



Distributed NetBeans for OpenVMS Version 5.5 Quick Start Guide

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1 Introduction

Distributed NetBeans for OpenVMS is a plug-in to the standard NetBeans that allows you to edit, build, execute, and debug programs on an OpenVMS system on the network.

This guide describes how to set up and configure Distributed NetBeans client on Windows, how to create an OpenVMS 3GL project and Java project using Distributed NetBeans client.

To set up Distributed NetBeans client for OpenVMS on Windows, the following installation must be done:

- Install latest Java JDK Version 5.0 Update 14 or later. You can download and install Java JDK from the following web address:
http://java.sun.com/javase/downloads/index_jdk5.jsp
- Install NetBeans Integrated Development Environment (IDE) Version 5.5.1 for Windows which is an open-source on Windows client. You can download and install NetBeans IDE Version 5.5.1 from the following web address:
http://www.netbeans.info/downloads/all.php?b_id=3095&src=1
- Install Distributed NetBeans Client for OpenVMS, which is a plug-in for NetBeans running on your desktop. You can download and install the Distributed NetBeans Client Module (.nbm file) from the following web address:
http://h71000.www7.hp.com/openvms/products/ips/netbeans/distnb_files.html

Prerequisites

For hardware and software prerequisites see the *Distributed NetBeans for OpenVMS Installation Guide and Release Notes* at:

http://h71000.www7.hp.com/openvms/products/ips/netbeans/docs/DISTNETBEANS_IGUIDE_RELNOTES.HTML#before

2 Using Distributed NetBeans Client

This section describes how to add and connect remote IDE server, how to create an OpenVMS 3GL project and how to create a Java project using Distributed NetBeans client and also addresses the following topics:

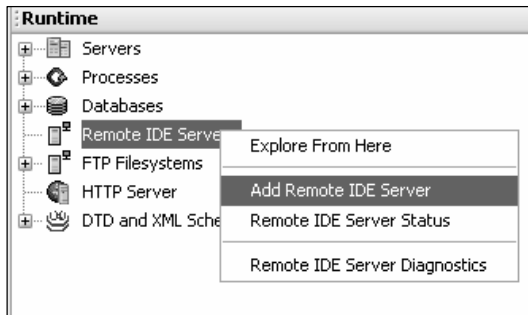
- Adding and Connecting a Remote IDE Server
- Creating an OpenVMS 3GL Project
- Creating a Java Project

2.1 Adding and Connecting a Remote IDE Server

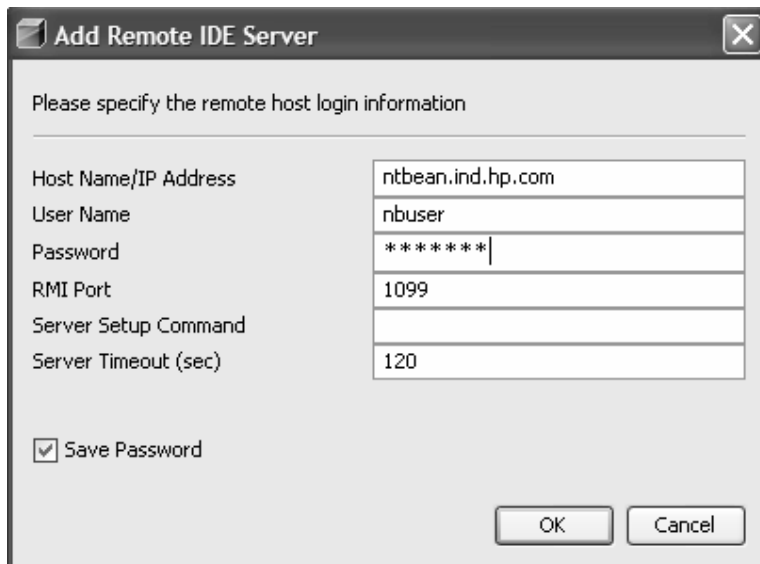
Before creating a remote project, we need a process on the remote OpenVMS machine which will act on our behalf to execute DCL commands, etc. This process is called as “Remote IDE Server”. You create this Remote IDE Server from within the IDE. The Remote IDE Server you create will be a detached process running in your user account on OpenVMS. The Remote IDE Server will make a connection back to the Distributed NetBeans client in the IDE using Java’s RMI (Remote Method Invocation) services.


