Vibe 4.0.5

Installation Guide

September 2018

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About This Guide

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

- Part I, “What Is Micro Focus Vibe?,” on page 13
- Part II, “System Requirements and Support,” on page 21
- Part III, “Basic Installation,” on page 33
- Part IV, “Advanced Installation and Reconfiguration,” on page 93
- Part V, “Multi-Server Configurations and Clustering,” on page 127
- Part VI, “Upgrade,” on page 169
- Part VII, “Migrate,” on page 207
- Part VIII, “Appendixes,” on page 219

Audience

This guide is intended for Micro Focus Vibe administrators.

Feedback

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

Documentation Updates

For the most recent version of this manual, visit the Micro Focus Vibe 4 Documentation website (http://www.novell.com/documentation/vibe4).

Additional Documentation

You can find more information in the Micro Focus Vibe documentation, which is accessible from the Micro Focus Vibe 4 Documentation website (http://www.novell.com/documentation/vibe4).

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

What Is Micro Focus Vibe?

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

- Chapter 1, “Vibe Capabilities,” on page 15
- Chapter 2, “Vibe Components,” on page 17
- Chapter 3, “Vibe Configurations,” on page 19

1 Vibe Capabilities

Micro Focus Vibe users fall into three basic groups:

Content Consumers

Content consumers use Micro Focus 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 *Micro Focus Vibe 4.0.5 User Guide*.

In many cases, content consumers quickly become content providers.

Content Providers

Content providers use Micro Focus 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 *Micro Focus Vibe 4.0.5 User Guide*.

Administrators

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

- Set up user access to the Vibe site

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

The typical tasks performed by Vibe site administrators are covered in the *Micro Focus Vibe 4.0.5 Administration Guide*.

2 Vibe Components

A Micro Focus Vibe site consists of four major components:

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.

Vibe Database

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

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

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

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.

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.

3 Vibe Configurations

You can configure Micro Focus 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 Micro Focus 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 Micro Focus 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 has its own approach to clustering the database server. Information about clustering database servers is available on the Internet.

For more information about which configuration type will best achieve the needs of your organization, see .

For more information about how to set up these configurations, see Part V, “Multi-Server Configurations and Clustering,” on page 127.

II

System Requirements and Support

- Chapter 4, “Vibe System Requirements,” on page 23
- Chapter 5, “Vibe User Platform Support,” on page 27
- Chapter 6, “Environment Support,” on page 31

4 Vibe System Requirements

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

- "Server Hardware Requirements" on page 23
- "Server Operating System Requirements" on page 23
- "Database Server Requirements" on page 24
- "Directory Service Requirements" on page 25
- "Disk Space Requirements" on page 25
- "Other Requirements" on page 26

Server Hardware Requirements

Your server hardware must meet the following requirements:

Item	Requirement
Processor	◆ x64 ◆ Minimum 2 GHz ◆ Multi-CPU systems preferred
Server Memory	◆ At least 4 GB RAM See and .

Server Operating System Requirements

Your server must have one of the following operating systems installed and running.

Platform	Requirement	
Linux	◆ Micro Focus Open Enterprise Server 2018, plus the latest Support Pack ◆ SUSE Linux Enterprise Server (SLES) 15, plus the latest Support Pack and with TK-32bit and TCL-32bit packages installed.	Recommended
	◆ SUSE Linux Enterprise Server (SLES) 12 SP3 with latest kernel	Supported
	NOTE: On SLES, the X Window System is required by the GUI Vibe installation program. However, it is not required for running Vibe after installation, or for text-based or silent installations.	

Platform	Requirement	
Windows	◆ Windows 2016, plus the latest Support Pack	Recommended
	◆ Windows Server 2008 R2 SP1 (Hyper-V, Standard, Enterprise, Datacenter) ◆ Windows Server 2012 R2 (Hyper-V, Enterprise, Datacenter)	Supported

See “Virtualization Support” on page 31 for information about support for running Vibe in a virtualized environment.

Database Server Requirements

The Vibe server must have access to a database server listed below.

IMPORTANT: The database server must be online and accessible before you begin the Vibe installation process.

Platform	Requirement	
SuSE Linux	◆ MariaDB 10 - server and client ◆ MySQL 5.5.3 or later - server and client **NOTE:** MySQL 8 and later has password complexity enabled by default, which Vibe doesn’t support. For help disabling password complexity and setting a non-complex password, see . ◆ Oracle 12c ◆ PostgreSQL 9.6 or later	Recommended
	◆ Oracle 11g ◆ PostgreSQL 9.4.*x*	Supported
Windows	◆ Microsoft SQL Server 2014 R2 on Windows Server 2012 R2 ◆ Microsoft SQL Server 2016 on Windows Server 2016 ◆ Oracle 12c ◆ PostgreSQL 9.6	Recommended
	◆ MariaDB 5.5 or later server and tools ◆ MySQL 5.5.3 or later server and tools **NOTE:** MySQL 8 and later has password complexity enabled by default, which Vibe doesn’t support. For help disabling password complexity and setting a non-complex password, see . ◆ Microsoft SQL Server 2012 R2 on Windows Server 2012 R2 ◆ Oracle 11g ◆ PostgreSQL 9.4.*x*	Supported

Directory Service Requirements

One of the following directory services:

Platform	Requirement	
GroupWise	◆ GroupWise 2018	Recommended
Linux	◆ eDirectory 9 plus the latest patch for Linux	Recommended
	◆ eDirectory 8.8 plus the latest patch for Linux	Supported
Windows	◆ Microsoft Active Directory on Windows Server 2016 ◆ eDirectory 9 with the latest patch for Windows	Recommended
	◆ Microsoft Active Directory on Windows Server 2012 R2 ◆ Microsoft Active Directory on Windows Server 2012 ◆ Microsoft Active Directory on Windows Server 2008 R2 ◆ eDirectory 8.8 with the latest patch for Windows	Supported

Disk Space Requirements

Item	Requirement
Vibe software	At least 500 MB for a new installation When you update an existing Vibe system, ensure that your server has free disk space equal to the disk space currently in use, plus an additional 500 MB in the following area: **Linux:** `/var/opt/novell/teaming` **Windows:** c:\Program Files\Novell\Teaming
Database server software	At least 500 MB for a new installation When you update an existing Vibe system, ensure that your server has free disk space equal to the disk space currently in use, plus an additional 500 MB in the following area: **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 “Planning the Vibe Database” on page 51 to plan for the disk space needs of your Vibe site.

Other Requirements

Requirement	Additional Information
Tomcat 8	Tomcat 8 is included with Vibe on Linux and Windows.

5 Vibe User Platform Support

- "Browser Support" on page 27
- "Office Application Support" on page 27
- "Collaboration Client Support" on page 28
- "Desktop Support" on page 28
- "Mobile Support" on page 28
- "File Viewer Support" on page 29

Browser Support

Platform	Requirement
Linux	◆ Mozilla Firefox (latest version)
Windows	◆ Microsoft Internet Explorer 11 (latest version) (must not have the Google Chrome Frame plug-in installed) ◆ Mozilla Firefox (latest version) ◆ Google Chrome (latest version) ◆ Microsoft Edge (latest version) (Windows 10 only)
Mac	◆ Safari (latest version)

Office Application Support

Table 5-1 *Desktop OS*

Platform	Requirement
Linux	N/A
Windows	◆ Microsoft Office 2013 ◆ MS Office 2016 (not Office 365)
Mac	N/A

Table 5-2 Workstation OS

Platform	Requirement
Linux	LibreOffice (latest version) MS (latest version)
Windows	Microsoft Office 2010 MS Office 2013 MS Office 2016 (not Office 365) LibreOffice (latest version) Windows 10 Drive Mapping via WebDAV Permalink
Mac	MS Office 2016 for Mac

Collaboration Client Support

Vibe is integrated with GroupWise 2018.

Desktop Support

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

Platform	Requirement
Windows	Windows 8.1, and 10
Mac	Mac OSX 10.11 and later

Mobile Support

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

Other devices can access the Vibe mobile interface by using a mobile browser that meets the requirements listed in "Browser Requirements" on page 29.

- "App Availability" on page 29
- "Browser Requirements" on page 29

App Availability

Micro Focus Vibe mobile apps are available for the following mobile operating systems:

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

Your device's browser must also meet the requirements that are discussed in Browser Requirements.

Browser Requirements

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

- HTML 4
- JavaScript

File Viewer Support

In Micro Focus Vibe, file viewing capabilities are provided by Micro Focus KeyView technology. For a list of supported file formats and background information on Micro Focus KeyView, see the "Micro Focus KeyView Filter SDK C Programming Guide."

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

6 Environment Support

- "IPV6 Support" on page 31
- "Clustering Support" on page 31
- "Virtualization Support" on page 31
- "Single Sign-On Support" on page 31
- "Linux File System Support" on page 32

IPV6 Support

Micro Focus 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.

Clustering Support

You can install Vibe components on multiple servers to provide failover support, as described in Part V, "Multi-Server Configurations and Clustering," on page 127.

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.

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

For more information about virtualization support on SUSE Linux Enterprise Server, see the SLES Documentation website (https://www.suse.com/documentation/sles11/#additional).

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

Single Sign-On Support

Micro Focus Access Manager can be used to provide single sign-on capabilities for your Vibe site. For setup instructions, see "Configuring Single Sign-On with Novell Access Manager" on page 103.

Linux File System Support

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

- ext3 (recommended in most cases)

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

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

III

Basic Installation

- Chapter 7, “Basic Installation Planning Worksheet,” on page 35
- Chapter 8, “Planning a Basic Vibe Installation,” on page 41
- Chapter 9, “Obtaining the Vibe Software,” on page 61
- Chapter 10, “Installing and Running the Database Server,” on page 63
- Chapter 11, “Installing and Setting Up a Basic Vibe Site,” on page 69
- Chapter 12, “Adding Users to Your Vibe Site,” on page 87
- Chapter 13, “Updating Your Vibe License,” on page 89
- Chapter 14, “Setting Up Vibe,” on page 91

7 Basic Installation Planning Worksheet

We recommend that you print this section and record your planning decisions. You will then be able to complete your Vibe installation process more efficiently, and you'll have a record of your Vibe installation for future reference.

Installation Program Field	Your Setting/Choice	Explanation
Vibe Server Platform: ◆ Windows ◆ Linux		See "Vibe Server Platform" on page 42.
Server Memory: ◆ 4 GB ◆ 8 GB ◆ More		See "Server Memory" on page 42.

Install Location:
◆ Software Location
Linux default:
`/opt/novell/teaming`
Windows default:
`c:\Program Files\Novell\Teaming`
◆ Data Location
Linux default:
`/var/opt/novell/teaming`
Windows default:
`c:\Novell\Teaming`
		See "Install Location" on page 43.

Installation Program Field	Your Setting/Choice	Explanation
Default Locale: Language (Country): ◆ Chinese (China) (Taiwan) ◆ Czech (Czech Republic) ◆ Danish (Denmark) ◆ Dutch (Belgium) (Netherlands) ◆ English (Australia) (Canada) (India) (Ireland) (New Zealand) (South Africa) (United States) ◆ Finnish (Finland) ◆ French (Belgium) (Canada) (France) (Luxembourg) (Switzerland) ◆ German (Austria) (Germany) (Luxembourg) (Switzerland) ◆ Hungarian (Hungary) ◆ Italian (Italy) (Switzerland) ◆ Japanese (Japan) ◆ Polish (Poland) ◆ Portuguese (Brazil) ◆ Russian (Russia) ◆ Spanish (Argentina) (Bolivia) (Chile) (Colombia) (Costa Rica) (Dominican Republic) (Ecuador) (El Salvador) (Guatemala) (Honduras) (Mexico) (Nicaragua) (Panama) (Paraguay) (Peru) (Puerto Rico) (Spain) (Uruguay) (Venezuela) ◆ Swedish (Sweden) **Logfile Timezone:** Country / Zone: ◆		See “Planning the Default Locale and Logging Time Zone” on page 44.
User ID for Micro Focus Vibe: ◆ User ID: ◆ Group ID:		See “Identifying Vibe’s Linux User and Group” on page 45.

Installation Program Field	Your Setting/Choice	Explanation
Network Information: ◆ Host: ◆ HTTP port: 8080 ◆ Secure HTTP port: 8443 ◆ Listen port: 8080 ◆ Secure listen port: 8443 ◆ Shutdown port:8005 ◆ AJP port:8009		See “Gathering Network Information for Your Vibe Site” on page 46.
WebDAV Authenticaiton Method: ◆ basic ◆ digest		See “Planning the WebDAV Authentication Method” on page 49.
Database Type: ◆ MySQL/MariaDB ◆ Microsoft SQL ◆ Oracle ◆ PostgreSQL		See “Database Type” on page 51.
JDBC URL: ◆ Hostname: ◆ Port number:		See “Database Location” on page 52.
Database Credentials: ◆ User name: ◆ Password:		See “Database Credentials” on page 53.
Database Setup Method: ◆ Basic installation (same server as Vibe software) ◆ Remote installation		See “Database Setup Method” on page 52.
Database Encryption Algorithm: ◆ SHA-256 ◆ PBEWITHSHA256AND128BITAES-CBC-BC		See “Database Encryption Algorithm” on page 54.
Java JDK Memory: ◆ JVM heap size:		See “Server Memory” on page 42.

Installation Program Field	Your Setting/Choice	Explanation
Outbound Email Protocol: ◆ SMTP ◆ SMTPS		See “Outbound Email Protocol” on page 55.
Outbound Email Host: ◆ Hostname: ◆ SMTP port: Default: 25 ◆ Time zone ◆ Continent/region: ◆ Country/state: ◆ City:		See “Outbound Email Host” on page 55.
Outbound Email Authentication: ◆ User name: ◆ Password: ◆ Authentication required? No / Yes		See “Outbound Email Authentication” on page 56.
Allow Sending Email to All Users Yes / No		See “Outbound Email Send Restriction” on page 56.
From email address override ◆ Email address for outbound email **Use this email address for all outbound email** Yes / No		See “Outbound Email From Address” on page 57.
Inbound Email Configuration ◆ Enable: No / Yes ◆ SMTP bind address: ◆ SMTP port: ◆ Announce TLS: Yes / No		See “Planning to Enable Inbound Email” on page 57.
Additional File Types for HTML Conversions ◆ Added HTML Extensions:		See “Planning File Types for HTML Conversions” on page 59

Installation Program Field	Your Setting/Choice	Explanation
Built-in Administrator Name: ◆ Default-Administrator Name: (Initial default is `admin`. You should secure it by changing the name.) ◆ Default-Administrator Password: (The initial password is the same as the default-administrator name that you enter [above]. You are prompted to change this the first time you log in.)		See "Planning a Secure Administrator Name and Password" on page 46.
LDAP Directory Service: ◆ eDirectory ◆ GroupWise ◆ Microsoft Active Directory		See "Synchronizing Users and Groups from an LDAP Directory" in the *Micro Focus Vibe 4.0.5 Administration Guide*.
LDAP Server: ◆ LDAP server URL: ◆ User DN: ◆ Password:		See "Server Information" in the *Micro Focus Vibe 4.0.5 Administration Guide*.
GUID Attribute (to identify the user): ◆ For eDirectory, select **GUID**. ◆ For Active Directory, select **objectGUID**. ◆ For GroupWise, select **entryUUID**.		See "Server Information" in the *Micro Focus Vibe 4.0.5 Administration Guide*.
Vibe Account Name Attribute: ◆ LDAP Attribute that is used for Vibe usernames.		See "Server Information" in the *Micro Focus Vibe 4.0.5 Administration Guide*.
LDAP User Search Context: ◆ Base DNs: ◆ Additional filter attributes: ◆ Search subtree: Yes / No		See "Configuring User Synchronization Options" in the *Micro Focus Vibe 4.0.5 Administration Guide*.
LDAP Group Search Context: ◆ Base DNs: ◆ Additional filter attributes: ◆ Search Subtree: Yes / No		See "Configuring Group Synchronization Options" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

Installation Program Field	Your Setting/Choice	Explanation
LDAP Synchronization Schedule: ◆ Days ◆ Every day ◆ Weekly Sun Mon Tue Wed Thu Fri Sat ◆ Hours: ◆ At time: ◆ Repeat every *nn* hours		See “Configuring the Synchronization Schedule” in the *Micro Focus Vibe 4.0.5 Administration Guide*.
LDAP User Options: ◆ Synchronize user profiles ◆ Register LDAP user profiles automatically ◆ Delete users that are not in LDAP ◆ When deleting a user, delete associated user workspaces and content ◆ Time zone for new users		See “Configuring User Synchronization Options” in the *Micro Focus Vibe 4.0.5 Administration Guide*.
LDAP Group Options: ◆ Synchronize group profiles ◆ Register LDAP group profiles automatically ◆ Synchronize group membership ◆ Delete local groups that are not in LDAP		See “Configuring User Synchronization Options” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

8 Planning a Basic Vibe Installation

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

- "What Is a Basic Vibe Installation?" on page 41
- "Planning the Operating Environment of Your Vibe Server" on page 42
- "Planning the Default Locale and Logging Time Zone" on page 44
- "Identifying Vibe's Linux User and Group" on page 45
- "Planning a Secure Administrator Name and Password" on page 46
- "Gathering Network Information for Your Vibe Site" on page 46
- "Planning the WebDAV Authentication Method" on page 49
- "Planning the Vibe Database" on page 51
- "Planning for Outbound Email" on page 54
- "Planning to Enable Inbound Email" on page 57
- "Planning File Types for HTML Conversions" on page 59
- "Gathering Directory Services Information" on page 59

What Is a Basic Vibe Installation?

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

If you are new to Vibe, the easiest way to get started is to perform a Basic installation first, with all Vibe components installed on the same server. Then you can add advanced configuration options to your Vibe site after the Basic installation has been successfully tested. However, experienced Vibe administrators can choose to perform an Advanced installation immediately, which includes all installation and configuration options, as described in Part IV, "Advanced Installation and Reconfiguration," on page 93.

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 "Distributing Different Data Types to Different Locations" on page 96 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 21, "Running Vibe on Multiple Servers," on page 141 for Advanced installation instructions. The option to enable a clustered environment is available only during an Advanced installation.

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

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

Before performing a Basic installation, ensure that all system requirements are met, as listed in Chapter 4, “Vibe System Requirements,” on page 23.

As you proceed with planning, you can use the Basic Installation Planning Worksheet to record your decisions about the options you want to use.

Planning the Operating Environment of Your Vibe Server

- “Vibe Server Platform” on page 42
- “Server Memory” on page 42
- “Install Location” on page 43

Vibe Server Platform

Micro Focus Vibe can run on the versions of Linux and Windows listed in “Server Operating System Requirements” on page 23.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Server Memory

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 19, “Creating the Vibe Database on a Remote Server,” on page 129.

- **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 “Install Location” on page 43. 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 137.

- **JVM:** 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. 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.

  Although it is possible to run Vibe with less than 4 GB of memory for the JVM (the recommended minimum), 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.

  BASIC VIBE INSTALLATION SUMMARY SHEET

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

After you have considered all of the points above, you are ready to specify the

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Install Location

Software Location: This 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.

Data Location: This 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 **Install Location**, 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 lets you 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 Installation Planning Worksheet, then follow the additional instructions in “Distributing Different Data Types to Different Locations” on page 96.

Planning the Default Locale and Logging Time Zone

Default Locale

The Micro Focus Vibe installation program runs in English only. When you install the Vibe software, you can choose to have the primary language of the Vibe site be any of the languages listed on the planning worksheet.

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 :

Home Workspace
Personal Workspace
Guest (guest)

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 locale 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 *Micro Focus Vibe 4.0.5 Administration Guide*.

Logfile Timezone

You also need to specify the time zone to be used for times recorded in Vibe log files.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Logfile Time Zone**, mark the time zone where your Vibe site is located.

Identifying Vibe's Linux User and Group

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

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

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

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **User ID for Micro Focus Vibe**, specify the non-`root` Linux user name and group name to use for running the Vibe program.

IMPORTANT: The non-`root` Linux user and group must exist before you start the Vibe Installation program. See "Performing Pre-Installation Tasks on Linux" on page 69.

Planning a Secure Administrator Name and Password

By default, the built-in default-administrator name and password are both set to `admin` by the Vibe installation program.

We strongly recommend that you change the name during the initial Vibe installation. The initial password is then set to whatever name you specify.

We also recommend that you change the password when you log in for the first time after Vibe is installed.

If you don't change the password during the initial login, you can change it (and the Vibe default-adminsitrator user name) at any time, as described in "Changing the Vibe Administrator User ID or Password" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Built-in Administrator Name**, specify a **Default-Administrator Name** different from `admin`.

Also specify a password that you can enter and confirm the first time you log in as the Vibe site administrator. (The initial password (for logging in the first time) is set to whatever you specify as the administrator name.)

Gathering Network Information for Your Vibe Site

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

- "Host Identification" on page 46
- "Port Numbers" on page 47

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.

For use inside your firewall, 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.

Do not use the default `localhost`

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Port Numbers

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

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

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

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

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

- “HTTP/HTTPS Ports” on page 47
- “HTTP/HTTPS Ports When You Use Novell Access Manager with Vibe” on page 48
- “Shutdown Port” on page 49
- “AJP Port” on page 49

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 "Identifying Vibe's Linux User and Group" on page 45. Also on Linux and Windows, the default Tomcat installation expects ports 8080 and 8443.

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

HTTP port: 80

Secure HTTP port: 443

Listen port: 8080

Secure listen port: 8443

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

After you install Vibe on Linux, you need to complete the steps in "Setting Up Port Forwarding" on page 77 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 *Micro Focus Vibe 4.0.5 Administration Guide* either before or after you install Vibe.

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

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

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

- "Windows Port Configuration" on page 48
- "Linux Port Configuration" on page 49

Windows Port Configuration

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

HTTP Port: 80

Secure HTTP Port: 443

Listen Port: 80

Secure Listen Port: 443

Linux Port Configuration

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

HTTP Port: 80

Secure HTTP Port: 443

Listen Port: 8080

Secure Listen Port: 8443

With this suggested configuration on Linux, you also need to set up port forwarding, as described in "Setting Up Port Forwarding" on page 77.

Shutdown Port

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

AJP Port

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

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Planning the WebDAV Authentication Method

- "Understanding WebDAV" on page 50
- "Choosing the WebDAV Authentication Method" on page 50

Understanding WebDAV

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

- Edit-in-Place for using tools such as LibreOffice and Microsoft Office, as described in “Editing Files Accessed through a Web Browser” in the *Micro Focus Vibe 4.0.5 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 *Micro Focus Vibe 4.0.5 Advanced User Guide*.

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 50
- “Choosing Digest Authentication” on page 50
- “Choosing Windows Authentication” on page 51

Choosing Basic Authentication

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

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

For more information about encryption algorithms, see “Database Encryption Algorithm” on page 54.

Choosing Digest Authentication

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

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

For more information about encryption algorithms, see “Database Encryption Algorithm” on page 54.

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 "Configuring Single Sign-On with Internet Information Services for Windows" on page 104.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Planning the Vibe Database

Micro Focus Vibe database disk space requirements are relatively modest. Files that are imported into Vibe are saved in the Vibe file repository, as described in "Install Location" on page 43.

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

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

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

- "Database Type" on page 51
- "Database Setup Method" on page 52
- "Database Location" on page 52
- "Database Credentials" on page 53
- "Database Encryption Algorithm" on page 54

Database Type

Vibe supports the following database types:

On Linux: MariaDB, MySQL, Oracle, and PostgreSQL

On Windows MariaDB, MySQL, Microsoft SQL, Oracle, and PostgreSQL

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Ensure that a supported version of the database server, as listed in "Database Server Requirements" on page 24, is installed and running before you install Vibe.

Database Setup Method

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

- "Basic Setup" on page 52
- "Remote Server Setup" on page 52

Basic Setup

If you plan to deploy the Vibe database as a basic installation, with the database running on the same server as the Vibe software, you first install the Vibe software, and then create the database, as described in Chapter 11, "Installing and Setting Up a Basic Vibe Site," on page 69.

Remote Server Setup

If you plan to deploy the Vibe database on a remote server, follow the instructions in Chapter 19, "Creating the Vibe Database on a Remote Server," on page 129.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Database Location

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

You can have your database administrator create a database on a remote server later, after you have successfully tested your Basic installation. See Chapter 19, "Creating the Vibe Database on a Remote Server," on page 129.

You must decide before installation whether you want the database on the Vibe server or on a remote server. See Chapter 19, "Creating the Vibe Database on a Remote Server," on page 129.

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

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

Database Server	Default Port Number
MySQL/MariaDB	3306
Microsoft SQL	1433
Oracle	1521
PostgreSQL	5432

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.

Database Credentials

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

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

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

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Database Encryption Algorithm

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

- SHA-256

  This is the only available option when you use Basic Authentication for WebDAV authentication, as described in "Planning the WebDAV Authentication Method" on page 49.
- PBEWITHSHA256AND128BITAES-CBC-BC

  This is the only available option when you select Digest Authentication for WebDAV authentication, as described in "Planning the WebDAV Authentication Method" on page 49.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Planning for Outbound Email

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

- Vibe users can subscribe to email notifications, so that they automatically receive a message whenever content of interest changes. For more information, see "Subscribing to a Folder or Entry" in "Getting Informed" in the *Micro Focus Vibe 4.0.5 User Guide*.
- From the Vibe site, users can send email messages to individual users or to teams. For more information, see "Sending Email from within Vibe" in "Connecting With Your Co-Workers" in the *Micro Focus Vibe 4.0.5 User Guide*.

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

- "Outbound Email Protocol" on page 55
- "Outbound Email Host" on page 55
- "Outbound Email Authentication" on page 56
- "Outbound Email Send Restriction" on page 56
- "Outbound Email From Address" on page 57

After installation, outbound email can be disabled and enabled again on the Vibe site, as described in "Configuring Email Integration" in "Site Setup" in the *Micro Focus Vibe 4.0.5 Administration Guide*. However, you must configure outbound email in the Vibe installation program.

Outbound Email Protocol

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

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

1. In the GroupWise Admin Console, browse to **Internet Agents > GWIA > Agent Settings**.
2. The **SMTP** row**, SSL** column indicates which protocols can be used as follows:

SSL Setting	Protocols Supported
`Required`	SMTPS
`Enabled`	SMTP or SMTPS
`Disabled`	SMTP

3. Click **Close**.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

4. If the email system requires SMTPS, see “Securing Email Transfer” in “Site Security” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

Outbound Email Host

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

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

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

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Outbound Email Authentication

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

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

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`), in order to configure the Internet Agent to refuse SMTP connections where a valid email user name and password are not provided. The Internet Agent can accept just the user name or the full email address.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Outbound Email Send Restriction

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Outbound Email From Address

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

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

Planning to Enable Inbound Email

You can configure your Micro Focus Vibe site so that users can post comments by emailing them to the folder where they want to post the comment. In order to receive email postings, folders must be properly configured, as described in "Enabling Folders to Receive Entries through Email" in "Managing Folders" in the *Micro Focus Vibe 4.0.5 Advanced User Guide*. Also, users must know the email address of the folder where they want to post their comment.

- "Internal Mail Host for Inbound Email" on page 57
- "Inbound Email Port Number" on page 57
- "Inbound Email IP Address" on page 58
- "Inbound Email Security" on page 58

After installation, inbound email can be disabled and enabled again on the Vibe site, as described in "Disabling/Enabling Inbound Email Postings" in "Site Setup" in the *Micro Focus Vibe 4.0.5 Administration Guide*. However, you must configure inbound email in the Vibe installation program.

Internal Mail Host for Inbound Email

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Inbound Email Port Number

Selecting the port number for the Vibe internal SMTP mail host presents the same issue that needs to be dealt with for the HTTP port numbers, as described in "HTTP/HTTPS Ports" on page 47. You might want to configure the Vibe internal SMTP mail host to use the standard SMTP port of 25. How you handle the issue depends on whether you are installing on Linux or on Windows.

