Network Simulation Tool for Project 25: Inter-RF Subsystem Interface (ISSI) All-in-one Installation Guide for OS X

September 30, 2011
GUI version 1.0.0

OS X All-in-one

The installation of the ISSI-NST all-in-one tool in Mac OS X [1] [2] performs the copy of the client and/or server files to the target installation directory.

First of all, obtain the server installation package available at http://www.nist.gov/itl/antd/emntg/ps_p25_tool.cfm. This package will install the ISSI-NST client, the audio traces generation tool, the sample scenarios, the ISSI-NST server, the server configuration tool and the documentation.

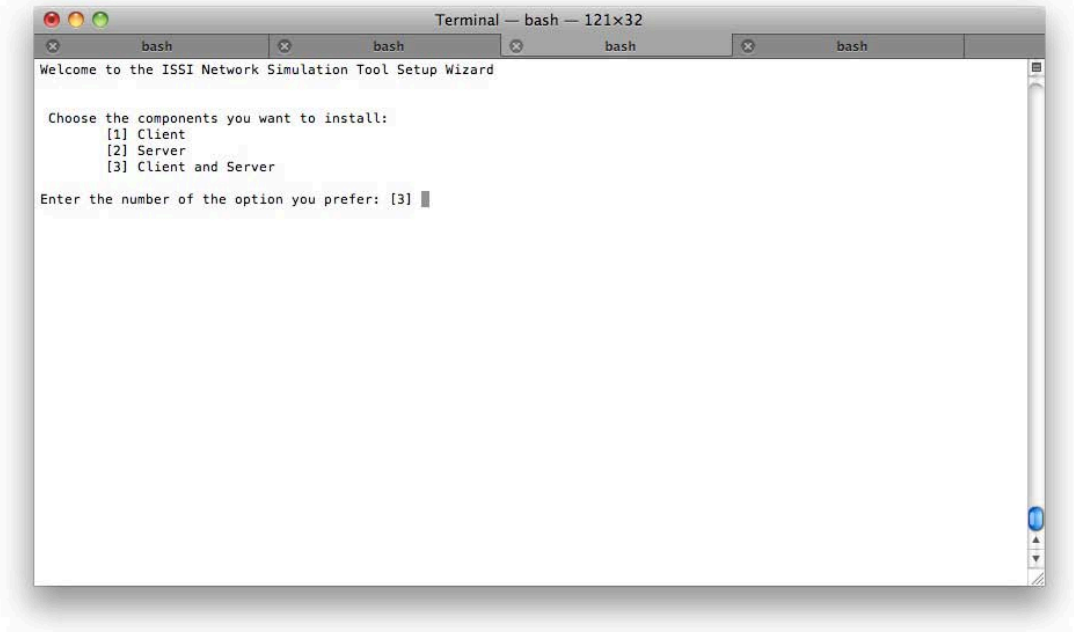
The installation of the ISSI-NST server requires Xcode [3] in the target system. The ISSI-NST client, the audio traces generation tool and the server configuration tool require a Java [4] Runtime Environment in the system, version 1.6 or higher. The documentation is provided in PDF format, so a PDF reader is required to access the documentation.

Open a terminal and run the package with '**`sh ISSI-NST_mac_setup.bin`**'.

Note: You do not need to have administration privileges to perform the installation. However, you will need to have write permission in the target installation directory. You will need administration privileges to run the server if you intend to use ports lower than 1024.

