NetBeans™ Version 3.6 for OpenVMS Alpha

RELEASE NOTES

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This document contains OpenVMS-specific usage information about running NetBeans Version 3.6 on the OpenVMS Alpha operating system.

Operating System:	OpenVMS Alpha Version 7.3-1 or higher
Software Version:	NetBeans Version 3.6 for OpenVMS

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CONTENTS

Purpose of This Document

This document contains OpenVMS-specific usage information about running NetBeans$_{TM}$. It is intended for a general user audience. Installation information, including system requirements and prerequisites, are contained in the:

NETBEANS36_INSTALLATION_GUIDE_OPENVMS.TXT|PS|PDF|HTML

What's New Information

NetBeans Version 3.6 is a new feature release and upgrades NetBeans Version 3.5.1, which was primarily a performance enhancements release. For complete new feature information about NetBeans Version 3.6, see:

http://www.netbeans.org/community/releases/36/Whats_New.html

NetBeans Version 3.6 for OpenVMS contains a new plug-in module, the OpenVMS FORTRAN Compiler Support Module. This module, along with the OpenVMS C/C++ Compiler Support Module, the OpenVMS DCL Command Support Module, the OpenVMS EDT Editor Keybindings Module, and the OpenVMS CMS Support Module, is available from within NetBeans in the Update Center on the Tools menu.

NetBeans Version 3.6 assumes that you have Version 1.4.2 of the Java 2 SDK for OpenVMS installed. If the Java 2 SDK for OpenVMS is not installed in its default location, or if you want to use a version of the Java 2 SDK other than 1.4.2, define NETBEANS$JDK_HOME so NetBeans can find the Java directory.

For a list of the known problems in Version 3.6, visit:

http://www.netbeans.org/community/releases/36/relnotes.html#KnownProblems

For an overview of NetBeans for OpenVMS features, visit:

http://h71000.www7.hp.com/openvms/products/ips/netbeans/overview.html

Conventions

The following conventions are used in this document:

UPPERCASE/lowercase	Since Java$_{TM}$ is a case-sensitive language and NetBeans requires an ODS-5 disk, commands are mixed-case as required.
$	Indicates the DCL prompt. This prompt may be different on your system.
[optional-name]	Square brackets indicate that the enclosed item is optional (unless within a file specification).
<variable-name>	Angled brackets indicate a placeholder for a command-line option, a system-specific name, or some other variable.

1. RUNNING NETBEANS FOR OPENVMS

Importing from Previous Versions

After installing NetBeans 3.6 for OpenVMS you can automatically import settings and project information created by NetBeans 3.3.1 or higher for OpenVMS. You must do this the first time you start up NetBeans.

Importing settings from NetBeans 3.2 and 3.21 for OpenVMS is not supported. In order to preserve settings and project information, Version 3.2x users should first upgrade to Version 3.3.1 or higher.

You can download Version 3.3.1 or higher for OpenVMS from the NetBeans release archive.

http://www.netbeans.org/downloads/ide/archive/release_archive.html

See Section 3 for details of the import process.

Before You Run NetBeans

There are several requirements for this application to work properly:

- Your NetBeans user directory must be on an ODS-5 disk. This directory is set the first time you start NetBeans. By default, the directory is automatically created by NetBeans as a subdirectory under your SYS$LOGIN directory.

  Important If your SYS$LOGIN directory is on an ODS-2 device, you must specify an ODS-5 device and directory as your NetBeans user directory when starting NetBeans.

- By default, NetBeans 3.6 uses Java 1.4.2 or the JVM. If you have an earlier version of Java installed on your system, you must set the NETBEANS$JDK_HOME logical to point to that JVM.

  The logical name NETBEANS$JDK_HOME must be defined with a string that points to the directory where the SDK is installed. The Launcher uses the FastVM for the main process. You can override this using the logical name NETBEANS$CLASSIC_VM. Setting the value of this logical to 1 causes the Classic VM to be used instead of the FastVM.

- User process quotas must be sufficient, as recommended in the NetBeans for OpenVMS Installation Guide: Installation Prerequisites. In particular, the SYSGEN value for CHANNELCNT should be at least 2000.