Linux:	Keep the default port number (2525) in the Vibe Installation program, then complete the steps in "Setting Up Port Forwarding" on page 77 so that requests incoming on port 25 are forwarded to port 2525.
Windows:	Specify port 25 for incoming email in the Vibe Installation program.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Inbound Email IP Address

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

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Inbound Email Security

You can choose whether the Vibe internal mail host uses TLS (Transport Layer Security) when it communicates with other SMTP mail hosts. In order for TLS to function properly, you must have a certificate on the Vibe server, as described in "Securing Email Transfer" in "Site Security" in the *Micro Focus Vibe 4.0.5 Administration Guide*. When an SMTP mail host queries the Vibe mail host, the Vibe mail host communicates its ability or inability to handle TLS. The other SMTP mail host then communicates appropriately, taking into account how the Vibe internal mail host is configured. The default is to use TLS, because this provides more secure communication between mail hosts.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

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

Planning File Types for HTML Conversions

Many file formats in Micro Focus Vibe can be viewed as HTML by default, as described in “Viewing the File in HTML Format” in the *Micro Focus Vibe 4.0.5 User Guide*. File formats that can be viewed as HTML by default are: `.123`, `.bmp`, `.doc`, `.docx`, `.dotm`, `.drw`, `.dxf`, `.htm`, `.html`, `.lwp`, `.odp`, `.ods`, `.odt`, `.ppt`, `.pptx`, `.prz`, `.rtf`, `.shw`, `.sxw`, `.tif`, `.txt`, `.vsd`, `.wpd`, `.xls`, `.xlsx`, `.sxi`.

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

Not all file formats can be enabled to be viewed as HTML in Vibe, but many can be. If you are unsure whether Vibe supports a particular file format to be viewed as HTML, try it and see.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

Gathering Directory Services Information

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

“Synchronizing Users and Groups from an LDAP Directory” in the *Micro Focus Vibe 4.0.5 Administration Guide* provides instructions for synchronizing user information via LDAP. Use this section when planning your LDAP configuration.

BASIC VIBE INSTALLATION SUMMARY SHEET

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

9 Obtaining the Vibe Software

- **Free Trial:** After registering for a user account with Micro Focus, you can download a 60-day free trial of Vibe software from the Micro Focus web site to share and evaluate with your team.
- **Purchase:** If you want to deploy Vibe services as part of your regular production system, visit the How to Buy link on the Vibe Trial Download page (linked above).

10 Installing and Running the Database Server

Vibe requires the creation of a Vibe database during installation. Therefore, a supported database server must be installed and running before you install Vibe.

A Basic Installation assumes that the database service is running on the same server as Vibe.

If your Vibe server already has one of supported database servers installed and running, skip to Chapter 11, "Installing and Setting Up a Basic Vibe Site," on page 69.

To install an Oracle or Microsoft SQL server, see the documentation for those products.

If you want to deploy a MySQL, MariaDB, or PostgreSQL database server, the following sections are provided for your convenience.

- "MySQL (or MariaDB) on Linux" on page 63
- "MySQL or MariaDB on Windows" on page 65
- "PostgreSQL on Linux" on page 66
- "PostgreSQL on Windows" on page 68
- "Securing PostgreSQL and Vibe Communications" on page 68

MySQL (or MariaDB) on Linux

IMPORTANT: The steps in this section are optimized for installing MYSQL on SUSE Linux Enterprise Server (SLES) 11.

For information regarding the installation of MySQL on other versions of SLES or other flavors of Linux, see Installing and Upgrading MySQL (http://dev.mysql.com/doc/refman/5.1/en/installing.html) in the MySQL documentation (http://dev.mysql.com/doc/).

In SLES 12, the default database changed from MySQL to MariaDB. Installation and management procedures, etc. are basically unchanged. For information on installing SLES 12 and using MariaDB, see the SLES 12 Documentation (https://www.suse.com/documentation/sles-12/) and MariaDB (http://www.mariadb.com) web sites.

Depending on the options you select when installing Open Enterprise Server and SUSE Linux Enterprise Server (SLES), the MySQL or MariaDB database server might be installed along with the operating system. Check for the following directory:

```
/usr/bin/mysql
```

If the `/usr/bin/mysql` directory does not exist, you need to install the MySQL or MariaDB database server. If MySQL or MariaDB is already installed, you still need to configure it for use with Vibe.

- "Installing MySQL/MariaDB" on page 64
- "Configuring MySQL/MariaDB" on page 64
- "Learning More about MySQL/MariaDB" on page 65

Installing MySQL/MariaDB

1. Ensure you have access to your operating system installation media.
2. In YaST, click **Software > Software Management**.
3. In the **Search** field, type `mysql`, then click **Search**.
4. Select **mysql**, then click **Accept**.
5. Click **Continue** to resolve dependencies.
6. Click **Continue** to acknowledge package support status.

   MySQL is then installed from the SLES media.
7. Continue with "Configuring MySQL/MariaDB" on page 64.

Configuring MySQL/MariaDB

When MySQL or MariaDB is initially installed, it is not configured with an administrator password, nor is it configured to start automatically. Follow the steps below to set up the MySQL or MariaDB database server for use with Vibe:

1. In YaST, click **System > System Services**.
2. Scroll to and select the service, then click **Enable**.
3. Click **Continue** to install dependencies, then click **OK** to close the status box.
4. Click **OK > Yes** to finish the installation, then exit YaST.
5. In a terminal window, become the `root` user.
6. To verify that the database server has started, use the following command:

   ```
   ps -eaf | grep mysql
   ```

   You should see the processes running.

---

7. **IMPORTANT:** If you are installing MySQL 8, you must disable password complexity before setting the administrator password. Go to , complete the instructions there, then continue with "Learning More about MySQL/MariaDB" on page 65.

   Set the administrator password for the database server:

   ```
   mysqladmin -u root password new_password
   ```

   This command changes the password for the database `root` user, which is the default administrator user name for the MySQL or MariaDB database server. This command is part of the database client package.

IMPORTANT: The database `root` user name is not the same as the Linux `root` user. The Linux `root` user has a password established for it when you install Linux. In a parallel fashion, the database `root` user needs to have a password established for it when you install MySQL or MariaDB.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Installation Planning Worksheet, specify the database administrator password. The Vibe installation program prompts you for this information.

Learning More about MySQL/MariaDB

The following table includes some basic and useful MySQL or MariaDB commands:

Action	Command
Stop MySQL	`/etc/init.d/mysql stop`
Start MySQL	`/etc/init.d/mysql start`
Show MySQL status	`mysqladmin -u root -p extended-status`

If you want to administer MySQL or MariaDB through a GUI interface, you can download tools from:

MySQL GUI Tools Downloads (http://dev.mysql.com/downloads/gui-tools/5.0.html)

For more information about MySQL, see:

MySQL Documentation (http://dev.mysql.com/doc)

MySQL or MariaDB on Windows

1. In your web browser, go to the MySQL or MariaDB download site.
2. Scroll down if necessary, then click the type of Windows operating system you are using (32-bit or 64-bit).
3. On the **Windows Essentials** line, click **Download**.
4. Click **Save File**, browse to and select a convenient temporary directory, then click **Save**.
5. In Windows Explorer, browse to the directory where you saved the MySQL `.exe` file.
6. Double-click the `.exe` file to start the Setup Wizard.
7. Follow the online instructions to install the software on the Windows server, then continue with Step 8 to configure the server.
8. Unless you are already familiar with configuring MySQL or MariaDB on a Windows server, select **Standard Configuration**, then click **Next**.
9. Select **Include Bin Directory in Windows PATH**, then click **Next**.
10. Set the database `root` user password, then click **Next**.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Installation Planning Worksheet, specify the database administrator password. The Vibe installation program prompts you for this information.

11 Click **Execute** to configure the database server, then click **Finish**.

Some messages report the status of your installation.

12 To monitor the database server, click **Start > All Programs**, then click **MySQL > MySQL Server 5.1 > MySQL Command Line Client** or the equivalent MariaDB options.

PostgreSQL on Linux

IMPORTANT: The steps in this section are optimized for installing PostgreSQL on SUSE Linux Enterprise Server (SLES) 12.

For information regarding the installation of PostgreSQL on other versions of SLES or other flavors of Linux, see the PostgreSQL (https://www.postgresql.org/docs/manuals/) and the SUSE (https://www.suse.com/documentation/) documentation on the web.

- "Installing PostgreSQL and Setting the postgres User Password" on page 66
- "Configuring the Socket Connection Method" on page 67
- "Learning More about PostgreSQL" on page 67

Installing PostgreSQL and Setting the postgres User Password

1 Ensure you have access to your operating system installation media.

2 In YaST, click **Software > Software Management**.

3 In the **Search** field, type `postgresql`, then click **Search**.

4 Select the **postgresql-jdbc** and **postgresql94-server** packages for the PostgreSQL server, and if the Vibe software is running on the same machine, select the PostgreSQL client package, **libecpg6**, then click **Accept**.

5 If needed, click **Continue** to resolve dependencies.

6 Click **Continue** to acknowledge package support status.

PostgreSQL is then installed from the SLES media.

7 Click **Finish**.

8 In YaST, click **System > Services Manager**.

9 Scroll to and select postgresql, then click **Enable/Disable > Start/Stop > OK**.

10 After the configuration is updated, close YaST and open a terminal prompt.

11 Set a password for the database administrator (`postgres` system user) by entering the following commands:

```
su - postgres
psql
\password postgres
specify-a-password
repeat-the-password
\q
exit
```

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Installation Planning Worksheet, record the postgres administrator password. If you want to use a password other than `postgres` you must modify the postgresql-create-empty-database.sql file. See the PostgreSQL documentation on the web (https://www.postgresql.org/docs/manuals/) for help.

---

12 Continue with “Configuring the Socket Connection Method” on page 67.

Configuring the Socket Connection Method

1. As the `root` user, browse to `/var/lib/pgsql/data`.
2. Edit the pg_hba`.conf` file and change the following local and host lines to specify md5 encryption, as follows:

   ```
   local  all   all                  md5
   host   all   all   127.0.0.1/32   md5
   host   all   all   ::1/128        md5
   host   all   all   0.0.0.0/0      md5
   ```

   For more information about the pg_hba.conf file, see the PostgreSQL documentation on the web (https://www.postgresql.org/docs/9.4/static/auth-pg-hba-conf.html).
3. Save the file.
4. Edit the `postgresql.conf` file.
5. Uncomment the listen_addresses line by removing the pound sign (#).
6. Change ‘localhost’ to ‘*’.
7. Save and close the file.
8. In YaST, click **System > Services Manager**.
9. Scroll to and select postgresql, then click **Start/Stop > OK** to stop PostgreSQL.
10. Repeat from Step 8 to restart PostgreSQL, then close YaST.
11. Continue with “Securing PostgreSQL and Vibe Communications” on page 68

Learning More about PostgreSQL

If you want to administer PostgreSQL through a GUI interface, you can download tools from:

Community Guide to PostgreSQL GUI Tools (https://wiki.postgresql.org/wiki/Community_Guide_to_PostgreSQL_GUI_Tools)

For more information about PostgreSQL, see:

The PostgreSQL Wiki (https://wiki.postgresql.org/wiki/Main_Page)

PostgreSQL on Windows

1. In your web browser, go to the PostgreSQL download site.
2. Scroll down if necessary, then click the type of Windows operating system you are using (32-bit or 64-bit).
3. On the **Windows Essentials** line, click **Download**.
4. Click **Save File**, browse to and select a convenient temporary directory, then click **Save**.
5. In Windows Explorer, browse to the directory where you saved the `.exe` file.
6. Double-click the `.exe` file to start the Setup Wizard.
7. Follow the online instructions to install the software on the Windows server, then continue with Step 8 to configure the server.
8. Unless you are already familiar with configuring PostgreSQL on a Windows server, select **Standard Configuration**, then click **Next**.
9. Select **Include Bin Directory in Windows PATH**, then click **Next**.
10. Set the database postgres user password, then click **Next**.

BASIC VIBE INSTALLATION SUMMARY SHEET

Under **Database Credentials** on the Basic Installation Planning Worksheet, specify the database administrator password. The Vibe installation program prompts you for this information.

11. Click **Execute** to configure the database server, then click **Finish**.

    Some messages report the status of your installation.
12. To monitor the database server, click **Start > All Programs**, then click **PostgreSQL > PostgreSQL Server > PostgreSQL Command Line Client**.
13. Continue with "Securing PostgreSQL and Vibe Communications" on page 68

Securing PostgreSQL and Vibe Communications

IMPORTANT: If SSL is enabled on your PostgreSQL server, you must modify the Vibe server as follows:

1. Shut down the Vibe server.
2. Rerun the Vibe installer and when specifying the JDBC URL, add `?ssl=true` after the database name, for example:

   `url="jdbc:postgresql://`*`IP_address_or_DNS_name`*`:5432/`*`vibe_db_name`*`?ssl=true"`
3. Restart Vibe.

11 Installing and Setting Up a Basic Vibe Site

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

- "Linux: Installing and Setting Up a Basic Vibe Site" on page 69
- "Windows: Installing and Setting Up a Basic Vibe Site" on page 80

Linux: Installing and Setting Up a Basic Vibe Site

You should already have reviewed Chapter 8, "Planning a Basic Vibe Installation," on page 41 and filled out the Basic Installation Planning Worksheet. The following sections step you through the process of installing and starting Micro Focus Vibe on Linux:

- "Performing Pre-Installation Tasks on Linux" on page 69
- "Running the Linux Vibe Installation Program" on page 70
- "Creating the Vibe Database" on page 73
- "Performing Post-Installation Tasks on Linux" on page 75

Performing Pre-Installation Tasks on Linux

1. Ensure that the Linux server where you plan to install Vibe meets the system requirements listed in "Vibe System Requirements" on page 23.
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 69
   - "Creating a Vibe User and Group" on page 70

Stopping and Disabling an Existing Web Server

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

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

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

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

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

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

Creating a Vibe User and Group

If the user and group that you want to use for Vibe (as described in "Identifying Vibe's Linux User and Group" on page 45) do not exist yet, create them. It is easier if you create the group first.

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

   1a In YaST, click **Security and Users > User and Group Management** to display the User and Group Administration page.

   1b Click **Groups**, then click **Add**.

   1c Specify the group name, then click **Accept** or **OK**.

   The group does not need a password.

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

   2a Click **Users**, then click **Add**.

   2b On the **User Data** tab, specify the user's full name, user name, and password, then select **Disable User Login**.

   Like any Linux system user, the Vibe Linux user does not need to manually log in. The Vibe Linux user does not need a password, either, but YaST requires you to provide one.

   2c Click the **Details** tab.

   2d In the **Login Shell** drop-down list, select **/bin/false**, because this user does not need to manually log in.

   2e In the **Default Group** drop-down list, select the Linux group that you created in Step 1.

   2f In the **Additional Groups** list, select the Linux group that you created in Step 1.

   2g Click **Accept** or **OK**.

3 Exit YaST.

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 71
- "Using the Text-Based Installation Program" on page 72
- "Performing a Silent Installation" on page 73

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

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

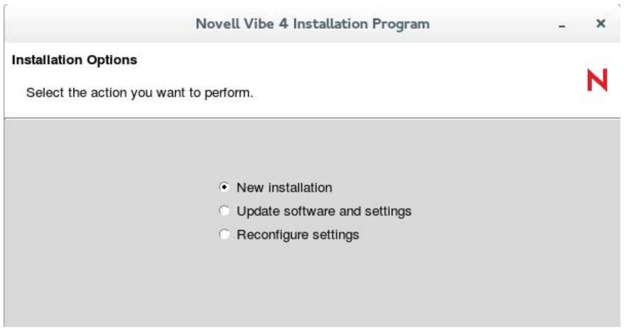
The Vibe installation program does not start without a license file in the same directory. If you have not already, rename the license file to be called `license-key.xml`.

For more information about licensing, see Chapter 13, “Updating Your Vibe License,” on page 89.

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

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

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



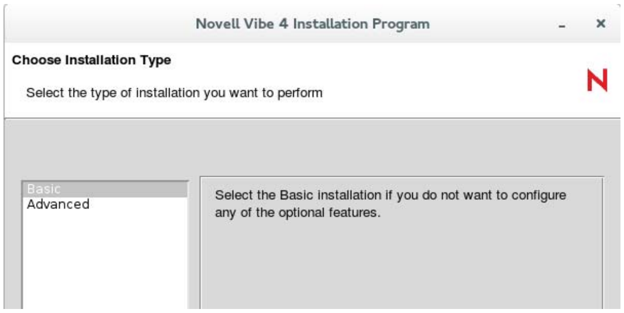
Novell Vibe 4 Installation Program

Installation Options

Select the action you want to perform.

● New installation
○ Update software and settings
○ Reconfigure settings

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



Novell Vibe 4 Installation Program

Choose Installation Type

Select the type of installation you want to perform

Basic
Advanced

Select the Basic installation if you do not want to configure any of the optional features.

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

8 Use the information that you have gathered on the Basic Installation Planning Worksheet to provide the information that the Vibe installation program prompts you for:

Installation Locations
Additional Extensions for View as HTML
Default Locale for Micro Focus Vibe
User ID for Micro Focus Vibe

- Built-In Administrator Name for Micro Focus Vibe
- Network Information
- WebDAV Authentication Method
- Database Selection
  - Database Type
  - JDBC URL
  - Credentials
  - Setup
  - Encryption Algorithm
- Outbound Email Configuration
  - Protocol
  - Host, Port, and Time Zone
  - User Name, Password, and Authentication
  - Allow Sending Email to All Users
- Inbound Email Configuration

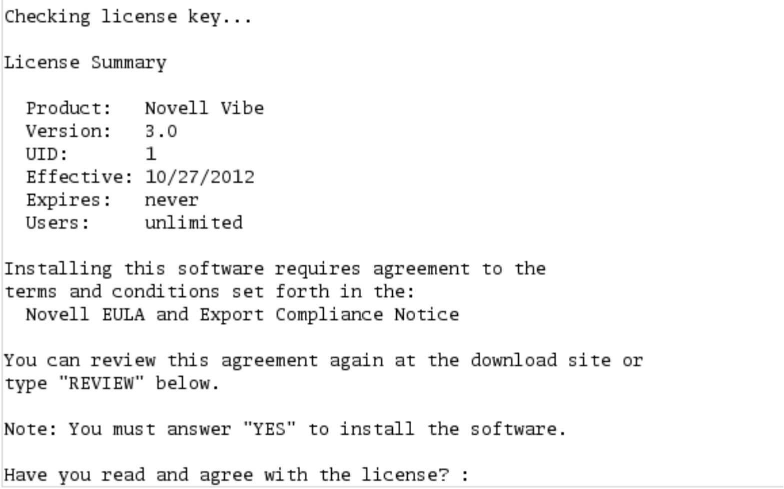
The installation program stores the information that it gathers in the `installer.xml` file in the same directory where you started the installation program.

9. After you have provided all the requested information, click **Install** to begin the Vibe installation.
10. Verify that the JCE is properly configured.
11. 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.
12. Continue with "Creating the Vibe Database" on page 73.

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: 10/27/2012
  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 Installation Planning Worksheet or the Advanced Vibe Installation Summary Sheet. If you make a mistake during the installation, continue to the end of the installation process and exit the installation program normally, so that all information is saved. Then run the text-based installation program again. Your previous information is supplied as defaults, and you can change the information as needed.

Performing a Silent Installation

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

1. Edit an existing `installer.xml` file so that it has the hostname of the server where you want to perform the silent installation and copy it to that server.
2. In the directory where the installation program is located, use the appropriate command to run the Vibe installation program, depending on the action that you want the silent installation to perform:

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

   The Installation program obtains all the information it needs from the `installer.xml` file and completes the installation without user interaction. If you have manually modified index server scripts, such as the `indexserver-startup.sh` file as described in "Installing the Lucene Software" on page 137, all modifications will be lost when you perform a silent upgrade. To retain your modifications, you should upgrade with the GUI installation program, as described in "Using the GUI Installation Program" on page 71.

Creating the Vibe Database

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

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

For single-server installations running on Linux, we recommend that you install the PostgreSQL database, but other databases are also supported (see Step 3). For information about how to install the database on the Vibe server (on Linux), see "PostgreSQL on Linux" on page 66.

For more information about installing the database for a multi-server Vibe system, see Chapter 19, "Creating the Vibe Database on a Remote Server," on page 129.

2. Ensure that the database already exists on the server that is running the Vibe software or on the remote server, depending on where you want to install the database.
3. In the terminal window as `root`, change to the following directory, as follows:

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

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

   - `mysql-create-empty-database.sql`
   - `oracle-create-empty-database.sql`
   - `postgresql-create-empty-database.sql`
   - `sqlserver-create-empty-database.sql`
4. (Optional) If you need to change the default database name from `sitescape` to something else, edit the `.sql` file for your database type to replace `sitescape` with the new name.
5. Use the database utility command for your database type to run the corresponding script for your database from the *`vibe_installation_source`*`/temp-installer/db/scripts/sql` directory:

   MySQL/MariaDB:

   ```
   mysql -uadmin-username -ppassword < "mysql-create-empty-database.sql"
   ```

   Microsoft SQL:

   ```
   psql -Uadmin-username -Ppassword -i sqlserver-create-empty-database.sql
   ```

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

   Oracle:

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

   Postgresql:

   ```
   psql -Uadmin-username < "postgresql-create-empty-database.sql"
   ```

   You are prompted for the password that you set for the admin user.
6. Change to the db directory in the Vibe installation:

   ```
   cd /vibe_installation_source/temp-installer/db
   ```

   This directory contains the following properties files:

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

7. In a text editor, open the properties file that corresponds with your database type and make the applicable changes in both the `Driver` and `referenceDriver` sections. Save and close the text editor when you are finished making changes.
   - Change the `username`, `password`, `referenceUsername`, and `referencePassword` fields to reflect the username and password for accessing your database.
   - (Conditional) If the database is running on a remote server, replace `localhost` with the IP address of the remote server.
   - (Optional) If you changed the database name in Step 4 on page 74, change the `url` and `referenceURL` fields to reflect name of your Vibe database.

   Save and close the text editor.
8. In the same directory, execute the following commands to create the database schema:

   ```
   PATH=/opt/novell/teaming/jre/bin:$PATH
   ```

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

   where *database_type* is one of the following: `mysql`, `oracle`, `postgresql`, or `sqlserver`.

   NOTE: Extending the schema can take a while. Wait until the command prompt reappears.

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

   ---
9. Start the Vibe server as described in "Starting Vibe on Linux" on page 78.
10. For security reasons, delete the password that you specified in Step 7:

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

    ```
    cd /vibe_installation_source/temp-installer/db
    ```

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

    10c Save and close the properties file.
11. Continue with "Performing Post-Installation Tasks on Linux" on page 75.

Performing Post-Installation Tasks on Linux

- "Checking for Available Hot Patches" on page 76
- "Configuring Vibe to Start Automatically on Reboot" on page 76
- "Disabling Automatic Starting on Reboot" on page 76
- "Setting Up Port Forwarding" on page 77
- "Starting Vibe on Linux" on page 78
- "Checking the Status of the Vibe Server" on page 79
- "Restarting Vibe" on page 79
- "Stopping Vibe" on page 79
- "Uninstalling Vibe" on page 79

Checking for Available Hot Patches

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

Configuring Vibe to Start Automatically on Reboot

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

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

   ```
   systemctl enable vibe.service
   ```

   The system returns a message that a symlink has been created.
2. To verify that automatic startup is turned on, enter the following command:

   ```
   systemctl status vibe.service
   ```

   The system returns a message containing

   ```
   Loaded: loaded (/usr/lib/systemd/system/vibe.service; enabled;
   ```

   indicating that autoload is enabled.

   IMPORTANT: Configuring Vibe to start automatically on a reboot doesn’t start the Vibe service. You must still use the `systemctl start vibe.service` command or restart the server to start Vibe.

Disabling Automatic Starting on Reboot

If you have configured Vibe to start automatically each time you reboot the Linux server and you want to disable this, do the following.

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

   ```
   systemctl disable vibe.service
   ```

   The system returns a message that a symlink has been removed.
2. To verify that automatic startup is turned off, enter the following command:

   ```
   systemctl status vibe.service
   ```

   The system returns a message containing

   ```
   Loaded: loaded (/usr/lib/systemd/system/vibe.service; disabled;
   ```

   indicating that autoload is disabled.

   IMPORTANT: Disabling autostart on a reboot doesn’t stop the Vibe service. You must still use the `systemctl stop vibe.service` command or restart the server to stop Vibe.

Setting Up Port Forwarding

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

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

- "Using the SuSEfirewall2 File" on page 77
- "Using iptables Commands on SLES 12" on page 77

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 on SLES 12

Complete the following steps to avoid needing to run the iptables commands after every boot:

1. As the Linux root user, change to the `/etc/init.d` directory.
2. Open the `after.local` file in a text editor.
3. Copy/past the following commands to the end of the `after.local` file and save the 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
```

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

   The lines above are wrapped. When you copy/paste them into the text editor, if the lines are still wrapped, remove the hard returns so that you have nine iptables commands, each on its own line.
5. Save the /etc/init.d/after.local file, then exit the text editor.
6. Reboot the Vibe server. Port forwarding should now be working again.

Starting Vibe on Linux

To start Vibe services, do the following:

1. In a terminal window, become `root` by entering `su -` and the `root` password.
2. Enter the following command to start Vibe:

   ```
   systemctl start vibe.service
   ```

   You must execute the `teaming` script as `root`, but the script runs Vibe as the user you selected in “Identifying Vibe’s Linux User and Group” on page 45 and specified during installation.
3. Ensure that Vibe is ready for work:

   3a Change to the following directory:

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

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

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

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

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

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

Checking the Status of the Vibe Server

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

1. In a terminal window, enter the following command:

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

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

Restarting Vibe

You need to restart Vibe whenever you use the Vibe installation program to make configuration changes, as described in Chapter 16, “Performing an Advanced Vibe Installation,” on page 119.

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

   ```
   systemctl restart vibe.service
   ```

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

Stopping Vibe

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

   ```
   systemctl stop vibe.service
   ```

   You should see the same output as when you started Vibe.
2. To verify that Vibe has stopped, check for its PID number:

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

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

Uninstalling Vibe

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

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

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

Windows: Installing and Setting Up a Basic Vibe Site

You should already have reviewed Chapter 8, "Planning a Basic Vibe Installation," on page 41 and filled out the Basic Installation Planning Worksheet. The following sections step you through the process of installing and starting Micro Focus Vibe on Windows:

- "Performing Pre-Installation Tasks on Windows" on page 80
- "Running the Windows Vibe Installation Program" on page 81
- "Creating the Vibe Database" on page 82
- "Performing Post-Installation Tasks on Windows" on page 84

Performing Pre-Installation Tasks on Windows

- "Verifying System Requirements" on page 80
- "Stopping an Existing Web Server" on page 80
- "Setting Environment Variables" on page 80

Verifying System Requirements

Ensure that the Windows server where you plan to install Vibe meets the system requirements listed in "Server Operating System Requirements" on page 23.

Stopping an Existing Web Server

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

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

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

Setting Environment Variables

Ensure that the 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. Check the PATH environment variable:
   - **3a** On the **Advanced** tab, click **Environment Variables**.
   - **3b** In the **System variables** list, locate the PATH environment variable.

3c If the path includes your database server software directory, click **Cancel**.

or

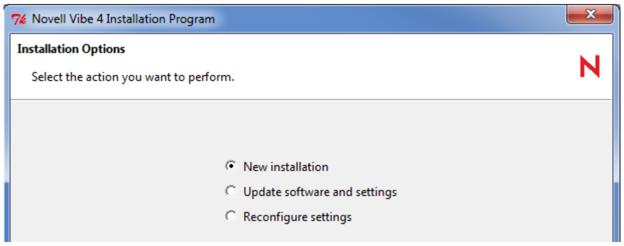
If the path does not include your database server software directory, add the directory, then click **OK**.

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. Ensure 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 13, "Updating Your Vibe License," on page 89.
4. Double-click the `installer-teaming.exe` file to start the Vibe installation program.
5. Accept the License Agreement, then click **Next**.



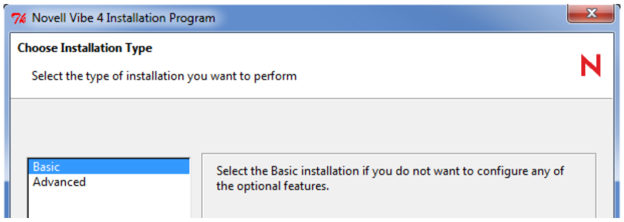
Novell Vibe 4 Installation Program

Installation Options

Select the action you want to perform.

● New installation
○ Update software and settings
○ Reconfigure settings

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



Novell Vibe 4 Installation Program

Choose Installation Type

Select the type of installation you want to perform

Basic (selected)
Advanced

Select the Basic installation if you do not want to configure any of the optional features.

7. Click **Next** to accept the default of **Basic**.
8. Use the information that you have gathered on the Basic Installation Planning Worksheet to provide the information that the Vibe installation program prompts you for:

   Installation Locations
   Default Locale for Micro Focus Vibe
   Network Information
   WebDAV Authentication Method
   Database Selection
      Database Type
      JDBC URL

  - Credentials
  - Setup
  - Encryption Algorithm
- Outbound Email Configuration
  - Protocol
  - Host, Port, and Time Zone
  - User Name, Password, and Authentication
  - Allow Sending Email to All Users
- Inbound Email Configuration
- Adding File Types for HTML Conversions

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

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

10 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.

11 Continue with "Creating the Vibe Database" on page 82.

Creating the Vibe Database

IMPORTANT: The following procedures are performed at the command prompt.

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

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

For single-server installations running on Windows, install either the MySQL/MariaDB, Postgresql, or Microsoft SQL database. (For information about how to install the PostgreSQL, MySQL or MariaDB database on the Vibe server (on Windows), see "PostgreSQL on Windows" on page 68 and "MySQL or MariaDB on Windows" on page 65).

For more information about installing the database for a multi-server Vibe system, see Chapter 19, "Creating the Vibe Database on a Remote Server," on page 129.

2 Open a command prompt window, then change to the following directory in your Vibe installation:

```
vibe_installation\temp-installer\db\scripts\sql
```

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

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

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

4. Open a command terminal, then use the database utility command for your database type to run the corresponding script for your database from the *`vibe_installation_source/`*`temp-installer/db/scripts/sql` directory:

   MySQL/ MariaDB:

   ```
   mysql -uadmin-username -ppassword < "mysql-create-empty-database.sql"
   ```

   Microsoft SQL:

   ```
   psql -Uadmin-username -Ppassword -i sqlserver-create-empty-database.sql
   ```

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

   Oracle:

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

   Postgresql:

   ```
   psql -Uadmin-username < "postgresql-create-empty-database.sql"
   ```

   You are prompted for the password that you set for the admin user.

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

   ```
   vibe_installation_source\temp-installer\db
   ```

   This directory contains the following properties files:

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

6. In a text editor, open the properties file that corresponds with your database type and make the applicable changes in both the `Driver` and `referenceDriver` sections. Save and close the text editor when you are finished making changes.

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

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

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

   ```
   SET PATH=C:\Program Files\Novell\Teaming\jre\bin;%PATH%
   ```

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

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

   ```
   SET PATH=C:\Program Files\Novell\Teaming\jre\bin;%PATH%
   ```

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

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

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

---

8 Start the Vibe server as described in "Running Vibe as a Windows Service" on page 84 and "Running Vibe as a Windows Application" on page 86.

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

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

  `vibe_installation_source``\temp-installer\db`

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

10 Continue with "Performing Post-Installation Tasks on Windows" on page 84.

Performing Post-Installation Tasks on Windows

- "Checking for Available Hot Patches" on page 84
- "Running Vibe as a Windows Service" on page 84
- "Running Vibe as a Windows Application" on page 86
- "Uninstalling Vibe" on page 86

Checking for Available Hot Patches

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

Running Vibe as a Windows Service

- "Removing Vibe as a Windows Service" on page 84
- "Configuring Vibe as a Windows Service" on page 85
- "Starting Vibe as a Windows Service" on page 85
- "Configuring the Vibe Service to Start Automatically on Reboot" on page 85
- "Restarting the Vibe Service" on page 86
- "Stopping the Vibe Service" on page 86

Removing Vibe as a Windows Service

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

1 In the `c:\Program Files\Novell\Teaming\apache-tomcat\bin\windows` directory, copy the files from the appropriate subdirectory—`x64` or `ia64`.

  If you are unsure which subdirectory is appropriate for your server, use the `readme.txt` file located in the windows directory as a reference.

2 Paste the files into the `c:\Program Files\Novell\Teaming\apache-tomcat\bin` directory.

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

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

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

```
service.bat remove Teaming
```

This removes a service named Apache Tomcat Teaming.

Configuring Vibe as a Windows Service

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

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

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

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

The following subdirectories exist: `x64` or `ia64`.

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

3 Paste the files into the `c:\Program Files\Novell\Teaming\apache-tomcat\bin` directory.

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

```
service.bat install Teaming
```

This creates a service named Apache Tomcat Teaming.

Starting Vibe as a Windows Service

IMPORTANT: If you named your Vibe service something other than “Teaming,” substitute your service name for Teaming in the sections that follow.

---

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 16, “Performing an Advanced Vibe Installation,” on page 119.

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

Stopping the Vibe Service

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

Running Vibe as a Windows Application

- “Starting Vibe as an Application” on page 86
- “Stopping Vibe as an Application” on page 86

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.

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.

12 Adding Users to Your Vibe Site

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

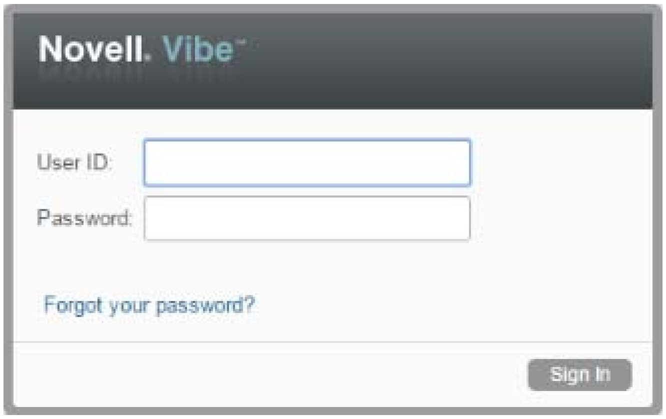
- "Accessing Your Basic Vibe Site as the Site Administrator" on page 87
- "Creating a User" on page 87
- "Adding Vibe Users from Your LDAP Directory" on page 88

Accessing Your Basic Vibe Site as the Site Administrator

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

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

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



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

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

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

Creating a User

For information about how to create a local user in the Vibe system, see "Creating a New Local User" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

Adding Vibe Users from Your LDAP Directory

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

For information about how to add users to your Vibe system via LDAP, see "Synchronizing Users and Groups from an LDAP Directory" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

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

- For a large Vibe site with thousands of users, the synchronization process can consume substantial server resources and can take some time to complete. Perform the initial import from the LDAP directory at a time when this processing does not conflict with other activities on the server.
- After they are added to the Vibe system, users could log into the Vibe site by using their eDirectory, Active Directory, or GroupWise user names and passwords. However, you should not invite users to access the Vibe site until after you have finished setting up the Vibe site, as described in "Site Setup" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

13

Updating Your Vibe License

Several Vibe license types are available:

- **Evaluation License:** Available from Novell Downloads (http://download.novell.com).

  You receive your 60-day evaluation license when you download the evaluation version of Vibe.
- **Standard Vibe License:** Purchased through a Micro Focus sales representative or Micro Focus partner.

  The Standard Vibe License gives full Vibe functionality on a per-user basis.

  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).

If you are upgrading to a new version of Vibe, or if you originally installed Vibe with an Evaluation 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 **admin** link in the upper-right corner of the page, then click the **Administration Console** icon .
10. Under **Management**, click **License**.
11. If the contents of the new license file are not displayed, click **Reload Vibe License**.
12. Click **Close**.

At any time, you can generate a report of license usage, as described in “License Report” in “Site Maintenance” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

14 Setting Up Vibe

After you have installed and started Micro Focus Vibe, there are still administrative tasks to perform before your Vibe site is ready for users to log in and use Vibe efficiently. Refer to the following sections of the *Micro Focus Vibe 4.0.5 Administration Guide* as you finish setting up your Vibe site.

- “Setting Up Initial Workspaces”
- “Planning and Controlling User Access to Workspaces and Folders”
- “Setting Up User Access to the Vibe Site”
- “Setting Up Site-Wide Customizations”
- “Configuring Email Integration”
- “Configuring Weekends and Holidays”
- “Configuring Real-Time Communication Tools”
- “Enabling Custom JSPs to Be Used on Your Vibe Site”
- “Enabling Custom JAR Files to Be Used on Your Vibe Site”
- “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”

IV

Advanced Installation and Reconfiguration

- Chapter 15, “Planning an Advanced Vibe Installation,” on page 95
- Chapter 16, “Performing an Advanced Vibe Installation,” on page 119
- Chapter 17, “Setting Configuration Options after Installation,” on page 121
- Chapter 18, “Advanced Vibe Installation Summary Sheet,” on page 123

15 Planning an Advanced Vibe Installation

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

- “What Is an Advanced Installation?” on page 95
- “Distributing Different Data Types to Different Locations” on page 96
- “Using Advanced Network Information Settings” on page 97
- “Configuring Requests and Connections Configuration” on page 98
- “Configuring Web Services” on page 99
- “Changing Your Lucene Index Server Configuration” on page 99
- “Managing RSS Feeds” on page 101
- “Configuring Presence” on page 102
- “Configuring Single Sign-On with Novell Access Manager” on page 103
- “Configuring Single Sign-On with Internet Information Services for Windows” on page 104
- “Configuring Mirrored Folder Resource Drivers” on page 116
- “Installing the Vibe Software in a Clustered Environment” on page 118

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.

What Is an Advanced Installation?

In addition to the Basic installation options described in “What Is a Basic Vibe Installation?” on page 41, 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
- Configuring requests and connections configuration
- Disabling and enabling four different web services
- Changing the configuration of the Lucene Index Server
- Configuring a remote Lucene Index Server or a group of high-availability Lucene nodes
- Reconfiguring how RSS feeds are retained or disabling them entirely
- Enabling presence in conjunction with GroupWise 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 "Distributing Different Data Types to Different Locations" on page 96 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 21, "Running Vibe on Multiple Servers," on page 141 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.

Distributing Different Data Types to Different Locations

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

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

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

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

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

  All attachment files are stored in the file repository. All versions of files are also stored here.
- **Jackrabbit repository:** (Optional) Takes only a fraction of the space consumed by the file repository.

  By default, Vibe stores all data files individually on disk, in the file repository. If you prefer to store data files in the database itself, you can use Apache Jackrabbit with Vibe. See the Apache Jackrabbit website (http://jackrabbit.apache.org) for setup instructions.
- **Extensions repository:** Disk space consumption depends on the number of extensions you add to your Vibe site.

  An extension is a software program that you can incorporate into your Vibe site in order to enhance (extend) Vibe capabilities. Adblock Plus is an example of a Firefox browser extension that filters out advertisements. You or a Java developer can create custom extensions for your Vibe site. For more information about creating and using Vibe extensions, see the *Micro Focus Vibe 4.0.5 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; however, depending on the size of your Vibe site and the types of data you store, the Vibe server might not be the best place to store all the Vibe data. If you want to store any of the data types on a remote server, you must ensure that the remote location of the data appears local to the Vibe server and that it is always available with read/write access.

Linux:	Mount the file repository to the Vibe server.
Windows:	Map a drive from the Vibe server to the file repository.
Linux and Windows	Place the file repository on a SAN (storage area network) with read/write access. This alternative provides the most reliable remote location for the Vibe file repository. This is required for a clustered environment, as described in Chapter 21, “Running Vibe on Multiple Servers,” on page 141.

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 16, “Performing an Advanced Vibe Installation,” on page 119.

Using Advanced Network Information Settings

- “Changing the Vibe Session Timeout” on page 97
- “Providing a Secure Keystore File” on page 98

Changing the Vibe Session Timeout

By default, if a user’s Micro Focus 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 16, “Performing an Advanced Vibe Installation,” on page 119.

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 *Micro Focus Vibe 4.0.5 Administration Guide*.

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 16, “Performing an Advanced Vibe Installation,” on page 119.

Configuring Requests and Connections Configuration

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

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

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

  If your database server license (for Oracle or MS SQL) restricts you from having more connections than the Vibe default of 50, you must specify a number that does not exceed your database server license.

- **Max Idle:** The maximum number of database connections that can be idle in this pool at the same time. The default is 20 connections.

ADVANCED VIBE INSTALLATION SUMMARY SHEET

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

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 16, “Performing an Advanced Vibe Installation,” on page 119.

Configuring Web Services

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

- **WSS authentication:** Uses OASIS Web Services Security (WSS) (http://www.oasis-open.org).
- **HTTP Basic authentication:** Uses HTTP Basic Access authentication (http://tools.ietf.org/html/rfc2617).
- **Token-based authentication:** Uses custom Vibe tokens to communicate with Vibe remote applications. For more information, see “Using Remote Applications on Your Vibe Site” in “Site Setup” in the *Micro Focus Vibe 4.0.5 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 *Micro Focus Vibe 4.0.5 Administration Guide*.

ADVANCED VIBE INSTALLATION SUMMARY SHEET

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

Complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 16, “Performing an Advanced Vibe Installation,” on page 119.

Changing Your Lucene Index Server Configuration

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

- “Understanding Indexing” on page 100
- “Changing Lucene Configuration Settings” on page 100
- “Running the Lucene Index Server in Its Own JVM” on page 101

- “Running the Lucene Index Server on a Remote Server” on page 101
- “Running Multiple Lucene Index Servers” on page 101

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 16, “Performing an Advanced Vibe Installation,” on page 119.

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 “File Viewer Support” on page 29.

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.

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.

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 Micro Focus 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 20, “Installing the Lucene Index Server on a Remote Server,” on page 137.

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 Micro Focus 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 20, “Installing the Lucene Index Server on a Remote Server,” on page 137.

Running Multiple Lucene Index Servers

Because the availability of the index is critical to the functioning of the Micro Focus Vibe site, you can install multiple Lucene Index Servers on multiple remote servers to provide high availability. For instructions, see Chapter 22, “Running Multiple Lucene Index Servers,” on page 149.

Managing RSS Feeds

By default, Micro Focus 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 *Micro Focus Vibe 4.0.5 User Guide*.

- “Configuring RSS Feeds” on page 102
- “Disabling RSS Feeds” on page 102

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 16, “Performing an Advanced Vibe Installation,” on page 119.

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.

Disabling RSS Feeds

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

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

Configuring Presence

If you are using GroupWise Messenger as your instant messaging solution, you can configure Micro Focus 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 *Micro Focus Vibe 4.0.5 User Guide*.

When you click a user's presence icon, the Profile Quick View is displayed. This 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 Messenger user you created and assigned as the Service ACL in

  "Integrating Micro Focus Vibe with GroupWise Messenger" in the *GroupWise Messenger 18 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 Micro Focus Vibe with GroupWise Messenger" in the *GroupWise Messenger 18 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`

  To remove the certificate after you have already selected it, click **Browse** > **Cancel**.

  ADVANCED VIBE INSTALLATION SUMMARY SHEET

  Under **Presence Configuration**, select **Enable GroupWise 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 16, "Performing an Advanced Vibe Installation," on page 119.

IMPORTANT: In order 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 *Micro Focus Vibe 4.0.5 Administration Guide*

Configuring Single Sign-On with Novell Access Manager

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

For background information about setting up Novell Access Manager 3.1, see the Access Manager 3.1 Documentation website (http://www.novell.com/documentation/novellaccessmanager31). For instructions specific to Vibe, see "Configuring a Protected Resource for a Micro Focus Vibe Server" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

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 16, “Performing an Advanced Vibe Installation,” on page 119.

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 Micro Focus 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 16, “Performing an Advanced Vibe Installation,” on page 119.

- “System Requirements” on page 104
- “Planning Your IIS Installation and Configuration” on page 106
- “Configuring the Vibe Server to Support Windows Authentication” on page 107
- “Running the Vibe Installation Program” on page 112
- “Configuring Your Browser to Allow Access to the Vibe Site” on page 112
- “Bypassing Windows Authentication to Configure LDAP and Perform Other Tasks” on page 113
- “Logging In to the Vibe Site through Windows Authentication” on page 114
- “Editing Files through WebDAV with Windows Authentication” on page 114
- “Configuring IIS to Allow Uploading of Large Files to the Vibe Site” on page 115
- “Configuring IIS to Load Balance in a Clustered Environment” on page 115

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 "Gathering Directory Services Information" on page 59 and "Synchronizing Users and Groups from an LDAP Directory" in the *Micro Focus Vibe 4.0.5 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 "Configuring Your Browser to Allow Access to the Vibe Site" on page 112.

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, you need to modify the `isapi_redirect.properties` files, as described in "Installing the Vibe IIS Plug-In" on page 107.

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 the following benefits:

- 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, 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 107.

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; therefore, 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 16, "Performing an Advanced Vibe Installation," on page 119.

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.

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 "Planning Your IIS Installation and Configuration" on page 106 for more information.

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

- "Installing the Vibe IIS Plug-In" on page 107
- "Installing ISAPI and GCI" on page 108
- "Installing Windows Authentication Role Service" on page 108
- "Creating and Managing Vibe Resources with IIS Manager" on page 108

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 ISAPI and GCI

1 Install the ISAPI and CGI components:

1a Launch the Web Platform Installer.

1b Search for isapi.

1c Add both the extensions and filters.

Installing Windows Authentication Role Service

If the Windows Authentication Role Service is not already installed, use the Add Roles and Features Wizard to add "Windows Authentication" to IIS/Web Server/Security.

Creating and Managing Vibe Resources with IIS Manager

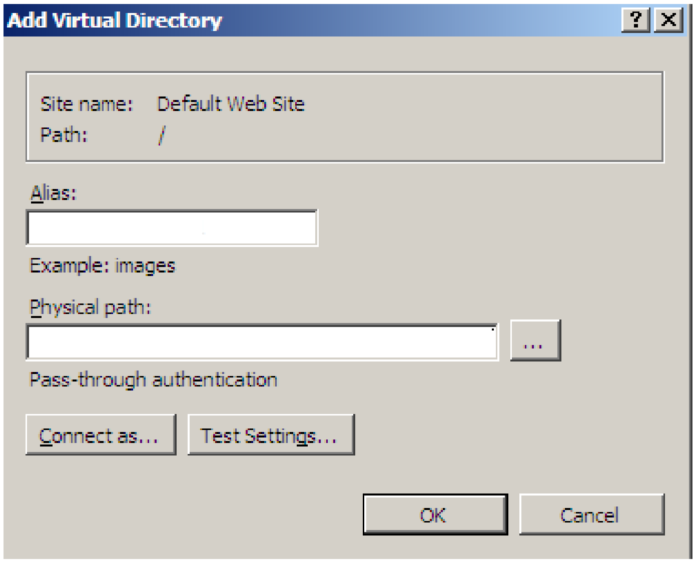
Internet Information Services (IIS) Manager is used to complete the integration.

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.


Add Virtual Directory
?
Alias:
Example: images
Physical path:
...
Pass-through authentication
Connect as...
Test Settings...
OK
Cancel

Site name: Default Web Site
Path: /

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

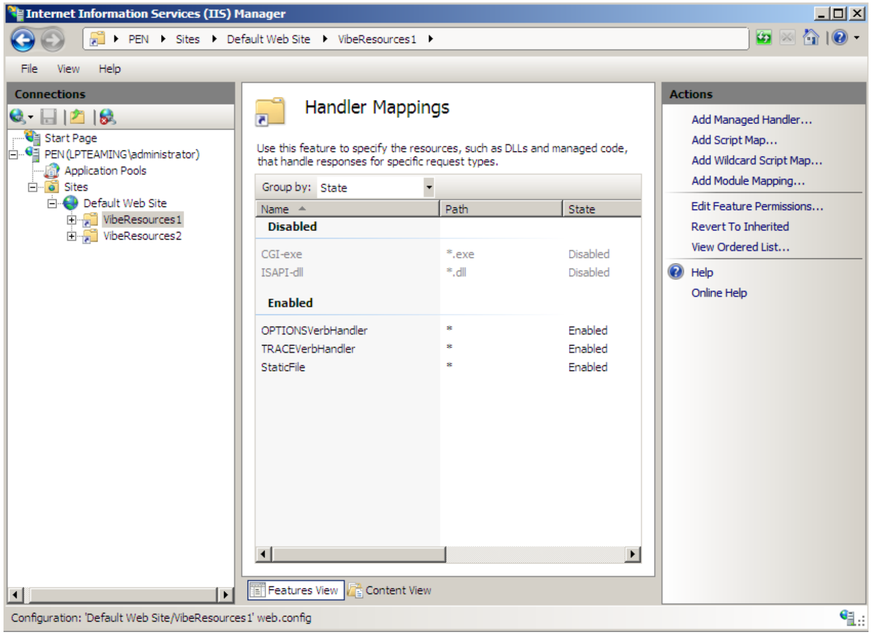
   Alias: `VibeResources1`

   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**.


Internet Information Services (IIS) Manager
PEN
Sites
Default Web Site
VibeResources1
File
View
Help
Connections
Start Page
PEN (LPTEAMING\administrator)
Application Pools
Sites
Default Web Site
VibeResources1
VibeResources2
Handler Mappings
Group by: State
Actions
Add Managed Handler...
Add Script Map...
Add Wildcard Script Map...
Add Module Mapping...
Edit Feature Permissions...
Revert To Inherited
View Ordered List...
Help
Online Help
Features View
Content View

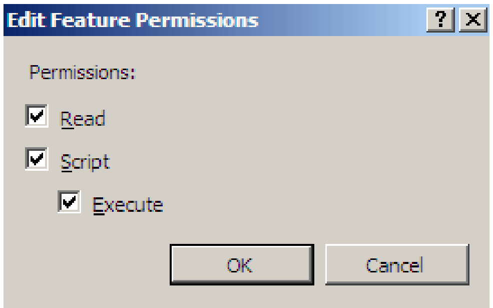
Use this feature to specify the resources, such as DLLs and managed code, that handle responses for specific request types.

Name	Path	State
Disabled		
CGI-exe	*.exe	Disabled
ISAPI-dll	*.dll	Disabled
Enabled		
OPTIONSVerbHandler	*	Enabled
TRACEVerbHandler	*	Enabled
StaticFile	*	Enabled

Configuration: 'Default Web Site/VibeResources1' web.config

8. In the **Actions** pane, click **Edit Feature Permissions**.

The Edit Feature Permissions dialog box is displayed.


Edit Feature Permissions
?
Permissions:
☑ Read
☑ Script
☑ Execute
OK
Cancel

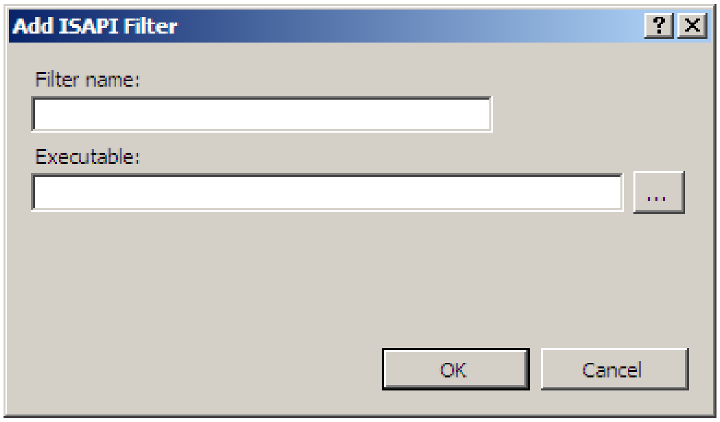
9 Select **Execute**, then click **OK**.

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.


Add ISAPI Filter
?
Filter name:
Executable:
...
OK
Cancel

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.

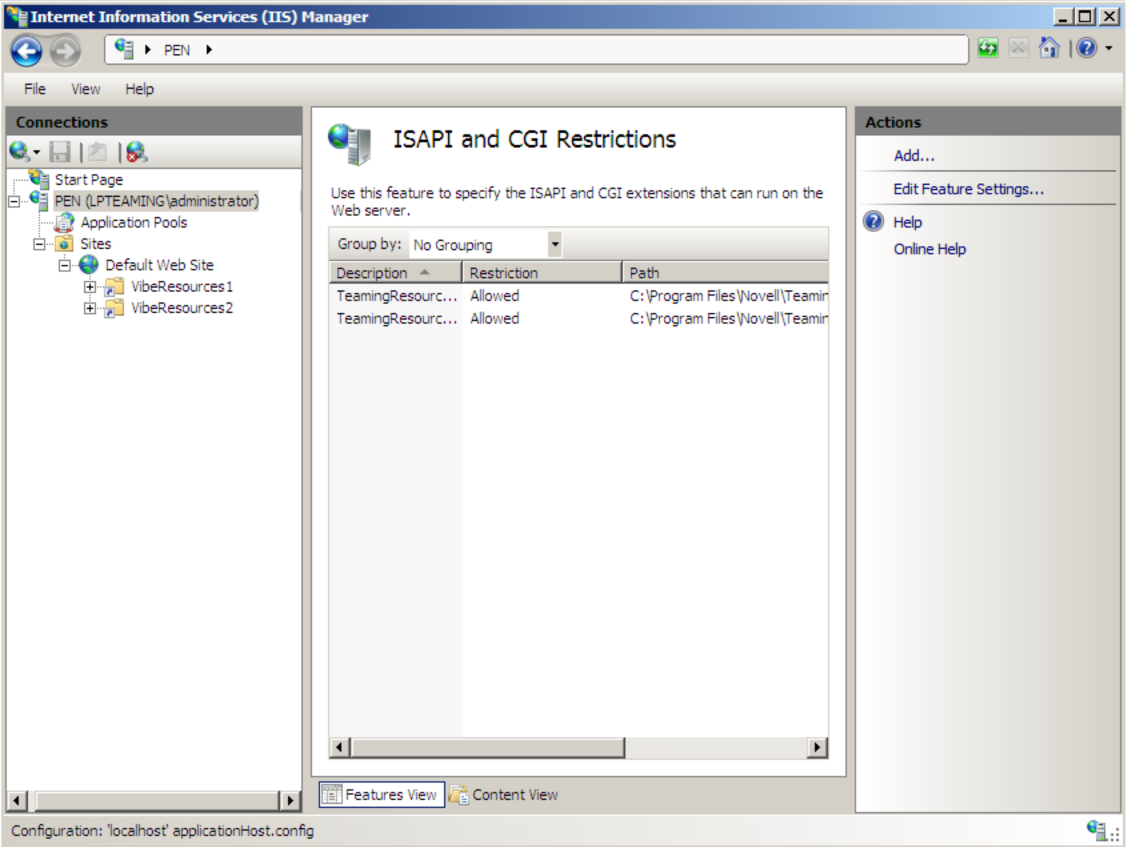
This time, specify the following information in the Add ISAPI Filter dialog box:

Filter name: `VibeResources2`

You must name the filter `VibeResources2` in order 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**.


Internet Information Services (IIS) Manager
PEN
File
View
Help
Connections
Start Page
PEN (LPTEAMING\administrator)
Application Pools
Sites
Default Web Site
VibeResources1
VibeResources2
Actions
Add...
Edit Feature Settings...
Help
Online Help
Features View
Content View

ISAPI and CGI Restrictions

Use this feature to specify the ISAPI and CGI extensions that can run on the Web server.

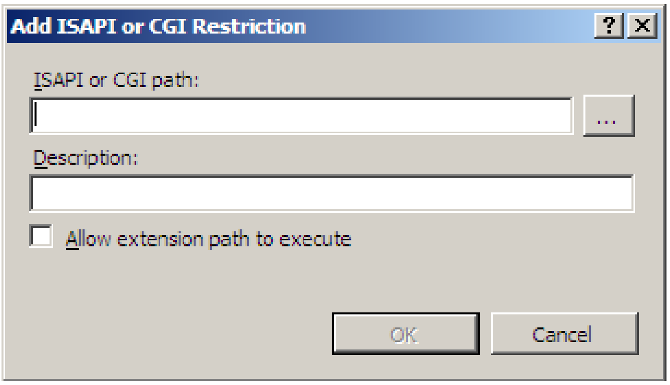
Group by: No Grouping

Description	Restriction	Path
TeamingResourc...	Allowed	C:\Program Files\Novell\Teamir
TeamingResourc...	Allowed	C:\Program Files\Novell\Teamir

Configuration: 'localhost' applicationHost.config

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

The Add ISAPI or CGI Restriction dialog box is displayed.


Add ISAPI or CGI Restriction
ISAPI or CGI path:
...
Description:
Allow extension path to execute
OK
Cancel

☐ Allow extension path to execute

18 In the dialog box, specify the following information:

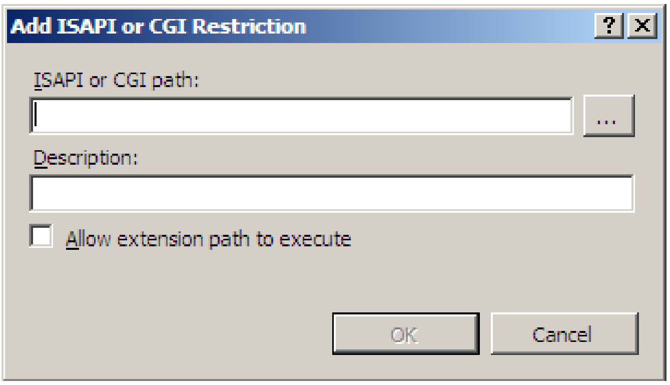
ISAPI or CGI path: Specify `C:\Program Files\Novell\Vibe IIS Plugin\resources1\bin\isapi_redirect.dll`

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.


Add ISAPI or CGI Restriction
ISAPI or CGI path:
...
Description:
☐ Allow extension path to execute
OK
Cancel

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 16, "Performing an Advanced Vibe Installation," on page 119.

Running the Vibe Installation Program

See "Choosing Windows Authentication" on page 51 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 16, "Performing an Advanced Vibe Installation," on page 119.

Return here and continue with "Configuring Your Browser to Allow Access to the Vibe Site" on page 112.

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 112
- "Firefox" on page 113

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 website.

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**.

Bypassing Windows Authentication to Configure LDAP and Perform Other Tasks

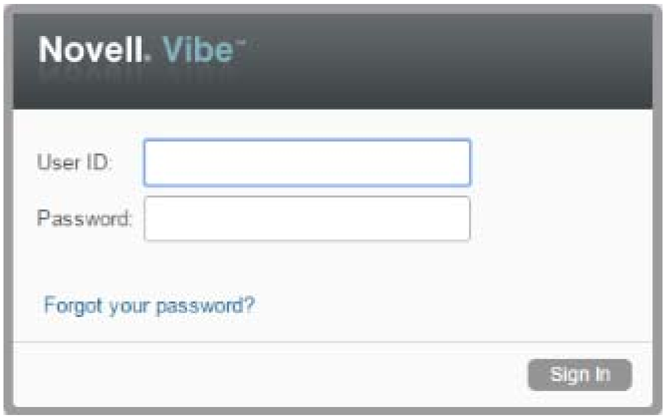
After Windows Authentication is working on your Vibe server, you can bypass the Windows Authentication functionality by including the Vibe listening port in the Vibe URL.

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.

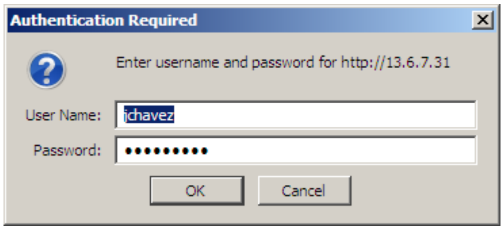
3 Configure LDAP, as described in "Adding Vibe Users from Your LDAP Directory" on page 88.

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

Logging In to the Vibe Site through Windows Authentication

After you have performed the configuration steps described in "Configuring the Vibe Server to Support Windows Authentication" on page 107 through "Configuring Your Browser to Allow Access to the Vibe Site" on page 112, 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:



Enter username and password for http://13.6.7.31

User Name: jchavez

Password: •••••••••

Editing Files through WebDAV with Windows Authentication

- "Achieving Single Sign-On When Editing Files through WebDAV" on page 114
- "Enabling Basic Authentication for WebDAV" on page 114

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 LibreOffice 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 a version of LibreOffice 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.

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.

Configuring IIS to Allow Uploading of Large Files to the Vibe Site

By default, IIS might not allow you to upload large files to the Vibe site. This is caused by timeout restrictions as well as maximum upload size restrictions.

For information about how to configure IIS to allow you to upload large files, see article 925083 in the Microsoft Support Knowledgebase (http://support.microsoft.com/kb/925083).

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` file 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.

The values that you specify in the `workers.properties` file (for example, `worker1`, `worker2`, etc.) must exactly match the values that you specify as the JVM Route setting during the Vibe installation, as described in "Installing the Vibe Software on Multiple Servers" on page 142.

7 Locate the `C:\Program Files\Novell\Vibe IIS Plugin\resources1\conf\uriworkermap.properties` file, then open the file in a text editor.

8 Replace all instances of `worker1` with `balancer`.

9 Repeat Step 7 and Step 8 for each Vibe node.

10 Locate the `C:\Program Files\Novell\Vibe IIS Plugin\resources2\conf\uriworkermap.properties` file, then open the file in a text editor.

11 Replace all instances of `worker1` with `balancer`.

12 Repeat Step 10 and Step 11 for each Vibe node.

13 Restart each Vibe node.

14 Restart the IIS server:

 14a Click **Start** > **Administrative Tools** > **Internet Information Services (IIS) Manager**.

 14b Select your server in the **Connections** panel, then click **Restart** in the **Actions** panel.

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 Micro Focus Vibe site. The files on the file system are accessed by the Micro Focus 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, and then set up additional resource drivers later.

- "File System Type" on page 117
- "File System Directory" on page 117
- "File System Access" on page 118
- "Mirrored Folder Setup" on page 118

After planning mirrored folders, complete the planning process for additional Advanced installation features as needed, then perform the Advanced installation as described in Chapter 16, "Performing an Advanced Vibe Installation," on page 119.

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) so that Vibe can provide a user name 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.

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 path name, 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.

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 user name 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 user name and password that provides access to the WebDAV server.

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 *Micro Focus Vibe 4.0.5 Administration Guide*.

Installing the Vibe Software in a Clustered Environment

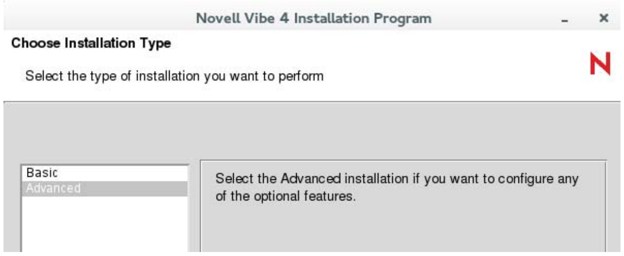
You must use an Advanced installation in order to install the Micro Focus Vibe software on multiple servers and set up a clustered environment. Setting up multiple Vibe servers, along with other clustering options, are described in Chapter 21, "Running Vibe on Multiple Servers," on page 141.

16

Performing an Advanced Vibe Installation

You should already have reviewed Chapter 8, “Planning a Basic Vibe Installation,” on page 41 and filled out the Basic Installation Planning Worksheet. You should also have reviewed Chapter 15, “Planning an Advanced Vibe Installation,” on page 95 and filled out the Advanced Vibe Installation Summary Sheet for those aspects of an Advanced installation that you want to implement for your Micro Focus Vibe site.

1. Follow the Basic installation instructions provided in Chapter 11, “Installing and Setting Up a Basic Vibe Site,” on page 69 for the platform where you are installing Vibe.
2. When you run the installation program, select **Advanced** on the Choose Installation Type page.



Choose Installation Type

Select the type of installation you want to perform

Select the Advanced installation if you want to configure any of the optional features.

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

Basic Installation Pages:

Installation Locations
Default Locale for Micro Focus Vibe
User ID for Micro Focus Vibe (Linux only)
Network Information
WebDAV Authentication Method
Database Selection
Outbound Email Configuration
Inbound Email Configuration

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

Advanced Installation Pages:

Web Services
Lucene Configuration
RSS Configuration
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.

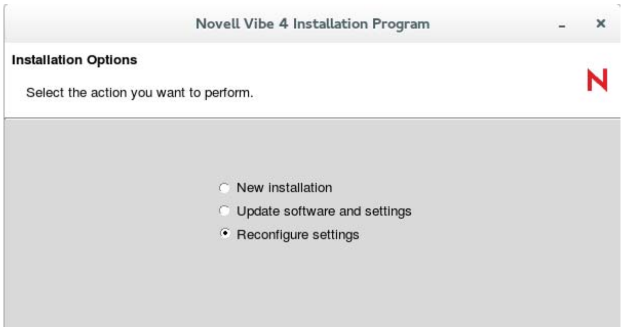
Information about the installation process is written to the `installer.log` file in the same directory where you ran the Installation program. If a problem occurs during the installation, the `installer.log` file provides information that can help you resolve the problem.

6 After you complete the Advanced installation, continue setting up your Vibe site, as described in Chapter 12, “Adding Users to Your Vibe Site,” on page 87.

17 Setting Configuration Options after Installation

After you install Micro Focus Vibe, following the instructions in Part III, “Basic Installation,” on page 33 or Part IV, “Advanced Installation and Reconfiguration,” on page 93, 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 “Running the Linux Vibe Installation Program” on page 70 and “Running the Windows Vibe Installation Program” on page 81.



Installation Options

Select the action you want to perform.

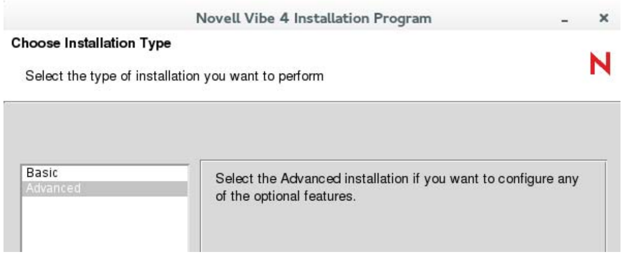
○ New installation
○ Update software and settings
● Reconfigure settings

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**.



Choose Installation Type

Select the type of installation you want to perform

Basic
Advanced

Select the Advanced installation if you want to configure any of the optional features.

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

Basic Installation Pages:

Installation Locations
Default Locale for Micro Focus Vibe
User ID for Micro Focus Vibe (Linux only)

Network Information
WebDAV Authentication Method
Database Selection
Outbound Email Configuration
Inbound Email 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.

18

Advanced Vibe Installation Summary Sheet

Installation Program Field	Value for Your Vibe Site	Explanation

Data Locations:
Linux default:
`/var/opt/novell/teaming`
Windows default:
`c:\Novell\Teaming`
◆ Simple file repository
◆ Jackrabbit repository
◆ Extensions repository
◆ Cache store
◆ Lucene index
		See “Distributing Different Data Types to Different Locations” on page 96.

Network Information: ◆ Enable web services: No / Yes ◆ Session timeout Default: 240 minutes ◆ Enable Tomcat access log: No / Yes ◆ Keystore file:		See “Using Advanced Network Information Settings” on page 97.
Network Information: ◆ Max Threads Default: 200 ◆ Max Active Default: 50 ◆ Max Idle Default: 20		See “Configuring Requests and Connections Configuration” on page 98.

Installation Program Field	Value for Your Vibe Site	Explanation
WebDAV Authentication Method ◆ basic ◆ digest		See “Planning the WebDAV Authentication Method” on page 49.
Web Services: ◆ Enable WSS authentication ◆ Enable Basic authentication ◆ Enable token-based authentication ◆ Enable anonymous access		See “Configuring Web Services” on page 99.
Lucene Configuration: Configuration type: all ◆ Max booleans: Default: 10000 ◆ Merge factor: 10		See “Changing Lucene Configuration Settings” on page 100.
Server Lucene Configuration: Configuration type: server only ◆ Host: ◆ RMI port: Default: 1199		See “Running the Lucene Index Server in Its Own JVM” on page 101.
High Availability Lucene Configuration: Configuration type: high availability only Number of high availability search nodes: ◆ Service name: ◆ Service title: ◆ Host: ◆ RMI port: ◆ Service name: ◆ Service title: ◆ Host: ◆ RMI port:		See Chapter 22, “Running Multiple Lucene Index Servers,” on page 149.

Installation Program Field	Value for Your Vibe Site	Explanation
RSS Configuration: Enable RSS: No / Yes ◆ Max elapsed days: ◆ Max inactive days:		See “Managing RSS Feeds” on page 101.
Presence Configuration: Enable presence: No / Yes ◆ Server address: ◆ Port: ◆ Server user: ◆ Password: ◆ Server Certificate:		See “Configuring Presence” on page 102.
Reverse Proxy Configuration: Enable Access Gateway: No / Yes ◆ Access Gateway address(es): ◆ Logout URL: ◆ Use Access Gateway for WebDav connections: No / Yes ◆ WebDAV Access Gateway address:		See “Configuring Single Sign-On with Novell Access Manager” on page 103.
Integration with IIS for Windows Authentication: Enable Integration with IIS for Windows Authentication: No / Yes ◆ IIS address(es): ◆ Logout URL:		See “Configuring Single Sign-On with Internet Information Services for Windows” on page 104.

Installation Program Field	Value for Your Vibe Site	Explanation
Mirrored Folder Resource Driver Configuration: Enable file share: No / Yes ◆ Share type ◆ File ◆ WebDav ◆ Read only: No / Yes ◆ Title ◆ Root path ◆ Allowed users ◆ Allowed groups ◆ User ◆ Password ◆ Host URL		See "Configuring Mirrored Folder Resource Drivers" on page 116.

V Multi-Server Configurations and Clustering

- Chapter 19, “Creating the Vibe Database on a Remote Server,” on page 129
- Chapter 20, “Installing the Lucene Index Server on a Remote Server,” on page 137
- Chapter 21, “Running Vibe on Multiple Servers,” on page 141
- Chapter 22, “Running Multiple Lucene Index Servers,” on page 149
- Chapter 23, “Running Multiple Database Servers,” on page 167

19 Creating the Vibe Database on a Remote Server

The default database location for Micro Focus Vibe is on the same server with the Vibe software, as described in "Database Location" on page 52. However, for better performance and scalability, you can install the database server (MySQL, MariaDB, Microsoft SQL, Oracle, or PostgreSQL) on a remote server, and then use the scripts that are included with the Vibe software to manually create the Vibe database in any location that you prefer.

- "JDK 9 or Later Required to Run manage-database Script" on page 129
- "Creating a MySQL/MariaDB Database" on page 129
- "Creating a Microsoft SQL Database" on page 131
- "Creating an Oracle Database" on page 133
- "Creating a PostgreSQL Database" on page 134

NOTE: This section assumes that you already have a Basic installation of Vibe up and running successfully. We highly recommend that you follow the instructions in Part III, "Basic Installation," on page 33 before attempting a more complex Vibe configuration.

JDK 9 or Later Required to Run manage-database Script

Creating the Vibe database by running the manage-database.sh script as instructed in the following sections, requires that the server have JDK 9 or later installed. Any Java release, such as IBM, Oracle, OpenJDK, and so on, meets this requirement.

Creating a MySQL/MariaDB Database

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

For more information about MySQL, see the following references:

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

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

The following database tools can be helpful:

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

To create the MySQL database:

1. Review the MySQL requirements listed in "Database Server Requirements" on page 24.
2. Ensure that the MySQL database server and client have been installed and configured, as described in "Installing and Running the Database Server" on page 63.
3. Ensure that the MySQL database client is also installed on the Vibe server.

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

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

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

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

   For information on how to set a password for your MySQL database if you have not already done so, see "Configuring MySQL/MariaDB" on page 64.

   5b Specify your password.

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

   ```
   SHOW ENGINES\G
   ```

   5d Locate the InnoDB engine, and ensure that `innodb` support is enabled.
6. Update the MySQL configuration file:

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

Linux:	`/etc/my.cnf`
Windows:	`c:\Program Files\MySQL\MySQL Server` *`version`*`\my.ini`

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

   ```
   default_character_set = utf8
   ```

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

   ```
   character_set_server = utf8
   ```

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

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

   ```
   bind-address = mysql_server_address
   ```

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

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

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

   or

   Download and unzip the Vibe software onto the database server.

8. In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-4.0.`*`n`*`-db.zip` file, unzip the `teaming-4.0.`*`n`*`-db.zip` file.
9. Change to the db subdirectory.
10. Change to the `db/scripts/sql` subdirectory.
11. Copy the `mysql-create-empty-database.sql` script to a convenient temporary location on the server where you want to create the database, and ensure that your database management utility is on your path so that you can run it from that directory.
12. Specify the following command to run the MySQL database creation script:

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

13. Configure MySQL to allow access from a remote server:

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

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

    For example:

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

15. Populate the database that you just created:

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

16. Verify that the database tables were created:

    ```
    mysql -uuser -p
    ```

17. Specify the password for the MySQL user.
18. Specify the following command to use the default Vibe database:

    ```
    mysql> use sitescape;
    ```

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

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

    ```
    mysql> show tables;
    ```

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 Microsoft Web Site (http://www.microsoft.com/sqlserver/).

The following database tool can be helpful:

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

To create a Microsoft SQL database:

1. Review the Microsoft SQL requirements listed in "Database Server Requirements" on page 24.
2. Ensure that the Microsoft SQL Server and Client have been installed and configured properly.

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

   For more information, see "Microsoft SQL Server" (http://msdn.microsoft.com/en-us/library/bb545450.aspx).
3. Ensure that the Microsoft SQL database client is also installed on the Vibe server.

   The Vibe installation program needs the Microsoft SQL client in order to communicate with the remote Microsoft SQL database server.
4. When you install Microsoft SQL Server, select **SQL Server and Windows** for authentication.

   The default is **Windows Only**, which is not appropriate for Vibe.
5. Copy the `teaming-4.0.`*`n`*`-db.zip` file from the Vibe server where the Vibe installation program is located and copy it to the database server.

   or

   Download and unzip the Vibe software onto the database server.
6. In the directory where the Vibe Installation program is located on the database server, or in the location where you copied the `teaming-4.0.`*`n`*`-db.zip` file, unzip the `teaming-4.0.`*`n`*`-db.zip` file.
7. Change to the db subdirectory.
8. Change to the `db/scripts/sql` subdirectory.
9. Use Microsoft SQL Server Management Studio to create the empty database:

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

   9b Execute the query to create the empty database.

   When the database is created, you should see `Command(s) completed successfully` in the messages window.
10. Change to the db directory.
11. Edit the `sqlserver-liquibase.properties` file to use your administrator user name and password for the SQL database server.
12. Populate the database that you just created (requires that Java is installed):

    ```
    run manage-database.bat sqlserver updateDatabase
    ```
13. Verify that the database tables were created by using Microsoft SQL Server Management Studio.
14. If desired, you can now uninstall Java.

Creating an Oracle Database

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

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

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

The following database tool can be helpful:

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

1. Review the Oracle database requirements listed in "Database Server Requirements" on page 24.
2. Ensure that the Oracle database server software has been installed and configured properly.

   For more information, see Oracle Database (http://www.oracle.com/database).
3. Set up the Oracle database character set to support Unicode character encodings.

   Vibe requires either the UTF-8 or AL32UTF8 character set for proper operation. Oracle recommends AL32UTF8, because it has increased support for certain Asian languages. For more information, see "Choosing a Character Set" (http://download.oracle.com/docs/cd/B19306_01/server.102/b14225/ch2charset.htm) in the *Oracle Database Globalization Support Guide*.
4. Copy the `teaming-4.0.`*`n`*`-db.zip` file from the Vibe server where the Vibe installation program is located and copy it to the database server.

   or

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

   Original:

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

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

   Updated:

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

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

---

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

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

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

    For example:

    `vi oracle-liquibase.properties`
12. Populate the database that you just created:

    `run ./manage-database.sh oracle updateDatabase`
13. Verify that the database tables were created.

Creating a PostgreSQL Database

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

For more information about PostgreSQL, see the PostgreSQL documentation on the web (https://www.postgresql.org/docs/manuals/).

To create the PosgreSQL database:

1. Review the PostSQL requirements listed in "Database Server Requirements" on page 24.
2. Ensure that the PostgreSQL database server and client have been installed and configured, as described in "Installing and Running the Database Server" on page 63.
3. Ensure that the PostgreSQL database client is also installed on the Vibe server.

   The Vibe installation program needs the PostgreSQL client in order to communicate with the remote PostgreSQL database server.
4. Ensure that you know the password for the PostgreSQL `postgres` administrator user.
5. Configure the socket connection method.

   5a As the `root` user, browse to `/var/lib/pgsql/data`.

   5b Edit the `pg_hba.conf` file and change the following local and host lines to specify md5 encryption, as follows:

   ```
   local  all   all                    md5
   host   all   all   127.0.0.1/32     md5
   host   all   all   ::1/128          md5
   ```

   5c Save the file.

   5d Edit the `postgresql.conf` file.

   5e Make sure that the listen_addresses line is uncommented and configured to allow connection requests from all Vibe servers by specifying individual IP addresses or by replacing localhost with an asterisk (*).

   5f Save and close the file.

   5g Stop and restart the PostgreSQL system process.

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

or

Download and unzip the Vibe software onto the database server.

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

8 Change to the db subdirectory.

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

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

11 Run the script to create your Vibe database:

```
psql -Uadmin-username < "postgresql-create-empty-database.sql"
```

You are prompted for the admin-user password.

12 Change to the db directory:

13 In a text editor, open the `postgresql-liquibase.properties` file and make the following changes:

- Change the `username`, `password`, `referenceUsername`, and `referencePassword` fields to reflect the admin-username and password for accessing your database.
- Replace `localhost` with the addresses specified in Step 5e on page 135.
- (Optional) If you changed the database name, change the `url` and `referenceURL` fields to reflect name of your Vibe database.

Save and close the text editor.

14 In the same directory, make the `manage-database.sh` file executable by entering the following command:

```
chmod +x manage-database.sh
```

15 Use the following command to create the database schema:

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

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

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

16 Start the Vibe server as described in "Starting Vibe on Linux" on page 78.

17 For security reasons, delete the password that you specified in Step 13 by opening the `postgresql-liquibase.properties` file and removing the password from the `password` and `referencePassword` fields.

18 Save and close the properties file.

20 Installing the Lucene Index Server on a Remote Server

You can install the Lucene Index Server on a different server from where Micro Focus Vibe 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).

- "Installing the Lucene Software" on page 137
- "Updating Your Vibe Site" on page 139
- "Managing a Remote Lucene Index Server" on page 139

NOTE: This section assumes that you already have a Basic installation of Vibe up and running successfully. We highly recommend that you follow the instructions in Part III, "Basic Installation," on page 33 before attempting a more complex Vibe configuration.

Installing the Lucene Software

1. Ensure that there is no firewall between the Vibe server and the Lucene Index Server.
2. 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 file name for the Lucene Installation program varies by platform:

Linux:	`lucene-installer.linux`
Windows:	`lucene-installer.exe`

3. Change to the directory where you copied the Lucene installation program, then start it.
4. Accept the License Agreement, then click **Next**.
5. Select **New installation**, then click **Next**.
6. 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`

7. Browse to and select the directory where you installed the JDK, then click **Next**.
8. Adjust the configuration of the Lucene Index Server, as described in "Changing Your Lucene Index Server Configuration" on page 99, then click **Next**.
9. Click **Install** to install the Lucene software.
10. (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.
11. (Conditional) On Windows, if you do not want to start the Lucene Index Server immediately, deselect **Start Lucene server**.

    For instructions on starting and stopping the Lucene Index Server manually, see "Managing a Remote Lucene Index Server" on page 139.
12. Click **Finish**.
13. (Conditional) On Linux:
    - **13a** Change to the following directory:

      ```
      /opt/novell/teaming/luceneserver/indexserver/bin
      ```
    - **13b** Open the `indexserver-startup.sh` file in a text editor.
    - **13c** 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.
    - **13d** Save the `indexserver-startup.sh` file, then exit the text editor.
    - **13e** Start the Lucene Index Server.

      For instructions on starting and stopping the Lucene Index Server manually, see "Managing a Remote Lucene Index Server" on page 139.

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 22, "Running Multiple Lucene Index Servers," on page 149.

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.

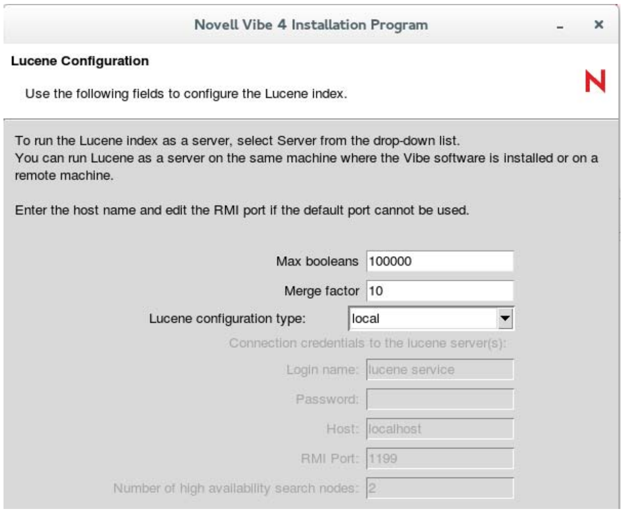
1 Stop Micro Focus Vibe.

2 Start the Vibe installation program to reconfigure the Lucene Index Server settings.

For information on how to start the installation program, see “Running the Linux Vibe Installation Program” on page 70 or “Running the Windows Vibe Installation Program” on page 81.

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

4 Click **Next** until you reach the Lucene Configuration page.



Lucene Configuration

Use the following fields to configure the Lucene index.

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: 100000
Merge factor: 10
Lucene configuration type: local

Connection credentials to the lucene server(s):
Login name: lucene service
Password:
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.

Managing a Remote Lucene Index Server

- “Linux: Managing a Remote Lucene Index Server” on page 139
- “Windows: Managing a Remote Lucene Index Server” on page 140

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
```

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.

21 Running Vibe on Multiple Servers

By running Micro Focus Vibe 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.

- "Planning a Multi-Server Vibe Configuration" on page 141
- "Installing the Vibe Software on Multiple Servers" on page 142
- "Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site" on page 145
- "Configuring Internet Information Services to Support Multiple Vibe Servers" on page 147

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 III, "Basic Installation," on page 33 before attempting a more complex Vibe configuration.

Planning a Multi-Server Vibe Configuration

- "Lucene Index Server Considerations" on page 141
- "Vibe File Repository Considerations" on page 141
- "Configuring Routing for Multicast IP on the Vibe Server" on page 142

Lucene Index Server Considerations

Before you can implement a multi-server Micro Focus Vibe configuration, you must move your Lucene Index Server away from the initial Vibe server, as described in Chapter 20, "Installing the Lucene Index Server on a Remote Server," on page 137.

Vibe File Repository Considerations

Before you implement a multi-server Micro Focus 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 "Distributing Different Data Types to Different Locations" on page 96.

Configuring Routing for Multicast IP on the Vibe Server

If you are planning to use ehcache as your hibernate caching provider, you might need to set up the routing for multicast IP on each server where Vibe is installed. If this is not done, then depending on your Vibe system, you might see a communication error when you start the Vibe server. For example, in the log file you might see the following:

```
Error starting heartbeat. Error was: No such device.
```

To prevent this error, or to fix the Vibe system after the error occurs:

1 Run the following command:

```
route add -net 232.0.0.0/8 dev eth0
```

Installing the Vibe Software on Multiple Servers

1 Update your existing Micro Focus 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 "Running the Linux Vibe Installation Program" on page 70 or "Running the Windows Vibe Installation Program" on page 81.

  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 Installation Planning Worksheet 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, select **Enable clustered environment** to enable clustering.

  1h On the first Vibe node, in the **JVM Route** field, specify `worker1`. On the second Vibe node, in the **JVM Route** field, specify `worker2`, and so forth for each Vibe node, incrementing the JVM Route setting. Each Tomcat instance should have a unique JVM Route setting.

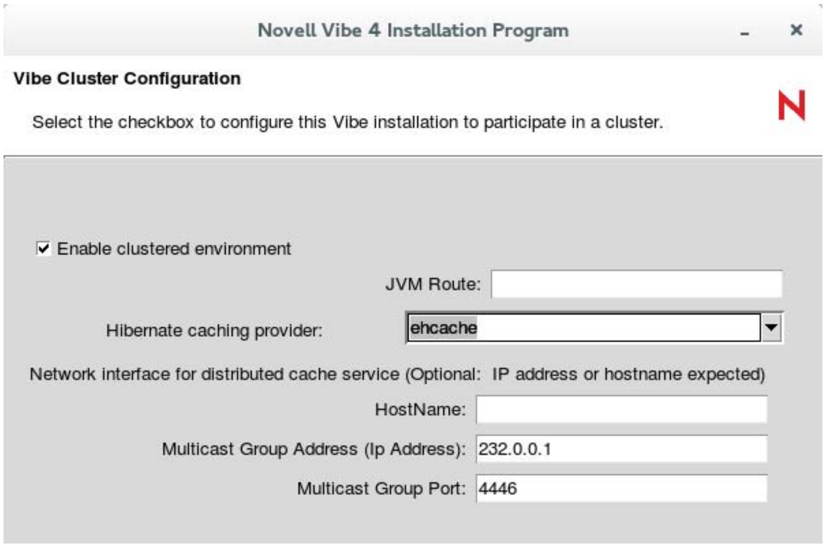
  `worker1`, `worker2`, and so forth are the default names for the matching values used for the reverse proxy configuration. For example, if you have set up Apache or IIS as a reverse proxy, these are the default values. The **JVM Route** setting in the Vibe installer must match these values.

