in the directory where you run the Installation program.

## 9.11.3 File System Access

Vibe offers several security options for controlling access to the data that resides on the file system.

- ♦ You can restrict the Vibe program to read-only access to the mirrored data, or you can allow full read/write access.
- ♦ You can list specific Vibe users who are allowed to access the mirrored folder resource drivers and thereby create mirrored folders.
- ♦ You can list specific Vibe groups whose members are allowed to access the mirrored folder resource drivers and thereby create mirrored folders.
- ♦ For WebDAV mirrored folder resource drivers, you must also specify a username and password that the Vibe program can use to access the WebDAV server.

---

## ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *Mirrored Folder Resource Driver Configuration*, list the file access (read/write or read-only) for the mirrored data, along with users and groups that you want to have access to the resource driver. For a WebDAV mirrored folder, list a username and password that provides access to the WebDAV server.

---

### 9.11.4 Mirrored Folder Setup

After you run the Vibe Installation program to configure the Vibe site for mirrored folder resource drivers, additional folder setup is required. Follow the instructions in “[Setting Up Mirrored Folders](#)” in “[Site Setup](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

## 9.12 Installing the Vibe Software in a Clustered Environment

You must use an Advanced installation in order to install the Novell Vibe software on multiple servers and set up a clustered environment. Setting up multiple Vibe servers, along with other clustering options, are described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131.

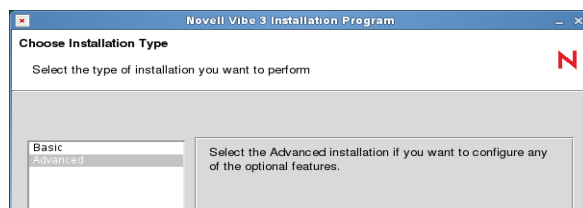


# Performing an Advanced Vibe Installation

# 10

You should already have reviewed [Chapter 3, “Planning a Basic Vibe Installation,”](#) on page 27 and filled out the [Basic Vibe Installation Summary Sheet](#). You should also have reviewed [Chapter 9, “Planning an Advanced Vibe Installation,”](#) on page 85 and filled out the [Advanced Vibe Installation Summary Sheet](#) for those aspects of an Advanced installation that you want to implement for your Novell Vibe OnPrem site.

- 1 Follow the Basic installation instructions provided in [Chapter 4, “Installing and Setting Up a Basic Vibe Site,”](#) on page 53 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](#)

[Location of TrueType Fonts for Stellant Converters](#)

[Default Locale for Novell Vibe](#)

[User ID for Novell Vibe \(Linux only\)](#)

[Network Information](#)

[Database Selection](#)

[Java JDK Location](#)

[Outbound E-Mail Configuration](#)

[Inbound E-Mail Configuration](#)

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

## Advanced Installation Pages:

[Web Services](#)

[Lucene Configuration](#)

[RSS Configuration](#)

[Presence Configuration](#)

[Reverse Proxy Configuration](#)

[Integration with IIS for Windows Authentication](#)

[Mirrored Folder Resource Driver Configuration](#)

## Vibe Cluster 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 arises 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 5, “Adding Users to Your Vibe Site,”](#) on page 67.

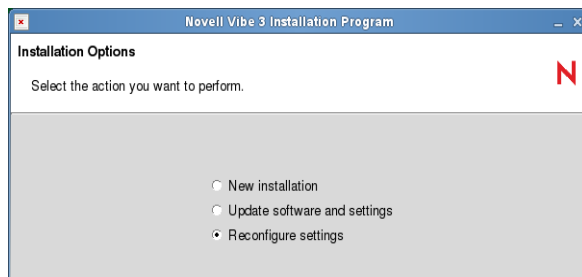


# Setting Configuration Options after Installation

# 11

After you install Novell Vibe OnPrem, following the instructions in [Part II, “Basic Installation,”](#) on page 25 or [Part III, “Advanced Installation and Reconfiguration,”](#) on page 83, 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 4.1.2, “Running the Linux Vibe Installation Program,”](#) on page 55 and [Section 4.2.2, “Running the Windows Vibe Installation Program,”](#) on page 63.

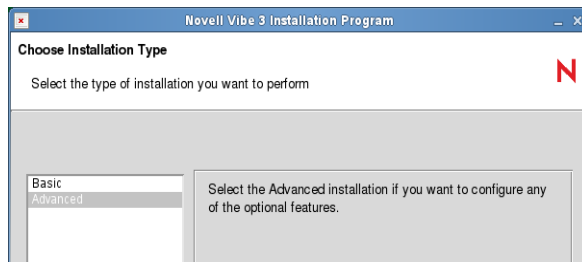


Because the Installation program finds an existing `installer.xml` file, it defaults to *Reconfigure settings*.

- 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](#)

[Location of TrueType Fonts for Stellent Converters](#)

[Default Locale for Novell Vibe](#)

[User ID for Novell Vibe \(Linux only\)](#)

[Network Information](#)  
[Database Selection](#)  
[Java JDK Location](#)  
[Outbound E-Mail Configuration](#)  
[Inbound E-Mail Configuration](#)

**Advanced Installation Pages:**

[Web Services](#)  
[Lucene Configuration](#)  
[RSS Configuration](#)  
[Presence Configuration](#)  
[Reverse Proxy Configuration](#)  
[Integration with IIS for Windows Authentication](#)  
[Mirrored Folder Resource Driver Configuration](#)  
[Vibe Cluster Configuration](#)

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

# Advanced Vibe Installation Summary Sheet

# 12

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Data Locations:</b>		See <a href="#">Section 9.2, "Distributing Different Data Types to Different Locations,"</a> on page 86.
Linux default:		
<code>/var/opt/novell/teaming</code>		
Windows default:		
<code>c:\Novell\Teaming</code>		
	<ul style="list-style-type: none"><li>◆ Simple file repository</li><li>◆ Jackrabbit repository</li><li>◆ Extensions repository</li><li>◆ Archive store</li><li>◆ Cache store</li><li>◆ Lucene index</li></ul>	
<b>Network Information:</b>		See <a href="#">Section 9.3, "Using Advanced Network Information Settings,"</a> on page 87.
	<ul style="list-style-type: none"><li>◆ Enable Web services: No / Yes</li><li>◆ Session timeout Default: 240 minutes</li><li>◆ Enable Tomcat access log: No / Yes</li><li>◆ Keystore file:</li></ul>	
<b>Web Services:</b>		See <a href="#">Section 9.4, "Configuring Web Services,"</a> on page 88.
	<ul style="list-style-type: none"><li>◆ Enable WSS authentication</li><li>◆ Enable Basic authentication</li><li>◆ Enable token-based authentication</li><li>◆ Enable anonymous access</li></ul>	

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Lucene Configuration:</b>		
Configuration type: all		See <a href="#">Section 9.5.2, "Changing Lucene Configuration Settings,"</a> on page 89.
<ul style="list-style-type: none"> <li>◆ Max booleans: Default: 10000</li> <li>◆ Merge factor: 10</li> </ul>		
<b>Server Lucene Configuration:</b>		
Configuration type: server only		See <a href="#">Section 9.5.3, "Running the Lucene Index Server in Its Own JVM,"</a> on page 90.
<ul style="list-style-type: none"> <li>◆ Host:</li> <li>◆ RMI port: Default: 1199</li> </ul>		
<b>High Availability Lucene Configuration:</b>		
Configuration type: high availability only		See <a href="#">Chapter 16, "Running Multiple Lucene Index Servers,"</a> on page 137.
Number of high availability search nodes:		
<ul style="list-style-type: none"> <li>◆ Service name:</li> <li>◆ Service title:</li> <li>◆ Host:</li> <li>◆ RMI port:</li> <li>◆ Service name:</li> <li>◆ Service title:</li> <li>◆ Host:</li> <li>◆ RMI port:</li> </ul>		
<b>RSS Configuration:</b>		
Enable RSS: No / Yes		See <a href="#">Section 9.6, "Managing RSS Feeds,"</a> on page 91.
<ul style="list-style-type: none"> <li>◆ Max elapsed days:</li> <li>◆ Max inactive days:</li> </ul>		
<b>Presence Configuration:</b>		
Enable presence: No / Yes		See <a href="#">Section 9.7, "Configuring Presence,"</a> on page 91.
<ul style="list-style-type: none"> <li>◆ Server address:</li> <li>◆ Port:</li> <li>◆ Server user:</li> <li>◆ Password:</li> <li>◆ Server Certificate:</li> </ul>		

Installation Program Field	Value for Your Vibe Site	Explanation
<b>Conferencing Configuration:</b>		
Enable Conferencing: No / Yes		See <a href="#">Section 9.7, "Configuring Presence,"</a> on page 91.
<ul style="list-style-type: none"> <li>◆ Conferencing URL:</li> </ul>		
<b>Reverse Proxy Configuration:</b>		
Enable Access Gateway: No / Yes		See <a href="#">Section 9.9, "Configuring Single Sign-On with Novell Access Manager,"</a> on page 93.
<ul style="list-style-type: none"> <li>◆ Access Gateway address(es):</li> <li>◆ Logout URL:</li> <li>◆ Use Access Gateway for WebDav connections: No / Yes <ul style="list-style-type: none"> <li>◆ WebDAV Access Gateway address:</li> </ul> </li> </ul>		
<b>Integration with IIS for Windows Authentication:</b>		
Enable Integration with IIS for Windows Authentication: No / Yes		See <a href="#">Section 9.10, "Configuring Single Sign-On with Internet Information Services for Windows,"</a> on page 94.
<ul style="list-style-type: none"> <li>◆ IIS address(es):</li> <li>◆ Logout URL:</li> </ul>		
<b>Mirrored Folder Resource Driver Configuration:</b>		
Enable file share: No / Yes		See <a href="#">Section 9.11, "Configuring Mirrored Folder Resource Drivers,"</a> on page 107.
<ul style="list-style-type: none"> <li>◆ Share type <ul style="list-style-type: none"> <li>◆ File</li> <li>◆ WebDav</li> </ul> </li> <li>◆ Read only: No / Yes</li> <li>◆ Title</li> <li>◆ Root path</li> <li>◆ Allowed users</li> <li>◆ Allowed groups</li> <li>◆ User</li> <li>◆ Password</li> <li>◆ Host URL</li> </ul>		



# Multi-Server Configurations and Clustering

# IV

- ◆ Chapter 13, “Creating the Vibe Database on a Remote Server,” on page 121
- ◆ Chapter 14, “Installing the Lucene Index Server on a Remote Server,” on page 127
- ◆ Chapter 15, “Running Vibe on Multiple Servers,” on page 131
- ◆ Chapter 16, “Running Multiple Lucene Index Servers,” on page 137
- ◆ Chapter 17, “Running Multiple Database Servers,” on page 155





# Creating the Vibe Database on a Remote Server

# 13

The default database location for Novell Vibe OnPrem is on the same server with the Vibe software, as described in [Section 3.6.3, “Database Location,” on page 37](#). However, for better performance and scalability, you can install the database server (MySQL, Microsoft SQL, or Oracle) on a remote server, then use the scripts that are included with the Vibe software to manually create the Vibe database in any location that you prefer.

- ♦ [Section 13.1, “Preparing to Manually Create a Database,” on page 121](#)
- ♦ [Section 13.2, “Creating a MySQL Database,” on page 122](#)
- ♦ [Section 13.3, “Creating a Microsoft SQL Database,” on page 123](#)
- ♦ [Section 13.4, “Creating an Oracle Database,” on page 124](#)
- ♦ [Section 13.5, “Installing Vibe with a Remote Database,” on page 125](#)

---

**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 II, “Basic Installation,” on page 25](#) before attempting a more complex Vibe configuration.

---

## 13.1 Preparing to Manually Create a Database

Novell Vibe includes scripts for creating the Vibe database on a remote server.

- 1 Copy the `teaming-3.1.n-sql.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.
- 2 In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-3.1.n-sql.zip` file, unzip the `teaming-3.1.n-sql.zip` file.  
This creates two new subdirectories, the `create` subdirectory for database creation scripts and the `update-3.0.n-3.1.n` directory for database update scripts.
- 3 Change to the `create` subdirectory.
- 4 Copy all the scripts for your database type to a convenient temporary location on the server where you want to create the database, and make sure that your database management utility is on your path so that you can run it from that directory

Database	Database Script	Database Management Utility
MySQL	<code>*mysql.sql</code>	<code>mysql</code>
Microsoft SQL	<code>*sqlserver.sql</code>	<code>osql</code>
Oracle	<code>*oracle.sql</code>	<code>sqlplus</code>

5 Continue with the instructions for the type of database that you want to create:

- ♦ [Section 13.2, “Creating a MySQL Database,” on page 122](#)
- ♦ [Section 13.3, “Creating a Microsoft SQL Database,” on page 123](#)
- ♦ [Section 13.4, “Creating an Oracle Database,” on page 124](#)

## 13.2 Creating a MySQL 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 \(http://dev.mysql.com/doc/refman/5.0/en\)](http://dev.mysql.com/doc/refman/5.0/en)
- ♦ [MySQL 5.1 Reference Manual \(http://dev.mysql.com/doc/refman/5.1/en\)](http://dev.mysql.com/doc/refman/5.1/en)

The following database tools can be helpful:

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

- 1 Review the MySQL requirements listed in [Section 2.1, “Vibe Server Requirements,” on page 19](#).
- 2 Make sure that the MySQL database server and client have been installed and configured, as described in [Section A.2, “MySQL Database Server,” on page 183](#).
- 3 Make sure 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 Make sure that you know the password for the MySQL `root` administrator user.
- 5 Make sure 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” on page 184](#).