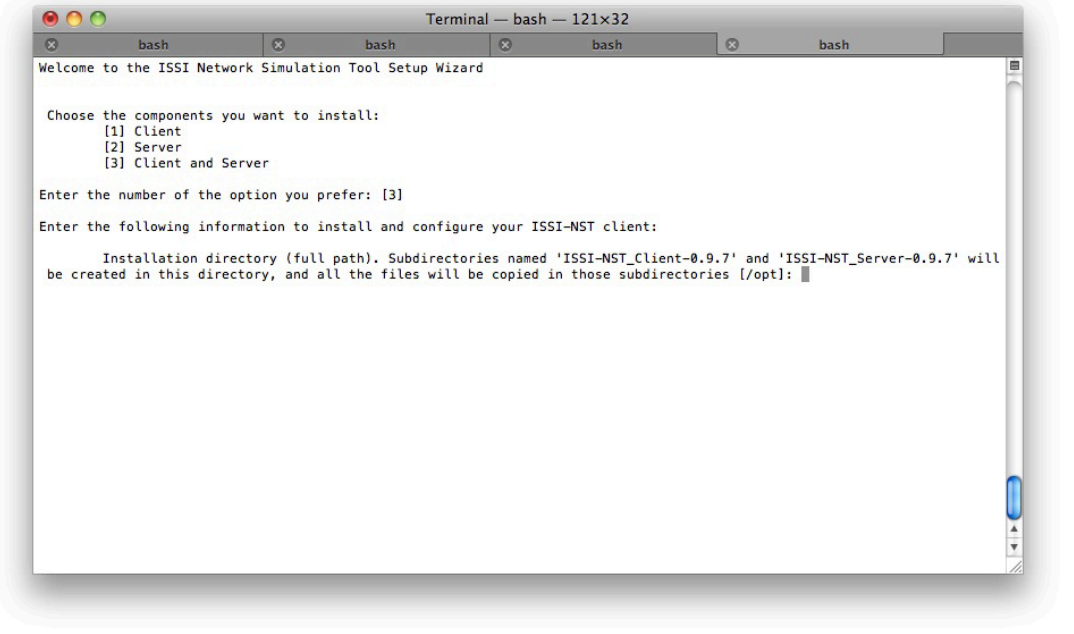
The installer will present you with a menu to select which package(s) to install:

[1] Mac OS X is a registered trademark of Apple, Inc.
[2] Disclaimer: Any mention of commercial products is for information only; it does not imply recommendation or endorsement by the NIST.
[3] Xcode is a registered trademark of Apple, Inc.
[4] Java is a registered trademark of Sun Microsystems, Inc. or its subsidiaries in the United States and other countries.



Selecting 'Client' will install the ISSI-NST client, the audio traces generation tool, the sample scenarios and the client documentation. Selecting 'Server' will install the ISSI-NST server, the server configuration tool and the server documentation. Selecting 'Client and Server' will install all of the above.

After making a selection, the installer will ask for the installation path for the selected package(s):

