

# Ensim<sup>®</sup> Pro and Ensim Basic 10.0.0 for Linux<sup>®</sup> Installation Guide

February 14, 2007

## Introduction

This guide provides instructions for installing Ensim<sup>®</sup> Pro and Ensim Basic 10.0.0 for Linux<sup>®</sup> on a server running any of the following operating systems—CentOS 4.1 (Community Enterprise Operating System), CentOS 4.2, CentOS 4.3, RHEL 4 (Red Hat<sup>®</sup> Enterprise Linux ES Release 4), FC 4 (Fedora<sup>™</sup> Core 4), and FC 2.

For simplicity, Ensim Pro and Ensim Basic 10.0.0 for Linux are referred to as “Ensim Control Panel” throughout the document.

### Note

This guide is updated as new information becomes available. Before you begin, be sure to check the Ensim Pro documentation section of the Ensim Support Site, <http://www.ensim.com/support>, to make sure you have the latest version of the guide. Changes are recorded in a revision history, which appears as the first topic in the guide.

Topics in this guide include:

- “Document revision history” on page 2
- “Before you install” on page 2
- “Installation instructions” on page 5
- “Next Steps” on page 11
- “Appendix A: List of RPMs” on page 11
- “Appendix B: Overview of the Ensim Control Panel System Checker” on page 13
- “Feedback and support” on page 14
- “Legal and copyright notice” on page 14

---

## Document revision history

Table 1 shows the changes that have been made to this document since its initial publication on June 19, 2006.

**Table 1. Document revision history**

Date	Description
June 27, 2006	Installer example modified in the section “Installing Ensim Control Panel” on page 6.

## Before you install

The following sections describe the minimum system requirements and provide a checklist to help you prepare for the installation. Your system must comply with the stipulated [requirements](#).

### Minimum requirements

Your system must meet the following minimum requirements for installing Ensim Control Panel.

**Table 2. Requirements for installing Ensim Control Panel**

Requirement	Description
Operating system	Any of the following: RHEL 4, CentOS 4.1, CentOS 4.2, CentOS 4.3, FC 2, or FC 4 Note: Ensim Control Panel cannot be installed on servers running operating systems designed for 64-bit processors.
File system	EXT3 <b>Important:</b> Quotas may not function as intended if you use other file systems.
RAM	256 MB
Processor	Intel Pentium® II or III processor, class 500 MHz or above or any Intel-compatible CPU of 500 MHz speed or above
Disk space	At least 40 GB. You may want to customize your disk partitions to manage the available disk resources on the target server. For information on customizing disk partitions, refer to the document <i>Ensim Pro 10.0.0 for Linux Technical Reference Guide</i> at <a href="http://www.ensim.com/support/pro/linux/index.html">http://www.ensim.com/support/pro/linux/index.html</a> .
Disk partitions	<b>/boot:</b> At least 75 MB <b>/:</b> All of the remaining disk space as Ensim Control Panel uses the <b>/home</b> directory to store the site information. You may want to customize your disk partitions to manage the available disk resources on the target server. For information on customizing disk partitions, refer to the document <i>Ensim Pro 10.0.0 for Linux Technical Reference Guide</i> at <a href="http://www.ensim.com/support/pro/linux/index.html">http://www.ensim.com/support/pro/linux/index.html</a> .
Connectivity	Network connectivity with Internet access
FTP access	Required if you want the installer to obtain the installation files from Ensim's FTP server or your local FTP server.