**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** In the directory where you copied the database scripts ([Step 4 in Section 13.1, “Preparing to Manually Create a Database,” on page 121](#)), enter the following command to run the MySQL database creation script:

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

**8** 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
    -> ;
```

**9** Skip to [Section 13.5, “Installing Vibe with a Remote Database,” on page 125](#).

## 13.3 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 \(http://www.microsoft.com/sqlserver/2008/en/us/learning.aspx\)](http://www.microsoft.com/sqlserver/2008/en/us/learning.aspx)
- ♦ [Microsoft SQL Server 2005 Learning Resources \(http://www.microsoft.com/sqlserver/2005/en/us/learning-resources.aspx\)](http://www.microsoft.com/sqlserver/2005/en/us/learning-resources.aspx)

The following database tool can be helpful:

- ♦ [Squirrel SQL Client \(http://squirrel-sql.sourceforge.net\)](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 19](#).
- 2** Make sure that the Microsoft SQL Server and Client have been installed and configured properly.

---

**IMPORTANT:** Make sure 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 Make sure 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 Immediately establish the database administrator username and password for the SQL database server.
- 6 Change to the directory where you copied the database scripts in [Step 4](#) in [Section 13.1](#), “Preparing to Manually Create a Database,” on page 121.
- 7 Enter the following command to run the Microsoft SQL database creation script:

```
osql -User -Ppassword -i create-database-sqlserver.sql
```

- 8 Skip to [Section 13.5](#), “Installing Vibe with a Remote Database,” on page 125.

## 13.4 Creating an Oracle Database

When you use an Oracle database, your database administrator must create it for you. The Novell Vibe installation program cannot create an Oracle database.

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Database Creation*, make sure you have marked that you want your database administrator to manually create the Oracle database before installation.

---

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/) (<http://www.oracle.com/technetwork/indexes/documentation/>)
- ♦ [Oracle SQL Plus Documentation](http://download.oracle.com/docs/cd/B19306_01/server.102/b14357/toc.htm) ([http://download.oracle.com/docs/cd/B19306\\_01/server.102/b14357/toc.htm](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) (<http://squirrel-sql.sourceforge.net>)
- 1 Review the Oracle database requirements listed in [Section 2.1](#), “Vibe Server Requirements,” on page 19.
  - 2 Make sure that the Oracle database server software has been installed and configured properly.  
For more information, see [Oracle Database](http://www.oracle.com/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](http://download.oracle.com/docs/cd/B19306_01/server.102/b14225/ch2charset.htm)) in the *Oracle Database Globalization Support Guide*.

- 4 Change to the directory where you copied the Oracle database scripts in [Step 4 in Section 13.1, “Preparing to Manually Create a Database,”](#) on page 121.
- 5 Edit the `create-database-oracle.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 owned 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`.

---

- 6 Enter the following commands to run the database creation script:

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

- 7 Check the resulting `create-database-oracle.out` file for errors and resolve them.
- 8 If you created the Oracle database on the Vibe server, skip to [Chapter 4, “Installing and Setting Up a Basic Vibe Site,”](#) on page 53 or [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.

---

**IMPORTANT:** On the Database Selection page in the Installation program, be sure to select *Database already exists or has already been created*.

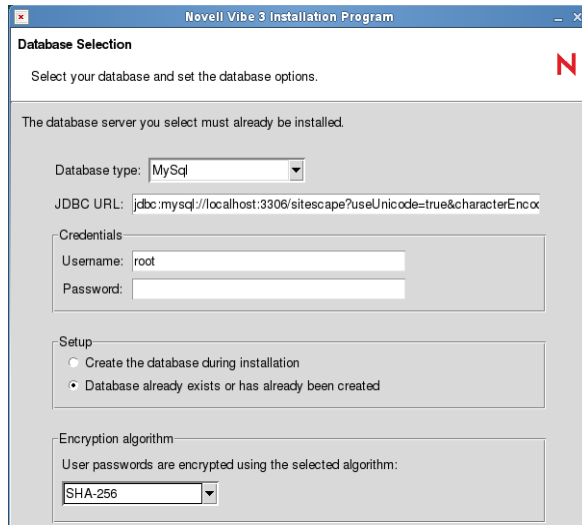
---

or

If you created the Oracle database on a remote server, continue with [Installing Vibe with a Remote Database](#).

## 13.5 Installing Vibe with a Remote Database

- 1 Run the Novell Vibe installation program, as described in [Chapter 4, “Installing and Setting Up a Basic Vibe Site,”](#) on page 53 or [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111.
- 2 Fill in the fields on the Database Selection page:



**Database type:** Select the type of database that you just created.

**JDBC URL:** Replace `localhost`, with the hostname of the server where you created the Vibe database. If needed, replace the port number with the port that Vibe uses to communicate with the database, and replace the database name with the name of your database.

**Credentials:** Specify the password for the database administrator user.

**Setup:** Select *Database already exists or has already been created* so that the installation program does not create one for you.

**Encryption algorithm:** Set the encryption appropriate for the security needs of the Vibe site. For more information, see [Section 3.6.5, “Database Encryption Algorithm,”](#) on page 39.

**3** Click *Next*.

The Vibe installation program tries to connect to the database. If it connects successfully, you can continue with the installation. If the Vibe installation program cannot connect to the database, you must resolve the problem with the database before you can continue with the Vibe installation.

**4** When the Vibe installation program can successfully connect to the remote database, continue as usual with the installation.

# Installing the Lucene Index Server on a Remote Server

# 14

You can install the Lucene Index Server on a different server from where Novell Vibe OnPrem is running. If the Lucene Index Server is already running on the same server as Vibe, you can move the Lucene Index Server to a different server.

Running the Lucene Index Server on a remote server allows both the Lucene Index Server and the Vibe server to have access to more server memory, disk space, and CPU resources.

Complete the following sections whether you are installing the Lucene Index Server on a remote server, or moving the Lucene Index Server to a remote server.

---

**IMPORTANT:** The Vibe server and the Lucene Index Server must not have a firewall between them. The RMI protocol used for the Lucene Index Server port works only within a trusted local area network (LAN).

---

- ♦ [Section 14.1, “Installing the Lucene Software,” on page 127](#)
- ♦ [Section 14.2, “Updating Your Vibe Site,” on page 128](#)
- ♦ [Section 14.3, “Managing a Remote Lucene Index Server,” on page 129](#)

---

**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 II, “Basic Installation,” on page 25](#) before attempting a more complex Vibe configuration.

---

## 14.1 Installing the Lucene Software

- 1 Make sure that a supported Java Developer Kit (JDK) is installed on the remote server where you want to install the Lucene Index Server.

For instructions, see [Appendix A, “Vibe System Requirements Assistance,” on page 181](#).

- 2 Make sure that there is no firewall between the Vibe server and the Lucene Index Server.
- 3 Copy the Lucene installation program from its original location in the same directory with the Vibe installation program to a convenient temporary directory on the remote server.

The filename for the Lucene Installation program varies by platform:

Linux: `lucene-installer.linux`

Windows: `lucene-installer.exe`

- 4 Change to the directory where you copied the Lucene installation program, then start it.
- 5 Accept the License Agreement, then click *Next*.
- 6 Select *New installation*, then click *Next*.
- 7 Browse to and select the directory where you want to install the Lucene Index Server, then click *Next*.

The default location varies by platform:

Linux: `/opt/novell/teaming/luceneserver`

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

- 8** Browse to and select the directory where you installed the JDK, then click *Next*.
- 9** Adjust the configuration of the Lucene Index Server, as described in [Section 9.5, “Changing Your Lucene Index Server Configuration,”](#) on page 89, then click *Next*.
- 10** Click *Install* to install the Lucene software.
- 11** (Conditional) On Linux, deselect *Start Lucene server*.  
You must edit the Lucene Index Server startup script before you start the Lucene Index Server. Instructions are provided later in this procedure.
- 12** (Conditional) On Windows, if you do not want to start the Lucene Index Server immediately, deselect *Start Lucene server*.  
For instructions for starting and stopping the Lucene Index Server manually, see [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129.
- 13** Click *Finish*.
- 14** (Conditional) On Linux:
  - 14a** Change to the following directory:  
`/opt/novell/teaming/luceneserver/indexserver/bin`
  - 14b** Open the `indexserver-startup.sh` file in a text editor.
  - 14c** Add the following switch to the `java` launch command at the end of the script:  
`-Djava.rmi.server.hostname=ip_address`  
Rename `ip_address` with the IP address of the server where you installed the Lucene Index Server.
  - 14d** Save the `indexserver-startup.sh` file, then exit the text editor.
  - 14e** Start the Lucene Index Server.  
For instructions for starting and stopping the Lucene Index Server manually, see [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129.

Moving the Lucene Index Server from the Vibe server to a remote server increases the scalability of your Vibe system because the workload is distributed between two different physical servers. However, in this configuration, the Lucene Index Server still runs on a single server. Your Vibe site depends on the Lucene Index Server for full functionality. If that server goes down for some reason, the Vibe site becomes inaccessible until access to the Lucene Index Server is restored. You can further expand your Vibe system by setting up multiple Lucene Index Servers to provide high availability, as described in [Chapter 16, “Running Multiple Lucene Index Servers,”](#) on page 137.

## 14.2 Updating Your Vibe Site

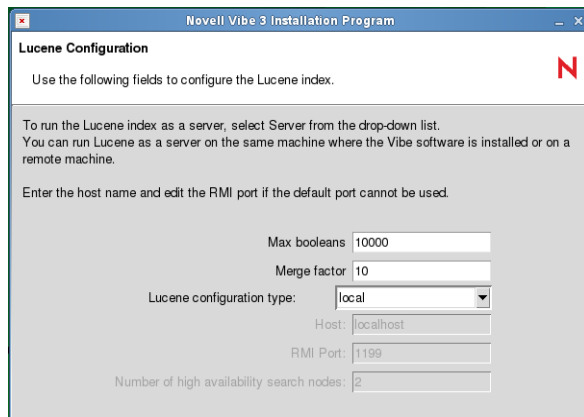
Complete this section only if you are moving the Lucene Index Server. If you are performing a fresh Lucene Index Server installation, disregard this section.

- 1** Stop Novell Vibe.
- 2** Start the Vibe installation program to reconfigure the Lucene Index Server settings.



For information on how to start the installation program, see [Section 4.1.2, “Running the Linux Vibe Installation Program,” on page 55](#) or [Section 4.2.2, “Running the Windows Vibe Installation Program,” on page 63](#).

- 3 On the Choose Installation Type page, select *Advanced*, then click *Next*.
- 4 Click *Next* until you reach the Lucene Configuration page.



The screenshot shows the 'Novell Vibe 3 Installation Program' window with the 'Lucene Configuration' tab selected. The window contains the following text and fields:

- Header: **Lucene Configuration**
- Instruction: Use the following fields to configure the Lucene index.
- Red 'N' logo in the top right corner.
- Text: To run the Lucene index as a server, select Server from the drop-down list. You can run Lucene as a server on the same machine where the Vibe software is installed or on a remote machine.
- Text: Enter the host name and edit the RMI port if the default port cannot be used.
- Fields:
  - Max booleans: 10000
  - Merge factor: 10
  - Lucene configuration type: local (dropdown menu)
  - Host: localhost
  - RMI Port: 1199
  - Number of high availability search nodes: 2

- 5 In the *Lucene configuration type* field, select *server* to activate additional fields.
  - Host:** Specify the hostname of the server where you installed the Lucene Index Server software.
  - RMI Port:** Use the same port number that you used when you installed the Lucene Index Server software. The default RMI port is 1199.
- 6 Click *Next* until you reach the Ready to Install page, then click *Install*.
- 7 When the installation is complete, click *Finish*.
- 8 Start Vibe.

## 14.3 Managing a Remote Lucene Index Server

- ♦ [Section 14.3.1, “Linux: Managing a Remote Lucene Index Server,” on page 129](#)
- ♦ [Section 14.3.2, “Windows: Managing a Remote Lucene Index Server,” on page 129](#)

### 14.3.1 Linux: Managing a Remote Lucene Index Server

Use the following commands to start and stop the Lucene Index Server manually:

```
/etc/init.d/indexserver start  
/etc/init.d/indexserver stop
```

To configure the Lucene Index Server to start automatically when the Linux server reboots, use:

```
chkconfig --add indexserver
```

### 14.3.2 Windows: Managing a Remote Lucene Index Server

Use the following commands at a DOS command prompt to start and stop the Lucene Index Server manually:

```
c:\Program Files\Novell\Teaming\luceneserver\indexserver\bin\  
indexserver-startup.bat
```