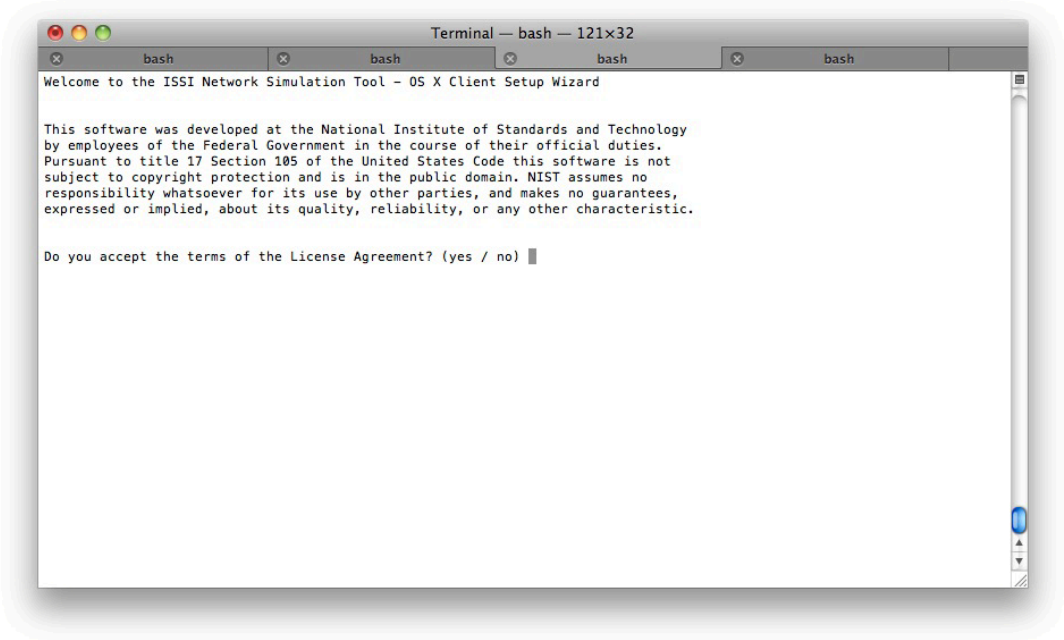


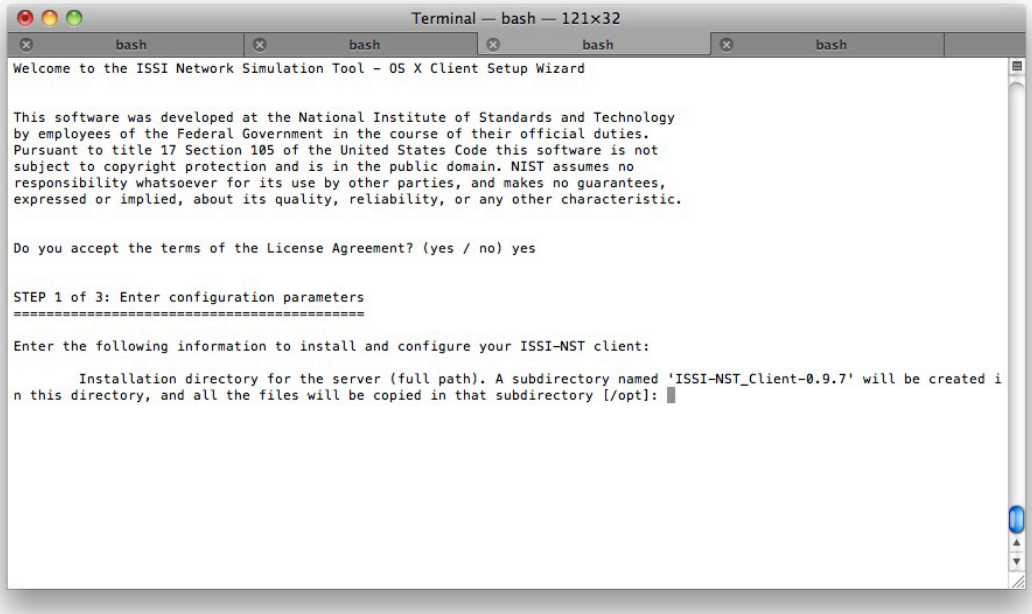
Make sure that you have permissions to write in the selected directory (and create it if it does not exist already); otherwise an error will be shown.

After this step, the individual installations of the client and/or the server packages will start.

GUI Installation

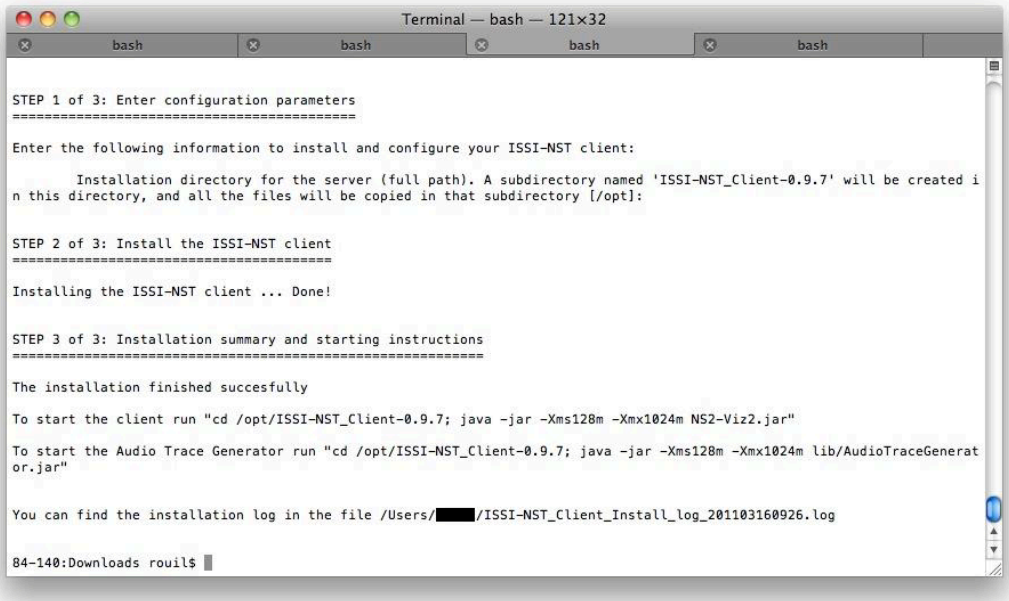
The installer will present you the license and ask for the installation path:





Make sure that you have permissions to write in the selected directory (and create it if it does not exist already); otherwise an error will be shown. If the target directory exists, the installation script will ask for confirmation to overwriting that directory (**WARNING**: Selecting 'yes' will delete all the contents of the target directory).