- The SDK logical names and settings for NetBeans are configured when you run the RUNIDEOPENVMS command procedure. Making changes to these settings can cause unexpected behavior in NetBeans.

Starting NetBeans

To start the NetBeans IDE on an OpenVMS Alpha system, execute the `RUNIDEOPENVMS.COM` command procedure or a NetBeans symbol that runs this command file:

```
$ @<device>:[<directory>.NETBEANS36.BIN]RUNIDEOPENVMS.COM [<startup args>]
```

where:

`<device>` and `<directory>` are the device and directory where NetBeans is installed.

or

You can define a NetBeans symbol, typically in `SYLOGIN.COM`, such as:

```
$ NETBEANS :== @ODS5$DISK:[NETBEANS36.BIN]RUNIDEOPENVMS.COM
```

Optional Startup Arguments

The following startup arguments may be used:

```
$ NetBeans [<User_dir|-help>] [<Java_switches>]
[<NetBeans_switches>]
```

where:

`[<User_dir|-help>]` can be:

An optional OpenVMS directory specification that will be used as the home directory for NetBeans user-specific files. If not specified, the subdirectory `[.NETBEANS.3_6]` from your `SYS$LOGIN` directory is used. If the directory does not exist, it is automatically created.

Important Your user directory must reside on an ODS-5 device.

or

The `-help` switch to see command-line help about the IDE launcher.

`[<Java switches>]` is an optional list of switches that you want to pass to the Java Virtual Machine. You can also specify NetBeans properties here. For example:

```
-Dnetbeans.windows=sdi
```

If the list contains more than one value or has lowercase characters that must be preserved, you should enclose the list within double quotes (" "). If the value contains a directory specification, it must be in UNIX-style format. For example:

```
"/dev/dir0/dir1/.../file.ext"
```

See the Java SDK Release Notes for more information about Java switches.

http://h18012.www1.hp.com/java/documentation/

[<NetBeans switches>] is a list of switches that you want to pass to the NetBeans IDE.

If the list contains more than one value or has lowercase characters that must be preserved, you should enclose the list within double quotes (""). If the value contains a directory specification, it must be in UNIX-style format. For example:

"/dev/dir0/dir1/.../file.ext"

A common setting is the standard font size to use within the IDE. For example:

"-fontsize 12"

Using a configuration file at startup

You can also pass startup parameters to the IDE Launcher using the <IDE_HOME>/bin/ideopenvms.cfg file. The Launcher tries to read this file before it starts parsing the command-line options. Only one option can be specified on each line.

The following options (including the "-") can be specified in the configuration file:

-J<jvm_flag>

Pass the specified flag directly to the JVM.

_fontsize <value>

Sets the font size, expressed in points, in the IDE's user interface. If this option is not used, the font size is 11 points.

_locale language[:country[:variant]]

Use the specified locale.

For example, an ideopenvms.cfg could contain the following:

```
! Lines that do not start with "-" are considered comments
!
! First a Java switch - this will display garbage collection
! information
!
-Jverbose:gc
!
! Now a NetBeans switch - this will set the font size to a more
! readable 14 points
!
-fontsize 14
```

Logical Name Definitions

You can define one or both of the following logical names prior to starting RUNIDEOPENVMS.COM in order to override the default values:

NETBEANS$JDK_HOME	Allows you to specify the location of the version of Java that you want to use. If defined, the value of this name must be an OpenVMS directory specification that points to the installed location of the Java 2 SDK version you want to use.

Example:

```
$ DEFINE NETBEANS$JDK_HOME SYS$COMMON:[JAVA$141]
```

NETBEANS$USER — Allows you to specify the user directory that will be used by the IDE. If defined, the value of this name must be an OpenVMS directory specification on an ODS-5 disk. The IDE will create the directory if it does not exist.

Example:

```
$ DEFINE NETBEANS$USER MYDISK$:[MYDIR.USER]
```

How the NetBeans Launcher Uses the OpenVMS JVM

For performance reasons, NetBeans for OpenVMS uses the FastVM when running the IDE. However, the FastVM does not support the Java debug architecture, JPDA. In order to compile and debug Java programs, the spawned subprocesses created during compilation and debugging must use the Classic VM.