```
c:\Program Files\Novell\Teaming\luceneserver\indexserver\bin\  
indexserver-shutdown.bat
```

To configure the Lucene Index Server to start automatically when the Windows server reboots, you can set it up as a scheduled task that runs at system startup.

- 1 On the Windows server where the Lucene Index Server is installed, click *Start > All Programs > Accessories > System Tools > Scheduled Tasks*.
- 2 Double-click *Add Scheduled Task*. to open the Scheduled Task Wizard, then click *Next* to continue.
- 3 Click *Browse*, then browse to and double-click the `indexserver-startup.bat` file in the following directory:  
c:\Program Files\Novell\Teaming\luceneserver\indexserver\bin
- 4 In the *Task name* field, specify an informative name for the task, such as Lucene Index Server. The default task name is the name of the batch file.
- 5 In the *Perform this task* field, select *When my computer starts*, then click *Next*.
- 6 Specify and confirm the Administrator password for the Windows server, then click *Next*.
- 7 Select *Open advanced properties for this task when I click Finish*, then click *Finish*.
- 8 Verify that *Run only if logged on* is deselected, then click *OK*.  
A new task with the name you specified in [Step 4](#) is added to the list in the Scheduled Tasks window.
- 9 Click *File > Exit* to close the Scheduled Task Wizard.

# Running Vibe on Multiple Servers

# 15

By running Novell Vibe OnPrem on multiple servers, you can achieve high availability, including failover and load balancing, depending on how you configure your servers. You must perform an Advanced installation on each server in order to configure the Vibe software for such a clustered environment.

- ♦ [Section 15.1, “Planning a Multi-Server Vibe Configuration,” on page 131](#)
- ♦ [Section 15.2, “Installing the Vibe Software on Multiple Servers,” on page 132](#)
- ♦ [Section 15.3, “Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site,” on page 133](#)
- ♦ [Section 15.4, “Configuring Internet Information Services to Support Multiple Vibe Servers,” on page 135](#)

---

**NOTE:** This section assumes that you already have a Basic installation of Vibe up and running successfully. We highly recommended that you follow the instructions in [Part II, “Basic Installation,” on page 25](#) before attempting a more complex Vibe configuration.

---

## 15.1 Planning a Multi-Server Vibe Configuration

- ♦ [Section 15.1.1, “Lucene Index Server Considerations,” on page 131](#)
- ♦ [Section 15.1.2, “Vibe File Repository Considerations,” on page 131](#)

### 15.1.1 Lucene Index Server Considerations

Before you can implement a multi-server Novell Vibe configuration, you must move your Lucene Index Server away from the initial Vibe server, as described in [Chapter 14, “Installing the Lucene Index Server on a Remote Server,” on page 127](#).

### 15.1.2 Vibe File Repository Considerations

Before you implement a multi-server Novell Vibe configuration, you must plan the Vibe file repository for the clustered Vibe servers. Your configuration must comply with the following restrictions:

- ♦ The Vibe file repository must be placed in a shared location that is accessible to each Tomcat instance.
- ♦ All Tomcat instances must be configured with the same path leading to the shared storage.

For background information on the contents of the Vibe file repository, see [Section 9.2, “Distributing Different Data Types to Different Locations,” on page 86](#).

## 15.2 Installing the Vibe Software on Multiple Servers

1 Update your existing Novell Vibe server to participate in a multi-server configuration:

1a Stop Vibe.

1b Start the Vibe Installation program.

For information on how to start the installation program, see [Section 4.1.2, “Running the Linux Vibe Installation Program,”](#) on page 55 or [Section 4.2.2, “Running the Windows Vibe Installation Program,”](#) on page 63.

1c On the Installation Settings page, select *Reconfigure Settings*, then click *Next*.

1d On the Choose Installation Type page, select *Advanced*, then click *Next*.

1e Click *Next* to proceed through the installation pages where no changes are needed.

1f (Conditional) If you do not have the [Basic Vibe Installation Summary Sheet](#) and [Advanced Vibe Installation Summary Sheet](#) from the initial Vibe server installation, record the configuration of the initial Vibe server as you proceed through the installation pages.

Subsequent Vibe servers in the multi-server configuration must be installed with the same configuration settings as the initial Vibe server.

1g On the Vibe Cluster Configuration page, specify the following information:

**Enable clustered environment:** Select this option to enable your environment for a multi-server configuration.

Selecting this option configures [Ehcache \(http://ehcache.sourceforge.net\)](http://ehcache.sourceforge.net) for your Vibe cluster.

**Network interface for distributed cache service:** Specify the IP address or hostname of the distributed cache service.

**Multicast Group Address:** (Optional) Specify the common multicast group IP address. Each clustered node recognizes other nodes in the cluster by means of this IP address.

---

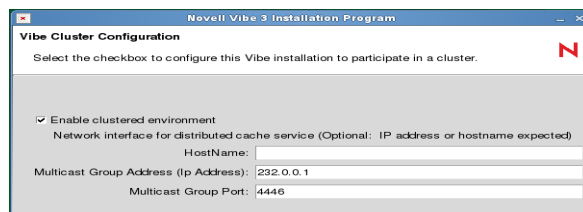
**IMPORTANT:** Make sure you specify the same IP address on all Vibe nodes in the cluster. After you have set this IP address for each Vibe node, restart each node in succession, allowing each node to initialize before restarting the next.

---

The default multicast group IP address is 232.0.0.1. If you have more than one clustered Vibe system (for example, one in the lab and one in production), or if you have another software product that is already using the default multicast group IP address, you must update this field for one system so that it uses an IP address other than the default.

Use an IP address in the range of 224.0.0.1 to 239.255.255.255.

**Multicast Group Port:** (Optional) Specify the port number through which the Vibe nodes will communicate.





The following sections provide examples of how to configure the Web applications:

- ♦ [Section 15.3.1, “Configuring Tomcat and Apache as a Load Balancer,” on page 134](#)
- ♦ [Section 15.3.2, “Configuring Linux Virtual Server as a Load Balancer,” on page 135](#)

## 15.3.1 Configuring Tomcat and Apache as a Load Balancer

The following example configuration uses the balancer module built into the newer Apache (version 2.2.4 and later) Web server. It is based on a widely used sticky session technique. Novell Vibe does not support session sharing/replication among Tomcat instances.

If you are using Novell Access Manager as described in [Section 9.9, “Configuring Single Sign-On with Novell Access Manager,” on page 93](#), you do not need to configure Tomcat and Apache to load balance as described in this section, because Access Manager provides this service.

---

**NOTE:** When you upgrade your Vibe system, these settings are not preserved. You must redefine these settings each time you upgrade your Vibe system.

---

To configure Tomcat and Apache to load balance:

- 1** Edit the Tomcat `server.xml` file on each Vibe server.

The location of the `server.xml` file varies by platform:

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

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

- 1a** Search for `jvmRoute`.

A sample line with a `jvmRoute` tag is provided in a comment.

```
<Engine name="Catalina" defaultHost="localhost" jvmRoute="jvm1">
```

- 1b** Update the active line below the comment so that it looks like the sample, but change the value of `jvmRoute` to `worker1`.

The line should now look like this:

```
<Engine name="Catalina" defaultHost="localhost" jvmRoute="worker1">
```

- 1c** On the second Vibe server, make the same change, incrementing the `jvmRoute` setting.

```
<Engine name="Catalina" defaultHost="localhost" jvmRoute="worker2">
```

- 1d** Repeat [Step 1c](#) for each Vibe server, so that each Tomcat instance has a unique `jvmRoute` setting.

- 2** Install the [Apache Web server \(http://httpd.apache.org\)](http://httpd.apache.org) on one server.

- 3** Edit the `httpd.conf` file in the Apache installation:

The `httpd.conf` file is located in the `conf` subdirectory in the Apache installation.

- 3a** Locate and uncomment the following lines:

```
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_ajp_module modules/mod_proxy_ajp.so
LoadModule proxy_balancer_module modules/mod_proxy_balancer.so
```

- 3b** Append the following section to the `httpd.conf` file, providing a `BalancerMember` line for each `jvmRoute` value in a Tomcat `server.xml` file.

```

<Location /balancer-manager>
    SetHandler balancer-manager
    Order deny,allow
    Deny from all
    Allow from 127.0.0.1
</Location>
<Proxy balancer://cluster_name>
    BalancerMember ajp://vibe_server_1:8009 route=worker1
    BalancerMember ajp://vibe_server_2:8009 route=worker2
</Proxy>
<Location />
    ProxyPass balancer://cluster_name/ stickysession=JSESSIONID
</Location>

```

**3c** Save the httpd.conf file.

**4** Reconfigure each Vibe server in the cluster so that each server has the same hostname as the Apache Web server.

For information on how to reconfigure your Vibe server, see [Chapter 11, “Setting Configuration Options after Installation,”](#) on page 113.

**5** Restart Tomcat and Apache.

---

**TIP:** For enhanced performance when using the Internet Explorer browser to access a Vibe system that is using Apache as an SSL reverse-proxy server, change the Apache SSL exclusion regular expression configuration from the following:

```

SetEnvIf User-Agent ".*MSIE.*" \
nokeepalive ssl-unclean-shutdown \
downgrade-1.0 force-response-1.0

```

to the following:

```

SetEnvIf User-Agent ".*MSIE [1-5].*"
nokeepalive ssl-unclean-shutdown
downgrade-1.0 force-response-1.0

```