To add or connect the remote IDE server on an OpenVMS system, follow these steps:

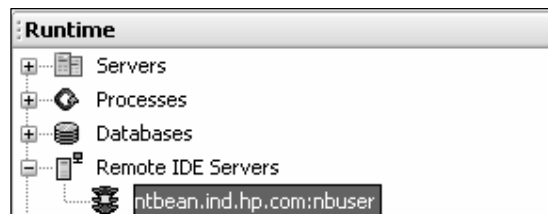
1. In the NetBeans IDE window, select the **Runtime** tab.
2. Right-click on **Remote IDE Servers** and select **Add Remote IDE Server**. You will see the **Add Remote IDE Server** dialog box.



3. Enter the Host Name/IP Address, User Name, and Password information of the OpenVMS system you are adding and click **OK** to close the dialog box and return to the NetBeans IDE window.



4. The **Remote IDE Server** is automatically connected. The connection icon  turns yellow when the connection is in progress, then green to show that you are connected to the remote server.



The following section explains how to create an OpenVMS 3GL application project on the remote OpenVMS system.

2.2 Creating an OpenVMS 3GL Project

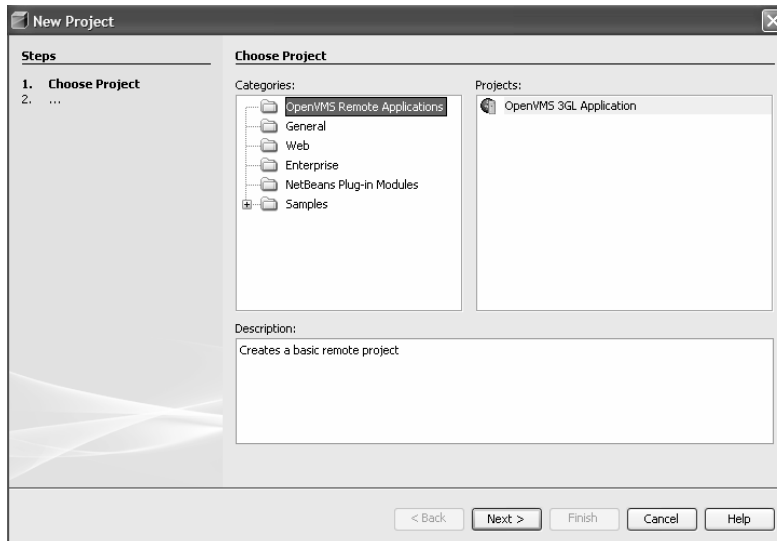
In NetBeans 5.5.1, you must create a project to work with files on the remote OpenVMS system. Your project can be a Java project or an OpenVMS 3GL application project.

The OpenVMS 3GL project type is useful for OpenVMS applications that are written in 3GL languages instead of Java. This project type allows you to map an OpenVMS source directory to a directory on your desktop, and edit and compile files written in the following 3GL languages:

- C/C++
- Cobol
- Fortran
- Basic
- Pascal

To create an OpenVMS 3GL project from the Distributed NetBeans client, follow these steps:

1. In the NetBeans IDE window, select the **Projects** tab.
2. Select **File > New Project**. The **New Project** wizard is displayed.
3. Select **OpenVMS Remote Applications**, and click **Next**.



The **New OpenVMS 3GL Application** dialog box is displayed. Enter the “Project Name” and click **Next**.

The dialog box shows the 'Steps' list on the left with '2. Project Name' selected. The 'Project Name' field contains the text 'TEST'. At the bottom are buttons for '< Back', 'Next >', 'Finish', 'Cancel', and 'Help'.

4. Select the name of the **Remote IDE Server** from the drop-down menu and click **Next**. The **New OpenVMS 3GL Application** dialog box is displayed.

The dialog box shows the 'Steps' list with '3. Remote IDE Server Chooser' selected. A drop-down menu shows 'ntbean.ind.hp.com:ntuser'. To the right, a table lists 'Remote IDE Server Properties'.