In order to implement this behavior, NetBeans for OpenVMS defines logical names for the JVM (JAVA$JVM_G_SHR and JAVA$JVM_SHR) to point to the FastVM shareable images, while confining these logical name definitions to the main process.

If you would like NetBeans to use the Classic VM for all operations, you can define the logical NETBEANS$CLASSIC_VM as follows:

```
$ Define NETBEANS$CLASSIC_VM 1
```

Startup Examples

```
$ @RUNIDEOPENVMS USER$:[MYACCOUNT.NETBEANS]
```

Starts NetBeans with the specified user directory. If the required directory structure and files do not exist, the NetBeans IDE will create them automatically.

```
$ NetBeans "" "" "-fontsize 14"
```

Starts NetBeans using a font size of 14. Note that null arguments ("") are required as placeholders and that the quotes around the specified argument are optional in this case.

NetBeans Launcher Now Uses User Mode Logicals

The NetBeans Launcher loads logical names into the Process table in User mode each time NetBeans starts. These User-mode logicals are removed when image rundown occurs. When NetBeans is running, all applications started from NetBeans will use subprocesses with the same logicals as NetBeans itself.

When developing Java or C/C++ applications with NetBeans, you may find different behavior in development mode than you will when your applications are running in their own process space.

These DECC-feature logical names are enabled:

```
DECC$ARGV_PARSE_STYLE
DECC$EFS_CASE_PRESERVE
DECC$POSIX_SEEK_STREAM_FILE
DECC$EFS_CHARSET
DECC$EFS_NO_DOTS_IN_DIRNAME
DECC$ENABLE_GETENV_CACHE
DECC$ENABLE_TO_VMS_LOGNAME_CACHE
DECC$FILE_PERMISSION_UNIX
DECC$FIXED_LENGTH_SEEK_TO_EOF
DECC$RENAME_NO_INHERIT
```

These `Java$` logical names are set by the Launcher:

- JAVA$CACHING_DIRECTORY
- JAVA$CACHING_INTERVAL is set to 240
- JAVA$CREATE_DIR_WITH_OWNER_DELETE
- JAVA$CREATE_ONE_VERSION
- JAVA$DAEMONIZE_MAIN_THREAD
- JAVA$DELETE_ALL_VERSIONS
- JAVA$DISABLE_MULTIDOT_DIRECTORY_STAT
- JAVA$FILE_OPEN_MODE is set to 3
- JAVA$FORK_PIPE_STYLE is set to 2 or 1
- JAVA$FSYNC_INTERVAL is set to 3
- JAVA$KEYBOARD_TYPE_DEC (optional, if NETBEANS$KEYBOARD_TYPE_DEC is also set)
- JAVA$READDIR_CASE_DISABLE
- JAVA$RENAME_ALL_VERSIONS
- JAVA$TIMED_READ_USE_QIO

The `Java$Filename_Controls` logical is set to:

```
JAVA$M_UNIX_AND_VMS
```

Default User Directory

In NetBeans 3.6, the default user directory created the first time you run NetBeans is `[.NetBeans.3_6]` in your `SYS$LOGIN` directory. This is the location for all project property files and does not have any influence on the location of your source files. You can run NetBeans using other user directories by specifying the directory as the first startup argument (`P1`) with the `RUNIDEOPENVMS` command procedure. For example:

```
$ @ODS5$DISK:[NETBEANS36.BIN]RUNIDEOPENVMS "EFS$:[JOEUSER.MYNBUSER36]"
```

(You can mount whatever directories you choose in the NetBeans Explorer and create new projects using the Project Manager in the IDE.)

Default MDI Window Mode

The NetBeans IDE is now MDI (multiple document interface) by default. That means all secondary windows are constrained by the main application window. You can change to SDI (single document interface) - making each secondary window independent of the main application window - by using the Setup Wizard from the IDE's Tools menu.

Note When in MDI mode, secondary windows can still become detached from the main application window. This is by design. To reattach a floating window, use the Attach MDI Frame command from the IDE's Window menu.