```

SetEnvIf User-Agent ".*MSIE [6-9].*"
ssl-unclean-shutdown

```

---

## 15.3.2 Configuring Linux Virtual Server as a Load Balancer

Consult the following online sources for instructions for setting up Linux Virtual Server as a load balancer for your Novell Vibe site:

- [The Linux Virtual Server Project \(http://www.linuxvirtualserver.org\)](http://www.linuxvirtualserver.org)
- [Linux Virtual Server \(LVS\) Project \(http://www.austintek.com/LVS\)](http://www.austintek.com/LVS)
- [Linux Virtual Server Tutorial \(http://www.ultramonkey.org/papers/lvs\\_tutorial/html\)](http://www.ultramonkey.org/papers/lvs_tutorial/html)

## 15.4 Configuring Internet Information Services to Support Multiple Vibe Servers

You can configure Internet Information Services (IIS) to support multiple Novell Vibe servers. For more information, see [Section 9.10.9, “Configuring IIS to Load Balance in a Clustered Environment,”](#) on page 106.





# Running Multiple Lucene Index Servers

# 16

Your Novell Vibe OnPrem site depends on the Lucene Index Server for full functionality. Different Lucene configurations provide different levels of scalability and reliability.

You can install the Lucene Index Server on a different server from where Vibe is running so that both programs have access to more server memory, disk space, and CPU resources. However, the Vibe server and the Lucene Index Server must not have a firewall between them. The RMI protocol used for the Lucene Index Server port works only within a trusted local area network (LAN).

- ♦ A Basic installation of Vibe places the Lucene Index Server on the same server where the Vibe software is installed.
- ♦ To provide additional memory for the Lucene Index Server, you might already have configured it to run in its own memory space, as described in [Section 9.5.3, “Running the Lucene Index Server in Its Own JVM,”](#) on page 90.
- ♦ To provide additional disk space and memory for the Lucene Index Server, you might already have moved it to a different server, as described in [Chapter 14, “Installing the Lucene Index Server on a Remote Server,”](#) on page 127.

These configurations provide additional resources for the Lucene Index Server, but it is still a single point of failure for your Vibe site. If the Lucene Index Server goes down, the Vibe site becomes inaccessible until access to the Lucene Index Server is restored.

Running multiple Lucene Index Servers provides high availability functionality, 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.

- ♦ [Section 16.1, “Planning a High Availability Lucene Configuration,”](#) on page 137
- ♦ [Section 16.2, “Setting Up a High Availability Lucene Configuration,”](#) on page 138
- ♦ [Section 16.3, “Testing Your Lucene High Availability Configuration,”](#) on page 150
- ♦ [Section 16.4, “Synchronizing a High Availability Lucene Configuration,”](#) on page 152

---

**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 II, “Basic Installation,”](#) on page 25 before attempting a more complex Vibe and Lucene configuration.

---

## 16.1 Planning a High Availability Lucene Configuration

A high availability Lucene Index Server configuration must include at least two different servers (either physical or virtual), referred to as “nodes” in the Vibe installation program. Lucene nodes in a high availability configuration can be set up on Linux servers, Windows servers, or both.

Each Lucene node must have its own independent directory structure for index files. The default location for the index files for the Lucene Index Server varies by platform:

Linux:        /var/opt/novell/teaming/lucene

Windows:    c:\Novell\Teaming\lucene

As you plan your high availability Lucene configuration, you can use the [Advanced Vibe Installation Summary Sheet](#) to record the options you want to use.

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *High Availability Lucene Configuration*, specify the number of Lucene nodes that you want in your high availability Lucene configuration.

---

Each Lucene node needs a unique name, a descriptive title, and a static IP address. The name and title identify the node in the Vibe administrative interface. Typically, the Lucene Index Server listens on RMI port 1199 on its server, but you can configure it to use a different port number if the default port number is already in use.

---

#### ADVANCED VIBE INSTALLATION SUMMARY SHEET

---

Under *High Availability Lucene Configuration*, specify the name, description, IP address, and RMI port number for each Lucene node.

---

If you have already accumulated index data on your initial Vibe server, you can choose to copy the index files to the Lucene nodes, or you can reindex the Vibe site after the new Lucene nodes are running. Depending on the amount of accumulated index data, reindexing can be a time-consuming process.

The Vibe server and the Lucene nodes must not have a firewall between them. The RMI protocol used for the Lucene Index Server port works only within a trusted local area network (LAN).

## 16.2 Setting Up a High Availability Lucene Configuration

- ♦ [Section 16.2.1, “Changing from a Local Lucene Index Server,”](#) on page 138
- ♦ [Section 16.2.2, “Changing from a Single Remote Lucene Index Server,”](#) on page 141
- ♦ [Section 16.2.3, “Expanding an Existing High Availability Lucene Configuration,”](#) on page 144
- ♦ [Section 16.2.4, “Changing Your Lucene Configuration without Vibe Site Down Time,”](#) on page 146

### 16.2.1 Changing from a Local Lucene Index Server

To change from a local Lucene Index Server running on the Novell Vibe server, you must install the Lucene Index Server on two or more remote servers, then reconfigure Vibe for a high availability Lucene configuration.

---

**NOTE:** Although it is possible to use the Lucene Index Server on the Vibe server as one of the “remote” Lucene nodes, this is not a recommended configuration. Consider it only if you are restricted to two servers for your Vibe site.

---

**1** Set up two or more Lucene nodes:

**1a** Install the Lucene Index Server on each node, as described in [Section 14.1, “Installing the Lucene Software,”](#) on page 127.

**1b** (Optional) Copy accumulated index data from the initial Lucene Index Server to each additional Lucene node.

The default location for the index files varies by platform:

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

Windows: `c:\Novell\Teaming\lucene`

**1c** Start the Lucene Index Server on each Lucene node, as described in [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129.

**2** Stop Vibe.

If you have installed the Vibe software on multiple servers, as described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131, stop Vibe on all servers, or follow the instructions in [Section 16.2.4, “Changing Your Lucene Configuration without Vibe Site Down Time,”](#) on page 146.

**3** Run the Vibe installation program to configure the Vibe server for multiple Lucene nodes:

**3a** On the Installation Settings page, select *Reconfigure Settings*, then click *Next*.

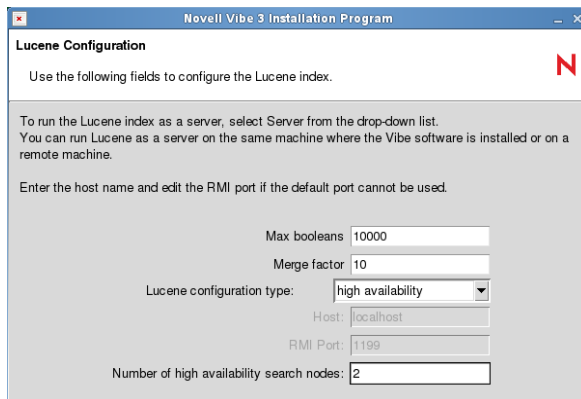
**3b** On the Choose Installation Type page, select *Advanced*, then click *Next*.

**3c** Click *Next* to proceed through the installation pages where no changes are needed.

**3d** On the Lucene Configuration page, fill in the following fields:

**Lucene configuration type:** Select *high availability*.

**Number of high availability search nodes:** Specify the number of Lucene nodes where you have installed and started the Lucene Index Server.



**3e** Click *Next*.

- 3f** On the Configure High Availability Search Nodes page, specify the configuration information for each Lucene node from the [Advanced Vibe Installation Summary Sheet](#) that you filled out in [Section 16.1, “Planning a High Availability Lucene Configuration,”](#) on page 137, then click *Next*.

Novell Vibe 3 Installation Program

**Configure High Availability Search Nodes**

Configure the high availability search nodes specified in the previous panel.

Use the following fields to configure each high availability search node.

To remove one of the high available search nodes, unselect its “Keep” check box.

Enter the high availability service name, host name and edit the RMI Port if the default port cannot be used.

High Availability Search Node 1

Keep Service name LuceneLinux

Service title Lucene on Linux

Host 172.16.5.2

RMI port 1199

High Availability Search Node 2

Keep Service name LuceneWindows

Service title Lucene on Windows


Host 172.16.5.19

RMI port 1199

If you need more than 2 high availability search nodes, you will need to select “< Back” and increase the specified number of nodes.

Novell Vibe 3.0.0 Installation Program

Help < Back Next > Cancel

- 3g** Click *Next* until you reach the Ready to Install page, then click *Install*.
- 3h** On the Installation Complete page, click *Finish*.
- 3i** Start Vibe.
- 3j** (Conditional) If you have multiple Vibe servers, repeat [Step 3](#) on each Vibe server.
- 4** Configure the Vibe site for the additional Lucene nodes:
- 4a** Log in to the Vibe site as the Vibe administrator.
- 4b** Click the *Administration* icon .
- 4c** Under *Search Index*, click *Nodes*.

**Lucene on Linux (lucenelinux)**

Host: 172.16.5.2  
RMI port: 1199

---

**User Mode Access**

Read and Write  
 Write Only  
 No Access

---

Enable Deferred Update Log

---

No Deferred Update Log Record Exists

**Lucene on Windows (lucenewindows)**

Host: 172.16.5.19  
RMI port: 1199

---

**User Mode Access**

Read and Write  
 Write Only  
 No Access

---

Enable Deferred Update Log

---

No Deferred Update Log Record Exists

By default, the first Lucene node in the list has Read and Write access, meaning that Vibe updates it as new content is added to the Vibe site. By default, subsequent nodes in the list have Write Only access, meaning that the Vibe software can update content on the server, but users cannot access it. This setting is useful when you need to perform maintenance on a Lucene node, but it is not the setting you want when you set up a new Lucene node.

- 4d** In the *User Mode Access* box, select *Read and Write* for all Lucene nodes, click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that users immediately have access to the additional Lucene nodes.

- 5** Skip to [Section 16.3, “Testing Your Lucene High Availability Configuration,”](#) on page 150.

## 16.2.2 Changing from a Single Remote Lucene Index Server

To change from a single remote Lucene Index Server to a high availability configuration, you must install the Lucene Index Server on one or more additional remote servers, then reconfigure Novell Vibe for additional Lucene nodes.

- 1** Bring down your Vibe site:

- 1a** Stop Vibe.

If you have installed the Vibe software on multiple servers, as described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131, stop Vibe on all servers, or follow the instructions in [Section 16.2.4, “Changing Your Lucene Configuration without Vibe Site Down Time,”](#) on page 146.

- 1b** Make sure that the existing remote Lucene Index Server also stops.

- 2** Set up one or more additional Lucene nodes:

- 2a** Install the Lucene Index Server on each additional remote server, as described in [Section 14.1, “Installing the Lucene Software,”](#) on page 127.

- 2b** (Optional) Copy accumulated index data from the initial remote Lucene node to each additional Lucene node.

The default location for the index files varies by platform:

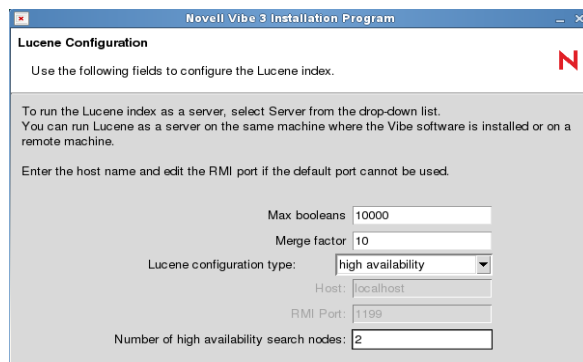
Linux: `/var/opt/novell/teaming/lucene`

Windows: `c:\Novell\Teaming\lucene`

- 2c** Start the Lucene Index Server on each Lucene node, as described in [Section 14.3](#), “[Managing a Remote Lucene Index Server](#),” on page 129, but do not bring up your Vibe site.
- 3** Run the Vibe installation program to configure the Vibe server for multiple Lucene nodes:
- 3a** On the Installation Settings page, select *Reconfigure Settings*, then click *Next*.
- 3b** On the Choose Installation Type page, select *Advanced*, then click *Next*.
- 3c** Click *Next* to proceed through the installation pages where no changes are needed.
- 3d** On the Lucene Configuration page, fill in the following fields:

**Lucene configuration type:** Change *server* to *high availability*.

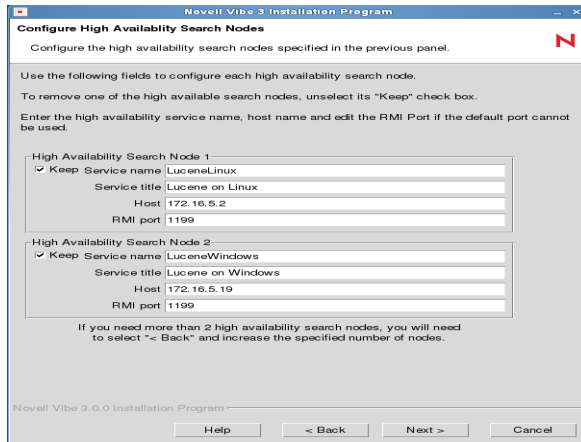
**Number of high availability search nodes:** Specify the number of Lucene nodes where you have installed the Lucene Index Server.




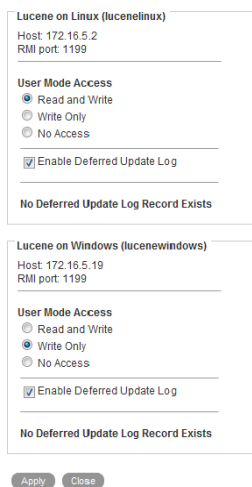
The screenshot shows the 'Novell Vibe 3 Installation Program' window with the 'Lucene Configuration' tab selected. The window contains the following fields and instructions:

- Instructions: "Use the following fields to configure the Lucene index." and "To run the Lucene index as a server, select Server from the drop-down list. You can run Lucene as a server on the same machine where the Vibe software is installed or on a remote machine. Enter the host name and edit the RMI port if the default port cannot be used."
- Max booleans: 10000
- Merge factor: 10
- Lucene configuration type: high availability (selected in a dropdown menu)
- Host: localhost
- RMI Port: 1199
- Number of high availability search nodes: 2

- 3e** Click *Next*.
- 3f** On the Configure High Availability Search Nodes page, specify the configuration information for each Lucene node from the [Advanced Vibe Installation Summary Sheet](#) that you filled out in [Section 16.1](#), “[Planning a High Availability Lucene Configuration](#),” on page 137, then click *Next*.



- 3g** Click *Next* until you reach the Ready to Install page, then click *Install*.
- 3h** On the Installation Complete page, click *Finish*.
- 3i** Start Vibe.
- 3j** (Conditional) If you have multiple Vibe servers, repeat [Step 3](#) on each Vibe server.
- 4** Configure the Vibe site for the additional Lucene nodes:
  - 4a** Log in to the Vibe site as the Vibe administrator.
  - 4b** Click the *Administration* icon .
  - 4c** Under *Search Index*, click *Nodes*.



By default, the first Lucene node in the list has Read and Write access, meaning that Vibe updates it as new content is added to the Vibe site. By default, subsequent nodes in the list have Write Only access, meaning that the Vibe software can update content on the server, but users cannot access it. This setting is useful when you need to perform maintenance on a Lucene node, but it is not the setting you want when you set up a new Lucene node.

- 4d** In the *User Mode Access* box, select *Read and Write* for all Lucene nodes.

**4e** Click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that users immediately have access to the additional Lucene nodes.

**5** Skip to [Section 16.3, “Testing Your Lucene High Availability Configuration,”](#) on page 150.

## 16.2.3 Expanding an Existing High Availability Lucene Configuration

After you have set up an initial high availability Lucene configuration, you can add additional Lucene nodes at any time.

**1** Bring down your Vibe site:

**1a** Stop Vibe.

If you have installed the Vibe software on multiple servers, as described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131, stop Vibe on all servers, or follow the instructions in [Section 16.2.4, “Changing Your Lucene Configuration without Vibe Site Down Time,”](#) on page 146.

**1b** Stop all Lucene nodes, as described in [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129.

**2** Set up one or more additional Lucene nodes:

**2a** Install the Lucene Index Server on each additional remote server, as described in [Section 14.1, “Installing the Lucene Software,”](#) on page 127.

**2b** (Optional) Copy accumulated index data from an existing Lucene node to each additional Lucene node.

The default location for the index files varies by platform:

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

Windows: `c:\Novell\Teaming\lucene`

**2c** Start the Lucene Index Server on each Lucene node, as described in [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129, but do not bring up your Vibe site.

**3** Run the Vibe installation program to configure the Vibe server for the additional Lucene nodes:

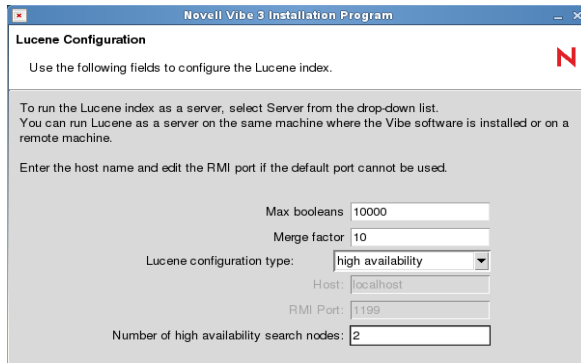
**3a** On the Installation Settings page, select *Reconfigure Settings*, then click *Next*.

**3b** On the Choose Installation Type page, select *Advanced*, then click *Next*.

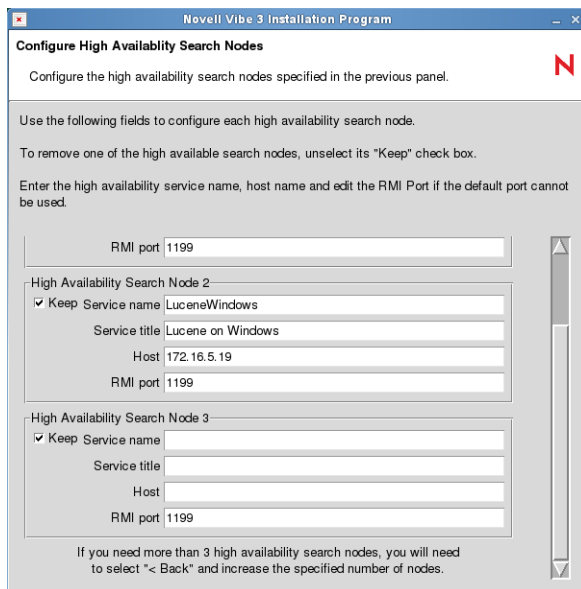
**3c** Click *Next* to proceed through the installation pages where no changes are needed.


**3d** On the Lucene Configuration page, increase the number of nodes in the *Number of high availability search nodes* field, then click *Next*.





- 3e** On the Configure High Availability Search Nodes page, specify the configuration information for each additional Lucene node, then click *Next*.



- 3f** Click *Next* until you reach the Ready to Install page, then click *Install*.
- 3g** On the Installation Complete page, click *Finish*.
- 3h** Start Vibe.
- 3i** (Conditional) If you have multiple Vibe servers, repeat [Step 3](#) on each Vibe server.
- 4** Configure the Vibe site for the additional Lucene nodes:
- 4a** Log in to the Vibe site as the Vibe administrator.
- 4b** Click the *Administration* icon .
- 4c** Under *Search Index*, click *Nodes*.

Lucene on Linux (lucenelinux)  
Host: 172.16.5.2  
RMI port: 1199

User Mode Access  
 Read and Write  
 Write Only  
 No Access

Enable Deferred Update Log

No Deferred Update Log Record Exists

---

Lucene on Windows (lucenewindows)  
Host: 172.16.5.19  
RMI port: 1199

User Mode Access  
 Read and Write  
 Write Only  
 No Access

Enable Deferred Update Log

No Deferred Update Log Record Exists

Apply Close

By default, the first Lucene node in the list has Read and Write access, meaning that Vibe updates it as new content is added to the Vibe site. By default, subsequent nodes in the list have Write Only access, meaning that the Vibe software can update content on the server, but users cannot access it. This setting is useful when you need to perform maintenance on a Lucene node, but it is not the setting you want when you set up a new Lucene node.

**4d** In the *User Mode Access* box, select *Read and Write* for all Lucene nodes.

**4e** Click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that users immediately have access to the additional Lucene nodes.

**5** Skip to [Section 16.3, “Testing Your Lucene High Availability Configuration,”](#) on page 150.

## 16.2.4 Changing Your Lucene Configuration without Vibe Site Down Time

Vibe site down time can be avoided only if you have installed the Vibe software on multiple servers, as described in [Chapter 15, “Running Vibe on Multiple Servers,”](#) on page 131.

To change to a high availability Lucene configuration in a multiple Vibe server configuration:

**1** Set up two or more Lucene nodes:

**1a** Install the Lucene Index Server on each node, as described in [Section 14.1, “Installing the Lucene Software,”](#) on page 127

**1b** Start the Lucene Index Server on each Lucene node, as described in [Section 14.3, “Managing a Remote Lucene Index Server,”](#) on page 129.

**2** Stop Vibe on one server.

The other Vibe servers remain in service for users and continue to communicate with the original Lucene Index Server.

**3** Run the Vibe installation program on the Vibe server that you stopped to configure it for multiple Lucene Index Servers:

**3a** On the Installation Settings page, select *Reconfigure Settings*, then click *Next*.

**3b** On the Choose Installation Type page, select *Advanced*, then click *Next*.

**3c** Click *Next* to proceed through the installation pages where no changes are needed.

**3d** On the Lucene Configuration page, fill in the following fields.

**Lucene configuration type:** Select *high availability*.

**Number of high availability search nodes:** Specify the number of Lucene nodes where you have installed the Lucene Index Server.

The screenshot shows the 'Lucene Configuration' window of the Novell Vibe 3 Installation Program. It contains the following fields and options:

- Max booleans: 10000
- Merge factor: 10
- Lucene configuration type: high availability (selected in a dropdown menu)
- Host: localhost
- RMI Port: 1199
- Number of high availability search nodes: 2

**3e** Click *Next*.

**3f** On the Configure High Availability Search Nodes page, specify the configuration information for each Lucene node from the [Advanced Vibe Installation Summary Sheet](#) that you filled out in [Section 16.1, "Planning a High Availability Lucene Configuration,"](#) on page 137, then click *Next*.

The screenshot shows the 'Configure High Availability Search Nodes' window of the Novell Vibe 3 Installation Program. It contains the following configuration for two nodes:

- High Availability Search Node 1:**
  - Keep:
  - Service name: LuceneLinux
  - Service title: Lucene on Linux
  - Host: 172.16.5.2
  - RMI port: 1199
- High Availability Search Node 2:**
  - Keep:
  - Service name: LuceneWindows
  - Service title: Lucene on Windows
  - Host: 172.16.5.19
  - RMI port: 1199

**3g** Click *Next* until you reach the Ready to Install page, then click *Install*.

**3h** On the Installation Complete page, click *Finish*.

**4** Start the reconfigured Vibe server.


**5** Access the reconfigured Vibe server and prevent access to the additional Lucene nodes:

---

**IMPORTANT:** All Vibe servers must be reconfigured before any of them access the additional Lucene nodes.

---

**5a** Log in to the reconfigured Vibe server as the Vibe administrator, using the server hostname rather than your Vibe site URL.

**5b** Click the *Administration* icon .

**5c** Under *Search Index*, click *Nodes*.

Lucene on Linux (lucenelinux)  
Host: 172.16.5.2  
RMI port: 1199

User Mode Access  
 Read and Write  
 Write Only  
 No Access

Enable Deferred Update Log

No Deferred Update Log Record Exists

Lucene on Windows (lucenewindows)  
Host: 172.16.5.19  
RMI port: 1199

User Mode Access  
 Read and Write  
 Write Only  
 No Access

Enable Deferred Update Log

No Deferred Update Log Record Exists

Apply Close

By default, the first Lucene node in the list has *Read and Write* access, meaning that Vibe updates it as new content is added to the Vibe site. By default, subsequent nodes in the list have *Write Only* access, meaning that the Vibe software can update content on the server, but users cannot access it. When you set up a high availability Lucene configuration without Vibe site down time, you need to prevent write access during the reconfiguration process.

**5d** In the *User Mode Access* box, change *Write Only* to *No Access* for the additional Lucene nodes.

**5e** Click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that the reconfigured Vibe server does not communicate with the additional Lucene nodes.

**6** Reconfigure the rest of the Vibe servers:

**6a** Stop each Vibe server.

**6b** Repeat [Step 3](#) to configure each Vibe server for the additional Lucene nodes.

**6c** Start each reconfigured Vibe server.

**7** Access the reconfigured Vibe site and allow write access to the additional Lucene nodes:

**7a** Log in to the reconfigured Vibe as the Vibe administrator.

**7b** Click the *Administration* icon .

**7c** Under *Search Index*, click *Nodes*.

<p><b>Lucene on Linux (LuceneLinux)</b></p> <p>Host: 172.16.5.19 RMI port: 1199</p> <hr/> <p><b>User Mode Access</b></p> <p><input checked="" type="radio"/> Read and Write <input type="radio"/> Write Only <input type="radio"/> No Access</p> <hr/> <p><input checked="" type="checkbox"/> Enable Deferred Update Log</p> <p>No Deferred Update Log Record Exists</p>
<p><b>Lucene on Windows (LuceneWindows)</b></p> <p>Host: 137.65.67.222 RMI port: 1199</p> <hr/> <p><b>User Mode Access</b></p> <p><input type="radio"/> Read and Write <input type="radio"/> Write Only <input checked="" type="radio"/> No Access</p> <hr/> <p><input checked="" type="checkbox"/> Enable Deferred Update Log</p> <p>No Deferred Update Log Record Exists</p>

Apply Close

**7d** In the *User Mode Access* box, change *No Access* to *Write Only* for the additional Lucene nodes.

**7e** Click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that the reconfigured Vibe servers can now communicate with the additional Lucene nodes, although user access is still disallowed.

**8** Reindex the Vibe site, so that the additional Lucene nodes are updated with the same index data that the original Lucene Index Server has:

**8a** On the Administration page, under *Search Index*, click *Index*.

Search Index

Manage Search Index Optimize Search Index

Re-Index Everything

Select the Places to be Re-Indexed:  
(Selecting a folder or workspace will automatically index all folders and workspaces within it.)

- Home Workspace
- Users and Groups
- Global Workspaces
- Personal Workspaces
- Team Workspaces

Select the Nodes to Apply Re-Indexing to:

If re-indexing all or large part of the tree, it is strongly recommended to change the access mode of the node(s) to write-only before starting re-indexing so that all read requests can go to the other unselected node(s) while re-indexing is in progress. At least one node must allow read-write at any given time. Once re-indexing is completed, change the access mode of the node(s) back to read-write so that search requests can use them again.

Lucene on Linux (lucenelinux) - Read and Write, Deferred Update Log Enabled, No Deferred Update Log Record Exists

Lucene on Windows (lucenewindows) - Write Only, Deferred Update Log Enabled, No Deferred Update Log Record Exists

OK Close

**8b** On the *Manage Search Index* tab, select *Re-Index Everything*, so that the entire Vibe site is reindexed.

**8c** Select the additional Lucene nodes, but do not select any previously existing nodes.

**8d** Click *OK* to start the indexing.

Depending on the size of your Vibe site, reindexing can be a time-consuming process. However, because one or more previously existing Lucene Index Servers are still servicing the Vibe site, users are not affected by the reindexing process.

**8e** When the reindexing is completed, click *Close*.

**9** Make the additional Lucene nodes available to Vibe users:

**9a** On the Administration page, under *Search Index*, click *Nodes*.

The screenshot shows two configuration panels for Lucene nodes. The top panel is for 'Lucene on Linux (lucenelinux)' with Host: 172.16.5.2 and RMI port: 1199. The 'User Mode Access' section has three radio buttons: 'Read and Write' (selected), 'Write Only', and 'No Access'. Below it is a checked checkbox for 'Enable Deferred Update Log' and a message 'No Deferred Update Log Record Exists'. The bottom panel is for 'Lucene on Windows (lucenewindows)' with Host: 172.16.5.19 and RMI port: 1199. It has the same 'User Mode Access' section with 'Write Only' selected, the 'Enable Deferred Update Log' checkbox checked, and the 'No Deferred Update Log Record Exists' message. At the bottom of the form are 'Apply' and 'Close' buttons.

**9b** In the *User Mode Access* box, change *Write Access* to *Read and Write* for the additional Lucene nodes.

**9c** Click *Apply*, then click *Close*.

The new setting is put into effect immediately, so that Vibe users have additional Lucene Index Servers available as they use the Vibe site.

## 16.3 Testing Your Lucene High Availability Configuration

When you first set up your high availability Lucene configuration, you can configure Novell Vibe to write Lucene node information to the Tomcat log file so that you can observe the behavior of the Lucene nodes. Then you can take nodes down and bring them up again to see the effect on your Vibe site. This process helps you prepare for the situation where a Lucene node goes down unexpectedly or you need to take one down on purpose, perhaps for maintenance.

- ◆ [Section 16.3.1, “Configuring Vibe to Log Lucene Node Activity,” on page 151](#)
- ◆ [Section 16.3.2, “Observing Lucene Node Activity,” on page 151](#)

---

**NOTE:** For background information about the Tomcat log file, see “[Tomcat Log File](#)” in “[Site Maintenance](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

---

## 16.3.1 Configuring Vibe to Log Lucene Node Activity

By default, Vibe writes an error to the Tomcat log file whenever it cannot communicate with a Lucene node. For testing purposes, you can change the logging level so that the Tomcat log file includes a message for each time Vibe contacts a Lucene Index Server.

After observing and understanding the behavior, you should return the logging to normal levels.

- 1 Open the `log4j.properties` file in a text editor.

The location of the `log4j.properties` file varies by platform.

Linux: `/opt/novell/teaming/apache-tomcat/webapps/ssf/WEB-INF`

Windows: `c:\Program Files\Novell\Teaming\apache-tomcat\`  
`webapps\ssf\WEB-INF`

- 2 Search for the following line:

```
#log4j.category.com.novell.teaming.search=DEBUG
```

- 3 Remove the pound sign (#) from the beginning of the line to activate the DEBUG logging level for the Lucene Index Server.

The DEBUG logging level adds a message for each time Vibe contacts a Lucene Index.

- 4 Save the `log4j.properties` file, then exit the text editor.
- 5 Stop Vibe, then start Vibe to put the new logging level into effect.

## 16.3.2 Observing Lucene Node Activity

After changing the Vibe logging level to include Lucene node activity, you can monitor the Tomcat log file to see which Lucene nodes Vibe is contacting.

- 1 Change to the directory where the Tomcat log file is located.

For background information about the Tomcat log file, see “[Tomcat Log File](#)” in “[Site Maintenance](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

- 2 On Linux, use the `tail` command to monitor the end of the Tomcat log file.

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

or

On Windows, download an equivalent command from the Internet in order to perform the following steps.

For example, there is a command available at [SourceForge.net](http://sourceforge.net/projects/tailforwin32) (<http://sourceforge.net/projects/tailforwin32>).

- 3 Perform some activities on the Vibe site to create new content.

For example, you could create a blog entry. The Tomcat log file shows that Vibe is contacting each available Lucene Index Server in turn as it submits the new information for indexing. Nodes are considered available if they are marked *Read and Write* in the *User Mode Access* box on the Lucene Nodes page.

- 4 Bring down one of the Lucene nodes.

For example, you might reboot the Lucene server, stop the Lucene Index Server on the node, or otherwise prevent Vibe from contacting the Lucene node.

- 5 Observe that the Tomcat log file displays an error when the Lucene node becomes unavailable.
- 6 Perform some additional activities on the Vibe site that create new content.

You might notice a pause as Vibe tries to connect with the Lucene node that is no longer available.

- 7 Observe that the Tomcat log file shows when normal Vibe processing has resumed without access to the unavailable Lucene node.
- 8 Make the unavailable Lucene node available again.
- 9 Observe that the Tomcat log file indicates that Vibe has created a journal record on the Lucene node that was temporarily unavailable.

The journal record contains the indexing operations that failed to take place while the Lucene node was unavailable. Even though the Lucene node is back up, Vibe does not start accessing it until it has been synchronized with the latest index information.


- 10 To synchronize the out-of-date Lucene node, follow the steps in [Section 16.4, “Synchronizing a High Availability Lucene Configuration,”](#) on page 152.

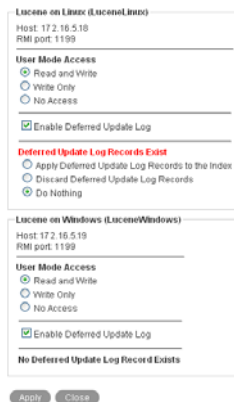
After the out-of-date Lucene node has been synchronized, Vibe starts accessing it again.

If a situation arises where no Lucene node is marked *Read and Write* in the *User Mode Access* box on the Lucene Nodes page, Vibe temporarily accesses the first node in the list that is set to *Write Only*. If no nodes are set to *Write Only* or *Read and Write*, Vibe temporarily access the first node in the list, even though it is set to *No Access*. This functionality is required because you cannot log in to the Vibe site without access to a Lucene Index Server.

## 16.4 Synchronizing a High Availability Lucene Configuration

You should ensure that your Lucene node servers remain in sync with each other. Whenever a Lucene node is down for a relatively short period of time (no more than one or two days), you can synchronize it with other Lucene nodes whose index files are up-to-date.

- 1 Make sure that the out-of-date Lucene node is running reliably again.
- 2 Log in to the Novell Vibe site as the Vibe administrator.
- 3 Click the *Administration* icon .
- 4 Under *Search Index*, click *Nodes*.



The screenshot shows two configuration panels for Lucene nodes. The top panel is for 'Lucene on Linux (LuceneLinux)' and the bottom panel is for 'Lucene on Windows (LuceneWindows)'. Both panels show the host IP as 172.16.5.18 and the RMI port as 1199. The 'User Mode Access' section in both panels has radio buttons for 'Read and Write', 'Write Only', and 'No Access'. The 'Enable Deferred Update Log' checkbox is checked in both. The 'Deferred Update Log Records Exist' section in the Linux panel has radio buttons for 'Apply Deferred Update Log Records to the Index', 'Discard Deferred Update Log Records', and 'Do Nothing'. The Windows panel shows 'No Deferred Update Log Record Exists'. At the bottom, there are 'Apply' and 'Close' buttons.



- 5** To repair the out-of-date Lucene node, select *Apply Deferred Update Log Records to the Index*, then click *Apply*.

The Deferred Update Log options disappear if the update is successful. If for some reason the deferred update log records cannot be applied to the index, you can rebuild the index, as described in “[Rebuilding the Lucene Index](#)” in “[Site Maintenance](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.

- 6** Click *Close*.



# Running Multiple Database Servers

# 17

Each of the three databases supported by Novell Vibe OnPrem (MySQL, 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 \(http://www.mysql.com/products/database/cluster\)](http://www.mysql.com/products/database/cluster)
- ♦ [SQL Server Clustering \(http://www.sql-server-performance.com/articles/clustering/clustering\\_intro\\_p1.aspx\)](http://www.sql-server-performance.com/articles/clustering/clustering_intro_p1.aspx)
- ♦ [Oracle Real Application Clusters \(http://www.oracle.com/technology/products/database/clustering\)](http://www.oracle.com/technology/products/database/clustering)

---

**NOTE:** We highly recommend that you follow the instructions in [Part II, “Basic Installation,”](#) on [page 25](#) before attempting a more complex Vibe configuration.

---



# Update



- ♦ [Chapter 18, “What’s New in Novell Vibe OnPrem 3.x,” on page 159](#)
- ♦ [Chapter 19, “Updating from Novell Vibe 3 to Novell Vibe 3.1,” on page 163](#)
- ♦ [Chapter 20, “Updating the Operating System Where Vibe Is Running,” on page 169](#)
- ♦ [Chapter 21, “Migrating Existing Novell Vibe Data into a New Vibe 3.1 System,” on page 171](#)
- ♦ [Chapter 22, “Migrating from SiteScape Forum or Other Collaboration Software,” on page 177](#)



# What's New in Novell Vibe OnPrem 3.x

# 18

Novell Vibe OnPrem is the new name for the product formerly known as Novell Teaming. This section describes new features that have been added to Novell Vibe 3.x.

- ◆ [Section 18.1, “Vibe 3.x User Enhancements,” on page 159](#)
- ◆ [Section 18.2, “Vibe 3.x Installation Enhancements,” on page 159](#)
- ◆ [Section 18.3, “Vibe 3.x Administration Enhancements,” on page 159](#)

## 18.1 Vibe 3.x User Enhancements

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


- ◆ [“What's New in Novell Vibe 3.x” in the \*Novell Vibe OnPrem 3.1 User Guide\*](#)
- ◆ [“What's New in Vibe 3x” in the \*Novell Vibe OnPrem 3.1 Advanced User Guide\*](#)

## 18.2 Vibe 3.x Installation Enhancements

- ◆ **Support for Windows Authentication:** You can configure a single sign-on experience for your users when you run Novell Vibe on a Windows server. For more information, see [Section 9.10, “Configuring Single Sign-On with Internet Information Services for Windows,” on page 94.](#)

## 18.3 Vibe 3.x Administration Enhancements

- ◆ **Disable User Accounts (v3.1):** You can disable user accounts rather than delete them. For more information, see [“Disabling Vibe User Accounts” in the \*Novell Vibe OnPrem 3.1 Administration Guide\*.](#)
- ◆ **E-Mail Report (v3.1):** You can generate reports for all e-mail messages sent from and into the Vibe site, as well as e-mail errors that have been encountered. For more information, see [“E-Mail Report” in the \*Novell Vibe OnPrem 3.1 Administration Guide\*.](#)
- ◆ **Restricting User Access by IP Address (v3.1):** You can restrict what information users can access when they are outside your corporate firewall. For more information, see [“Restricting Access Rights of Users Outside the Firewall” in the \*Novell Vibe OnPrem 3.1 Administration Guide\*.](#)
- ◆ **Workspace and Folder Data Quotas (3.1):** You can limit the amount of information that can exist in specific workspaces and folders. For more information, see [“Managing Workspace and Folder Data Quotas” in the \*Novell Vibe OnPrem 3.1 Administration Guide\*.](#)
- ◆ **Configuring Search Functionality (3.1):** You can configure the settings for how items are indexed and how searches are executed on the Vibe site. For more information, see [“Understanding and Configuring Search Functionality” in the \*Novell Vibe OnPrem 3.1 Administration Guide\*.](#)

- ♦ **Site-wide brand:** You can create a site-wide brand and manage users' ability to create individual brands on lower-level workspaces. For more information, see [“Creating a Site-Wide Brand”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.
- ♦ **Default home page:** You can set a default home page where all users are first taken when they access the Novell Vibe site. You can create a separate default home page for visitors. For more information, see [“Setting a Default Home Page”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.
- ♦ **User and group management:** When you move or rename users and groups that are being synchronized via LDAP, Vibe now recognizes the change and maintains the association between the user or group that was moved or renamed and the LDAP server. For more information, see [“LDAP Attribute to Identify a User or Group”](#) on page 46.
- ♦ **User Visibility:** You can hide one set of users from another set of users. For example, you might want to do this if your Vibe site has users from more than one company and you want users to see only the users who belong to the same company. For more information, see [“Restricting Groups of Users from Seeing One Another”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.
- ♦ **Integrations with Novell Messenger:** Vibe 3 provides tight integrations with Novell Messenger, which allows Vibe users to see who is currently online. Presence icons  are located next to users' names in folder entries.

Vibe administrators must configure Novell Messenger to work with Novell Vibe, as described in [“Integrating Messenger with Vibe”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.


- ♦ **Integrations with Novell Conferencing:** Vibe 3 provides tight integrations with Novell Conferencing, which allows you to start an instant meeting with other Vibe users directly from the Vibe interface.

Vibe administrators must configure Novell Messenger to work with Novell Conferencing, as described in [“Integrating Conferencing with Vibe”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

- ♦ **Expanded User Profile:** The User Profile section in Vibe 3 has been expanded to rival other professional knowledgebases such as LinkedIn. Now users can include more information to share with their colleagues, such as education, qualifications, and competencies. For more information, see [“Modifying Your Profile”](#) in the *Novell Vibe OnPrem 3.1 User Guide*.

For information about how Vibe administrators can modify the information that is displayed in the profile view, see [“Customizing the Default User Profile View”](#) in [“Setting Up Users' Personal Workspaces”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

If you have modified the User Profile definition for your Vibe site, these changes are not displayed when you upgrade to Vibe 3. To display these changes, complete the steps in [Section 19.4.1, “Resetting Your Definitions,”](#) on page 167.

- ♦ **Profile Quick View Dialog Box:** The Profile Quick View dialog box is displayed when users click a user's Presence icon . It enables them to see information about that user, view the user's micro-blog or workspace, follow the user, and more.

For information about how Vibe administrators can modify the information that is displayed in the Profile Quick View, see [“Customizing the Default Profile Quick View”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

If you have modified the User Profile definition for your Vibe site, this dialog box is not displayed when you upgrade to Vibe 3. To display these changes, complete the steps in [Section 19.4.1, “Resetting Your Definitions,”](#) on page 167.



- ◆ **Ability to Send Vibe Mail Messages from a Custom Address:** You can configure Vibe to send e-mail messages and notifications from a zone-specific or site-wide address. In previous versions of Vibe, when a user sends an e-mail message from Vibe, the message can be shown only as being from that specific user.

For more information, see “[Configuring Vibe to Send E-Mail Messages and Notifications from a Custom Address](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.



# Updating from Novell Vibe 3 to Novell Vibe 3.1

# 19

This section describes how to update to Novell Vibe 3.1 from Novell Vibe 3. If you are updating from an earlier version of Novell Vibe (earlier versions of Novell Vibe are called Novell Teaming), you must first update to Novell Vibe 3 before you can update to Novell Vibe 3.1. For information on how to update to Novell Vibe 3, see “Update” in the *Novell Vibe OnPrem 3 Installation Guide* ([http://www.novell.com/documentation/vibe\\_onprem3/vibeprem3\\_inst/data/bookinfo.html](http://www.novell.com/documentation/vibe_onprem3/vibeprem3_inst/data/bookinfo.html))

- ♦ Section 19.1, “Understanding the Update Process,” on page 163
- ♦ Section 19.2, “Updating a Single-Server System from Vibe 3 to Vibe 3.1,” on page 163
- ♦ Section 19.3, “Updating a Multiple-Server System from Vibe 3 to Vibe 3.1,” on page 165
- ♦ Section 19.4, “Performing Post-Update Tasks,” on page 167

## 19.1 Understanding the Update Process

When you upgrade to Novell Vibe 3.1, each user who has used a previous version of Vibe must clear his or her browser’s cache, regardless of which browser he or she is using. Not clearing the browser cache results in Vibe not displaying correctly.

Ensure that you communicate this to each Vibe user in your system.

During the update from Novell Vibe 3 to Vibe 3.1, the following aspects of your Vibe system are modified:

- ♦ The software is updated from Vibe 3 to Vibe 3.1.
- ♦ A backup copy of your existing Vibe 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 Novell Vibe is called Novell Teaming), the backup copy is located in the following directory:

Linux:        /opt/icecore

Windows:    C:\Program Files\icecore

## 19.2 Updating a Single-Server System from Vibe 3 to Vibe 3.1

When you update a single-server Novell Vibe installation from Vibe 3 to Vibe 3.1, the Vibe Installation program can perform the entire update in a single process.

- 1 Make sure you have a current backup of your Vibe 3 system.

- 2 Stop Vibe.
- 3 Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 3 system.
- 4 Copy the `installer.xml` file from the directory where the Vibe 3 Installation program is located to the directory where you have extracted the Vibe 3.1 software.

You must obtain a new `license-key.xml` file when upgrading to Vibe 3.1.

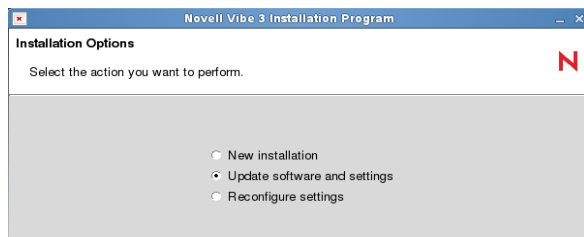
The `installer.xml` file provides default values when you run the Vibe 3.1 Installation program.

- 5 Start the Vibe 3.1 installation program.

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

- ♦ [Section 4.1.2, “Running the Linux Vibe Installation Program,” on page 55](#)
- ♦ [Section 4.2.2, “Running the Windows Vibe Installation Program,” on page 63](#)

- 6 Accept the License Agreement, then click *Next*.



Because you provided your Vibe 3 `installer.xml` file in the directory with the Vibe 3.1 installation program, the *Update software and settings* installation option is selected by default.

- 7 Click *Next* to continue.
- 8 Click *Yes* to let the Installation program know that you have stopped Vibe.
- 9 Select the check box to let the installation program know that you have backed up all of your data, then click *Next*.
- 10 Select *Basic* or *Advanced*, depending on the type of Vibe installation you are updating, then click *Next*.
- 11 Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 3.1 system.
- 12 Click *Install* when you are ready to perform the update.  
The Installation program might seem to pause at this point. It needs to update tables and indexes in the Vibe database. If you have a large database, this process can be time-consuming.
- 13 Click *Finish* when the update is completed.
- 14 Start Vibe 3.1 in the same way that you have been starting Vibe 3.  
When you start Vibe for the first time after the update, it takes longer to start than usual because data in the Vibe database must be updated before the Vibe site is ready to use.

## 19.2.1 Updating an Oracle Database from 3 to 3.1

The Vibe Installation program can update MySQL and Microsoft SQL databases as part of the Vibe software update, but it cannot update an Oracle database. Therefore, if you are using Oracle, you must manually run the database update script after you have stopped Vibe:

- 1 Change to the directory where the Vibe 3.1 Installation program is located.
- 2 Unzip the `teaming-3.1.n-sql.zip` file to create the `update-3.0.0-3.1.n` directory  
The `update-3.0.0-3.1.n` directory contains an update script for each type of database (MySQL, Microsoft SQL, and Oracle).
- 3 Run the `update-oracle.sql` script to update the database structure.  