**Table 2. Requirements for installing Ensim Control Panel (continued)**

Requirement	Description
Software	One Ensim Control Panel 10.0.0 CD-ROM Required if you want the installer to obtain the installation files from the CD-ROM
License	You need a valid license key before you can install Ensim Control Panel. When you buy Ensim Control Panel from the Ensim Storefront ( <a href="https://buy.ensim.com">https://buy.ensim.com</a> ), you receive the license key in the order confirmation email from Ensim.
Other requirements	<ul style="list-style-type: none"> <li>• A DNS server on the network</li> <li>• “root” user access</li> <li>• The system files <code>/etc/hosts</code>, <code>/etc/resolv.conf</code>, <code>/etc/sysconfig/network</code>, and <code>/etc/sysconfig/network-scripts/ifcfg-eth0</code> on the target server must include the entries as specified below. If the entries are not present, use an editor to modify the files.</li> </ul> <p>✦ <b>/etc/hosts</b> file</p> <pre>---/etc/hosts begin file-- 127.0.0.1 localhost.localdomain localhost 1.2.3.4 myhost.mydomain.com myhost ---/etc/hosts end file--</pre> <p><b>Important:</b> If you use the <code>-x</code> option with the installer to specify the network interface on which sites are to be provisioned, make sure that you add the IP address of the interface as the first entry in the <code>/etc/hosts</code> file before running the installer.</p> <p>✦ <b>/etc/resolv.conf</b> file</p> <pre>---/etc/resolv.conf begin file-- primary_name_server ip_address secondary_name_server ip_address ---/etc/resolv.conf end file--</pre> <p>✦ <b>/etc/sysconfig/network</b> file</p> <pre>---/etc/sysconfig/network begin file-- NETWORKING=yes DOMAIN=mydomain.com HOSTNAME=myhost.mydomain.com GATEWAY=ip_address_gateway ---/etc/sysconfig/network end file--</pre> <p>✦ <b>/etc/sysconfig/network-scripts/ifcfg-eth0</b> file</p> <pre>---/etc/sysconfig/network-scripts/ifcfg-eth0 begin file-- DEVICE=eth0 ONBOOT=yes BOOTPROTO=static IPADDR=IP_address_host_server NETMASK=netmask_value (please check with your service provider) GATEWAY=ip_address_gateway ---/etc/sysconfig/network-scripts/ifcfg-eth0 end file--</pre>

## Installation checklist

Use the following checklist to verify that you have adequately prepared your system for a successful installation.

**Table 3. Ensim Control Panel installation checklist**

Requirement	Description	Status
<b>1. Verify that the swap partition size of the target server is adequate.</b>		
Target server's swap partition size	The target server must have a minimum of 256 MB swap partition size. For information on customizing disk partitions, refer to the document, <i>Ensim Pro 10.0.0 for Linux Technical Reference Guide</i> at <a href="http://www.ensim.com/support/pro/linux/index.html">http://www.ensim.com/support/pro/linux/index.html</a> .	<input type="checkbox"/>
<b>2. Verify that you have installed the following RPMs on the target server.</b>		
up2date (if using Red Hat Network (RHN) to obtain RPM updates)	You must install the RPM <b>up2date</b> on the server if you want to use RHN for obtaining RPM updates. After installing the RPM, run the <b>up2date</b> utility to register the server with RHN.	<input type="checkbox"/>
spamassassin-3 or later version	You must install the RPM <b>spamassassin-3 or later</b> on the server before you install Ensim Control Panel.	<input type="checkbox"/>
<b>3. Verify that you have set up the yum repository containing the operating system RPMs and RPM updates (required only if using yum to obtain and update RPMs).</b>		
Yum repository	Set up a yum repository on your local FTP server or on the server on which you are installing Ensim Control Panel. The installer obtains the operating system RPMs and the required RPM updates from the repository. <b>Important:</b> Ensim control Panel is compatible with yum version <b>2.4 or later</b> . If an earlier version is installed, the installer tries to install/update the installed version; however, to avoid installation failures, it is recommended that you verify the version of yum installed on the server. To verify the yum version, run the following command at the prompt: <b>/usr/bin/yum --version</b> For instructions on setting up a yum repository on your local FTP server, refer to the document <i>Setting up a local FTP server to install Ensim Pro and Ensim Basic 10.0.0 for Linux</i> at <a href="http://www.ensim.com/support/pro/linux/index.html">http://www.ensim.com/support/pro/linux/index.html</a> .	<input type="checkbox"/>
<b>4. Verify that you have access to one of the following software repositories for installing Ensim Control Panel.</b>		
Ensim FTP server	The installer obtains the installation files from Ensim's FTP server. The installer knows the address of the FTP server.	None required
Ensim Control Panel CD-ROM (purchased from the storefront <a href="https://buy.ensim.com">https://buy.ensim.com</a> ).	One Ensim Control Panel CD-ROM. The installer obtains the installation files from the CD-ROM.	<input type="checkbox"/>

**Table 3. Ensim Control Panel installation checklist (continued)**

Local FTP server	The installer obtains the installation files from your local FTP server. For instructions on setting up a local FTP server, see <i>Setting up a local FTP server to install Ensim Pro and Ensim Basic 10.0.0 for Linux</i> at <a href="http://www.ensim.com/support/pro/linux/index.html">http://www.ensim.com/support/pro/linux/index.html</a> .	<input type="checkbox"/>
<b>5. Verify that you have disabled SELinux (if installed)</b>		
Disable SELinux	If you enabled SELinux at the time of installing the operating system, disable it and restart the server before proceeding to install Ensim Control Panel, otherwise the installation fails with an error.	<input type="checkbox"/>