Using Javadoc

NetBeans supports the Javadoc standard for Java documentation. You can view and generate Javadoc documentation from within the IDE.

Mounting Javadocs

From the Tools menu, choose Javadoc Manager. In the Javadoc Manager you can mount and unmount directories, archives, and web-based sources. Note that the Hidden property must be set to `True` for a Javadoc node to be visible in Filesystems.

For example, you can download the Java 2 SDK documentation archive file to your OpenVMS system and mount the `.zip` file.

Java 2 SDK documentation is available from: http://java.sun.com/j2se/1.3/docs.html

Context-sensitive lookups

Any Javadoc archives are automatically included when you do context-sensitive lookups. To do a context-sensitive lookup: Press Shift+F1 when the edit cursor is on a package or function name.

More information about using and generating Javadoc is available within the NetBeans IDE from the Core IDE Help:
Working with Java Source: Working with Javadoc Documentation: Mounting a Javadoc Filesystem

Using JavaHelp

JavaHelp is available in the NetBeans IDE from the Help menu and by clicking Help buttons or the F1 key on various IDE objects, such as node icons and property sheets.

JavaHelp for OpenVMS users is installed with each of the available NetBeans modules for OpenVMS. This help is fully integrated with the standard NetBeans JavaHelp and may be opened from the Help menu. (The HelpSet option in the Help menu lists installed module help files.)

JavaHelp texts may be copied and pasted into an external text editor or printed. URL links provided in JavaHelp that are not hypertext can be copied and pasted into a browser's address field.

Downloading and Installing NetBeans Plug-in Modules

The NetBeans IDE features an Update Center wizard (Tools menu), which provides a convenient way to update the IDE with new functional units called modules.

Through the wizard, NetBeans for OpenVMS provides access to both the NetBeans Update Center and the NetBeans for OpenVMS Update Center. The OpenVMS Update Center contains modules that are designed to enhance the usability and productivity of NetBeans for OpenVMS customers.

Note If you are behind a firewall, you will need to set up the Proxy Configuration.

General Instructions

1. Open the NetBeans Update Center wizard (choose Update Center from the Tools menu).
2. With the Check the Web... option selected, choose the NetBeans for OpenVMS Update Center and click Next.

   -or-

   Choose the Install Manually Downloaded Modules option if applicable and click Next.
3. Follow the instructions on the wizard for completing installation.
4. After clicking Finish, if you are prompted to restart NetBeans, you must choose Restart the IDE to complete installation of the module.

Single-User Versus Multi-User Installation

When you install new plug-in modules using the Update Center wizard, you have the choice to install them for individual use or for systemwide use.

Single-user mode

This is the default choice. The module files are placed in your NetBeans user directory (such as NBUSER36). This means that only you have access to the module.

Multi-user mode

If you want to do a systemwide installation, select the Global? option on the View Certificates and Install Modules page of the wizard. The module files are placed in the NetBeans installation directories, and all users of NetBeans will have the module loaded at startup.

Notes for multi-user installation

- Your process must have write access to the directories in which NetBeans is installed.
- No other users should be running NetBeans while you are doing the update.
- You may need to change the protection of installed modules so that others can access the files.

Local (Offline) Installation

You can install NetBeans modules (.NBM file) from locations other than the Internet-based Update Centers. For example, you may want to install a previously downloaded .NBM file on a local drive. In this case, you still use the Update Center wizard, but you choose the Install Manually Downloaded Modules option.

Important You must change the record format of the downloaded .NBM file to STREAM_LF before installing it. You can use this command:

```
$ SET FILE/ATTRIBUTE=(RFM:STMLF,RAT:CR) <MODNAME>.NBM
```

To download modules for offline installation, see the Modules Download Page

http://h71000.www7.hp.com/openvms/products/ips/netbeans/nbmdownload.html

Performance Tuning NetBeans on OpenVMS

There are defaults chosen in the NetBeans Launcher for the initial stack size, initial heap size, and maximum heap size. These values were selected based on tests that simulated an average workload. If your NetBeans process is running out of heap or stack space, you may need to start NetBeans with a larger value for the stack size or maximum heap size.