```
sqlplus "/ as sysdba"  
SQL>spool update-oracle.out;  
SQL>@update-oracle;  
SQL>quit;
```
- 4 Return to [Step 5 in Section 19.2, "Updating a Single-Server System from Vibe 3 to Vibe 3.1," on page 163.](#)

## 19.3 Updating a Multiple-Server System from Vibe 3 to Vibe 3.1

If your Novell Vibe 3 system is distributed across multiple servers, the Vibe 3.1 installation program can update Vibe components on the Vibe server, but you must manually update any Vibe components that you have placed on remote servers.

- ♦ [Section 19.3.1, "Manual Vibe Database Update," on page 165](#)
- ♦ [Section 19.3.2, "Remote Lucene Index Server Update," on page 166](#)

### 19.3.1 Manual Vibe Database Update

In order to update a database from Vibe 3 to 3.1 when the Vibe installation program cannot do it for you, you must run the Vibe 3.1 database update script.

- 1 Stop Vibe.
- 2 Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 3 system.
- 3 Change to the directory where the Vibe 3 installation program is located.
- 4 Unzip the `teaming-3.1.n-sql.zip` file to create the `update-3.0.0-3.1.n` directory  
The `update-3.0.0-3.1.n` directory contains an update script for each type of database (MySQL, Microsoft SQL, and Oracle).
- 5 Copy the script for your database type to the server where the Vibe database is located.
- 6 Use the database client utility for your database type to run the script:

```
MySQL:  mysql -uusername -ppassword < /path/update-mysql.sql
```

```
Microsoft osql -Uusername -Ppassword -i update-sqlserver.sql
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 update the database.
```

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

**7** After you have updated the database from Vibe 3 to Vibe 3.1:

If your Lucene Index Server is also on a remote server, continue with [Section 19.3.2, “Remote Lucene Index Server Update,”](#) on page 166.

or

If all remaining components that need to be updated from Vibe 3 to Vibe 3.1 are on the Vibe server, follow the instructions in [Section 19.2, “Updating a Single-Server System from Vibe 3 to Vibe 3.1,”](#) on page 163.

## 19.3.2 Remote Lucene Index Server Update

In order to update your index from Novell Vibe 3 to Novell Vibe 3.1 when the Vibe installation program cannot do it for you, you need to run the Remote Lucene Server installation program.

- 1** Stop Vibe.
- 2** Stop the Lucene Index Server.
- 3** Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 3 system.
- 4** Copy the Vibe 3.1 Remote Lucene Server Installation program from the directory where the Vibe 3.1 Installation program is located to a convenient directory on the server where the remote Lucene Index Server is located.

The name of the Remote Lucene Server Installation program varies by platform:

```
Linux:    lucene-installer.linux
```

```
Windows: lucene-installer.exe
```

- 5** Start the Vibe 3.1 Remote Lucene Server installation program.
- 6** Accept the License Agreement, then click *Next*.
- 7** Select *Update software and settings*.
- 8** Click *Next* to continue.
- 9** Click *Next* to accept the installation location.
- 10** Click *Next* to accept the Java JDK location.
- 11** In the *Host* field, specify the hostname where you are installing the remote Lucene Index Server.
- 12** Change Lucene configuration settings as needed, then click *Next*.

For information about Lucene configuration settings, see [Section 9.5.2, “Changing Lucene Configuration Settings,”](#) on page 89.

- 13 Click *Install* to install the updated Lucene Index Server software.
- 14 Click *Finish* when the update is completed.
- 15 Start the Lucene Index Server.
- 16 Now that all remote Vibe components have been updated, follow the instructions in [Section 19.2, “Updating a Single-Server System from Vibe 3 to Vibe 3.1,”](#) on page 163.

## 19.4 Performing Post-Update Tasks

After you start Novell Vibe 3.1, 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 updated 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.

- ♦ [Section 19.4.1, “Resetting Your Definitions,”](#) on page 167
- ♦ [Section 19.4.2, “Resetting the Search Index,”](#) on page 168
- ♦ [Section 19.4.3, “Resetting the Standard Templates,”](#) on page 168

### 19.4.1 Resetting Your Definitions


Various aspects of the Vibe interface have been redesigned and enhanced in Vibe 3.1. 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 Vibe 3.1 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.


---

To reset your Vibe definitions:

- 1 Log in to the Vibe site as the Vibe administrator.
- 2 Click the *Administration* icon  in the upper right corner of the page.
- 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*.

## 19.4.2 Resetting the Search Index

Search functionality has been improved in Vibe 3.1. For optimal search performance, you need to re-index the search index after you upgrade to Vibe 3.1.


- 1 Log in to the Vibe site as the Vibe administrator.
- 2 Click the *Administration* icon  in the upper right corner of the page.
- 3 In the *Management* section, click *Search Index*.
- 4 Select *Re-Index Everything*.
- 5 Click *OK*, then click *Close*.

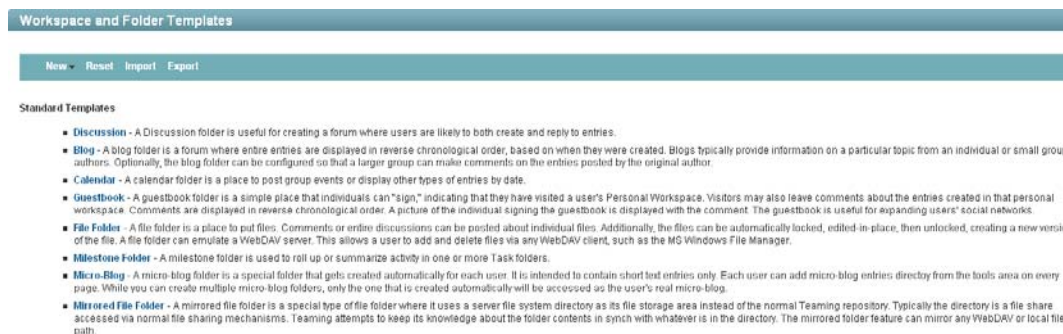
## 19.4.3 Resetting the Standard Templates

---

**IMPORTANT:** If you have manually customized any templates that are included with the Vibe product, back up the files you have modified before performing the interface reset.

---

- 1 Log in to the Vibe site as the Vibe administrator.
- 2 Click the *Administration* icon  in the upper right corner of the page.
- 3 In the *Management* section, click *Workspace and Folder Templates*.



- 4 Click *Reset*.
- 5 Click *OK* to confirm, then click *Close*.

Your Vibe 3.1 site is now ready for use.

---

**IMPORTANT:** If Vibe users encounter problems displaying any pages on the Vibe site after the update, simply have them clear the browser cache.

---



# Updating the Operating System Where Vibe Is Running

# 20

You can upgrade the operating system where Vibe OnPrem is running.

- 1 Upgrade 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 19.

For information about how to upgrade the operating system, view the appropriate documentation for your operating system.

- 2 (Conditional) If you upgraded a Linux server, the TrueType font path that Vibe uses for document conversion might be broken after the upgrade. 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 4.1, “Linux: Installing and Setting Up a Basic Vibe Site,”](#) on page 53 for a basic installation, or [Chapter 10, “Performing an Advanced Vibe Installation,”](#) on page 111 for an advanced installation.



# Migrating Existing Novell Vibe Data into a New Vibe 3.1 System

# 21

If your existing Novell Vibe 3 system has outgrown the server where you originally set it up, or if you want to move to a different operating system, you can install Vibe 3.1 on a new server, then migrate your existing Vibe data from a previous version to your new Vibe 3.1 system. This is especially helpful if you created your Vibe system by using the [Virtual Eval version of the Novell Vibe Starter Pack](http://download.novell.com/Download?buildid=Y7J2HFucjfw~) (<http://download.novell.com/Download?buildid=Y7J2HFucjfw~>).

You might also want to migrate an existing Vibe 3 system to a Vibe 3.1 system on another server.

If you are migrating from a Teaming 2.1 server, follow the instructions in “Update” in the *Novell Vibe OnPrem 3 Installation Guide* ([http://www.novell.com/documentation/vibe\\_onprem3/vibeprem3\\_inst/data/bookinfo.html](http://www.novell.com/documentation/vibe_onprem3/vibeprem3_inst/data/bookinfo.html)).

- ◆ [Section 21.1, “Linux Migration with a MySQL Database,” on page 171](#)
- ◆ [Section 21.2, “Windows Migration with an MS SQL Database,” on page 173](#)

---

**NOTE:** In these instructions, “target server” refers to the server where you install the Vibe 3.1 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 Linux Migration with a MySQL Database

- ◆ [Section 21.1.1, “Preparing the Target Linux Server,” on page 171](#)
- ◆ [Section 21.1.2, “Preparing the Source Linux Server,” on page 172](#)
- ◆ [Section 21.1.3, “Transferring Data from the Source Server to the Target Server,” on page 172](#)
- ◆ [Section 21.1.4, “Importing the Vibe Database to the Target Server,” on page 173](#)
- ◆ [Section 21.1.5, “Updating the Vibe Database on the Target Server,” on page 173](#)
- ◆ [Section 21.1.6, “Finalizing Your New Vibe 3.1 Site,” on page 173](#)

### 21.1.1 Preparing the Target Linux Server

On the target server:

- 1 Install the Vibe 3.1 software on the target server, as described in [Part II, “Basic Installation,” on page 25](#), 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 past.

- ♦ Select the same encryption algorithm for the Vibe database that was used in Vibe 3.

---

**IMPORTANT:** If the database encryption algorithms do not match between the source and target Vibe systems, you cannot log in to the new Vibe 3.1 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`. This is because 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 21.1.2, “Preparing the Source Linux Server,”](#) on page 172.

## 21.1.2 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 Make sure that you have a recent backup of your entire Vibe system.
- 4 Continue with [Section 21.1.3, “Transferring Data from the Source Server to the Target Server,”](#) on page 172.

## 21.1.3 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 21.1.2, “Preparing the Source Linux Server,”](#) on page 172 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 Continue with [Section 21.1.4, “Importing the Vibe Database to the Target Server,”](#) on page 173.

## 21.1.4 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 3.1 software:  

```
mysql>drop database sitescape;
```
- 2 Change to the directory where you copied the `sitescape.sql` file in [Step 3 in Section 21.1.3, “Transferring Data from the Source Server to the Target Server,”](#) on page 172.
- 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
```

## 21.1.5 Updating the Vibe Database on the Target Server

On the target server:

- 1 Unzip the `teaming-3.1.n.zip` file, change to the resulting `update-3.0.0-3.1.n` directory, then run the update script to update the database from Vibe 3 to Vibe 3.1:  

```
mysql -uusername -ppassword < update-mysql.sql
```

For more complete database update instructions, refer to [Section 19.3.1, “Manual Vibe Database Update,”](#) on page 165.
- 2 Continue with [Section 21.1.6, “Finalizing Your New Vibe 3.1 Site,”](#) on page 173.