Name	Value
Host Name	ntbean.ind.hp.com
User Name	ntuser
Port Number	1099
JDK version	1.4.2
OS	OpenVMS V8.3

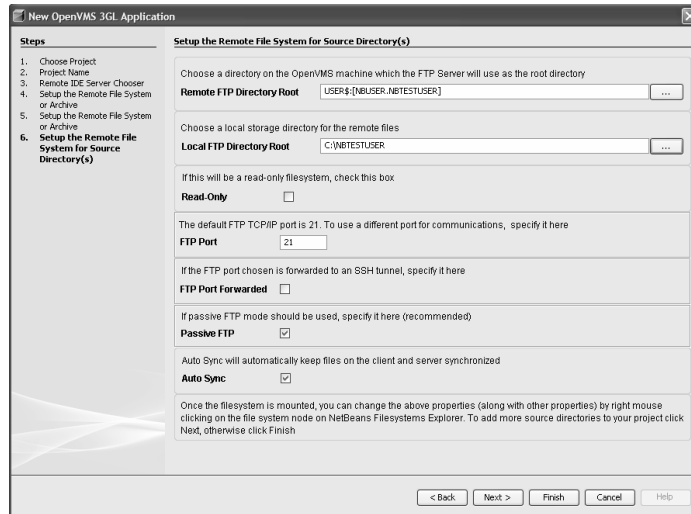
Below the table, text reads: 'Select the Remote IDE Server to perform remote operations on this file system. If no Remote IDE Server is listed on the Combo box, go to the Runtime Tab, find "Remote IDE Servers", and add desired Remote IDE Server'.

5. Select the remote file system type as **FTP based file system**. Click **Next** to view the **New OpenVMS 3GL Application** dialog box.

The dialog box shows the 'Steps' list with '4. Setup the Remote File System or Archive' selected. The title is 'Select the Remote File System or Archive'. The instruction says 'Select the file system type'. Two radio buttons are present: 'FTP based file system' (which is selected) and 'Advanced Server or CIFS/Samba based shared network file system'.

6. In the **New OpenVMS 3GL Application** dialog box enter the following:

- **Remote FTP Directory Root** – Browse to select a remote default directory for the FTP filesystem root on the OpenVMS system. The Remote FTP Directory Root is the root directory that allows you to access and see your source files from the OpenVMS system. Usually, this will be your project directory. For example, USER\$:[NBUSER.NBTESTUSER].
- **Local FTP Directory Root** – Browse to select a Local FTP Directory Root to store copies of the files from the OpenVMS system. This directory will contain some or all of the files found in the remote FTP default directory.

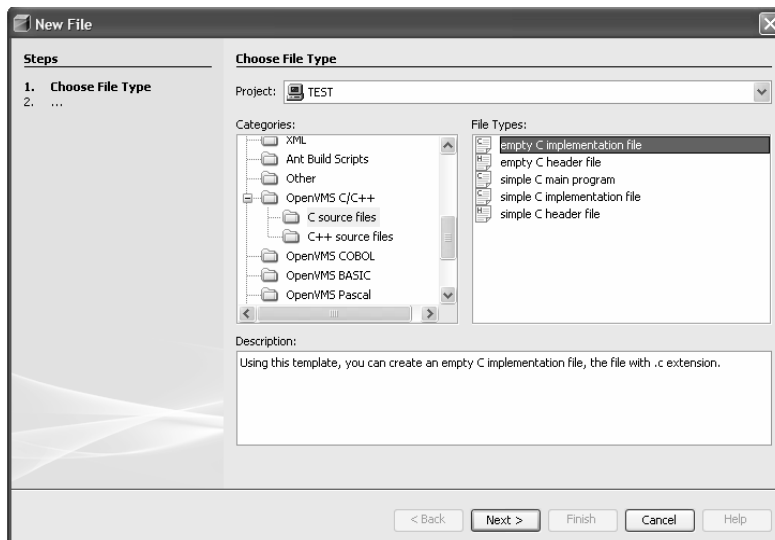


The following sections explain how to create a new C source file and a new DCL command procedure (.com) file on the remote OpenVMS system.