This is an example of setting the maximum heap size to 350MB and the stack size to 2MB.

```
NetBeans "" "-Xmx350m -Xss2m"
```

For more information about various performance switches for the SDK on OpenVMS see the Java SDK Release Notes.
(http://h18012.www1.hp.com/java/documentation/)

Optimizing the Look and Feel of NetBeans for OpenVMS

The look and feel of NetBeans for OpenVMS is highly dependent on being set up with the right fonts and point sizes.

Fonts and eXcursion

If you are an eXcursion user, to ensure that the appearance of the NetBeans user interface is optimal, the following font sets should be installed in eXcursion:

- Speedo
- Type 1
- Misc
- 100dpi
- 75dpi

Check their presence by opening the eXcursion Control Panel and selecting the Fonts tab.

On your eXcursion system

If one or more font sets is not present, you can reinstall eXcursion (and choose the option to install all fonts) or you can do the following:

1. Locate the directory location of the font sets that come with the eXcursion kit.
2. Open the eXcursion Control Panel and select the Fonts tab.
3. Specify the full path of each missing font set in the New Font Path Elements group box and click Add.
4. Once you have all five sets installed and activated, restart the eXcursion server.

On your Alpha system

Like the previous instructions, this is only applicable to eXcursion users. Do the following:

1. Copy the eXcursion font properties file to your `LOGIN` directory.

   The standard location for this file is
   `SYS$COMMON:[JAVA$142.JRE.LIB]FONT_PROPERTIES.EXCURSION`

2. Copy it to `SYS$LOGIN:FONT.PROPERTIES`

See the Java SDK Release Notes for important information about Java, eXcursion, and fonts. (http://h18012.www1.hp.com/java/documentation/)

Alpha console users
Do not use the eXcursion `FONT.PROPERTIES` file as described above.

Font size selection
Readability of fonts in the NetBeans IDE, whether you are using an Alpha console or eXcursion, may be improved by setting a default font size of your choosing. Do so by using the NetBeans startup switch `"-fontsize <n>"`. For example:

```
$ @ODS5$DISK:[NETBEANS36.BIN]RUNIDEOPENVMS "" "" "-fontsize 12"
```

Uninstalling NetBeans

To uninstall NetBeans, use the `PCSI PRODUCT REMOVE` command.

If you execute a `PRODUCT REMOVE` command for NetBeans 3.5.1, you may see the following errors:

```
Portion done: 0%...10%...20%
%PCSI-E-FILNOTPUR, error deleting EFS$:[000000.][NETBEANS3.5_1.tomcat404.webapps.to
mcat-docs.appdev]web^.xml.txt;1
-SYSTEM-W-BADFILENAME, bad file name syntax
%PCSI-E-FILNOTPUR, error deleting EFS$:[000000.][NETBEANS3.5_1.tomcat404.webapps.to
mcat-docs.appdev]build^.xml.txt;1
-SYSTEM-W-BADFILENAME, bad file name syntax
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
-SYSTEM-W-BADFILENAME, bad file name syntax
Portion done: 90%
%PCSI-E-FILNOTPUR, error deleting EFS$:[000000.][NETBEANS3.5_1.bin.fastjavac]fastja
vac^.sun.intel;1
-SYSTEM-W-BADFILENAME, bad file name syntax
%PCSI-E-FILNOTPUR, error deleting EFS$:[000000.][NETBEANS3.5_1.bin]^.runide_default
s.sh;1
-SYSTEM-W-BADFILENAME, bad file name syntax
Portion done: 100%
```

This indicates that the product is marked as "removed", but all of the associated files have not been deleted.

Workaround
Delete the NetBeans 3.5.1 installation directory yourself. You will first need to delete all the files (and any remaining subdirectories and their files) in the installation directory.

2. RESTRICTIONS AND LIMITATIONS

The NetBeans User Directory Must Be on an ODS-5 Disk

See Section 1: Before You Run NetBeans.

NetBeans for Java Source and Package Files on an ODS-2 Disk

Java source files residing on an ODS-2 disk can be used from within NetBeans, but the class and package names in the files must be entirely in lower case. The files on the ODS-2 disk will have uppercase names, but the Java Virtual Machine will translate the names to lower case. When NetBeans attempts to match a filename to a classname, only class and package names that are completely lowercase will match.