## 21.1.6 Finalizing Your New Vibe 3.1 Site

- 1 Start Vibe 3.1, as described in [Section 4.1.6, “Starting Vibe on Linux,”](#) on page 60.
- 2 Reindex the Vibe site, as described in “[Rebuilding the Lucene Index](#)” in “[Site Maintenance](#)” in the *Novell Vibe OnPrem 3.1 Administration Guide*.  
Your Vibe site should now function just as it did on the original source server.

## 21.2 Windows Migration with an MS SQL Database

- ♦ [Section 21.2.1, “Preparing the Target Windows Server,”](#) on page 174
- ♦ [Section 21.2.2, “Preparing the Source Windows Server,”](#) on page 174
- ♦ [Section 21.2.3, “Transferring Data from the Source Server to the Target Server,”](#) on page 174
- ♦ [Section 21.2.4, “Importing the Database to the Target Server,”](#) on page 175
- ♦ [Section 21.2.5, “Updating the Vibe Database on the Target Server,”](#) on page 175
- ♦ [Section 21.2.6, “Finalizing Your New Vibe 3.1 Site,”](#) on page 176

## 21.2.1 Preparing the Target Windows Server

On the target server:

- 1 Install the Vibe 3.1 software, as described in [Part II, “Basic Installation,”](#) on page 25.

---

**IMPORTANT:** Select the same encryption algorithm for the Vibe 3.1 database as you selected for the Vibe 3 database. If the database encryption algorithms do not match between the source and target systems, you cannot log in to the new Vibe 3.1 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`. This is because 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 21.2.2, “Preparing the Source Windows Server,”](#) on page 174.

## 21.2.2 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 Make sure that you have a recent backup of your entire system.
- 4 Continue with [Section 21.2.3, “Transferring Data from the Source Server to the Target Server,”](#) on page 174.

## 21.2.3 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 Continue with [Section 21.2.4, “Importing the Database to the Target Server,”](#) on page 175.

## 21.2.4 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 3.1 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 3.1 system.

## 21.2.5 Updating the Vibe Database on the Target Server

On the target server:

- 1 Unzip the `teaming-3.1.n-sql.zip` file, change to the resulting `update-3.0.0-3.1.n` directory, then run the update script to update the database from Vibe 3 to Vibe 3.1:  

```
osql -Uusername -Ppassword -i update-sqlserver.sql
```

For more complete database update instructions, refer to [Section 19.3.1, “Manual Vibe Database Update,”](#) on page 165.
- 2 Continue with [Section 21.2.6, “Finalizing Your New Vibe 3.1 Site,”](#) on page 176.

## 21.2.6 Finalizing Your New Vibe 3.1 Site

- 1 Start Vibe 3.1, as described in [Section 4.1.6, “Starting Vibe on Linux,”](#) on page 60.
- 2 Reindex the Vibe site, as described in [“Rebuilding the Lucene Index”](#) in [“Site Maintenance”](#) in the *Novell Vibe OnPrem 3.1 Administration Guide*.

Your Vibe site should now function just as it did on the original source server.



# Migrating from SiteScape Forum or Other Collaboration Software

# 22

Moving legacy corporate data into a new collaboration system can look like a long, challenging process. To make the job easier, see the *Novell Teaming Migration Services Flyer*. ([http://www.novell.com/docrep/2009/04/Novell\\_Teaming\\_Migration\\_Flyer\\_en.pdf](http://www.novell.com/docrep/2009/04/Novell_Teaming_Migration_Flyer_en.pdf))



# Appendixes

# VI

- ♦ [Appendix A, “Vibe System Requirements Assistance,”](#) on page 181
- ♦ [Appendix B, “Third-Party Materials,”](#) on page 187



# Vibe System Requirements Assistance



The system requirements for Novell Vibe OnPrem include supporting components that might or might not be already 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.

- ♦ [Section A.1, “Java Development Kit,” on page 181](#)
- ♦ [Section A.2, “MySQL Database Server,” on page 183](#)

## A.1 Java Development Kit

The Novell 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 Sun 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 Sun JDK. The existing Vibe functionality for handling self-signed certificates is not compatible with the way the IBM JDK handles self-signed certificates.

- ♦ [Section A.1.1, “Sun JDK on Linux,” on page 181](#)
- ♦ [Section A.1.2, “IBM JDK on Linux,” on page 182](#)
- ♦ [Section A.1.3, “Sun JDK on Windows,” on page 183](#)

### A.1.1 Sun JDK on Linux

1 Go to the following URL:

[Java SE Downloads \(http://java.sun.com/javase/downloads/index.jsp\)](http://java.sun.com/javase/downloads/index.jsp)

2 Click *Download JDK*.

3 Accept the License Agreement.

4 Click the `jdk-6unn-linux-version-rpm.bin` file in the *Download* column, then save the file to an empty temporary directory on your Linux server.

5 As the `root` user, change to that temporary directory, then use the following command to make sure that the download arrived safely:

```
ls -l
```

You should see a file named `jdk-6unn-linux-version-rpm.bin`.

6 Change the permissions on the file to include execute permissions:

```
chmod +x jdk-6unn-linux-version-rpm.bin
```

7 Run the self-extracting file:

```
./jdk-6unn-linux-version-rpm.bin
```

This creates a file named `jdk-6unn-linux-version.rpm`, and a directory named `/usr/java/jdk.1.6.0_nn` with the Sun JDK software in it.

The Sun JDK is now installed on your Linux server.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Java JDK Location* on the [Basic Vibe Installation Summary Sheet](#), specify the directory where you install the JDK. The Vibe installation program prompts you for this location.

---

## A.1.2 IBM JDK on Linux

- ♦ “Installing the IBM JDK on SUSE Linux Enterprise Server 11” on page 182
- ♦ “Installing the IBM JDK on Open Enterprise Server 2 and SUSE Linux Enterprise Server 10” on page 182

### Installing the IBM JDK on SUSE Linux Enterprise Server 11

The IBM JDK 6.0 is available with SUSE Linux Enterprise Server (SLES) 11, which is used for Open Enterprise Server (OES) 2. You can install it by using YaST.

- 1 In YaST, click *Software > Software Management*.
- 2 In the *Search* field, type `ibm`, then click *Search*.
- 3 Select *Java 5 SDK, Standard Edition (java-1\_5\_0-ibm-devel)*, then click *Accept*.
- 4 Click *Continue* to accept the suggested dependencies, then click *No* because you don't need any more packages.
- 5 Exit YaST.

This creates a directory named `/usr/lib/jvm/java-1_5_0-ibm-1.5.0_sr3` with the IBM JDK software in it.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Java JDK Location* on the [Basic Vibe Installation Summary Sheet](#), specify the directory where you install the JDK. The Vibe installation program prompts you for this location.

---

### Installing the IBM JDK on Open Enterprise Server 2 and SUSE Linux Enterprise Server 10

The IBM JDK 6.0 is not included with SUSE Linux Enterprise Server (SLES) 10.

To download the IBM JDK 6.0:

- 1 Go to the following URL:  
[Java SE Downloads \(http://www.ibm.com/developerworks/java/jdk/linux/download.html\)](http://www.ibm.com/developerworks/java/jdk/linux/download.html)
- 2 In the *Java SE Version 6* table, in the *Download* column, click the appropriate link for your operating system.
- 3 Sign in using your IBM account. If you don't have an account, create one.
- 4 Agree to IBM's License Agreement, then continue.

- 5 Download the `ibm-java-i386-sdk-6.0-n.n.i386.rpm` file to an empty temporary directory on your Linux server.
- 6 Change to that directory, then run the downloaded file.  
This creates a directory named `opt\ibm` with the IBM JDK in it.  
The IBM JDK is now installed on your Linux server.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Java JDK Location* on the [Basic Vibe Installation Summary Sheet](#), specify the directory where you install the JDK. The Vibe installation program prompts you for this location.

---

### A.1.3 Sun JDK on Windows

- 1 Go to the following URL:  
[Java SE Downloads \(http://java.sun.com/javase/downloads/index.jsp\)](http://java.sun.com/javase/downloads/index.jsp)  
The update you need is listed as “JDK 6 Update *nn*.”
- 2 Click *Download JDK* next to this update.
- 3 In the *Platform* field, select *Windows* or *Windows x64*, depending on the processor in your Vibe server.
- 4 Select *I agree*, then click *Continue* to accept Sun’s License Agreement.
- 5 Click the `jdk-6unn-windows-version.exe` file, then save the file to an empty temporary directory on your Windows server.
- 6 Change to that temporary directory, then run the downloaded executable.  
This creates a directory named `c:\Program Files\Java\jdk6unn` with the Sun JDK software in it.  
The Sun JDK is now installed on your Windows server.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Java JDK Location* on the [Basic Vibe Installation Summary Sheet](#), specify the directory where you install the JDK. The Vibe installation program prompts you for this location.

---

## A.2 MySQL Database Server

- ♦ [Section A.2.1, “MySQL on Linux,” on page 183](#)
- ♦ [Section A.2.2, “MySQL on Windows,” on page 185](#)

### A.2.1 MySQL on Linux

Depending on the options you select when installing Open Enterprise Server 2 and SUSE Linux Enterprise Server (SLES), the MySQL 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 database server. If MySQL is already installed, you still need to configure it for use with Vibe.

- ♦ [“Installing MySQL” on page 184](#)
- ♦ [“Configuring MySQL” on page 184](#)
- ♦ [“Learning More about MySQL” on page 185](#)

## Installing MySQL

- 1 Make sure 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” on page 184](#).

## Configuring MySQL

When MySQL 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 database server for use with Vibe:

- 1 In YaST, click *System > System Services*.
- 2 Scroll to and select the MySQL 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 MySQL database server has started, use the following command:
- 7 Set the administrator password for the MySQL database server:

```
ps -eaf | grep mysql
```

You should see MySQL processes running.

```
mysqladmin -u root password new_password
```

This command changes the password for the MySQL `root` user, which is the default administrator username for the MySQL database server. This command is part of the MySQL client package.

---

**IMPORTANT:** The MySQL `root` username 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 MySQL `root` user needs to have a password established for it when you install MySQL.

---

---

### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Database Credentials* on the [Basic Vibe Installation Summary Sheet](#), specify the MySQL administrator password. The Vibe installation program prompts you for this information.

---



## Learning More about MySQL

The following table includes some basic and useful MySQL commands:

Action	Command
Stop MySQL	<code>/etc/initd/mysql stop</code>
Start MySQL	<code>/etc/initd/mysql start</code>
Show MySQL status	<code>mysqladmin -u root -p extended-status</code>

If you want to administer MySQL through a GUI interface, you can download tools from:

[MySQL GUI Tools Downloads \(http://dev.mysql.com/downloads/gui-tools/5.0.html\)](http://dev.mysql.com/downloads/gui-tools/5.0.html)

For more information about MySQL, see:

[MySQL Documentation \(http://dev.mysql.com/doc\)](http://dev.mysql.com/doc)

### A.2.2 MySQL on Windows

- 1 In your Web browser, go to the following URL:  
[MySQL 5.1 Downloads \(http://dev.mysql.com/downloads/mysql/5.1.html\)](http://dev.mysql.com/downloads/mysql/5.1.html)
- 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 MySQL .exe file to start the MySQL Setup Wizard.
- 7 Follow the online instructions to install the MySQL software on the Windows server, then continue with [Step 8](#) to configure the server.
- 8 Unless you are already familiar with configuring MySQL on a Windows server, select *Standard Configuration*, then click *Next*.
- 9 Select *Include Bin Directory in Windows PATH*, then click *Next*.
- 10 Set the MySQL root user password, then click *Next*.

---

#### BASIC VIBE INSTALLATION SUMMARY SHEET

---

Under *Database Credentials* on the [Basic Vibe Installation Summary Sheet](#), specify the MySQL administrator password. The Vibe installation program prompts you for this information.

---

- 11 Click *Execute* to configure the MySQL database server, then click *Finish*.  
Some messages report the status of your MySQL installation.
- 12 To monitor the MySQL database server, click *Start > All Programs*, then click *MySQL > MySQL Server 5.1 > MySQL Command Line Client*.



# Third-Party Materials

# B

- ♦ Section B.1, “ANTLR 3 License,” on page 187
- ♦ Section B.2, “Colt License Agreement,” on page 188
- ♦ Section B.3, “Dom4j License,” on page 188
- ♦ Section B.4, “iCal4j License,” on page 189
- ♦ Section B.5, “ICU4J license (ICU4J 1.3.1 and later),” on page 189
- ♦ Section B.6, “JAXEN License,” on page 190
- ♦ Section B.7, “Jung,” on page 191
- ♦ Section B.8, “ASM,” on page 191
- ♦ Section B.9, “Firebug Lite,” on page 192

## B.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.

## B.2 Colt License Agreement

### Packages `cern.colc*`, `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 Hoeschek, 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.

## B.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. 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](mailto: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](mailto: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.

## **B.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.

## **B.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.

## B.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](mailto: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](mailto: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>.

## B.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.

## B.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.

## B.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.