  1i Select one of the following options for your hibernate caching provider:

  ehcache: Ehcache is recommended for small clustered Vibe sites, and is included in the Vibe software. If you select this option, no further configuration is necessary. For more information, see Ehcache (http://ehcache.sourceforge.net).

memcached: Memcached is recommended for medium to large clustered Vibe sites. Memcached is not included in the Vibe software. If you select this option, you must download and install memcached on each server that you plan to use for caching in your Vibe cluster. For information about downloading and installing memcached, see Appendix B, “Memcached Caching with Micro Focus Vibe,” on page 229.

Depending on the cache provider you select, different options are displayed.



Vibe Cluster Configuration

Select the checkbox to configure this Vibe installation to participate in a cluster.

☑ Enable clustered environment

JVM Route:

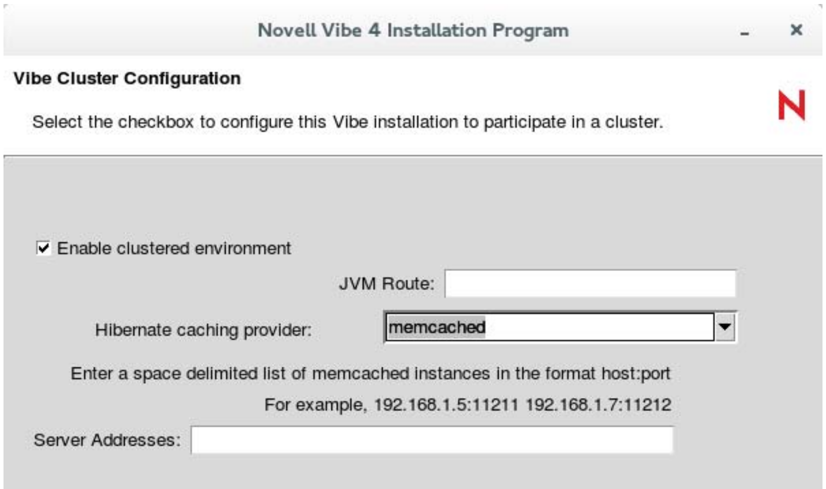
Hibernate caching provider: ehcache

Network interface for distributed cache service (Optional: IP address or hostname expected)

HostName:

Multicast Group Address (Ip Address): 232.0.0.1

Multicast Group Port: 4446



Vibe Cluster Configuration

Select the checkbox to configure this Vibe installation to participate in a cluster.

☑ Enable clustered environment

JVM Route:

Hibernate caching provider: memcached

Enter a space delimited list of memcached instances in the format host:port

For example, 192.168.1.5:11211 192.168.1.7:11212

Server Addresses:

1j (Conditional) If you selected **ehcache** as the hibernate caching provider in Step 1g, specify the following information on the Vibe Cluster Configuration page to configure ehcache:

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: Ensure 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.

1k (Conditional) If you selected **memcached** as the hibernate caching provider in Step 1g, specify the following information on the Vibe Cluster Configuration page to configure memcached:

Server Addresses: Specify a list of memcached servers, with each server separated by a space. For example, `hostname1:port hostname2:port hostname3:port`

The server addresses listed here are all nodes within the Vibe cluster. Changes made to one Vibe node are immediately visible in other Vibe nodes. Ensure that the clock settings for each Vibe node are synchronized. Failure to do so can significantly degrade overall system performance.

Memcached is not included in the Vibe software. If you select memcached as your hibernate caching provider, you must download and install memcached on each server in your Vibe cluster. For information about downloading and installing memcached, see .

1l On the Ready to Install page, click **Install**.

1m On the Installation Complete page, click **Finish**.

2 Install the Vibe software on each additional server, using the same installation settings that you used for the initial Vibe server.

3 (Conditional) If you set up ehcache as the caching provider, on each Linux server where you installed the Vibe software, set the multicast route to enable the servers to function as a cluster:

3a Use the following command on the command line to immediately set the multicast route for the server:

```
route add -net 232.0.0.0/8 dev eth0
```

3b To run this command each time the server reboots, add the command to the following file on each server:

```
/etc/init.d/boot.local
```

4 Start Vibe on each server, as described for the platform where you are installing Vibe:

- "Starting Vibe on Linux" on page 78
- "Running Vibe as a Windows Service" on page 84
- "Running Vibe as a Windows Application" on page 86

5 (Conditional) If you set up ehcache as the caching provider and the Vibe servers fail to start because of a communication error, ensure that you have followed the steps in "Configuring Routing for Multicast IP on the Vibe Server" on page 142.

6 Continue with Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site.

Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site

After Micro Focus Vibe is installed and running on multiple servers, you must provide additional software to provide high availability functionality. Because Vibe is based on Tomcat, you can use software that provides high availability for Tomcat.

1. Install and configure one of the following web applications to provide high availability for your Vibe site:
   - Apache web server (http://www.apache.org)
   - Linux Virtual Server (http://www.linuxvirtualserver.org)
   - Novell Access Manager (https://www.netiq.com/products/access-manager/)
   - Microsoft Internet Information Services (http://www.iis.net)
2. Configure the web application to establish the Vibe site URL, which then stays constant for Vibe users regardless of which Vibe server they access at any given time.
3. Start the web application with its new configuration settings.
4. Test your Vibe site for high availability.
   - If you are using Apache web server, Linux Virtual Services, or Microsoft Internet Information Services, users can immediately log in to the Vibe site again after a failover has occurred. The connection between the user’s browser and the Vibe site is maintained as the failover occurs.
   - If you are using Novell Access Manager, users must start a new browser session, and then log in to the Vibe site after a failover has occurred. They cannot log in again from the same browser session, because the connection between the user’s browser and the Vibe site must be reestablished after the failover.

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

- “Configuring Apache as a Load Balancer” on page 145
- “Configuring Linux Virtual Server as a Load Balancer” on page 147

Configuring 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. Micro Focus Vibe does not support session sharing/replication among Tomcat instances.

If you are using Novell Access Manager as described in “Configuring Single Sign-On with Novell Access Manager” on page 103, you do not need to configure Apache to load balance as described in this section, because Access Manager provides this service.

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

To configure Apache to load balance:

1. Install the Apache web server (http://httpd.apache.org) on one server.
2. Edit the `/etc/sysconfig/apache2` file:
   - **2a** Locate the following line:

     ```
     APACHE_MODULES=
     ```

     Then add the following lines:

     ```
     proxy
     proxy_ajp
     proxy_balancer
     ```

     The end result should look similar to the following:

     ```
     APACHE_MODULES="actions alias auth_basic authn_file authz_host
     authz_groupfile authz_default authz_user authn_dbm autoindex cgi dir
     env expires include log_config mime negotiation setenvif ssl suexec
     userdir php5 reqtimeout proxy proxy_ajp proxy_balancer"
     ```

   - **2b** Create the following new configuration file:

     ```
     /etc/apache2/httpd.conf.vibe
     ```

   - **2c** Add the following section to the `/etc/apache2/httpd.conf.vibe` 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>
     ```

     The values that you specify for the `route` setting (for example, `worker1`, `worker2`, etc.) must exactly match the values that you specify as the JVM Route setting during the Vibe installation, as described in "Installing the Vibe Software on Multiple Servers" on page 142.

   - **2d** Save the `httpd.conf.vibe` file.
3. Reconfigure each Vibe server in the cluster so that each server has the same network information (hostname and ports) as the Apache web server.

   For each Vibe server in the cluster:

   - **3a** Run the Vibe installation program by reconfiguring the Vibe server.

     For information about how to reconfigure your Vibe server, see Chapter 17, "Setting Configuration Options after Installation," on page 121.

3b On the **Network Information** page in the Vibe installation program, change the hostname in the **Host** field for each Vibe server. The hostname must match the DNS name that users use to access the Vibe service.

For example, if the URL for you Vibe site is `vibe.acme.com`, you would specify `vibe.acme.com` in this field.

3c Continue through the Vibe installation program for each Vibe server in the cluster, as described in Chapter 17, "Setting Configuration Options after Installation," on page 121.

4 Restart 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
```

Configuring Linux Virtual Server as a Load Balancer

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

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

Configuring Internet Information Services to Support Multiple Vibe Servers

You can configure Internet Information Services (IIS) to support multiple Micro Focus Vibe servers. For more information, see "Configuring IIS to Load Balance in a Clustered Environment" on page 115.

22 Running Multiple Lucene Index Servers

Your Micro Focus Vibe 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 "Running the Lucene Index Server in Its Own JVM" on page 101.
- 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 20, "Installing the Lucene Index Server on a Remote Server," on page 137.

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.

- "Planning a High Availability Lucene Configuration" on page 149
- "Setting Up a High Availability Lucene Configuration" on page 150
- "Testing Your Lucene High Availability Configuration" on page 162
- "Synchronizing a High Availability Lucene Configuration" on page 164

NOTE: This section assumes that you already have a Basic installation of Vibe up and running successfully. We highly recommend that you follow the instructions in Part III, "Basic Installation," on page 33 before attempting a more complex Vibe and Lucene configuration.

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).

Setting Up a High Availability Lucene Configuration

- "Changing from a Local Lucene Index Server" on page 150
- "Changing from a Single Remote Lucene Index Server" on page 153
- "Expanding an Existing High Availability Lucene Configuration" on page 156
- "Changing Your Lucene Configuration without Vibe Site Down Time" on page 158

Changing from a Local Lucene Index Server

To change from a local Lucene Index Server running on the Micro Focus Vibe server, you must install the Lucene Index Server on two or more remote servers, and 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 “Installing the Lucene Software” on page 137.
- **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 “Managing a Remote Lucene Index Server” on page 139.

2 Stop Vibe.

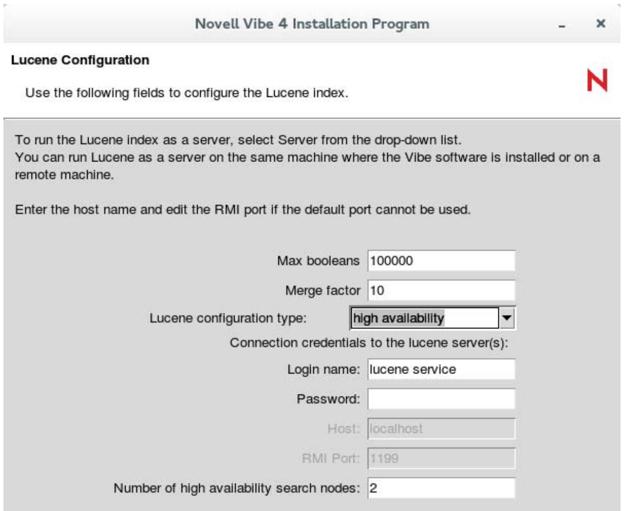
If you have installed the Vibe software on multiple servers, as described in Chapter 21, “Running Vibe on Multiple Servers,” on page 141, stop Vibe on all servers, or follow the instructions in “Changing Your Lucene Configuration without Vibe Site Down Time” on page 158.

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.



Lucene Configuration

Use the following fields to configure the Lucene index.

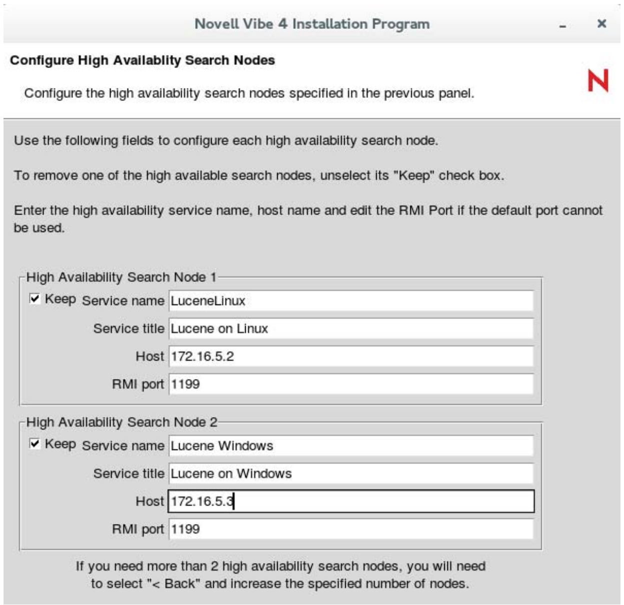
To run the Lucene index as a server, select Server from the drop-down list.
You can run Lucene as a server on the same machine where the Vibe software is installed or on a remote machine.

Enter the host name and edit the RMI port if the default port cannot be used.

Max booleans: 100000
Merge factor: 10
Lucene configuration type: high availability
Connection credentials to the lucene server(s):
Login name: lucene service
Password:
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 "Planning a High Availability Lucene Configuration" on page 149, then click **Next**.



Configure High Availablity 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: Lucene Windows

Service title: Lucene on Windows

Host: 172.16.5.3

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.

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.

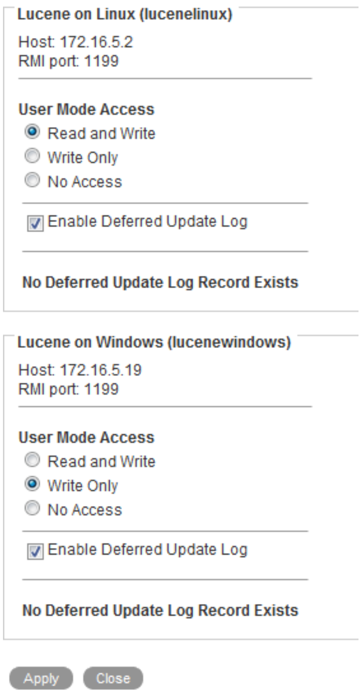
3j (Conditional) If you have multiple Vibe servers, repeat Step 3 on each Vibe server.

4 Configure the Vibe site for the additional Lucene nodes:

4a Log in to the Vibe site as the Vibe administrator.

4b Click your linked name in the upper right corner of the page, then click the **Administration Console** 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 "Testing Your Lucene High Availability Configuration" on page 162.

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, and then reconfigure Micro Focus 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 21, "Running Vibe on Multiple Servers," on page 141, stop Vibe on all servers, or follow the instructions in "Changing Your Lucene Configuration without Vibe Site Down Time" on page 158.

1b Ensure 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 “Installing the Lucene Software” on page 137.

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 “Managing a Remote Lucene Index Server” on page 139, 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**.

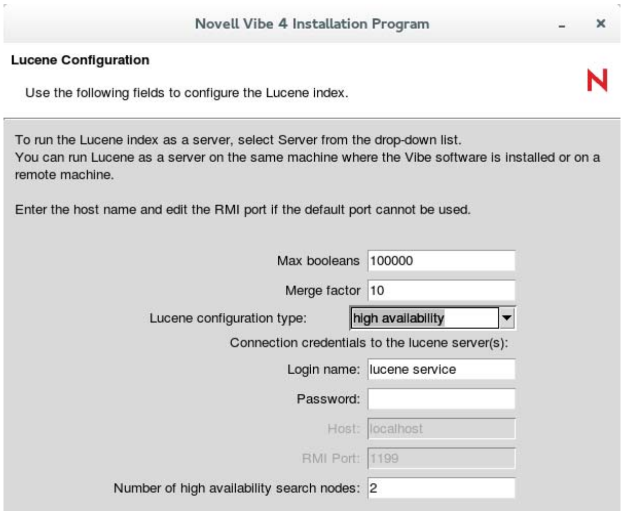
3b On the Choose Installation Type page, select **Advanced**, then click **Next**.

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.



Novell Vibe 4 Installation Program

Lucene Configuration

Use the following fields to configure the Lucene index.

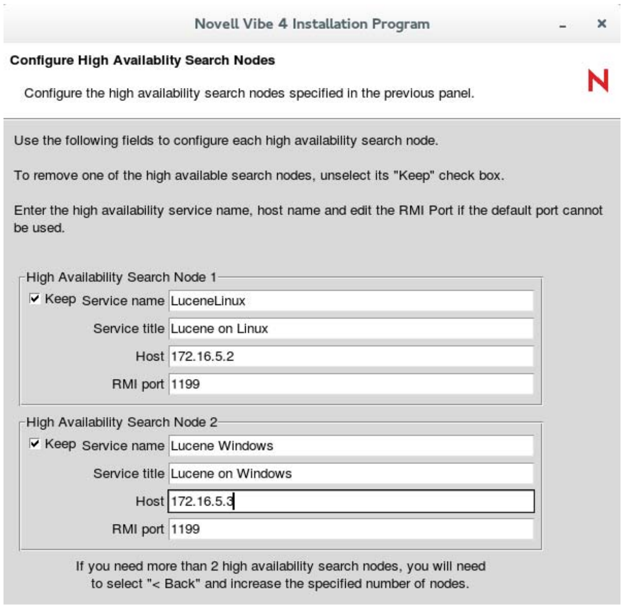
To run the Lucene index as a server, select Server from the drop-down list.
You can run Lucene as a server on the same machine where the Vibe software is installed or on a remote machine.

Enter the host name and edit the RMI port if the default port cannot be used.

Max booleans: 100000
Merge factor: 10
Lucene configuration type: high availability
Connection credentials to the lucene server(s):
Login name: lucene service
Password:
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 “Planning a High Availability Lucene Configuration” on page 149, then click **Next**.



Configure High Availablity 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: Lucene Windows

Service title: Lucene on Windows

Host: 172.16.5.3

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.

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.

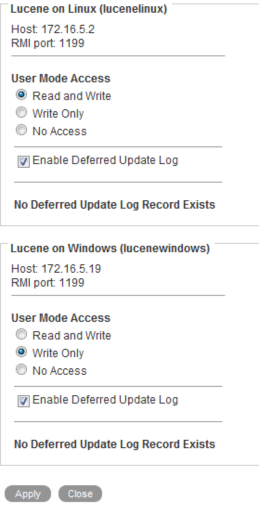
3j (Conditional) If you have multiple Vibe servers, repeat Step 3 on each Vibe server.

4 Configure the Vibe site for the additional Lucene nodes:

4a Log in to the Vibe site as the Vibe administrator.

4b Click your linked name in the upper right corner of the page, then click the **Administration Console** 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.

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 "Testing Your Lucene High Availability Configuration" on page 162.

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 21, "Running Vibe on Multiple Servers," on page 141, stop Vibe on all servers, or follow the instructions in "Changing Your Lucene Configuration without Vibe Site Down Time" on page 158.

1b Stop all Lucene nodes, as described in "Managing a Remote Lucene Index Server" on page 139.

2 Set up one or more additional Lucene nodes:

2a Install the Lucene Index Server on each additional remote server, as described in "Installing the Lucene Software" on page 137.

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 "Managing a Remote Lucene Index Server" on page 139, but do not bring up your Vibe site.

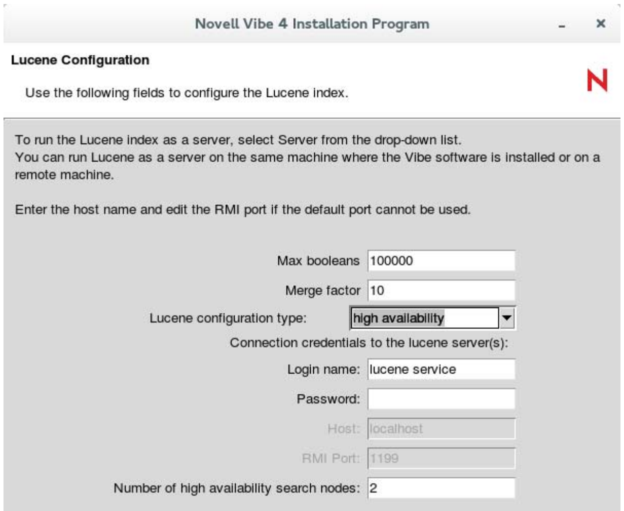
3 Run the Vibe installation program to configure the Vibe server for the additional Lucene nodes:

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**.



Lucene Configuration

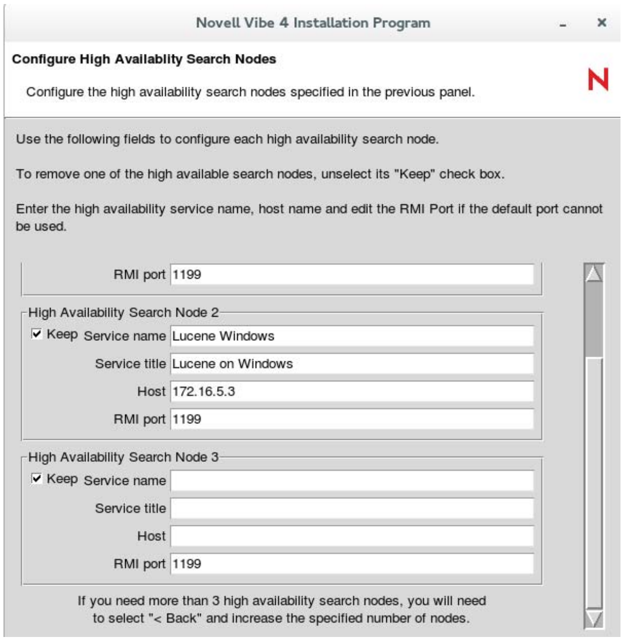
Use the following fields to configure the Lucene index.

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: 100000
Merge factor: 10
Lucene configuration type: high availability
Connection credentials to the lucene server(s):
Login name: lucene service
Password:
Host: localhost
RMI Port: 1199
Number of high availability search nodes: 2

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



Configure High Availablity 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.

RMI port: 1199

High Availability Search Node 2
☑ Keep Service name: Lucene Windows
Service title: Lucene on Windows
Host: 172.16.5.3
RMI port: 1199

High Availability Search Node 3
☑ Keep Service name:
Service title:
Host:
RMI port: 1199

If you need more than 3 high availability search nodes, you will need to select "< Back" and increase the specified number of nodes.

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.

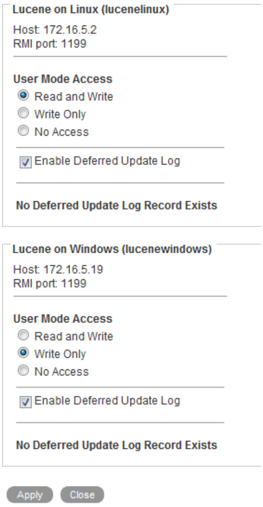
3i (Conditional) If you have multiple Vibe servers, repeat Step 3 on each Vibe server.

4 Configure the Vibe site for the additional Lucene nodes:

4a Log in to the Vibe site as the Vibe administrator.

4b Click your linked name in the upper right corner of the page, then click the **Administration Console** 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.

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 "Testing Your Lucene High Availability Configuration" on page 162.

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 21, "Running Vibe on Multiple Servers," on page 141.

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 "Installing the Lucene Software" on page 137

1b Start the Lucene Index Server on each Lucene node, as described in "Managing a Remote Lucene Index Server" on page 139.

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**.

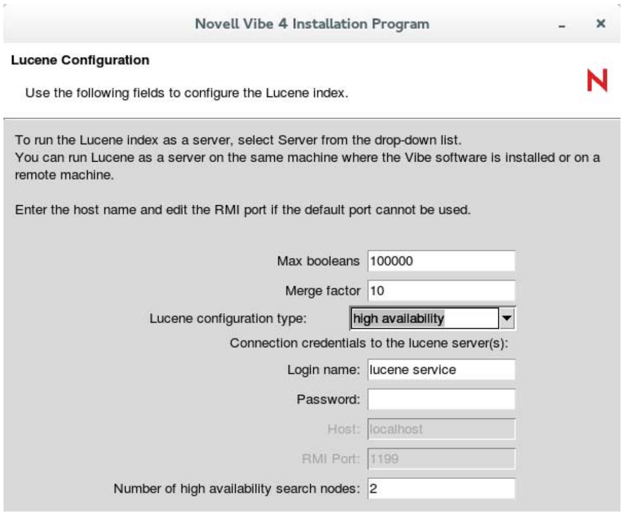
3b On the Choose Installation Type page, select **Advanced**, then click **Next**.

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.



Lucene Configuration

Use the following fields to configure the Lucene index.

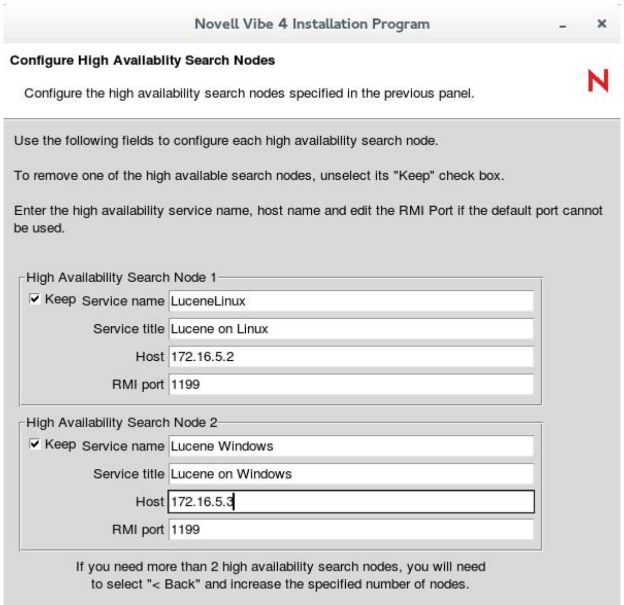
To run the Lucene index as a server, select Server from the drop-down list.
You can run Lucene as a server on the same machine where the Vibe software is installed or on a remote machine.

Enter the host name and edit the RMI port if the default port cannot be used.

Max booleans: 100000
Merge factor: 10
Lucene configuration type: high availability
Connection credentials to the lucene server(s):
Login name: lucene service
Password:
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 "Planning a High Availability Lucene Configuration" on page 149, then click **Next**.



Configure High Availablity 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: Lucene Windows
Service title: Lucene on Windows
Host: 172.16.5.3
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.

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.

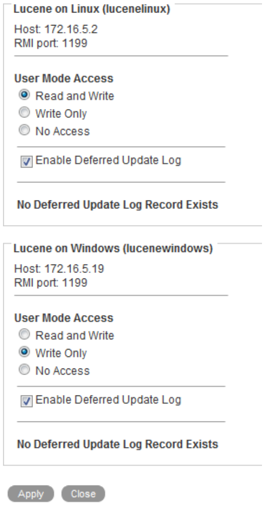
5 Access the reconfigured Vibe server and prevent access to the additional Lucene nodes:

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 your linked name in the upper right corner of the page, then click the **Administration Console** 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

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.

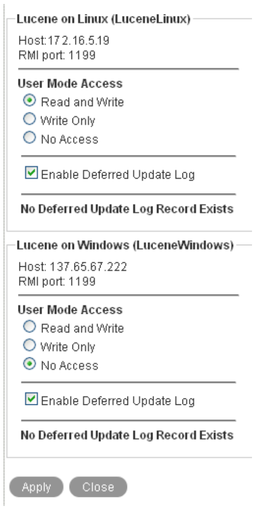
6c Start each reconfigured Vibe server.

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 your linked name in the upper right corner of the page, then click the **Administration Console** icon.

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



Lucene on Linux (LuceneLinux)

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

Lucene on Windows (LuceneWindows)

Host: 137.65.67.222
RMI port: 1199

User Mode Access
○ Read and Write
○ Write Only
● No Access

☑ Enable Deferred Update Log

No Deferred Update Log Record Exists

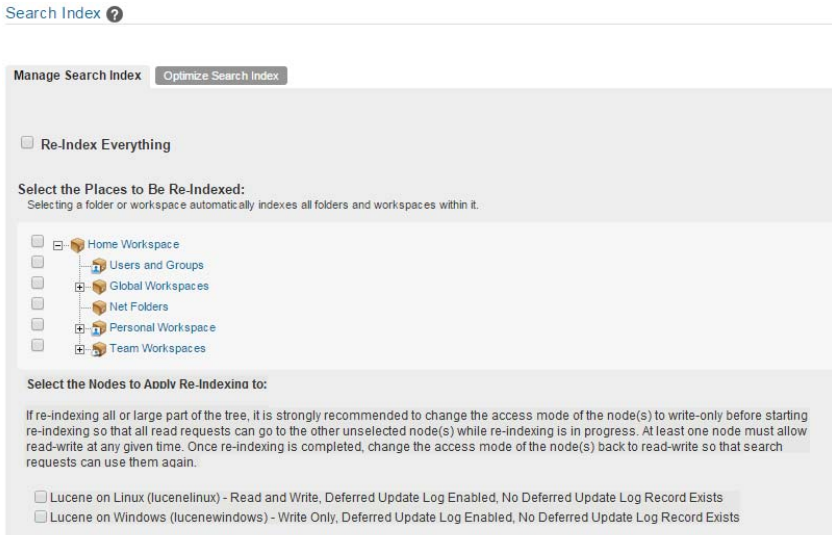
7d In the **User Mode Access** box, change **No Access** to **Write Only** for the additional Lucene nodes.

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**.



☐ Re-Index Everything

Select the Places to Be Re-Indexed:
Selecting a folder or workspace automatically indexes all folders and workspaces within it.

☐ Home Workspace
☐ Users and Groups
☐ Global Workspaces
☐ Net Folders
☐ Personal Workspace
☐ 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

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.

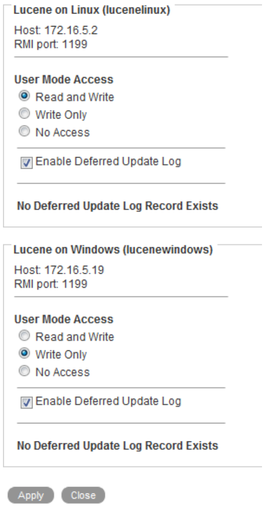
8d Click **OK** to start the indexing.

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 complete, click **Close**.

9 Make the additional Lucene nodes available to Vibe users:

9a On the Administration page, 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

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.

Testing Your Lucene High Availability Configuration

When you first set up your high availability Lucene configuration, you can configure Micro Focus 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.

- “Configuring Vibe to Log Lucene Node Activity” on page 163
- “Observing Lucene Node Activity” on page 163

NOTE: For background information about the Tomcat log file, see “Tomcat Log File” in “Site Maintenance” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

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.

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 *Micro Focus Vibe 4.0.5 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).

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 "Synchronizing a High Availability Lucene Configuration" on page 164.

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 accesses 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.

Synchronizing a High Availability Lucene Configuration

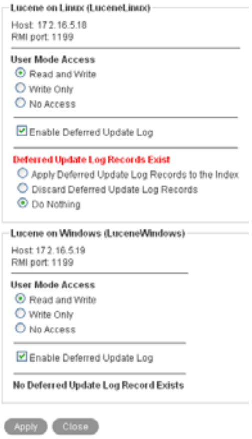
You should ensure that your Lucene node servers remain in sync with each other. Whenever a Lucene node is down for a relatively short period of time (no more than one or two days), you can synchronize it with other Lucene nodes whose index files are up-to-date.

1 Ensure that the out-of-date Lucene node is running reliably again.

2 Log in to the Micro Focus Vibe site as the Vibe administrator.

3 Click your linked name in the upper right corner of the page, then click the **Administration Console** icon 👤.

4 Under **Search Index**, click **Nodes**.


Lucene on Linux (LuceneLinux)

Host: 172.16.5.18
RMI port: 1199

User Mode Access
● Read and Write
○ Write Only
○ No Access

☑ Enable Deferred Update Log

Deferred Update Log Records Exist
○ Apply Deferred Update Log Records to the Index
○ Discard Deferred Update Log Records
● Do Nothing

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

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 *Micro Focus Vibe 4.0.5 Administration Guide*.

6 Click **Close**.

23 Running Multiple Database Servers

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

- MySQL Cluster (http://www.mysql.com/products/database/cluster)
- MariaDB (https://mariadb.com/kb/en/mariadb/galera-cluster/)
- SQL Server Clustering (http://www.sql-server-performance.com/articles/clustering/clustering_intro_p1.aspx)
- Oracle Real Application Clusters (http://www.oracle.com/technology/products/database/clustering)
- PostgreSQL High Availability (https://www.postgresql.org/docs/9.6/static/high-availability.html)

NOTE: We highly recommend that you follow the instructions in Part III, “Basic Installation,” on page 33 before attempting a more complex Vibe configuration.

VI

Upgrade

- Chapter 24, “Upgrading From Novell Vibe 4.*x to Micro Focus Vibe 4.0.5,” on page 171*
- Chapter 25, “Upgrading From Novell Vibe 3.4 to Micro Focus Vibe 4.0.5,” on page 183
- Chapter 26, “Upgrading to Novell Vibe 3.4 from Previous Versions,” on page 203
- Chapter 27, “Updating the Operating System Where Vibe Is Running,” on page 205

24 Upgrading From Novell Vibe 4.*x* to Micro Focus Vibe 4.0.5

This section describes how to upgrade from Novell Vibe 4.*x* to Micro Focus Vibe 4.0.5.

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

- "Obtaining and Preparing the Vibe 4.0.5 Software" on page 171
- "Understanding the Upgrade Process" on page 171
- "Backing Up Vibe Data" on page 172
- "Remote Lucene Index Server Upgrade" on page 172
- "Preserving Self-Signed Certificates During the Upgrade" on page 174
- "Upgrading the Vibe Software" on page 175
- "If the Installer Reports an Error" on page 176
- "Upgrading the Vibe Database from 4.*x to 4.0.5" on page 176*
- "Performing Post-Upgrade Tasks" on page 178

Obtaining and Preparing the Vibe 4.0.5 Software

You can download Vibe 4.0.5 through your Customer Center account or obtain the software from a Micro Focus Partner.

As you extract the software, make sure that you don't overwrite the previous Vibe version.

Understanding the Upgrade Process

During the upgrade to Vibe 4.0.5, the following aspects of your Vibe system are modified:

- The software is upgraded to Vibe 4.0.5.
- A backup copy of your existing Vibe 4.*x* 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`

- The Java Virtual Machine (JVM) software that you installed to support the previous version of Vibe is replaced by a customized version of OpenJDK.

  Using a separate JDK and JRE is no longer required, nor is it supported.

Backing Up Vibe Data

Ensure that your Vibe data is backed up before you begin the upgrade process. For information about the data that needs to be backed up, see "Backing Up Vibe Data" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

Because of significant changes to the database schema, Micro Focus recommends that you use your database backup software to back up your Vibe database before upgrading to Vibe 4.0.5.

Remote Lucene Index Server Upgrade

IMPORTANT: If your Lucene search index is running on the same server as the Vibe software, you do not need to upgrade it separately. Skip to "Preserving Self-Signed Certificates During the Upgrade" on page 174.

You have the following options when upgrading your remote Lucene search index to Vibe 4.0.5:

- **Create a new search index**

  Because a full re-index is required after upgrading to Vibe 4.0.5, creating a new search index is less time-consuming than upgrading your existing search index. The benefit to creating a new Lucene search index is that you are able to maintain the original search index in the unlikely case of an emergency rollback.
- **Upgrade your existing Lucene search index**

  If you choose to upgrade your existing Lucene search index, you must perform a re-index after the upgrade, as described in "Resetting the Search Index" on page 179.

These options are described in the following sections:

- "Creating a New Search Index" on page 172
- "Upgrading an Existing Search Index" on page 173

Creating a New Search Index

1 Stop Vibe.

Linux:	On the Vibe server, specify the following command: `/etc/init.d/teaming stop`
Windows:	See "Stopping Vibe as an Application" on page 86.

2 Stop the Lucene search index.

On the Lucene index server, specify the following command:

Linux:	`/etc/init.d/indexserver stop`
Windows:	`c:\Program Files\Novell\Teaming\luceneserver\indexserver\bin\indexserver-shutdown.bat`

3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe4.0 system.
4. On a different server than where your original search index was running, create a new search index, as described in "Installing the Lucene Software" on page 137.

Upgrading an Existing Search Index

The Vibe installation program cannot upgrade the Lucene search index when it is running on a remote server. To upgrade your remote search index from Novell Vibe 4.*x* to Micro Focus Vibe 4.0.5, you need to run the Remote Lucene Server installation program:

1. Stop Vibe.

Linux:	On the Vibe server, specify the following command: `/etc/init.d/teaming stop`
Windows:	See "Stopping Vibe as an Application" on page 86.

2. Stop the Lucene search index.

   On the Lucene index server, specify the following command:

Linux:	`/etc/init.d/indexserver stop`
Windows:	`c:\Program Files\Novell\Teaming\luceneserver\indexserver\bin\indexserver-shutdown.bat`

3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 4.*x* system.
4. Copy the Vibe 4.0.5 Remote Lucene Server Installation program from the directory where the Vibe 4.0.5 Installation program is located to a convenient directory on the server where the remote Lucene search index 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 4.0.5 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 "Changing Lucene Configuration Settings" on page 100.

13 Click **Install** to install the upgraded Lucene search index software.

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

15 (Conditional) If memcached is running on the Lucene search index server, reboot the server where it is running to ensure that the 4 cache is cleared.

16 Start the Lucene Index Server.

On the Lucene index server, specify the following command:

Linux:
```
systemctl start indexserver.service
```

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

17 Ensure that the index server is running.