## Installation instructions

The following section provides instructions for installing Ensim Control Panel. Please ensure that your system meets the minimum requirements (see “[Minimum requirements](#)” on page 2) for a successful installation. Before installing Ensim Control Panel, the installer automatically runs the System Checker to ensure that your system is compatible for a successful installation. See [Appendix B: Overview of the Ensim Control Panel System Checker](#) for more information about the System Checker.

To install Ensim Control Panel, you need to:

- Obtain the installer script as described in “[Obtaining the installer script](#)” on page 5.
- Install Ensim Control Panel as described in “[Installing Ensim Control Panel](#)” on page 6.

## Obtaining the installer script

You can obtain the installer script from the CD-ROM or the FTP server.

### Procedure

To obtain the installer script:

- 1 Log in to the server on which you want to install Ensim Control Panel.
- 2 Obtain the installer script **ensim-installer.py** from one of the following repositories:

#### **Option 1: Ensim Control Panel CD-ROM**

To use this option, you need to purchase the Ensim Control Panel CD-ROM from the storefront <https://buy.ensim.com>.

To access the installer script, mount the CD-ROM.

- a Insert the Ensim Control Panel CD-ROM into the CD-ROM drive of the server.
- b To access the contents of the CD-ROM, mount the CD-ROM by typing the following command. Do not mount the CD-ROM if you have enabled **AutoMount** on your server.

```
mount /mnt/cdrom
```

- c Browse to the installer script **ensim-installer.py** (located at **/mnt/cdrom**).

#### **Option 2: FTP server**

To use this option, you need to download the installer script **ensim-installer.py** from the Ensim support page <http://www.ensim.com/support/downloads.html>.

---

## Installing Ensim Control Panel

Before you start the installation:

- Make sure that you are using the installer that corresponds to your operating system. For more information, see the section [“Obtaining the installer script” on page 5](#).
- Refer to the section [“Appendix A: List of RPMs” on page 11](#) to verify the required on the Ensim Control Panel server.

You can install Ensim Control Panel in one of the following ways:

- **Attended installation.** An attended installation is interactive and requires you to engage with the installation process from time to time to provide responses to installation queries. An attended installation is appropriate if you want to customize the installation with your preferences.
- **Unattended installation.** An unattended installation is a hands-free installation process invoked using the option `--assume-yes`. The installer sets the value `yes` to installation queries that require a yes or no response.

The following query is set to `yes` during the installation—The system check has completed. If you wish to browse the results, the output has been stored in `<log_file_name>`. Would you like to continue? [y/N]:

### Procedure

To install Ensim Control Panel:

- 1 Access the installer script as described in [“Obtaining the installer script” on page 5](#).
- 2 Install Ensim Control Panel using either [attended](#) or [unattended](#) installation.
  - **Attended installation**

Run the installer script by typing the following command at the prompt. [Table 4](#) describes the key script options. Use the `--help` option with the script to learn more about the various command line options you can use with the script.

```
python ensim-installer.py -n<admin_username> -p<admin_passwd>  
-m<admin_email> <installation_files_source> <os_update_repository>
```

#### Examples

In the following example, the command installs Ensim Control Panel on RHEL by obtaining the necessary Ensim Control Panel files from the CD-ROM and the operating system RPMs and updates from a local FTP server.

```
python ensim-installer.py -nadmin -ppasswd --cdrom  
-mexample1@example.com -o ftp://ftp.example.com/path/os -u ftp://  
ftp.example.com/path/updates
```

In the following example, the command installs Ensim Control Panel on RHEL by obtaining the necessary Ensim Control Panel files from Ensim’s FTP server and the operating system RPMs and updates from RHN.

```
python ensim-installer.py -nadmin -ppasswd -mexample1@example.com --ftp-  
server=ftp.ensim.com --updater=up2date
```

□ **Unattended installation**

Run the script with the `--assume-yes` option. The `--assume-yes` option sets the value `yes` to installation queries that require a yes or no response. Table 4 describes the key script options. Use the `--help` option with the script to learn more about the various command line options you can use with the script.

```
python ensim-installer.py -n<admin_username> -p<admin_passwd>
-m<admin_email> <installation_files_source> <os_update_repository> --
assume-yes
```