When the installation is over, the installer will present with a summary of the installation, along with the commands to start the tools and the path to the installation log file:

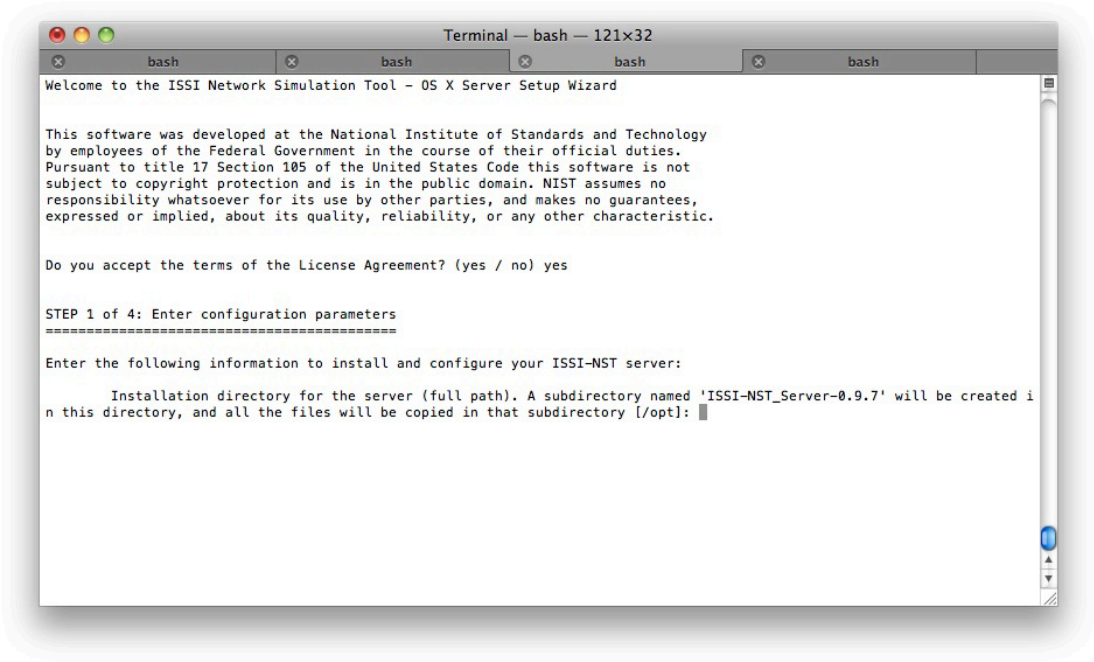


Server Installation

Follow the instructions. The installer will present you the license and ask about several configuration parameters. For each parameter, the default value is enclosed within brackets. Entering an empty answer (e.g., hitting the ENTER key) will use the default value provided. The configuration parameters requested are the following:

- **Installation directory**: The directory in which the software will be installed. The user running the installation must have write permissions in this directory.

If the target directory does not exist, the user must have the required permissions to create it. Otherwise the installation will show an error message and request a new path. If the target directory exists, the installation script will ask for confirmation to overwriting that directory (**WARNING**: Selecting 'yes' will delete all the contents of the target directory).



- **TCP port for the simulation server**: The TCP port in which this server will listen for the client requests.

  NOTE: Remember that you will need administrative privileges to start the application if you choose a port lower than 1024.
- **Listening IP address for the simulation server**: Network address in which the server will listen for client requests.
- **TCP port for the administration server**: The TCP port in which this server will listen for configuration updates.