```
/etc/init.d/indexserver status
```

18 Now that all remote Vibe components have been upgraded, follow the instructions in "Upgrading the Vibe Software" on page 175.

Preserving Self-Signed Certificates During the Upgrade

If your Vibe site uses self-signed certificates for SSL connections to other services, such as LDAP, WebDAV, and so on, the Vibe 4.0.5 installation program can preserve SSL connectivity by automatically importing the certificates that you identify in your old JAVA Certificate Store (cacerts) to the new OpenJDK cacerts file.

The process works as follows:

1 You must identify the aliases of the certificates you want to have imported to the new certificate store. If you are unsure of any alias names, you can list the aliases in the current cacerts file using a command similar to the following:

```
keytool -list -v -keystore $JAVA_HOME/jre/lib/security/cacerts
```

2 When you run the Vibe installer, you are prompted to enter the alias names, separated by commas.

3 The Vibe installer makes appropriate backup copies of the old and new cacerts files.

4 When the installation process concludes, the new OpenJDK installation is configured for secure communications just like your previous Java installation.

Upgrading the Vibe Software

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

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

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

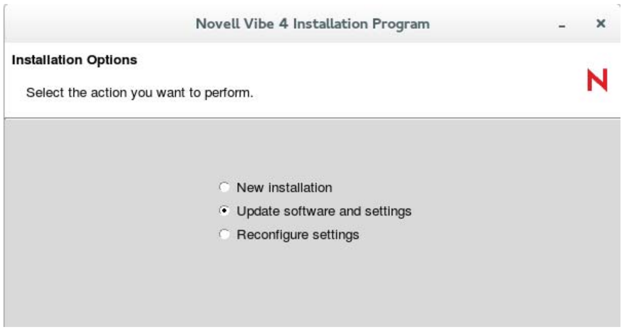
   ```
   /etc/init.d/teaming stop
   ```

   Windows: See "Stopping Vibe as an Application" on page 86.

3. Ensure that no application (such as a command prompt or Windows Explorer) is running on the Vibe 4.*x* system.
4. Copy the `installer.xml` file from the directory where the previous-version Vibe 4 Installation program is located to the directory where you have extracted the Vibe 4.0.5 software.
5. Copy the `license-key.xml` file from the directory where the Vibe 4 Installation program is located to the directory where you have extracted the Vibe 4.0.5 software.

   Alternatively, you can obtain a new license key (`*.xml`) from the location where you downloaded the Vibe 4.0.5 software, copy it to the directory containing the extracted Vibe 4.0.5 software, and rename it to `license-key.xml`.
6. Start the Vibe 4.0.5 installation program.

   If you need assistance with this task, see the detailed installation instructions for the platform where you are upgrading Vibe:
   - "Running the Linux Vibe Installation Program" on page 70
   - "Running the Windows Vibe Installation Program" on page 81
7. Accept the License Agreement, then click **Next**.

   Novell Vibe 4 Installation Program

   Installation Options

   Select the action you want to perform.

   ○ New installation
   ● Update software and settings
   ○ Reconfigure settings

   Because you provided your Vibe 4 `installer.xml` file in the directory with the Vibe 4.0.5 installation program, the **Update software and settings** installation option is selected by default.
8. Click **Next** to continue.
9. Click **Yes** to let the Installation program know that you have stopped Vibe.
10. Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.

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

    For more information about the differences between basic and advanced installations, see “What Is a Basic Vibe Installation?” on page 41 and “What Is an Advanced Installation?” on page 95.

12. Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4.0.5 system.
13. If you are using self-signed certificates to secure communications between Vibe and other services, when you reach the Java JDK screen, enter the aliases that you used when importing the certificates, in a comma-separated list.
14. Click **Install** when you are ready to perform the upgrade.
15. Click **Finish** when the upgrade is complete.

    If the installer reports errors, skip to “If the Installer Reports an Error” on page 176.

16. (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the cache is cleared.
17. Continue with “Upgrading the Vibe Database from 4.*x to 4.0.5” on page 176*.

If the Installer Reports an Error

1. If you have typed an alias name wrong, or if the installer doesn’t find a specified certificate for some other reason, it notifies you.

    The `installer.log` file has information about the error.

2. Run the installation again as instructed in “Upgrading the Vibe Software” on page 175 and be sure to repeat Step 4 on page 175 so that the `installer.xml` file doesn’t contain any modifications made by the failed attempt to install 4.0.5.

Upgrading the Vibe Database from 4.*x* to 4.0.5

Upgrade the Vibe software (as described in “Upgrading the Vibe Software” on page 175) before upgrading the Vibe database.

When you upgrade to Vibe 4.0.5, the Vibe Installation program does not update the database as part of the Vibe software upgrade. Therefore, you must manually update the database before you can start Vibe:

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

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

    ```
    SELECT default_character_set_name FROM information_schema.SCHEMATA
    S WHERE schema_name = 'sitescape';
    ```

    In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

    1b If the character set format is anything other than UTF-8, run the following command to change it:

In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

```
ALTER DATABASE sitescape CHARACTER SET utf8;
```

2. Change to the db directory in the Vibe installation:

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

   This directory contains the following properties files:

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

3. In a text editor, open the properties file that corresponds with your database type and make the applicable changes in both the `Driver` and `referenceDriver` sections. Save and close the text editor when you are finished making changes.

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

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

4. Save your changes and close the properties file.

5. In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

Windows

```
SET PATH=C:\path_to_java_used_by_vibe\bin;%PATH%
```

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

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

Linux

```
PATH=/path_to_java_used_by_vibe/bin:$PATH
```

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

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

NOTE: Ensure that the `manage-database.sh` file is executable.

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

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

---

6. Start Vibe 4.0.5.

   When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

Linux:	On the Vibe server, specify the following command: `systemctl start vibe.service`
Windows:	See "Starting Vibe as an Application" on page 86. or See "Starting Vibe as a Windows Service" on page 85. **NOTE:** If you have been starting Vibe as a Windows service, you need to delete your existing Windows service configuration and re-configure Vibe as a Windows service before you can start Vibe. For information about how to configure Vibe as a Windows service, see "Configuring Vibe as a Windows Service" on page 85.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in "Creating the Vibe Database" on page 73.

7a Change to the db directory in the Vibe installation:

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

This directory contains the following properties files:

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

7b In a text editor, open the `*database_type*-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with "Performing Post-Upgrade Tasks" on page 178.

Performing Post-Upgrade Tasks

After you start Micro Focus Vibe, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

- "Re-Installing the Windows Service" on page 179
- "Resetting the Search Index" on page 179
- "Resetting the Standard Templates" on page 180
- "Resetting Your Definitions" on page 181
- "Updating the Server.xml File When Using Secure HTTP" on page 182

Re-Installing the Windows Service

If you installed Vibe as a Windows service (as described in “Running Vibe as a Windows Service” on page 84), you must do the following by using the instructions in the same section.

1. Remove the service as described in “Removing Vibe as a Windows Service” on page 84.
2. Re-install the service as described in “Configuring Vibe as a Windows Service” on page 85.

This is necessary because the original service references an unsupported version of Tomcat.

Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4.0.5, you need to re-index the search index. Until you reset the search index, the search index and the vibe server are not in a compatible state. The `catalina.out` and `appserver.log` files show errors until the search index is reset.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers. For more information about multiple search indexes, see Chapter 22, “Running Multiple Lucene Index Servers,” on page 149.

Depending on the size of your Vibe site, this can be a very time-consuming process.

- “Resetting a Single Search Index” on page 179
- “Resetting the Search Index with Multiple Index Servers” on page 180

Resetting a Single Search Index

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon 👤.
3. In the **Management** section, click **Search Index**.
4. Select **Re-Index Everything**.
5. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
6. After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` ◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	◆ `/opt/novell/teaming/apache-tomcat/logs/catalina.out` ◆ `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

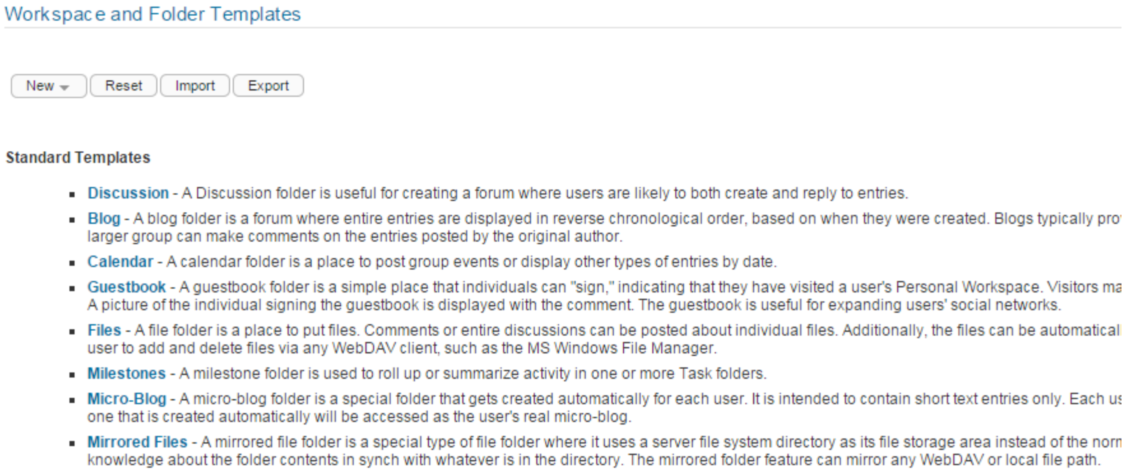
   A message notifies you when indexing is complete.
7. After the index server has been reset, ensure that no errors are contained in the following log files:

Windows:	◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out` ◆ `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`
Linux:	◆ `/opt/novell/teaming/apache-tomcat/logs/catalina.out` ◆ `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Management** section, click **Workspace and Folder Templates**.



Workspace and Folder Templates

Standard Templates

- **Discussion** - A Discussion folder is useful for creating a forum where users are likely to both create and reply to entries.
- **Blog** - A blog folder is a forum where entire entries are displayed in reverse chronological order, based on when they were created. Blogs typically pro
  larger group can make comments on the entries posted by the original author.
- **Calendar** - A calendar folder is a place to post group events or display other types of entries by date.
- **Guestbook** - A guestbook folder is a simple place that individuals can "sign," indicating that they have visited a user's Personal Workspace. Visitors ma
  A picture of the individual signing the guestbook is displayed with the comment. The guestbook is useful for expanding users' social networks.
- **Files** - A file folder is a place to put files. Comments or entire discussions can be posted about individual files. Additionally, the files can be automatical
  user to add and delete files via any WebDAV client, such as the MS Windows File Manager.
- **Milestones** - A milestone folder is used to roll up or summarize activity in one or more Task folders.
- **Micro-Blog** - A micro-blog folder is a special folder that gets created automatically for each user. It is intended to contain short text entries only. Each us
  one that is created automatically will be accessed as the user's real micro-blog.
- **Mirrored Files** - A mirrored file folder is a special type of file folder where it uses a server file system directory as its file storage area instead of the nor
  knowledge about the folder contents in synch with whatever is in the directory. The mirrored folder feature can mirror any WebDAV or local file path.

4 Click **Reset**.

5 Click **OK** to confirm, then click **Close**.

Your Vibe site is now ready for use.

Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 4. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1 Log in to the Vibe site as the Vibe administrator.

2 Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .

3 In the **System** section, click **Form/View Designers** to display the Form and View Designers page.

4 Click **Reset**.

The Reset Definitions page is displayed.

5 Click **Select All**.

You can expand each definition to ensure that all definitions have been selected.

6 Click **OK**.

Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file (*`apache-tomcat-location`*`/conf/server.xml`) is overwritten during the upgrade to Vibe 4.0.5. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading Vibe.

For information about how to update the `.keystore` password in the `server.xml` file, see "Do Not Change the Password for the Keystore File" in the Micro Focus Vibe 4.0.5 Administration Guide.

25 Upgrading From Novell Vibe 3.4 to Micro Focus Vibe 4.0.5

This section describes how to upgrade from Novell Vibe 3.4 to Micro Focus Vibe 4.0.5.

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

- "Backing Up Vibe Data" on page 183
- "A Vibe Backup Is Automatically Created" on page 183
- "Upgrading Vibe on Linux" on page 184
- "Continuing the Vibe 3.4 to Vibe 4.0.5 on Linux" on page 193
- "Upgrading Vibe on Windows from 3.4 to 4.0.5" on page 193

Backing Up Vibe Data

Ensure that your Vibe data is backed up before you begin the upgrade process. For information about the data that needs to be backed up, see "Backing Up Vibe Data" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

Because of significant changes to the database schema, Micro Focus recommends that you use your database backup software to back up your Vibe database before upgrading to Vibe 4.

A Vibe Backup Is Automatically Created

A backup copy of your existing Vibe 3.4 installation is created in the following locations, depending on the hosting platform:

Linux:	`/opt/novell/teaming/teaming-backup`
Windows:	`C:\Program Files\Novell\Teaming\teaming-backup`

If your original Vibe system was Novell Teaming 1.0, the backup copy is located in the following locations, depending on the hosting platform:

Linux:	`/opt/icecore`
Windows:	`C:\Program Files\icecore`

Upgrading Vibe on Linux

Overview–The Linux Upgrade Process

The platform requirements of Vibe 3.4 and Vibe 4.0.5 on Linux don’t overlap.

Therefore, it’s not possible to upgrade from Vibe 3.4 to Vibe 4.0.5 on the same server hardware. Upgrading from 3.4 to 4.0.5 requires the installation of a new SLES 15 (or SLES 12) server along with the specific upgrade and migration processes that are outlined in Figure 25-1 and Table 25-1 and detailed in the sections referenced.

Figure 25-1 *Graphical Overview–Upgrading from Vibe 3.4 to Vibe 4.0.5*

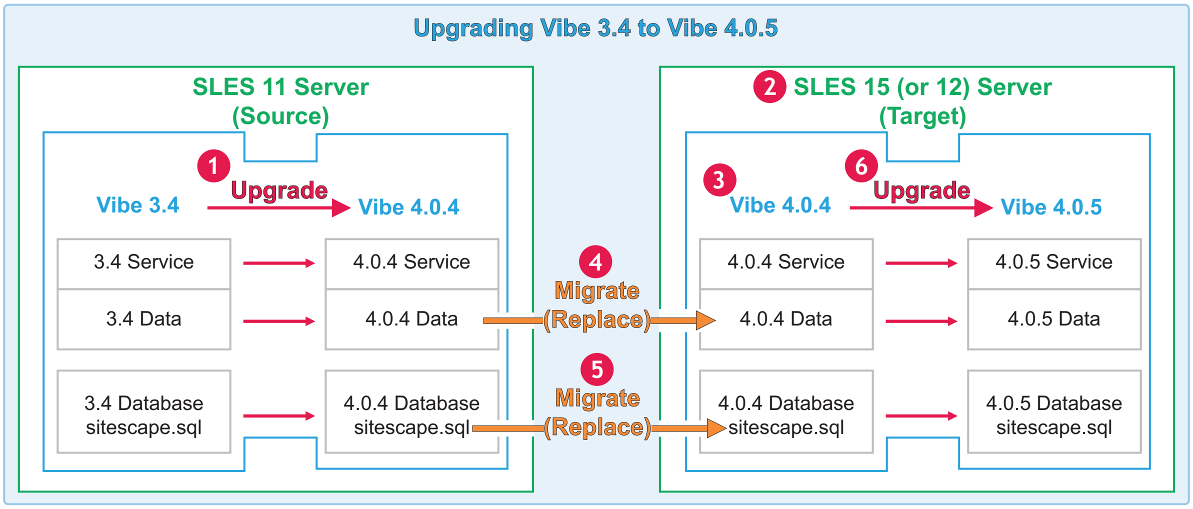

Upgrading Vibe 3.4 to Vibe 4.0.5
SLES 11 Server
(Source)
① Upgrade
Vibe 3.4
Vibe 4.0.4
3.4 Service
3.4 Data
3.4 Database
sitescape.sql
4.0.4 Service
4.0.4 Data
4.0.4 Database
sitescape.sql
④ Migrate
(Replace)
⑤ Migrate
(Replace)
② SLES 15 (or 12) Server
(Target)
③ Vibe 4.0.4
⑥ Upgrade
Vibe 4.0.5
4.0.4 Service
4.0.4 Data
4.0.4 Database
sitescape.sql
4.0.5 Service
4.0.5 Data
4.0.5 Database
sitescape.sql

Table 25-1 *Upgrade Process Explanation*

Step	Explanation
①	◆ Using the instructions in this chapter, upgrade the source server from Vibe 3.4 to Vibe 4.0.4.
②	◆ Install a new SLES 15 (recommended) or SLES 12 (supported) Server.
③	◆ Install Vibe 4.0.4 on the target (new) SLES server. For instructions, download the 4.0.4 documentation set in PDF format. See “Previous Release” on the Vibe 4.0.5 documentation web site (https://www.novell.com/documentation/vibe4).
④	◆ Migrate the data from your current (source) Vibe 4.0.4 deployment to the new (target) Vibe 4.0.4 deployment. This involves replacing the data on the new server with the source server’s Vibe data. See “Migrating Vibe on Linux” on page 210.
⑤	◆ Migrate the sitescape.sql database from your current Vibe 4.0.4 deployment to the new Vibe 4.0.4 deployment. As with the data, this involves replacing the newly deployed database with the older database. See “Importing the Vibe Database to the Target Server” on page 212.
⑥	◆ After verifying that Vibe 4.0.4 is running on the new server as expected, upgrade Vibe to version 4.0.5. See Chapter 24, “Upgrading From Novell Vibe 4.*x to Micro Focus Vibe 4.0.5,” on page 171*.

Preparing the New Target Server

As outlined in "Overview–The Linux Upgrade Process" on page 184, upgrading Vibe on Linux from version 3.4 to 4.0.5 requires interim steps that involve the installation of a new Vibe 4.0.4 server.

Use the Vibe 4.0.4 software available through your Customer Center account for the new server.

If you need Vibe 4.0.4 installation instructions, download the 4.0.4 documentation set in PDF format by accessing the "Previous Release" section on the Vibe 4.0.5 documentation web site (https://www.novell.com/documentation/vibe4).

IMPORTANT: To ensure a smooth upgrade process, we recommend that you prepare your new target Vibe 4.0.4 server before continuing the upgrade process.

Keep in mind that the new server will eventually be running Vibe 4.0.5.

Make sure that

- Your new server meets the Vibe 4.0.5 system requirements specified in Part II, "System Requirements and Support," on page 21.
- The new deployment uses the same database type as the previous deployment.

Remote Lucene Index Server Upgrade

IMPORTANT: If your Lucene search index is running on the same server as the Vibe software, you do not need to upgrade it separately. Skip to "Upgrading the Linux Vibe Software" on page 187.

You have the following options when upgrading your remote Lucene search index to Vibe 4:

- **Create a new search index**

  Because a full re-index is required after upgrading to Vibe 4, creating a new search index is less time-consuming than upgrading your existing search index. The benefit to creating a new Lucene search index is that you are able to maintain the original search index in the unlikely case of an emergency rollback.
- **Upgrade your existing Lucene search index**

  If you choose to upgrade your existing Lucene search index, you must perform a re-index after the upgrade, as described in "Resetting the Search Index" on page 190.

These options are described in the following sections:

- "Creating a New Search Index" on page 185
- "Upgrading an Existing Search Index" on page 186

Creating a New Search Index

1. On the Vibe server at a terminal prompt, stop Vibe by entering `/etc/init.d/teaming stop`.
2. On the Lucene server, stop the Lucene search index by entering `/etc/init.d/indexserver stop`.

3 Ensure that no application (such as a command prompt) is running on the Vibe 3.4 system.

4 On a different server than where your original search index was running, create a new search index, as described in “Installing the Lucene Software” on page 137.

Upgrading an Existing Search Index

The Vibe installation program cannot upgrade the Lucene search index when it is running on a remote server. To upgrade your remote search index from Novell Vibe 3.4 to Novell Vibe 4, you need to run the Remote Lucene Server installation program:

1 On the Vibe server at a terminal prompt, stop Vibe by entering `/etc/init.d/teaming stop`.

2 On the Lucene server, stop the Lucene search index by entering `/etc/init.d/indexserver stop`.

3 Ensure that no application (such as a command prompt) is running on the Vibe 3.4 system.

4 Copy the Vibe 4 Remote Lucene Server Installation program–`lucene-installer.linux`–from the directory where the Vibe 4 Installation program is located to a convenient directory on the server where the remote Lucene search index is located.

5 Start the Vibe 4 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 “Changing Lucene Configuration Settings” on page 100.

13 Click **Install** to install the upgraded Lucene search index software.

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

15 (Conditional) If memcached is running on the Lucene search index server, reboot the server where it is running to ensure that the 3.4 cache is cleared.

16 On the Lucene server, start the Lucene Index Server by entering `systemctl start indexserver.service`.

17 Ensure that the index server is running.