**Example**

In the following example, the command installs Ensim Control Panel on RHEL by obtaining the necessary Ensim Control Panel files from Ensim’s FTP server and the operating system RPMs and updates from RHN.

```
python ensim-installer.py --assume-yes -nadmin -ppasswd
-mexample1@example.com --ftp-server=ftp.ensim.com --updater=up2date
```

**Table 4. Command options**

Option	Description
<code>&lt;installation_files_source&gt;</code>	<b>Required.</b> Indicates the repository (Ensim’s FTP server, local FTP server, or the CD-ROM) from where the installer obtains the Ensim Control Panel installation files. Use one of the following options: <ul style="list-style-type: none"> <li><code>--ftp-server=&lt;path_to_ftp&gt;</code>. Indicates that the installer obtains the installation files from an FTP repository (Ensim’s FTP server or your local FTP server).</li> <li><code>--cdrom</code>. Indicates that the installer obtains the installation files from the Ensim Control Panel CD-ROM. If you choose the CD-ROM option, you will be prompted to insert the CD-ROM.</li> </ul>
<code>-m&lt;admin_email&gt;</code>	<b>Required.</b> The valid email address of the Server Administrator.
<code>-n&lt;admin_username&gt;</code>	<b>Required.</b> The user name required to log in to the Server Administrator control panel.
<code>-p&lt;admin_passwd&gt;</code>	<b>Required.</b> The password required to log in to the Server Administrator control panel.  Note: Ensim Control Panel creates your administrative account at the time of installation with the information provided in the <code>-n</code> and <code>-p</code> options. You need to use this account information when you log into the control panel after installation.
<code>-k&lt;license_key&gt;</code>	<b>Optional.</b> The 25-character alphanumeric license key. You receive the license key in the order confirmation email when you buy Ensim Control Panel from the Ensim Storefront.
<code>--assume-yes</code>	<b>Required for unattended installation.</b> The option used to perform an unattended installation. For more information, see “Unattended installation” on page 7.

**Table 4. Command options (continued)**

Option	Description
<b>&lt;os_update_repository&gt;</b>	<p><b>Required.</b> Depending on the source of the repository, replace the variable with the appropriate option as indicated.</p> <ul style="list-style-type: none"> <li>• <b>--updater &lt;tool_name&gt;</b>. Indicates that the installer obtains the operating system RPMs and updates using yum or the up2date utility. Replace <b>&lt;tool_name&gt;</b> with one of the following values: <ul style="list-style-type: none"> <li>↗ <b>yum</b> (<b>--updater=yum</b>). The installer obtains the operating system RPMs and updates using the yum utility.</li> <li>↗ <b>up2date</b> (<b>--updater=up2date</b>). The installer obtains the operating system RPMs and updates using the up2date utility from RHN.</li> </ul> <p><b>In using up2date, be aware that:</b></p> <ul style="list-style-type: none"> <li>↗ To obtain the RPMs from RHN, you must be a subscribed member of RHN and the server on which you are installing Ensim Control Panel must be registered with the network. For details, refer to <a href="https://rhn.redhat.com/help/faq">https://rhn.redhat.com/help/faq</a>.</li> <li>↗ When you obtain automatic updates from RHN, you must exclude certain RPMs that are incompatible with Ensim Control Panel. The list of RPMs that cannot be upgraded are published in the knowledge base article at <a href="http://onlinesupport.ensim.com/TWKB/ViewCase.asp?KnowledgeID=2215">http://onlinesupport.ensim.com/TWKB/ViewCase.asp?KnowledgeID=2215</a>.</li> </ul> </li> <li>• <b>-o &lt;os_repository&gt;</b> and <b>-u &lt;updates_repository&gt;</b>. Indicates that the installer obtains the operating system RPMs and updates from a <i>local FTP server</i> or a <i>local system</i>. <p><b>&lt;os_repository&gt;</b> is the complete path containing the operating system RPMs.</p> <p><b>&lt;updates_repository&gt;</b> is the complete path containing the RPM updates.</p> <p>If the repository is on an FTP server, specify the path as follows: <b>ftp://&lt;path_to_ftp&gt;</b></p> <p>If the repository is on your local system, specify the path as follows: <b>file:///&lt;path_to_repository&gt;</b></p> </li> </ul>
<b>-x&lt;nic&gt;</b>	<p><b>Optional.</b> The name of the network interface card on which you want to provision sites.</p> <p><b>Important:</b> When you specify the network interface, ensure that the IP address of the selected interface matches the IP address obtained by running the command <code>hostname -i</code>. Make sure that you add the IP address of the selected interface as the first entry in the <b>/etc/hosts</b> file before running the installer.</p>

The installer begins installation of Ensim Control Panel.