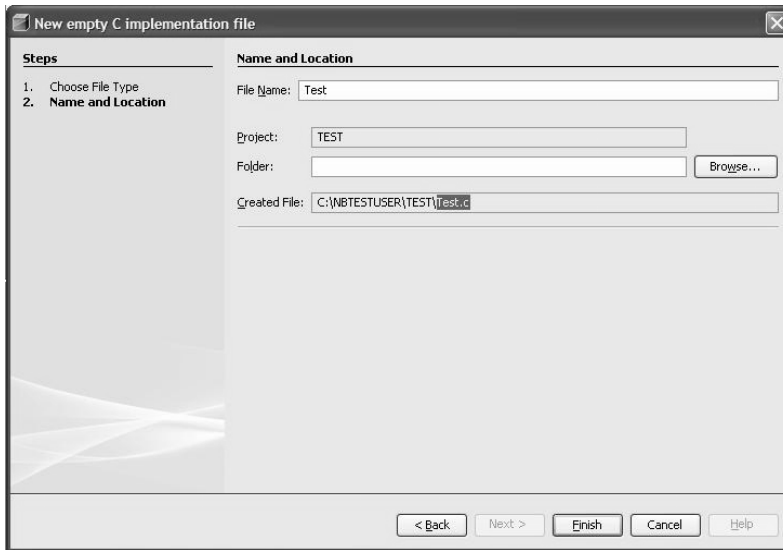
2.2.1 Creating a New C Source File

To create a new C source file in the *Test* project on the remote OpenVMS system, follow these steps:

1. From the main menu in NetBeans IDE, select **File > New File**. The **New File** dialog box is displayed. Alternately, you can right-click on your project and select **New File**.
2. Click the plus sign (+) next to OpenVMS C/C++ listed under **Categories** and select C source files.
3. In the **File Types**, select the required template file and click **Next**.

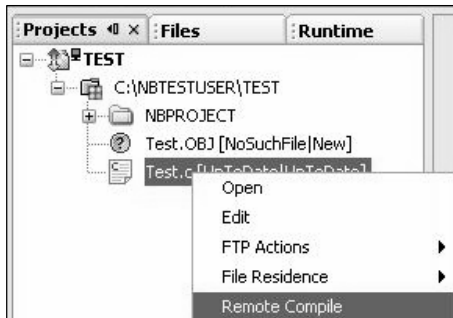


The **New empty C implementation file** dialog box is displayed. Enter the “File Name” and click **Browse** button and create a C file in a different folder and click **Finish**.

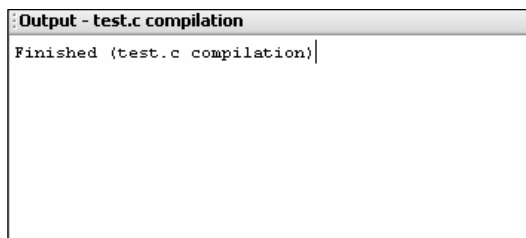


A C source file with .c extension is created in the NetBeans IDE. Your C file will appear in your **Projects** tab as remote filesystem.

4. In the source editor window, edit *test.c* source file and save it.
5. In the **Projects** tab, right-click on the *test.c* file and select **Remote Compile**.



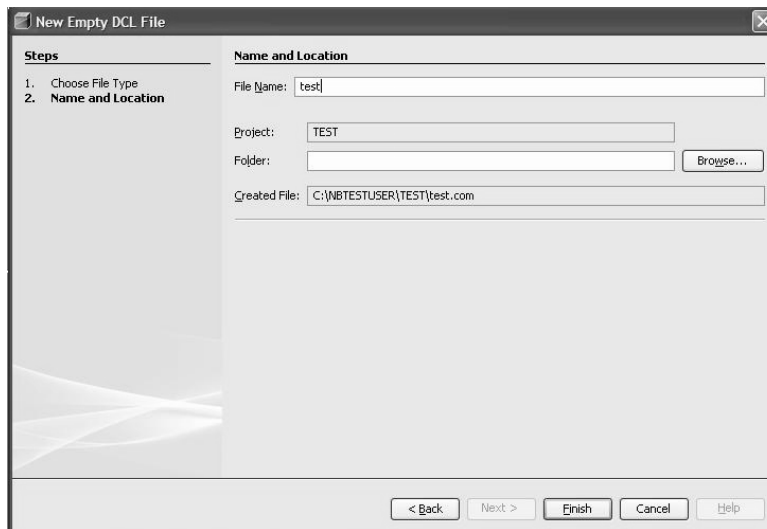
After compilation is done, an OBJ file is created and the following message is displayed in the NetBeans IDE **Output** Window. Then, follow the procedure outlined in Section 2.2.2, *Creating a DCL Command Procedure File*.