```
/etc/init.d/indexserver status
```

18 Now that all remote Vibe components have been upgraded, follow the instructions in “Upgrading the Linux Vibe Software” on page 187.

Upgrading the Linux Vibe Software

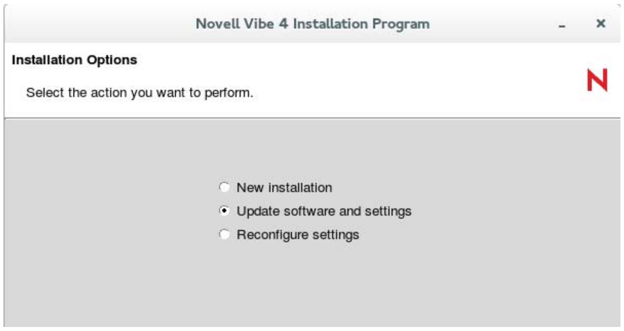
Complete the following steps for each server in your Vibe system that is running the Vibe software:

1. Ensure that you have a current backup of your Vibe 3.4 system.
2. On the Vibe server, stop Vibe by entering `/etc/init.d/teaming stop`.
3. Ensure that no application (such as a command prompt) is running on the Vibe 3.4 system.
4. Copy the `installer.xml` file from the directory where the Vibe 3.4 Installation program is located to the directory where you have extracted the Vibe 4 software.

   The `installer.xml` file provides default values when you run the Vibe 3.4 Installation program.
5. Obtain a new license key from the location where you downloaded the Vibe 4 software, then place it in the same directory with the Vibe software. (The Vibe installation program does not start without a license file in the same directory.) Rename the license to `license-key.xml`.

   Vibe 4 requires an updated license. If you use a license from a previous version, not all features are available.
6. Make sure that your server platform meets the requirements outlined for the Vibe 4.0.4 release. See the Vibe 4.0.4 documentation available for download from the Vibe 4.0.5 documentation site (https://www.novell.com/documentation/vibe4).
7. Start the Vibe 4 installation program.

   If you need assistance with this task, see the detailed installation instructions in "Running the Linux Vibe Installation Program" on page 70.
8. Accept the License Agreement, then click **Next**.

   Novell Vibe 4 Installation Program

   Installation Options

   Select the action you want to perform.

   ○ New installation
   ● Update software and settings
   ○ Reconfigure settings

   Because you provided your Vibe 3.4 `installer.xml` file in the directory with the Vibe 4.0.4 installation program, the **Update software and settings** installation option is selected by default.
9. Click **Next** to continue.
10. Click **Yes** to let the Installation program know that you have stopped Vibe.
11. Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.
12. Select **Basic** or **Advanced**, depending on the type of Vibe installation you are upgrading, then click **Next**.

    For more information about the differences between basic and advanced installations, see "What Is a Basic Vibe Installation?" on page 41 and "What Is an Advanced Installation?" on page 95.

13 Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4 system.

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

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

16 (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the 3.4 cache is cleared.

17 Continue with "Upgrading the Vibe Database from 3.4 to 4.0.4" on page 188.

Upgrading the Vibe Database from 3.4 to 4.0.4

IMPORTANT: Make sure you do the following:

1. Upgrade the Vibe software (as described in "Upgrading the Linux Vibe Software" on page 187) before upgrading the Vibe database.
2. Because the Vibe 4 upgrade process does not update the database as part of the Vibe software upgrade, you must
    - Ensure that the 3.4 system is in UTF-8 format before updating the database.
    - Manually update the database before you start Vibe.

The following example outlines the process for MySQL. Refer to the documentation for your database type as needed.

1 (Conditional) When upgrading a MySQL database, ensure that the Vibe database character set for the Vibe 3.4 system is in UTF-8 format.

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

```
SELECT default_character_set_name FROM information_schema.SCHEMATA
S WHERE schema_name = 'sitescape';
```

In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

1b If the character set format is anything other than UTF-8, run the following command to change it:

In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

```
ALTER DATABASE sitescape CHARACTER SET utf8;
```

2 Change to the db directory in the Vibe installation:

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

This directory contains the following properties files:

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

3 In a text editor, open the properties file that corresponds with your database type and make the applicable changes in both the `Driver` and `referenceDriver` sections. Save and close the text editor when you are finished making changes.

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

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

4 Save your changes and close the properties file.

5 In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

PATH=/*path_to_java_used_by_vibe*/bin:$PATH (if not already set)

```
./manage-database.sh databaseType mark33DatabaseAsUpdated
```

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

Possible database types (*databaseType*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

NOTE: Ensure that the `manage-database.sh` file is executable.

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

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

---

6 Start Vibe 4 in the same way that you have been starting Vibe 3.4 (`/etc/init.d/teaming start`).

When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in "Creating the Vibe Database" on page 73.

7a Change to the db directory in the Vibe installation:

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

This directory contains the following properties files:

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

7b In a text editor, open the *database_type*`-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with "Performing Post-Upgrade Tasks" on page 190.

Performing Post-Upgrade Tasks

After you start Micro Focus Vibe 4, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

- "Resetting the Search Index" on page 190
- "Resetting Your Definitions" on page 191
- "Resetting the Standard Templates" on page 192
- "Updating the Server.xml File When Using Secure HTTP" on page 192

Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4, you need to re-index the search index. Until you reset the search index, the search index and the vibe server are not in a compatible state. The `catalina.out` and `appserver.log` files show errors until the search index is reset.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers. For more information about multiple search indexes, see Chapter 22, "Running Multiple Lucene Index Servers," on page 149.

Depending on the size of your Vibe site, this can be a very time-consuming process.

- "Resetting a Single Search Index" on page 190
- "Resetting the Search Index with Multiple Index Servers" on page 191

Resetting a Single Search Index

1 Log in to the Vibe site as the Vibe administrator.

2 Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .

3 In the **Management** section, click **Search Index**.

4 Select **Re-Index Everything**.

5 Click **OK**, then click **Close**.

Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

A message notifies you when indexing is complete.

6 After the index server has been reset, ensure that no errors are contained in the following log files:

- `/opt/novell/teaming/apache-tomcat/logs/catalina.out`
- `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
7. After the index server has been reset, ensure that no errors are contained in the following log files:
   - `/opt/novell/teaming/apache-tomcat/logs/catalina.out`
   - `/opt/novell/teaming/apache-tomcat/logs/appserver.log`

Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 3.4. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon .
3. In the **System** section, click **Form/View Designers** to display the Form and View Designers page.
4. Click **Reset**.

   The Reset Definitions page is displayed.
5. Click **Select All**.

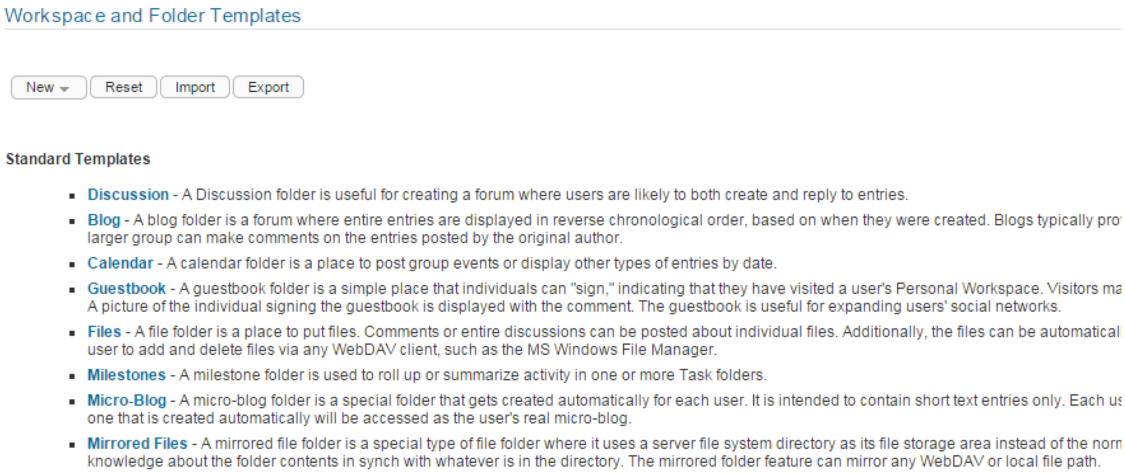
   You can expand each definition to ensure that all definitions have been selected.
6. Click **OK**.

Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

---

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Management** section, click **Workspace and Folder Templates**.



Standard Templates

- **Discussion** - A Discussion folder is useful for creating a forum where users are likely to both create and reply to entries.
- **Blog** - A blog folder is a forum where entire entries are displayed in reverse chronological order, based on when they were created. Blogs typically pro
larger group can make comments on the entries posted by the original author.
- **Calendar** - A calendar folder is a place to post group events or display other types of entries by date.
- **Guestbook** - A guestbook folder is a simple place that individuals can "sign," indicating that they have visited a user's Personal Workspace. Visitors ma
A picture of the individual signing the guestbook is displayed with the comment. The guestbook is useful for expanding users' social networks.
- **Files** - A file folder is a place to put files. Comments or entire discussions can be posted about individual files. Additionally, the files can be automaticall
user to add and delete files via any WebDAV client, such as the MS Windows File Manager.
- **Milestones** - A milestone folder is used to roll up or summarize activity in one or more Task folders.
- **Micro-Blog** - A micro-blog folder is a special folder that gets created automatically for each user. It is intended to contain short text entries only. Each us
one that is created automatically will be accessed as the user's real micro-blog.
- **Mirrored Files** - A mirrored file folder is a special type of file folder where it uses a server file system directory as its file storage area instead of the norn
knowledge about the folder contents in synch with whatever is in the directory. The mirrored folder feature can mirror any WebDAV or local file path.

4. Click **Reset**.
5. Click **OK** to confirm, then click **Close**.
6. Verify that the 4.0.4 site is working as expected before proceeding with the migration to your new 4.0.4 server.

Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file is overwritten during the upgrade to Vibe 4. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading to Vibe 4.

For information about how to update the `.keystore` password in the `server.xml` file, see "Do Not Change the Password for the Keystore File" in the Micro Focus Vibe 4.0.5 Administration Guide.

Now proceed with "Continuing the Vibe 3.4 to Vibe 4.0.5 on Linux" on page 193.

Continuing the Vibe 3.4 to Vibe 4.0.5 on Linux

After your old Vibe server is upgraded to Vibe 4.0.4 and is verified to be performing well, it is time to proceed with the process outlined in "Overview–The Linux Upgrade Process" on page 184.

To summarize, you must do the following:

1. Migrate the data from your current (source) Vibe 4.0.4 deployment to the new (target) Vibe 4.0.4 deployment.

   This involves replacing the datastore on the new server with the source server's Vibe data. See "Transferring Data from the Source Server to the Target Server" on page 211.
2. Migrate the sitescape.sql database from your current Vibe 4.0.4 deployment to the new Vibe 4.0.4 deployment.

   As with the data migration, this involves replacing the newly deployed 4.0.4 database with the older 4.0.4 database. See "Importing the Vibe Database to the Target Server" on page 212.
3. After verifying that Vibe 4.0.4 is running on the new server as expected, upgrade Vibe to version 4.0.5. See Chapter 24, "Upgrading From Novell Vibe 4.*x to Micro Focus Vibe 4.0.5," on page 171*.

Upgrading Vibe on Windows from 3.4 to 4.0.5

IMPORTANT: In contrast with the Linux upgrade process, which requires a new SLES server, upgrading from Vibe 3.4 to Vibe 4.0.5 on Windows doesn't require interim steps, as long as the platform on which Vibe 3.4 is running also supports Vibe 4.0.5.

Keep in mind, however, that Micro Focus policy dictates that we will no longer support Windows 2008 SP2 once Microsoft discontinues support for the platform.

If that support change will impact your Vibe deployment, you might want to plan to upgrade your platform.

Remote Lucene Index Server Upgrade

IMPORTANT: If your Lucene search index is running on the same server as the Vibe software, you do not need to upgrade it separately. Skip to "Upgrading the Windows Vibe Software" on page 195.

You have the following options when upgrading your remote Lucene search index to Vibe 4:

- **Create a new search index**

  Because a full re-index is required after upgrading to Vibe 4, creating a new search index is less time-consuming than upgrading your existing search index. The benefit to creating a new Lucene search index is that you are able to maintain the original search index in the unlikely case of an emergency rollback.
- **Upgrade your existing Lucene search index**

  If you choose to upgrade your existing Lucene search index, you must perform a re-index after the upgrade, as described in "Resetting the Search Index" on page 190.

These options are described in the following sections:

- “Creating a New Search Index” on page 194
- “Upgrading an Existing Search Index” on page 194

Creating a New Search Index

1. Stop Vibe.

   See “Stopping Vibe as an Application” on page 86
2. Stop the Lucene search index.

   On the Lucene index server, specify the command:

   ```
   c:\Program
   Files\Novell\Teaming\luceneserver\indexserver\bin\indexserver-
   shutdown.bat
   ```
3. Ensure that no application (such as Windows Explorer) is running on the Vibe 3.4 system.
4. On a different server than where your original search index was running, create a new search index, as described in “Installing the Lucene Software” on page 137.

Upgrading an Existing Search Index

The Vibe installation program cannot upgrade the Lucene search index when it is running on a remote server. To upgrade your remote search index from Novell Vibe 3.4 to Novell Vibe 4, you need to run the Remote Lucene Server installation program:

1. Stop Vibe.

   See “Stopping Vibe as an Application” on page 86.
2. Stop the Lucene search index.

   On the Lucene index server, specify the command:

   ```
   c:\Program
   Files\Novell\Teaming\luceneserver\indexserver\bin\indexserver-
   shutdown.bat                                                 :
   ```
3. Ensure that no application (such as Windows Explorer) is running on the Vibe 3.4 system.
4. Copy the Vibe 4.0.5 Remote Lucene Server Installation program–`lucene-installer.exe`–from the directory where the Vibe 4.0.5 Installation program is located to a convenient directory on the server where the remote Lucene search index is located.
5. Start the Vibe 4.0.5 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 “Changing Lucene Configuration Settings” on page 100.

13 Click **Install** to install the upgraded Lucene search index software.

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

15 (Conditional) If memcached is running on the Lucene search index server, reboot the server where it is running to ensure that the 3.4 cache is cleared.

16 Start the Lucene Index Server by specifying the following command:

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

17 Now that all remote Vibe components have been upgraded, follow the instructions in “Upgrading the Windows Vibe Software” on page 195.

Upgrading the Windows Vibe Software

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

1 Ensure that you have a current backup of your Vibe 3.4 system.

2 Stop Vibe.

See “Stopping Vibe as an Application” on page 86.

3 Ensure that no application (such as Windows Explorer) is running on the Vibe 3.4 system.

4 Copy the `installer.xml` file from the directory where the Vibe 3.4 Installation program is located to the directory where you have extracted the Vibe 4 software.

The `installer.xml` file provides default values when you run the Vibe 3.4 Installation program.

5 Obtain a new license key from the location where you downloaded the Vibe 4 software, then place it in the same directory with the Vibe software. (The Vibe installation program does not start without a license file in the same directory.) Rename the license to `license-key.xml`.

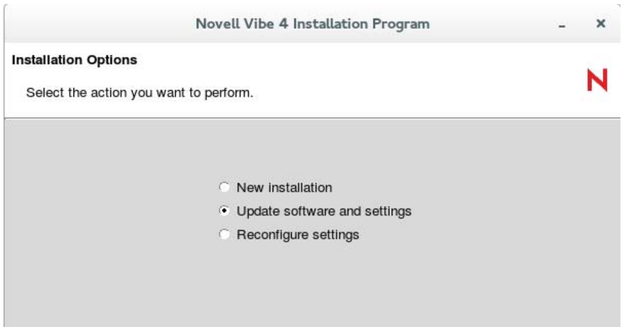
Vibe 4 requires an updated license. If you use a license from a previous version, not all features are available.

6 Make sure that your server platform meets the requirements outlined in Part II, “System Requirements and Support,” on page 21.

7 Start the Vibe 4 installation program.

If you need assistance with this task, see the detailed installation instructions in “Running the Windows Vibe Installation Program” on page 81.

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


Novell Vibe 4 Installation Program

Installation Options

Select the action you want to perform.

○ New installation
● Update software and settings
○ Reconfigure settings

Because you provided your Vibe 3.4 `installer.xml` file in the directory with the Vibe 4 installation program, the **Update software and settings** installation option is selected by default.

9. Click **Next** to continue.
10. Click **Yes** to let the Installation program know that you have stopped Vibe.
11. Select the check box to let the installation program know that you have backed up all of your data, then click **Next**.
12. Select **Basic** or **Advanced**, depending on the type of Vibe installation you are upgrading, then click **Next**.

    For more information about the differences between basic and advanced installations, see "What Is a Basic Vibe Installation?" on page 41 and "What Is an Advanced Installation?" on page 95.
13. Continue through the installation process, retaining or changing configuration information depending on the needs of your Vibe 4 system.
14. Click **Install** when you are ready to perform the upgrade.
15. Click **Finish** when the upgrade is complete.
16. (Conditional) If memcached is running on the Vibe server, reboot the server to ensure that the 3.4 cache is cleared.
17. Continue with "Upgrading the Vibe Database from 3.4 to 4" on page 196.

Upgrading the Vibe Database from 3.4 to 4

IMPORTANT: Make sure you do the following:

1. Upgrade the Vibe software (as described in "Upgrading the Windows Vibe Software" on page 195) before upgrading the Vibe database.
2. Because the Vibe 4 upgrade process does not update the database as part of the Vibe software upgrade, you must
   - Ensure that the 3.4 system is in UTF-8 format before updating the database.
   - Manually update the database before you start Vibe.

The following example outlines the process for MySQL. Refer to the documentation for your database type as needed.

1 (Conditional) When upgrading a MySQL database, ensure that the Vibe database character set for the Vibe 3.4 system is in UTF-8 format.

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

  ```
  SELECT default_character_set_name FROM information_schema.SCHEMATA
  S WHERE schema_name = 'sitescape';
  ```

  In this command `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

  1b If the character set format is anything other than UTF-8, run the following command to change it:

  In the following command, `sitescape` is the name of the Vibe database. Replace `sitescape` with the name of your database.

  ```
  ALTER DATABASE sitescape CHARACTER SET utf8;
  ```

2 Change to the db directory in the Vibe installation:

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

This directory contains the following properties files:

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

3 In a text editor, open the properties file that corresponds with your database type and make the applicable changes in both the `Driver` and `referenceDriver` sections. Save and close the text editor when you are finished making changes.

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

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

4 Save your changes and close the properties file.

5 In the same directory (`/vibe_installation/temp-installer/db`), execute the following commands to update the database schema:

`SET PATH=C:\`*`path_to_java_used_by_vibe`*`\bin;%PATH%` (if not already set)

```
manage-database.bat databaseType mark33DatabaseAsUpdated
```

```
manage-database.bat databaseType updateDatabase
```

Possible database types (*`databaseType`*) are `mysql`, `oracle`, or `sqlserver`, depending on your type of database.

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

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

---

6 Start Vibe 4 in the same way that you have been starting Vibe 3.4.

See "Starting Vibe as an Application" on page 86.

or

See "Starting Vibe as a Windows Service" on page 85.

NOTE: If you have been starting Vibe as a Windows service, you need to delete your existing Windows service configuration and re-configure Vibe as a Windows service before you can start Vibe. For information about how to configure Vibe as a Windows service, see "Configuring Vibe as a Windows Service" on page 85.

When you start Vibe for the first time after the upgrade, it takes longer to start than usual because data in the Vibe database must be upgraded before the Vibe site is ready to use.

7 (Recommended) For security reasons, delete the password that you specified in Step 7 in "Creating the Vibe Database" on page 82.

7a Change to the db directory in the Vibe installation:

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

This directory contains the following properties files:

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

7b In a text editor, open the *`database_type`*`-liquibase.properties` file that corresponds with your database type, then delete the password.

7c Save and close the properties file.

8 Continue with "Performing Post-Upgrade Tasks" on page 198.

Performing Post-Upgrade Tasks

After you start Micro Focus Vibe 4, you can access your Vibe site as usual. However, you need to reset some aspects of the interface before you allow users to access the upgraded site. The interface reset affects only those definitions and templates that are included with the Vibe product. If you have created custom definitions and templates, they are unaffected by the interface reset.

- "Resetting the Search Index" on page 199
- "Resetting Your Definitions" on page 200
- "Resetting the Standard Templates" on page 200
- "Re-Installing the Windows Service" on page 201
- "Updating the Server.xml File When Using Secure HTTP" on page 201

Resetting the Search Index

In order for an upgraded search index to be compatible with Vibe 4, you need to re-index the search index. Until you reset the search index, the search index and the vibe server are not in a compatible state. The `catalina.out` and `appserver.log` files show errors until the search index is reset.

The steps to reset the search index differ depending on whether you have multiple Lucene Index servers. For more information about multiple search indexes, see Chapter 22, "Running Multiple Lucene Index Servers," on page 149.

Depending on the size of your Vibe site, this can be a very time-consuming process.

- "Resetting a Single Search Index" on page 199
- "Resetting the Search Index with Multiple Index Servers" on page 199

Resetting a Single Search Index

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Management** section, click **Search Index**.
4. Select **Re-Index Everything**.
5. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.
6. After the index server has been reset, ensure that no errors are contained in the following log files:
   - `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out`
   - `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`

Resetting the Search Index with Multiple Index Servers

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Search Index** section, click **Index**.
4. Select **Re-Index Everything**.
5. Select each node that you want to re-index.
6. Click **OK**, then click **Close**.

   Users can still access the Vibe site during the indexing process, but search results might not be accurate until the index has been completely rebuilt.

   A message notifies you when indexing is complete.

7 After the index server has been reset, ensure that no errors are contained in the following log files:

- `C:\Program Files\Novell\Teaming\apache-tomcat\logs\catalina.out`
- `C:\Program Files\Novell\Teaming\apache-tomcat\logs\appserver.log`

Resetting Your Definitions

Various aspects of the Vibe interface have been redesigned and enhanced since Vibe 3.4. Some of these enhancements affect entries, folders, user profiles, and user workspaces. If you have made customizations to these areas of Vibe, you must reset these definitions in order to see the enhancements, as described in this section.

WARNING: The following procedure deletes any custom modifications that you have previously made to the default Vibe definitions. If you want to save any modified definitions before proceeding, you can export the modified definitions. Also, you might want to document exactly what changes you have made in order to make it easier to reconstruct the definition after you reset it. This applies only to definitions that you have modified; definitions that you have created are not affected.

To reset your Vibe definitions:

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **System** section, click **Form/View Designers** to display the Form and View Designers page.
4. Click **Reset**.

   The Reset Definitions page is displayed.
5. Click **Select All**.

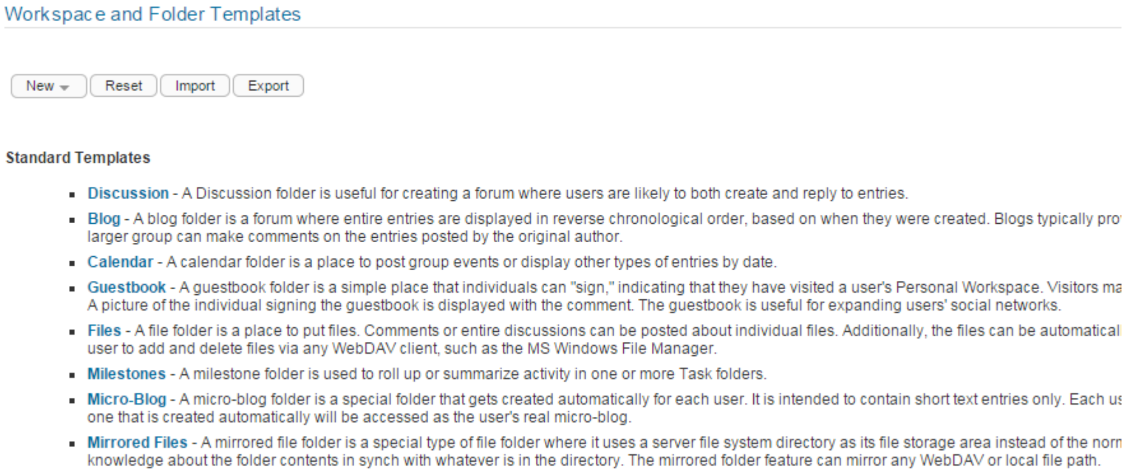
   You can expand each definition to ensure that all definitions have been selected.
6. Click **OK**.

Resetting the Standard Templates

IMPORTANT: The following procedure deletes any custom modifications that you have previously made to the default Vibe templates. If you have manually customized any default Vibe templates, back up the files you have modified before performing the interface reset. This applies only to default templates that you have modified; templates that you have created are not affected.

---

1. Log in to the Vibe site as the Vibe administrator.
2. Click your linked name in the upper right corner of the page, then click the **Administration Console** icon.
3. In the **Management** section, click **Workspace and Folder Templates**.



Workspace and Folder Templates

Standard Templates

- **Discussion** - A Discussion folder is useful for creating a forum where users are likely to both create and reply to entries.
- **Blog** - A blog folder is a forum where entire entries are displayed in reverse chronological order, based on when they were created. Blogs typically pro
larger group can make comments on the entries posted by the original author.
- **Calendar** - A calendar folder is a place to post group events or display other types of entries by date.
- **Guestbook** - A guestbook folder is a simple place that individuals can "sign," indicating that they have visited a user's Personal Workspace. Visitors ma
A picture of the individual signing the guestbook is displayed with the comment. The guestbook is useful for expanding users' social networks.
- **Files** - A file folder is a place to put files. Comments or entire discussions can be posted about individual files. Additionally, the files can be automatical
user to add and delete files via any WebDAV client, such as the MS Windows File Manager.
- **Milestones** - A milestone folder is used to roll up or summarize activity in one or more Task folders.
- **Micro-Blog** - A micro-blog folder is a special folder that gets created automatically for each user. It is intended to contain short text entries only. Each us
one that is created automatically will be accessed as the user's real micro-blog.
- **Mirrored Files** - A mirrored file folder is a special type of file folder where it uses a server file system directory as its file storage area instead of the norm
knowledge about the folder contents in synch with whatever is in the directory. The mirrored folder feature can mirror any WebDAV or local file path.

4 Click **Reset**.

5 Click **OK** to confirm, then click **Close**.

6 Your Vibe 4 site is now ready for use.

Re-Installing the Windows Service

If you installed Vibe as a Windows service (as described in "Running Vibe as a Windows Service" on page 84), you must remove the service and re-install it. This is necessary because the original service references an unsupported version of Tomcat.

Updating the Server.xml File When Using Secure HTTP

The `server.xml` Tomcat configuration file is overwritten during the upgrade to Vibe 4. If you set up secure HTTP browser connections to the Vibe server, and if you changed the password for the `.keystore` file to something other than the default `changeit`, you need to update the `server.xml` file after upgrading to Vibe 4.

For information about how to update the `.keystore` password in the `server.xml` file, see "Do Not Change the Password for the Keystore File" in the Micro Focus Vibe 4.0.5 Administration Guide.

26 Upgrading to Novell Vibe 3.4 from Previous Versions

For information about how to upgrade to Vibe 3.4, see "Update" (https://www.novell.com/documentation/vibe34/vibe34_inst/data/bj0kxa6.html) in the *Micro Focus Vibe 3.4 Installation Guide* (https://www.novell.com/documentation/vibe34/vibe34_inst/data/bookinfo.html).

27 Updating the Operating System Where Vibe Is Running

You can update the operating system where Vibe is running.

1 Update the Linux or Windows operating system to a version that Vibe supports.

For information about which versions are supported, see "Server Operating System Requirements" on page 23.

For information about how to update the operating system, view the appropriate documentation for your operating system.

VII Migrate

- Chapter 28, “Migrating Existing Micro Focus Vibe 4 Data into a New Vibe 4 System,” on page 209
- Chapter 29, “Migrating from SiteScape Forum or Other Collaboration Software,” on page 217

28 Migrating Existing Micro Focus Vibe 4 Data into a New Vibe 4 System

---

IMPORTANT: The term “data migration” as used in this section, is essentially about creating a clone of an existing Vibe system.

- **Cross-version Migration Not Supported:** Data migration between servers running different versions of Vibe is not supported. However, you can use data migration in conjunction with an upgrade (see “Using Data Migration in Conjunction with an Upgrade to Vibe 4” on page 210).
- **Name and Credentials Must Be the Same:** The database name and the database username and password must be the same on the source and the target server.

This section describes how to migrate data from an existing Vibe 4 server to a new Vibe 4 server. You might want to do this for any of the following reasons:

- Your existing Vibe system has outgrown the server where you originally set it up.
- You want to move your existing Vibe system to a different operating system.

  In this case, you can install Vibe 4 on a new server, then migrate your existing Vibe 4 data to your new Vibe 4 system.
- You want to preserve your old system in its current state.
- You are upgrading from Kablink Vibe to Micro Focus Vibe.

NOTE: In the instructions that follow, “target server” refers to the server where you install the Vibe 4 software, and “source server” refers to the existing server from which you are migrating Vibe data.

The instructions in this section are based on a single-server Vibe configuration. If you have a multi-server Vibe configuration, the single-server instructions can serve as a foundation to get you started with your more complex migration process.

This section does not include instructions for migrating an Oracle database. Use the instructions for your Vibe platform as a guideline for the tasks that are involved in migrating Vibe data, then apply these guidelines to your Oracle database migration.

- “Using Data Migration in Conjunction with an Upgrade to Vibe 4” on page 210
- “Migrating Vibe on Linux” on page 210
- “Migrating Vibe on Windows” on page 212

Using Data Migration in Conjunction with an Upgrade to Vibe 4

As stated above, data migration between servers running different versions of Vibe is not supported.

If you want to migrate data from Vibe 3.4 to a new Vibe 4 system, you must:

- Upgrade the Vibe 3.4 server to Vibe 4.
- Install a new Vibe 4 server
- Migrate the data from the old Vibe 4 server to the new Vibe 4 system.

Migrating Vibe on Linux

NOTE: The instructions in this section assume that your Vibe deployment uses MySQL as the database server. If you use another SQL database, you will need to adjust the steps to fit your deployment.

- "Preparing the Target Linux Server" on page 210
- "Preparing the Source Linux Server" on page 211
- "Transferring Data from the Source Server to the Target Server" on page 211
- "Importing the Vibe Database to the Target Server" on page 212
- "Finalizing Your New Vibe 4 Site" on page 212

Preparing the Target Linux Server

On the target server:

1. Install the Vibe 4 software on the target server, as described in Part III, "Basic Installation," on page 33, paying special attention to these important details:
   - Set up the same Linux user to run the Vibe software that has been used to run the Vibe software in the source Vibe server.
   - Select the same encryption algorithm for the Vibe database that was used for the source Vibe server.

   IMPORTANT: If the database encryption algorithms do not match between the source and target Vibe systems, you cannot log in to the new Vibe 4 site.

   ---
2. Start Vibe on the target server.
3. Verify that the new Vibe site is working as expected.
4. Stop Vibe on the target server.
5. Rename the `teaming` directory to `teaming_backup`. In a future step, you will copy the `teaming` directory from the source server to the target server.

   The location of the `teaming` directory varies by platform:

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

6 Continue with "Preparing the Source Linux Server" on page 211.

Preparing the Source Linux Server

On the source server:

1 Stop Vibe.

2 Back up your existing database:

```
mysqldump -uusername -ppassword sitescape > sitescape.sql
```

This creates a file named `sitescape.sql` in the directory where you executed the `mysqldump` command.

3 Ensure that you have a recent backup of your entire Vibe system.

4 Continue with "Transferring Data from the Source Server to the Target Server" on page 211.

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 "Preparing the Source Linux Server" on page 211 to a convenient temporary location on the target server.

4 Copy the entire data area from `/var/opt/novell/teaming` on the source server to the same location on the target server.

5 (Conditional) If you are using secure LDAP (LDAPS), you need to copy the `cacerts` file to the same location on the target server.

6 Edit the `/opt/novell/teaming/apache-tomcat/webapps/ssf/WEB-INF/classes/config/ssf-ext.properties` file on the target server to include the same content as the corresponding file on the source server, as follows:

  6a Make sure that the `user.pwdenc.default=`*`PROPERTY-VALUE`* values are the same in the ssf-ext.properties files on both servers.

  6b Copy the following property values in the `ssf-ext.properties` file on the source server and replace the corresponding property values on the target server with the source server values.

NOTE: We recommending pasting to avoid typing errors.

- `database.password=`*`PROPERTY-VALUE`*
- `mail.SiteScape.out.password=`*`PROPERTY-VALUE`*

    - `smtp.service.keystore.password=`*`PROPERTY-VALUE`*
    - `kablink.encryption.key=`*`PROPERTY-VALUE`*
    - `kablink.encryption.key.initial=`*`PROPERTY-VALUE`*

   6c Save the modified `ssf-ext.properties` file on the target server.

7. Continue with "Importing the Vibe Database to the Target Server" on page 212.

Importing the Vibe Database to the Target Server

On the target server:

1. Remove the empty Vibe database that was created when you installed the Vibe 4 software:

   ```
   mysql>drop database sitescape;
   ```

2. Change to the directory where you copied the `sitescape.sql` file in Step 3 in "Transferring Data from the Source Server to the Target Server" on page 211.
3. Create an empty database called `sitescape`:

   ```
   mysql -uusername -ppassword -e "create database sitescape character set
   utf8"
   ```

4. Manually re-create the Vibe database with the data that you copied from the source server:

   ```
   mysql -uusername -ppassword sitescape < sitescape.sql
   ```

Finalizing Your New Vibe 4 Site

1. Start Vibe 4, as described in "Starting Vibe on Linux" on page 78.
2. Reindex the Vibe site, as described in "Rebuilding the Lucene Index" in "Site Maintenance" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

   Your Vibe site should now function just as it did on the original source server.

Migrating Vibe on Windows

NOTE: The instructions in this section assume that your Vibe deployment uses MS SQL as the database server. If you use another SQL database, you will need to adjust the steps to fit your deployment.

- "Preparing the Target Windows Server" on page 213
- "Preparing the Source Windows Server" on page 213
- "Transferring Data from the Source Server to the Target Server" on page 213
- "Importing the Database to the Target Server" on page 214
- "Finalizing Your New Vibe 4 Site" on page 215

Preparing the Target Windows Server

On the target server:

1 Install the Vibe 4 software, as described in Part III, “Basic Installation,” on page 33.

IMPORTANT: Select the same encryption algorithm for the Vibe 4 database that you selected for the source Vibe server. If the database encryption algorithms do not match between the source and target systems, you cannot log in to the new Vibe 4 site.

---

2 Start Vibe on the target server.

3 Verify that the new Vibe site is working as expected.

4 Stop Vibe on the target server.

5 Rename the `teaming` directory to `teaming_backup`. In a future step you will copy the `teaming` directory from the source server to the target server.

The location of the teaming directory varies by platform:

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

6 Continue with “Preparing the Source Windows Server” on page 213.

Preparing the Source Windows Server

On the source server:

1 Stop Vibe.

2 Back up your existing database:

2a In Microsoft SQL Server Management Studio, browse to and right-click the existing database (named `sitescape`), then click **Tasks > Back Up**.

2b For **Backup type**, select **Full**.

2c Set other backup options as desired, then click **OK**.

This creates a file named `sitescape.bak` in the following directory:

```
c:\Program Files\Microsoft SQL Server\MSSQL\Backup
```

3 Ensure that you have a recent backup of your entire system.

4 Continue with “Transferring Data from the Source Server to the Target Server” on page 213.

Transferring Data from the Source Server to the Target Server

On the source server:

1 Map a drive from the target server to the source server so that data can be copied from one server to the other.

2 Copy your existing software extensions to the target server:

From:	`c:\home\icecoredata\extensions`
To:	`c:\novell\teaming\extensions`

Beginning with Vibe 3, the `extensions` directory now contains `kablink` and `liferay.com` directories.

3. Delete the empty `kablink` directory.
4. Delete or rename the following directories to make room for the corresponding directories that you are copying from the source server:

   ```
   c:\novell\teaming
   c:\novell\teaming\lucene
   c:\novell\teaming\extensions
   ```

5. Copy the entire data area from `c:\novell\teaming` on the source server to the same location on the target server.
6. (Conditional) If you are using secure LDAP (LDAPS), you need to copy the `cacerts` file to the same location on the target server.
7. Edit the `C:\Program Files\Novell\Teaming\apache-tomcat\webapps\ssf\WEB-INF\classes\config\ssf-ext.properties` file on the target server to include the same content as the corresponding file on the source server, as follows:

   7a Make sure that the `user.pwdenc.default=`*`PROPERTY-VALUE`* values are the same in the ssf-ext.properties files on both servers.

   7b Copy the following property values in the `ssf-ext.properties` file on the source server and replace the corresponding property values on the target server with the source server values.

   NOTE: We recommending pasting to avoid typing errors.

   - `database.password=`*`PROPERTY-VALUE`*
   - `mail.SiteScape.out.password=`*`PROPERTY-VALUE`*
   - `smtp.service.keystore.password=`*`PROPERTY-VALUE`*
   - `kablink.encryption.key=`*`PROPERTY-VALUE`*
   - `kablink.encryption.key.initial=`*`PROPERTY-VALUE`*

   7c Save the modified `ssf-ext.properties` file on the target server.

8. Continue with "Importing the Database to the Target Server" on page 214.

Importing the Database to the Target Server

On the target server:

1. In Microsoft SQL Server Management Studio, browse to and right-click the existing Vibe database (named `sitescape`) that was created when you installed the Vibe 4 software, then click **Delete**.
2. To import the data from your source database, browse to and right-click **Databases**, then click **Tasks > Restore**.

3. In the **To database** field, specify `sitescape`.
4. In the **From device** field, browse to and select the `sitescape.bak` file that you transferred to the target server.
5. Set other restore options as desired, then click **OK**.

   This creates the `sitescape` database in the following directory on the target server:

   ```
   c:\Program Files\Microsoft SQL Server\MSSQL
   ```

   Backed-up data from the source database is imported into the database for your new Vibe 4 system.

Finalizing Your New Vibe 4 Site

1. Start Vibe 4, as described in "Starting Vibe on Linux" on page 78.
2. Reindex the Vibe site, as described in "Rebuilding the Lucene Index" in "Site Maintenance" in the *Micro Focus Vibe 4.0.5 Administration Guide*.

   Your Vibe site should now function just as it did on the original source server.

29 Migrating from SiteScape Forum or Other Collaboration Software

Moving legacy corporate data into a new collaboration system can look like a long, challenging process. To make the job easier, see the *Micro Focus Teaming Migration Services Flyer.* (http://www.novell.com/docrep/2009/04/Novell_Teaming_Migration_Flyer_en.pdf)

VIII Appendixes

- Appendix A, “Sizing and Performance Considerations,” on page 221
- Appendix B, “Memcached Caching with Micro Focus Vibe,” on page 229
- Appendix C, “Using MySQL 8 and Later with Vibe,” on page 235
- Appendix D, “Third-Party Materials,” on page 237

A Sizing and Performance Considerations

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

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

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

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

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

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

Server machines can be physical or virtual.

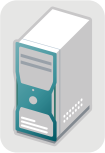
- “Configuration Based on Installation Size” on page 222
- “Test Installation” on page 223
- “Small Installation” on page 223
- “Medium Installation” on page 224
- “Large Installation” on page 225
- “Very Large Installation” on page 227

Configuration Based on Installation Size

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

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

Test Installation


Tomcat
Lucene Index
SQL Database
File System
Vibe Desktop

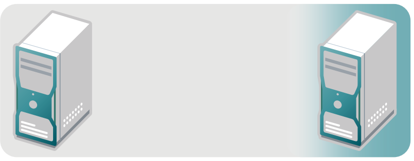
This deployment is suitable for a single-person evaluation or minimal usage by a small group.

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

For more information about installing a basic, single-server Vibe site, see Part III, “Basic Installation,” on page 33.

You can perform a Basic installation to set up a single-server configuration, as described in Chapter 8, “Planning a Basic Vibe Installation,” on page 41 and Chapter 11, “Installing and Setting Up a Basic Vibe Site,” on page 69.

Small Installation


Tomcat
Lucene Index
SQL Database
File System
Tomcat
(for Vibe Desktop
if more than 100
active users)

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

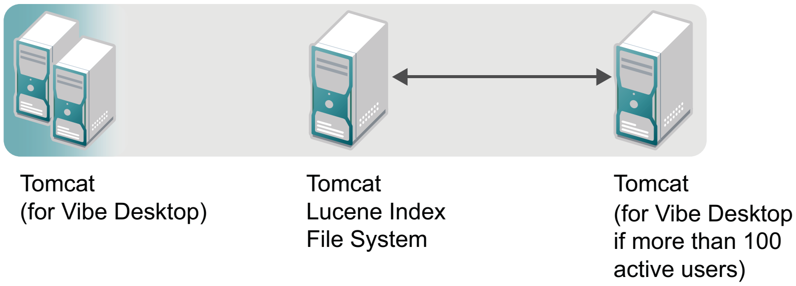
Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 1 dedicated Vibe (Tomcat) server with SQL and file system ◆ 1 dedicated Vibe (Tomcat) server with Vibe Desktop for 100 or fewer active users; 2 dedicated Vibe (Tomcat) servers with Vibe Desktop for more than 100 active users	3Ghz x64, dual-core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

For more information about installing a basic, single-server Vibe site, see Part III, “Basic Installation,” on page 33.

For more information on how to configure Vibe Desktop to run on your Vibe server, as well as how to distribute Vibe Desktop synchronization traffic to a dedicated Vibe server, see “Providing File Access and Editing for Vibe Users” in “Site Setup” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

You can perform a Basic installation to set up a single-server configuration, as described in Chapter 8, “Planning a Basic Vibe Installation,” on page 41 and Chapter 11, “Installing and Setting Up a Basic Vibe Site,” on page 69.

Medium Installation



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

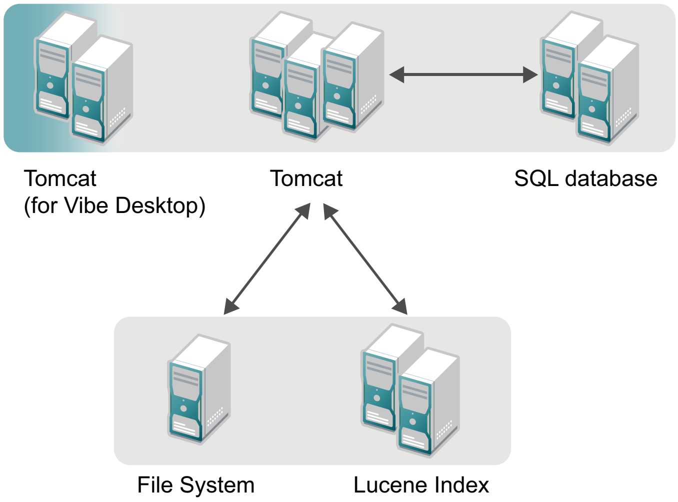
Vibe Components	CPU	Memory	Java Heap
Multiple Vibe servers: ◆ 1 dedicated Vibe (Tomcat) server with file system ◆ 1 or more dedicated SQL servers ◆ 2 dedicated Lucene servers ◆ 2 or more dedicated Vibe (Tomcat) servers with Vibe Desktop	3Ghz x64 quad-core	4–8 GB	6 GB

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 19, “Creating the Vibe Database on a Remote Server,” on page 129.

For more information on how to configure Vibe Desktop to run on your Vibe server, as well as how to distribute Vibe Desktop synchronization traffic to a dedicated Vibe server, see “Providing File Access and Editing for Vibe Users” in “Site Setup” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

You can perform a Basic installation to set up a multiple-server configuration (as described in Chapter 8, “Planning a Basic Vibe Installation,” on page 41 and Chapter 11, “Installing and Setting Up a Basic Vibe Site,” on page 69); however, the remote database must be created manually and in advance of performing the installation, as described in Chapter 19, “Creating the Vibe Database on a Remote Server,” on page 129.

Large Installation



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

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

For more information on load balancing, see “Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site” on page 145.

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 19, “Creating the Vibe Database on a Remote Server,” on page 129.

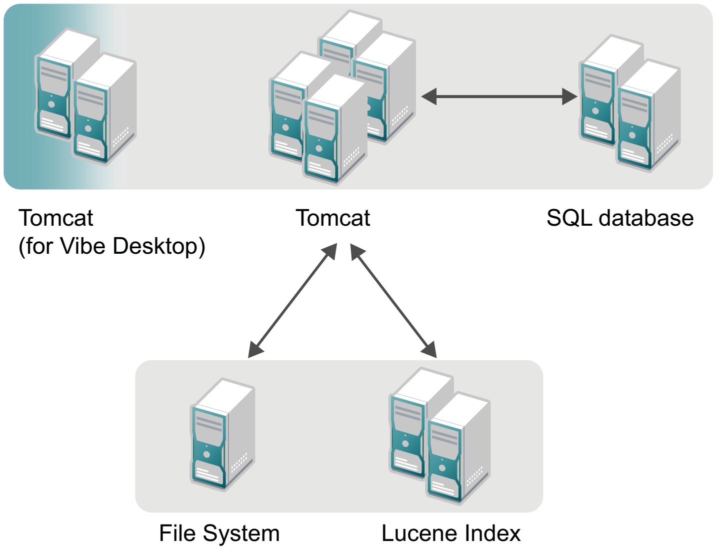
For information on how to create a separate index server, see Chapter 20, “Installing the Lucene Index Server on a Remote Server,” on page 137.

For more information on how to create a separate file system server, see “Vibe File Repository Considerations” on page 141.

For more information on how to configure Vibe Desktop to run on your Vibe server, as well as how to distribute Vibe Desktop synchronization traffic to a dedicated Vibe server, see “Providing File Access and Editing for Vibe Users” in “Site Setup” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

You must perform an Advanced installation to achieve this type of deployment. For more information, see Part IV, “Advanced Installation and Reconfiguration,” on page 93.

Very Large Installation



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

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

For more information on load balancing, see “Configuring a Web Application to Provide High Availability Functionality for Your Vibe Site” on page 145.

For information on how to create a separate Vibe database, follow the instructions specific to your database type, as described in Chapter 19, “Creating the Vibe Database on a Remote Server,” on page 129.

For information on how to create a separate index server, see Chapter 20, “Installing the Lucene Index Server on a Remote Server,” on page 137.

For more information on how to create a separate file system server, see “Vibe File Repository Considerations” on page 141.

For more information on how to configure Vibe Desktop to run on your Vibe server, as well as how to distribute Vibe Desktop synchronization traffic to a dedicated Vibe server, see “Providing File Access and Editing for Vibe Users” in “Site Setup” in the *Micro Focus Vibe 4.0.5 Administration Guide*.

You must perform an Advanced installation to achieve this type of deployment. For more information, see Part IV, “Advanced Installation and Reconfiguration,” on page 93.

B Memcached Caching with Micro Focus Vibe

Micro Focus Vibe contains two caching options for the hibernate caching provider: ehcache and memcached. For more information about ehcache, see Ehcache (http://ehcache.sourceforge.net).

- "About Memcached" on page 229
- "Downloading and Installing Memcached" on page 229
- "Configuring Memcached" on page 230
- "Securing Memcached" on page 232
- "Configuring Memcached in the Vibe Installation Program" on page 232
- "Memcached Logging" on page 232

About Memcached

Memcached is a high-performance, distributed memory object caching system used by a number of large Internet sites such as Wikipedia, Flickr, Twitter, and Youtube, as well as enterprise systems.

- "Advantages for Using Memcached" on page 229
- "Hardware Requirements and Configurations" on page 229

Advantages for Using Memcached

Memcached offers the following advantages over other caching systems:

- Better utilization of memory resources from the server farm.
- No replication (and therefore no overhead involved in replication). This results in a reduction of 60 or more threads per Vibe node in a two-node cluster.
- The number of servers and the size of data scale together.
- Scales out much better than replication-based cluster cache.

Hardware Requirements and Configurations

Micro Focus Vibe supports memcached only on the SUSE Linux operating system.

Downloading and Installing Memcached

NOTE: You should run memcached only on a SUSE Linux operating system. 64-bit is recommended.

Memcached is included with the SUSE Linux Enterprise High Availability Extension. You simply need to install it on the server where the Lucene search index is running as you would any other Linux package.

If you do not have the SUSE Linux Enterprise High Availability Extension, you can download and install memcached by completing the following steps on the Lucene search index server:

1. Navigate to the openSUSE Software Download page (http://software.opensuse.org).
2. In the **Search** field, type `memcached`, then click **Search**.
3. Download the RPM file after it is returned in the search results.
4. Install the downloaded RPM file.
5. Repeat Step 1 through Step 4 on the Lucene search index server.
6. Continue with "Configuring Memcached" on page 230.

Configuring Memcached

After you have downloaded and installed memcached on the server where the Lucene search index is running, as described in "Downloading and Installing Memcached" on page 229, you need to configure it on each node.

You configure memcached by adding the desired switches to the `MEMCACHED_PARAMS` variable.

1. Navigate to the `etc/sysconfig` directory.
2. Open the `memcached` file in a text editor.
3. Uncomment the `MEMCACHED_PARAMS` variable and add any switches that you feel are appropriate. When you uncomment the `MEMCACHED_PARAMS` variable, the following switches are already present:
   - **-d:** Runs as a daemon. This is recommended.
   - **-l:** Determines the interface to listen on. The default value is the localhost. You should either delete this switch with its default address (this is recommended for a simple setup) or change the default address to the address that you want memcached to listen on. For example, `-l 172.17.2.3`.

   To see a complete list of switches that are available with memcached, type `memcached -h` from the command line of a machine where memcached is installed.
4. (Recommended) Increase the maximum memory to use for items to 1024 MB. You do this by adding the `-m` switch to the `MEMCACHED_PARAMS` variable. For example:

   ```
   -m 1024
   ```
5. (Recommended) You should configure memcached to start automatically each time you reboot the server where the Lucene search index is running. To configure memcached to start automatically, enter the following command from the command line:

   ```
   chkconfig --add memcached
   ```

   To verify that automatic startup is enabled, enter the following command from the command line:

   ```
   chkconfig memcached
   ```

6 Validate that memcached is running from the local server by typing the following command:

```
netstat -ap|grep memcached
```

7 After you have verified that memcached is running on the local server, log in to a remote server, then validate that memcached is running to ensure that no networking problems exist:

7a From the command line of a remote server, make a network connection to the server where memcached is running. For example, you can use the `telnet` command.

```
telnet 172.17.2.3 11211
```

7b Type a simple memcached command, such as `stats` and `stats settings`.

7c After you have verified that memcached is running as expected, type `quit` to exit `telnet`.

Following is an example of what you see:

```
07309:~/Desktop # telnet xxx.xxx.xxx.xx 11211
Trying xxx.xxx.xxx.xx...
Connected to xxx.xxx.xxx.xx.
Escape character is '^]'.
stats
STAT pid 2486
STAT uptime 313
STAT time 1334337169
STAT version 1.2.6
STAT pointer_size 64
STAT rusage_user 0.028001
STAT rusage_system 0.000000
STAT curr_items 10
STAT total_items 17
STAT bytes 7971
STAT curr_connections 4
STAT total_connections 6
STAT connection_structures 5
STAT cmd_get 79
STAT cmd_set 17
STAT get_hits 62
STAT get_misses 17
STAT evictions 0
STAT bytes_read 14249
STAT bytes_written 67674
STAT limit_maxbytes 67108864
STAT threads 1
END
quit
Connection closed by foreign host.
07309:~/Desktop #
```

8 Continue with "Configuring Memcached in the Vibe Installation Program" on page 232.

Securing Memcached

Memcached was not designed for authentication and is protected only by firewalls and similar mechanisms.

Viable options include the following:

- Set up an SSL tunnel between memcached and instances of Tomcat.
- Use SASL for authentication.
- Use the Lucene server’s firewall to allow access only from the Vibe servers that run Vibe Tomcat.

  For example:

  1. At the terminal prompt on the Lucene server, run the following command for each Vibe server that needs access:

     ```
     iptables -A INPUT -s ip_of_allowed_server -p tcp --dport 11211 -j ACCEPT
     ```

     Where *ip_of_allowed_server* is the IP address of one of the Vibe servers needing access.

     For example:

     ```
     iptables -A INPUT -s 192.168.1.61 -p tcp --dport 11211 -j ACCEPT
     ```

  2. Repeat Step 1 until all of the Vibe servers that need access are allowed to communicate through the Lucene server’s firewall.
  3. Run the following command to block access by all other servers:

     ```
     iptables -A INPUT -s 0.0.0.0/0 -p tcp --dport 11211 -j DROP
     ```

Configuring Memcached in the Vibe Installation Program

After you have installed and configured memcached, you need to configure the Vibe installation program to use memcached as the hibernate caching provider. For more information, see “Running the Linux Vibe Installation Program” on page 70.

Memcached Logging

To trace activities on the Vibe server that are related to memcached:

1 Navigate to the following directory: `/opt/novell/teaming/apache-tomcat/conf`

2 Open the `log4j.properties` file in a text editor.

3 Uncomment the following lines in the `log4j.properties` file:

```
# Tracing of memcached
#log4j.category.net.spy.memcached=DEBUG
#log4j.category.net.rubyeye.xmemcached=DEBUG
#log4j.category.com.googlecode.hibernate.memcached=DEBUG
#log4j.category.com.novell.teaming.memcached=DEBUG
#log4j.category.com.novell.teaming.hibernate.memcached=DEBUG
```

4. Save and close the `log4j.properties` file.
5. Restart the Vibe server.

C Using MySQL 8 and Later with Vibe

MySQL 8 and later has password complexity enabled by default, which Vibe doesn't support.

The sections that follow replace Step 7 in "Configuring MySQL/MariaDB" on page 64 and provide basic help for disabling password complexity and setting a non-complex password.

For complete MySQL information, including download and installation instructions, see the MySQL web site (https://www.mysql.com/).

Disabling Password Complexity in MySQL 8

On the server running MySQL 8, do the following:

1. Access a terminal prompt as the `root` user and enter the commands in the following steps.
2. View the temporary MySQL root password that the installation process set in the `mysqld.log` file, by entering the following command:

   ```
   grep 'temporary password' /var/log/mysql/mysqld.log
   ```
3. Log in to MySQL.

   ```
   mysql -uroot -ptemporary-password
   ```

   where *`temporary-password`* is the password obtained in Step 2.
4. Change the system-generated temporary password to another password that satisfies the password-complexity requirements, such as `MyNewPass4!`.

   ```
   ALTER USER 'root'@'localhost' IDENTIFIED BY 'MyNewPass4!';
   ```
5. Remove the password-complexity requirement.

   ```
   UNINSTALL COMPONENT 'file://component_validate_password';
   ```
6. Change the password to a non-complex password.

   ```
   ALTER USER 'root'@'localhost' IDENTIFIED BY 'new-password';
   ```
7. Change the MySQL Native Password as well.

   ```
   ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY
   'new-password';
   ```

Adding Remote Access to the MySQL 8 Database

If your MySQL 8 database is on a separate server from Vibe, you must also do the following:

1. Add Remote access to the Database using the following commands:

   ```
   CREATE USER 'root'@'%' IDENTIFIED BY 'new-password';
   GRANT ALL PRIVILEGES ON *.* TO 'root'@'%' WITH GRANT OPTION;
   ALTER USER 'root'@'%' IDENTIFIED WITH mysql_native_password BY 'new-password';
   ```

Where to Go from Here

When you complete the application instructions in this section, continue with "Learning More about MySQL/MariaDB" on page 65.

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