---

All the services and add-ons provided by Ensim Control Panel are installed. The installation events are recorded in the log file `/var/log/ensim/installer.<version>.<release>-<install attempt>.log`. If you encounter problems during the installation, refer to “[Troubleshooting installation or installer issues](#)” on page 9 to resolve them. After addressing the issues, you can resume the installation by running the installer at the command prompt. The installer resumes the installation from the point of failure.

Before you use Ensim Control Panel to provision resellers accounts and organizations, you need to complete certain tasks using the Server Administrator control panel. See “[Next Steps](#)” on page 11 for information.

## Installation complete

You have completed the instructions for installing **Ensim Control Panel**.

## Troubleshooting installation or installer issues

The following section describes issues that you may encounter during the installation. You may refer to the log file located at `/var/log/ensim/installer.<version>.<release>-<install attempt>.log` for event details. If you encounter problems that you cannot troubleshoot using the log file or the information in [Table 5](#), contact Ensim for online support at <https://onlinesupport.ensim.com>.

**Table 5. Troubleshooting installation or installer issues**

Symptom	Description	Solution
When you run the command, “ <b>hostname</b> ” the value “myhost” is returned by the command instead of “myhost.mydomain.com”.	The host name of the server is incorrect.	Check the file <code>/etc/sysconfig/network</code> . The host name must be a fully qualified domain name. See the following example. <b>Incorrect:</b> myhost <b>Correct:</b> myhost.mydomain.com
Unable to connect to Ensim’s FTP server.	Failed to download the metadata from Ensim’s FTP server. Error initializing setup.	Ensure that your server is connected to the Internet.

**Table 5. Troubleshooting installation or installer issues (continued)**

Symptom	Description	Solution
Cannot download or install updates.	Error downloading/installing updates.	The error log contains a list of all the updates that could not be downloaded. Download these updates and install them on the server, before re-starting the server to install Ensim Control Panel.
During installation, the following message is displayed: check_hostname <FAILED>.	The host file is incorrect.	The file <b>/etc/hosts</b> should contain the host name and IP address of your server (see the following example). If it does not, use an editor to modify the file. <b>Example</b> ---/etc/hosts begin file-- 127.0.0.1 localhost.localdomain localhost 1.2.3.4 myhost.mydomain.com myhost ---/etc/hosts end file-- where 1.2.3.4 is the IP address of myhost.mydomain.com
Cannot download Ensim Control Panel.	Error downloading Ensim Control Panel.	Ensure that your server is connected to the Internet.

---

## Next Steps

Before you use Ensim Control Panel to perform provisioning or management operations, you must provide the license key information, if you have not provided the information at the time of installation. You receive the license key in the order confirmation email when you buy Ensim Control Panel from the Ensim Storefront.

- 1 Open a Web browser and enter the URL **http://<server host name (or IP address)>/admin** to access the control panel.
- 2 Log in to the Server Administrator control panel using the account information specified at the time of installation.
- 3 Provide the license information (25-character alphanumeric license key).

## Appendix A: List of RPMs

The following table lists the RPMs required on the Ensim Control Panel server for RHEL and CentOS operating systems. Make sure that you have these RPMs installed on the Ensim Control Panel server. You can use the `-o` and `-u` installer options to install them; alternatively, for RHEL systems, you can use the `--updater` option to install them. You do not have to install additional RPMs for Fedora Core systems as the required RPMs are installed by the installer.

The RPMs in **boldface** indicate the RPMs that are not available on the RHEL CD-ROMs. These RPMs must be downloaded from the Red Hat Web site <http://rhn.redhat.com>.

[Table 6](#) provides the complete list of RPMs installed on the Ensim Control Panel server. For faster installations, set up a repository of these RPMs as described in the document *Setting up a local FTP server to install Ensim Pro and Ensim Basic 10.0.0 for Linux* at <http://www.ensim.com/support/pro/linux/index.html>.