  NOTE: Remember that you will need administrative privileges to start the application if you choose a port lower than 1024.
- **Listening IP address for the administration server**: Network address in which the server will listen for configuration updates.

```
Welcome to the ISSI Network Simulation Tool - OS X Server Setup Wizard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Do you accept the terms of the License Agreement? (yes / no) yes


STEP 1 of 4: Enter configuration parameters
===========================================

Enter the following information to install and configure your ISSI-NST server:

        Installation directory for the server (full path). A subdirectory named 'ISSI-NST_Server-0.9.7' will be created i
n this directory, and all the files will be copied in that subdirectory [/opt]:

        TCP Port of the simulation server [8000]:

        Listening IP address of the simulation server (empty string for all available addresses) []:

        TCP Port of the administration server [8080]:

        Listening IP address of the administration server (empty string for all available addresses) []:
```

When all the configuration parameters have been introduced, the installation program will proceed to install the simulation model and its required libraries:

```
expressed or implied, about its quality, reliability, or any other characteristic.


Do you accept the terms of the License Agreement? (yes / no) yes


STEP 1 of 4: Enter configuration parameters
===========================================

Enter the following information to install and configure your ISSI-NST server:

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n this directory, and all the files will be copied in that subdirectory [/opt]:

        TCP Port of the simulation server [8000]:

        Listening IP address of the simulation server (empty string for all available addresses) []:

        TCP Port of the administration server [8080]:

        Listening IP address of the administration server (empty string for all available addresses) []:


STEP 2 of 4: Compile and install ns and its libraries
=====================================================

Installing ns (this is a lengthy operation and may take a while)...
        Installing TCL   (1/5) ...Done
        Installing TK    (2/5) ...Done
        Installing OTCL  (3/5) ...Done
        Installing TCLCL (4/5) ...Done
        Installing NS    (5/5) ...
```
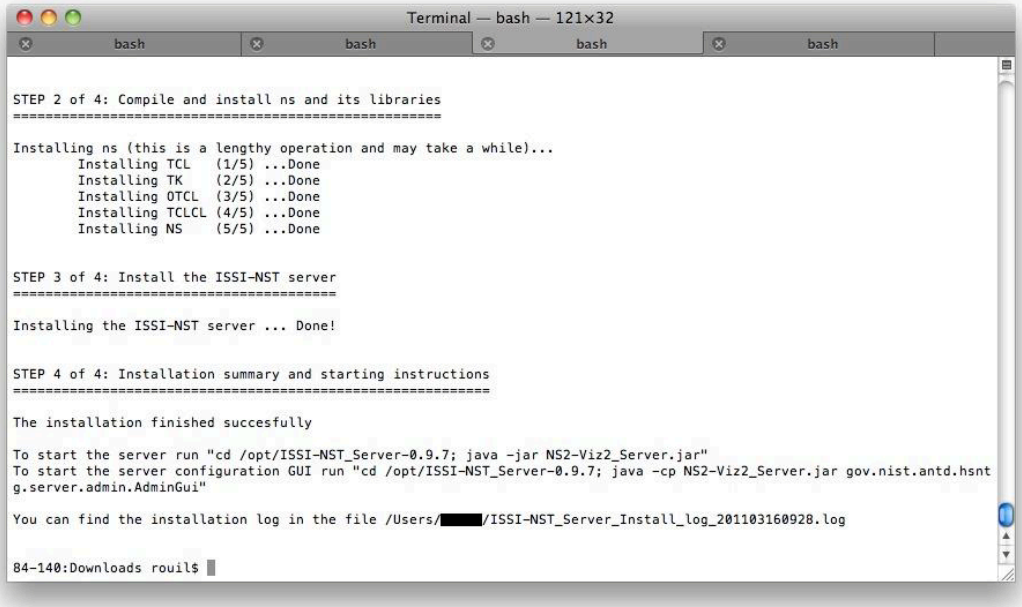
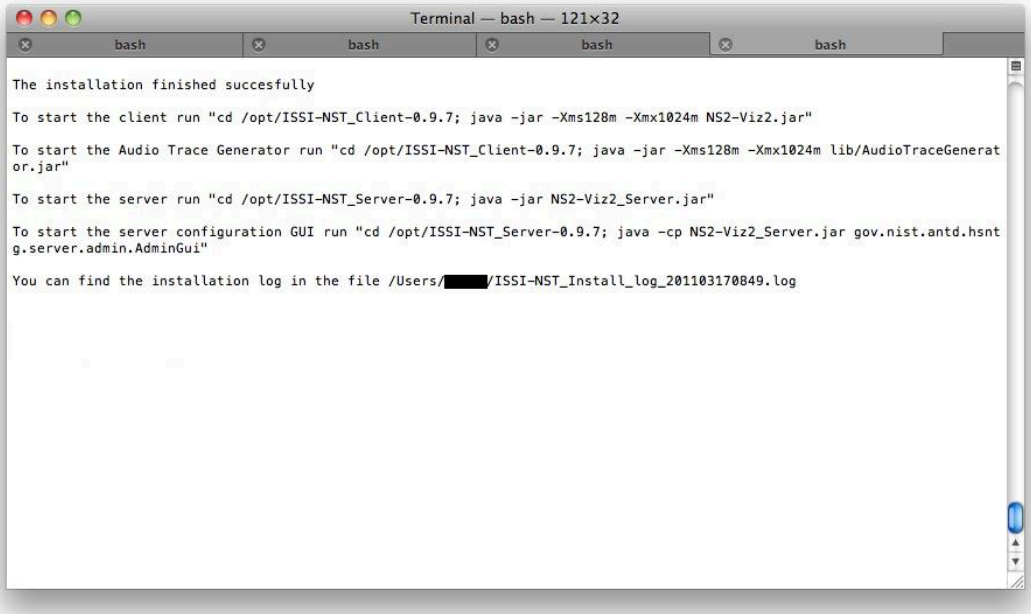