2.2.2 Creating a New DCL Command Procedure File

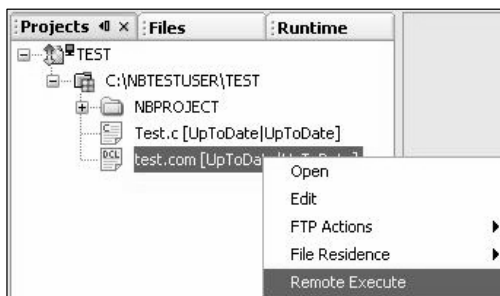
To create a new DCL command procedure (.com) file in the *Test* project on the remote OpenVMS system, follow these steps:

1. From the main menu in NetBeans IDE, select **File > New File**. The **New File** dialog box is displayed.
2. Select the OpenVMS DCL option listed under **Categories**.
3. In the **File Types**, select the required template file and click **Next**. The **New Empty DCL File** dialog box is displayed.
4. Enter the “File Name” and click **Browse** button and create a com file in a different folder and click **Finish**.



A DCL command procedure file with .com extension is created in the NetBeans IDE. Your DCL command procedure file will appear in the **Projects** tab.

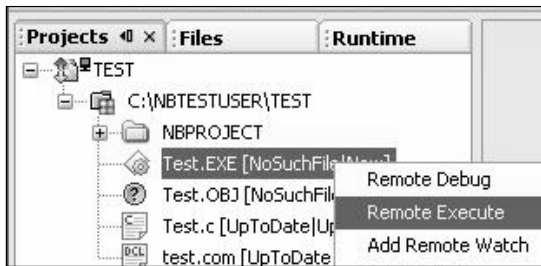
5. In the source editor window, edit *test.com* file to create required image (EXE) and save it.
6. In the **Projects** tab, right-click on the *test.com* file and select **Remote Execute**.



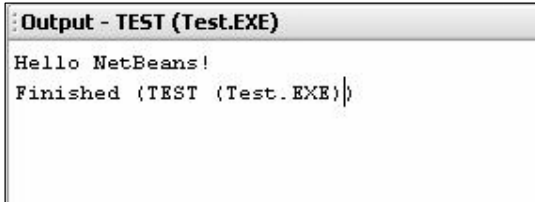
After DCL execution, executable image (EXE) is created and the following message is displayed in the NetBeans IDE **Output** window.



7. Right-click the EXE file and select **Remote Execute**.



The NetBeans IDE **Output** window is displayed.



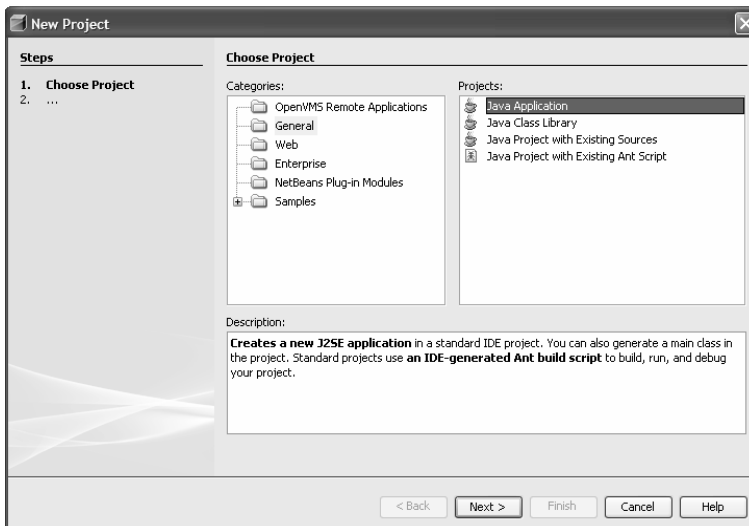
2.3 Creating a Java Project

For creating a Java project, you first create a standard Java or web-based project and then convert it to a remote project. The conversion to remote project can occur immediately after you create the project or sometime later.