**Table 6. List of all RPMs**

List of all RPMs	
apr	ncompress
apr-devel	net-snmp
apr-util	net-snmp-libs
apr-util-devel	openldap-devel
atk	pango
bind	pcre-devel
caching-nameserver	perl-DateManip
compat-libstdc++	perl-DBD-MySQL
cpp	perl-DBD-Pg
curl	perl-DBI
compat-db	perl-Digest-HMAC
cyrus-sasl-devel	perl-Digest-SHA1
db4-devel	perl-HTML-Parser
distcache	perl-HTML-Tagset

**Table 6. List of all RPMs (continued)**

List of all RPMs	
expat-devel	perl-libwww-perl
gcc	perl-libxml-errno
gcc-c++	perl-libxml-perl
gd	perl-Net-DNS
glibc-devel	perl-Parse-Yapp
glibc-headers	perl-Time-HiRes
glibc-kernheaders	perl-URI
gtk2	perl-XML-Dumper
httpd-devel	perl-XML-Encoding
httpd	perl-XML-Grove
httpd-suexec	perl-XML-Parser
ImageMagick	perl-XML-Twig
libart_lgpl	php
libc-client	php-imap
libgcj	php-ldap
libidn	php-mysql
libstdc++-devel	php-pear
libtool-libs	php-pgsql
libungif	postgresql
libxslt-python	postgresql-libs
lm_sensors	postgresql-python
mod_perl	postgresql-server
mod_ssl	php-mbstring
mx	sendmail-cf
mysqlclient10	tcl
mysql	telnet-server
MySQL-python	unixODBC
mysql-server	vim-common
webalizer	spamassassin-3
PyXML	python-sqlite
sqlite	python-urlgrabber

---

## Appendix B: Overview of the Ensim Control Panel System Checker

Before installing Ensim Control Panel, the installer performs a system check to ensure that your system provides a compatible platform for successful installation. The System Checker reports potential conflicts and ways to resolve them. At the end of the check it displays the number of errors or warnings encountered. The results of the system check (list of checks, status of each check, and details about errors or warnings) are logged in the file `/var/log/ensim/installer.<version>.<release>-<upgrade-attempt>.log` and can be viewed after the completion of the installation process.

### Interpreting the results of the system check

As the System Checker performs each check, it displays the name of the check, a brief description, and the outcome of the check.

The outcome can be any of the following:

- **OK.** Displayed when the check is successful.
- **WARNING.** Displayed when the check encounters an exception that **may** interfere with the installation process.
- **ERROR.** Displayed when the check encounters an exception that **will** interfere with the installation process and cause it to fail.

When the outcome of the check is a warning or an error, details about the exception are provided.

The System Checker report provides the following information:

- A detailed list of exceptions observed on the server
- Recommended actions to be performed

#### Note

The recommended actions provide general solutions for problems. If they are appropriate for your problems, perform the recommended actions and run the installer again. For instructions, please refer to [“Installing Ensim Control Panel” on page 6](#).

---

At the end of the check, a summary of the results is displayed, in the following format:

```
SUMMARY for <hostname>: <n> error(s), <m> warning(s), with issues
```

Where:

- `<hostname>` is the host name of your Ensim Control Panel server
- `<n>` indicates the number of errors
- `<m>` indicates the number of warnings

---

## Feedback and support

For Ensim online support or feedback, use the following links:

- <http://support.ensim.com> to access product downloads and documentation
- <https://onlinesupport.ensim.com> to file a support ticket or request online support
- [http://onlinesupport.ensim.com/kb\\_search.asp?product=lwp](http://onlinesupport.ensim.com/kb_search.asp?product=lwp) to search the knowledge base
- <http://www.ensim.com/about/feedback.asp> to provide feedback to Ensim

### Note

All customers receive passwords that allow access to the Ensim Support site. If you do not have a password, contact your organization's liaison to Ensim.

---

## Legal and copyright notice

This document contains information proprietary to Ensim Corporation and its receipt or possession does not convey any rights to reproduce, disclose, manufacture, or sell anything it might describe. Reproduction, disclosure, or use without Ensim's specific written authorization is strictly forbidden.

Ensim Corporation makes no representations or warranties with respect to the content or use of this document. It also reserves the right to revise this document at any time without the obligation to notify any person of such revision.

Ensim and the Ensim logo are registered trademarks of Ensim Corporation.

All other trademarks and copyrights are the property of their respective owners.

© 2006 Ensim Corporation. All rights reserved.