When the installation is over, the installer will present a summary of the installation, along with the commands to start the server, launch the server configuration GUI, and the path to the installation log file:



```
Terminal — bash — 121×32
bash   bash   bash   bash

STEP 2 of 4: Compile and install ns and its libraries
=====================================================

Installing ns (this is a lengthy operation and may take a while)...
        Installing TCL   (1/5) ...Done
        Installing TK    (2/5) ...Done
        Installing OTCL  (3/5) ...Done
        Installing TCLCL (4/5) ...Done
        Installing NS    (5/5) ...Done


STEP 3 of 4: Install the ISSI-NST server
========================================

Installing the ISSI-NST server ... Done!


STEP 4 of 4: Installation summary and starting instructions
===========================================================

The installation finished succesfully

To start the server run "cd /opt/ISSI-NST_Server-0.9.7; java -jar NS2-Viz2_Server.jar"
To start the server configuration GUI run "cd /opt/ISSI-NST_Server-0.9.7; java -cp NS2-Viz2_Server.jar gov.nist.antd.hsnt
g.server.admin.AdminGui"

You can find the installation log in the file /Users/[redacted]/ISSI-NST_Server_Install_log_201103160928.log


84-140:Downloads rouil$
```

The basic configuration provided with the installation program creates a default user for the simulations (**user**: `user01`; **password**: `user01`) and another one for the configuration GUI (**user**: `admin`; **password**: `admin`). This configuration can be changed using the configuration GUI (refer to the documentation for further information).

If the client package was also installed, the installation summary will include the instructions to launch the client and the audio traces generation tool.



```
Terminal — bash — 121×32
bash   bash   bash   bash

The installation finished succesfully

To start the client run "cd /opt/ISSI-NST_Client-0.9.7; java -jar -Xms128m -Xmx1024m NS2-Viz2.jar"

To start the Audio Trace Generator run "cd /opt/ISSI-NST_Client-0.9.7; java -jar -Xms128m -Xmx1024m lib/AudioTraceGenerat
or.jar"

To start the server run "cd /opt/ISSI-NST_Server-0.9.7; java -jar NS2-Viz2_Server.jar"

To start the server configuration GUI run "cd /opt/ISSI-NST_Server-0.9.7; java -cp NS2-Viz2_Server.jar gov.nist.antd.hsnt
g.server.admin.AdminGui"

You can find the installation log in the file /Users/[redacted]/ISSI-NST_Install_log_201103170849.log
```

The basic configuration provided with the server installation program creates a default user for the simulations (**user**: `user01`; **password**: `user01`) and another one for the configuration GUI (**user**: `admin`; **password**: `admin`). This configuration can be changed using the configuration GUI (refer to the server documentation for further information).