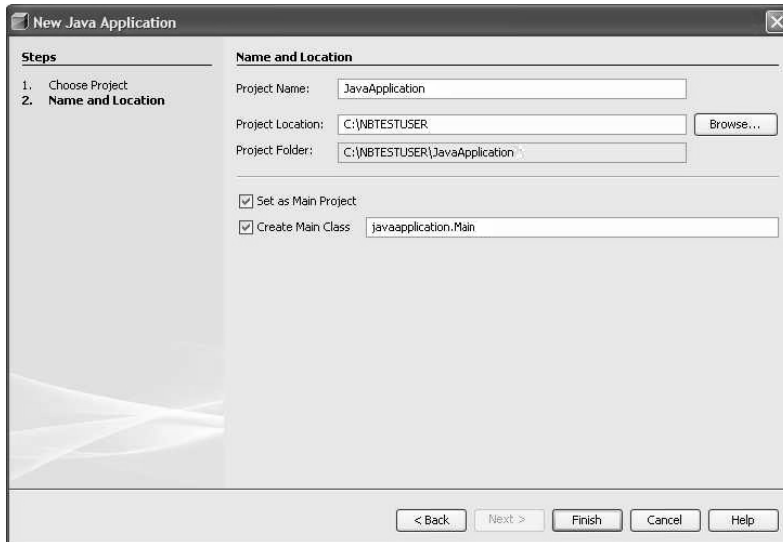
When you convert a project to a remote project, your project files and source files will be copied to the OpenVMS system and modifications will be made to the NetBeans-generated Build.xml to support remote operations.

To create a Java project using Distributed NetBeans, follow these steps:

1. From the main menu in NetBeans IDE, select **File > New Project**. The **New Project** dialog box is displayed.
2. Select **General** listed under **Categories**.
3. In the **Projects** tab, select the required Java Application template file and click **Next**.



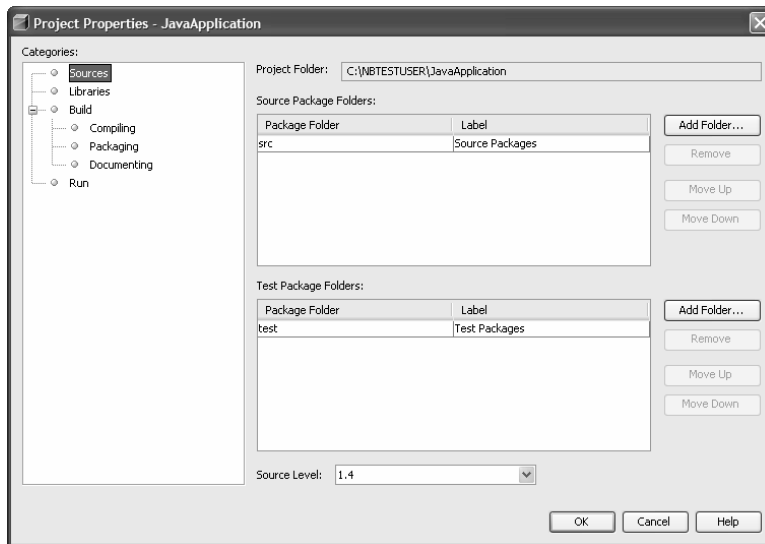
The **New Java Application** dialog box is displayed. Enter the “Project Name”, “Project Location” and “Project Folder” and click **Finish** to close the dialog box and return to the NetBeans IDE window.