Importing Projects from Other IDEs

Importing a project from another IDE (for example, Microsoft Visual J++, JBuilder, Visual Cafe, and NetBeans/Forte for Java) will not work.

Manually Convert Source Files to STREAM_LF Format

NetBeans can create improper line breaks in source files that have a record format other than STREAM_LF. You may need to manually convert files to STREAM_LF before you access them within the NetBeans IDE.

File Specification Syntax

All file specifications you use within the NetBeans IDE must use standard UNIX syntax. This applies to the NetBeans Open File dialog box and Filesystems window.

Removing old Java symbols and logicals

When you run a particular version of Java, various version-specific symbols and logical names are defined. Before you can use a different Java version, you must execute the appropriate DCL command procedure to remove these old symbol and logical name definitions. For Java 2 SDK 1.3.1-6, run the following command:

```
$ @SYS$COMMON:[JAVA$131.COM]JAVA$<xxx>_CANCEL_SETUP.COM
```

where <xxx> is the Java version (for example, 118 or 122) you are removing.

3. IMPORTING FROM PREVIOUS VERSIONS

NetBeans 3.6 can import projects and settings created with NetBeans 3.3.1 (and higher) for OpenVMS versions. This update process is fully automated using the Settings Import Wizard.

During the import process, you will be prompted for the location of your existing user directory (such as .NBUSER33). This directory is not affected in any way by the import process.

Important You must import your project when prompted to by the wizard - you cannot import at a later time.

Using the Settings Import Wizard

After installing NetBeans 3.6, the first time you start the IDE, the Settings Import Wizard appears (before the Setup Wizard). Three simple steps are involved:

Page 1 Do you need to import settings?

Choose Yes if you are upgrading from 3.3.1 or higher ~~and~~ want to import your settings and your projects.

Page 2 Locate previous IDE?

Browse for or type your existing user directory (for example, /device/user/nbuser33). Click Next to start the import process.

Page 3 Import settings

Wait for the import process to complete and click Finish (which initiates the Setup Wizard).

After the import process and completion of any remaining setup, NetBeans 3.6 will open with the projects imported from the previous version of NetBeans. If the import is successful, you should see that your user environment and settings for the previous version of NetBeans have been transferred to NetBeans 3.6.

Usage Notes

The following additional information explains a little more about the import and update process and addresses a few issues related to it.

Backup Directory

Before the import operation starts up, NetBeans 3.6 creates a backup directory named .USERDIR_BACKUP under the same parent directory as the new 3.6 user directory. This directory is only used if the import process fails for some reason, in which case a default 3.6 user directory will be restored.

File Import Process

Once the backup directory is created, NetBeans copies the files from the user directory of the previous version of NetBeans into the user directory of NetBeans 3.6 with the exception of userdir.cfg. It then updates the imported files under the NetBeans 3.6 user directory and continues to start up.

If, for any reason, the copy operation fails, the NetBeans 3.6 user directory will be restored from the `.USERDIR_BACKUP` directory. NetBeans 3.6 will continue to start up without importing.

4. REPORTING AND RESOLVING PROBLEMS

Support for NetBeans for OpenVMS is provided under existing OpenVMS service agreements through standard support channels.

http://www.hp.com/country/us/eng/contact_us.html

As an open source application, NetBeans is also supported through peer-support channels. NetBeans.org is home to the NetBeans Open Source project and is the best resource for general support information and links to peer-support groups.

To ask questions or give feedback
Send your technical questions and feedback about NetBeans for OpenVMS directly to the engineering team at:

NetBeans@hp.com

To participate in peer groups
NetBeans.org provides a variety of mailing lists and newsgroups that can answer most user questions.

http://www.netbeans.org/community

To report bugs
NetBeans.org provides a bug-entering system called IssueZilla, which you can use to enter and track issues. The submission form includes an operating system selection field that lists OpenVMS.

http://www.netbeans.org/community

General Comments and Feedback
If you would like to provide comments or general feedback about the e-Business offerings for OpenVMS, please send mail to:

OpenVMS.eBusiness@hp.com