4. Right-click on your Java project and select **Properties**.

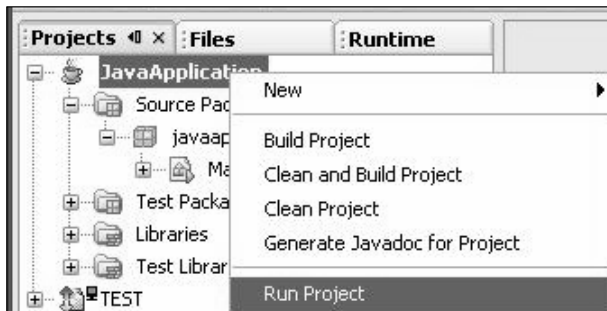


The **Project Properties – JavaApplication** dialog box is displayed.

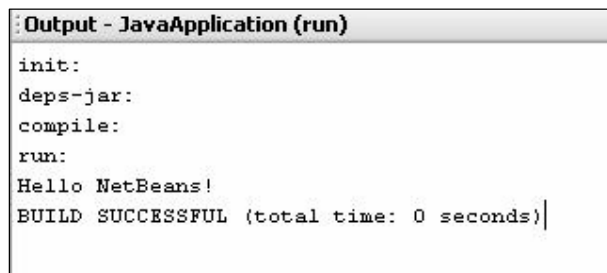


The Java source level should be less than or equal to the version of Java with which you are running the IDE Server on OpenVMS. To change the source level for your project, set the proper source level from the **Source Level** drop-down menu.

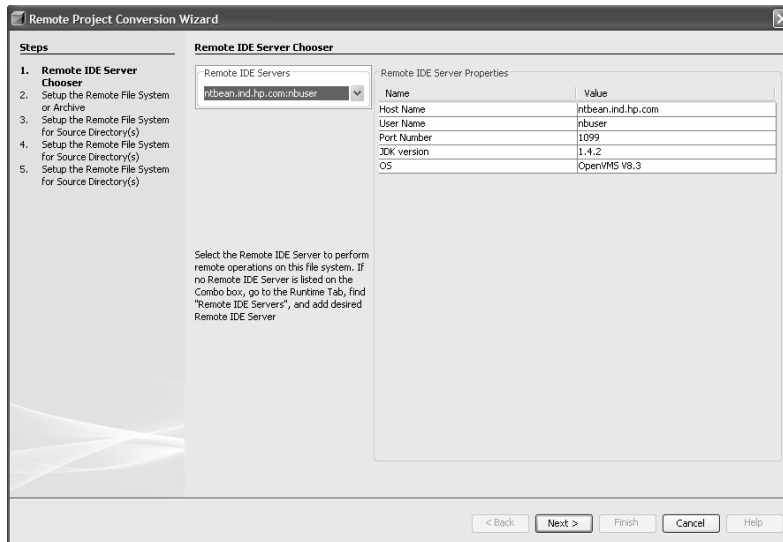
5. In the source editor window, make the required edits to your program in the *JavaApplication.main* file and save it.
6. In the **Projects** tab, right-click on your project and select **Clean and Build Project**.
7. Run your Java Application by right-clicking on your project and select **Run Project**.



The NetBeans IDE **Output** window is displayed.



8. Convert to remote project by right-clicking on your project and select **Convert to Remote Project**. The **Remote Project Conversion Wizard** dialog box is displayed. Then, follow the steps in the wizard and click **Finish**.



9. After the project has been converted to remote project, right-click and select **Remote Project Operations** and then select **Run Project**. The NetBeans IDE **Output** window is displayed.

```
Output - JavaApplication (build.xml)
-----
-init-project:
-init-macrodef-property:
-do-init:
-post-init:
-init-check:
-init-macrodef-javac:
-init-macrodef-junit:
-init-macrodef-nbjpda:
-init-macrodef-debug:
-init-macrodef-java:
-init-presetdef-jar:
init:
deps-jar:
-pre-pre-compile:
-pre-compile:
-do-compile:
-post-compile:
compile:
run:
Hello NetBeans!
BUILD SUCCESSFUL
Total time: 3 seconds
Finished {JavaApplication (build.xml)}|
```

3 Conclusion

This document has explained briefly on how to create, build, and execute your OpenVMS 3GL program and Java program. For more information about Distributed NetBeans, see the following web address:

<http://h71000.www7.hp.com/openvms/products/ips/netbeans/distnb.html>