How to install and use Network Connect Client in Linux 64 bit

Operating System Compatibility:

- Ubuntu 12.04 LTS or greater.

Tested on above flavor of Linux. May work on other flavors of Linux also, users can make an attempt.

To complete the installation procedure disable proxy setting in the browser, if you have enabled it, whenever you are initializing the VPN connection.

Note: Browser recommended are Mozilla Firefox. New release of Mozilla Firefox 52.0 version are not allowing Java plugins to load. So configure the following settings to run the Java plugins in your browser.
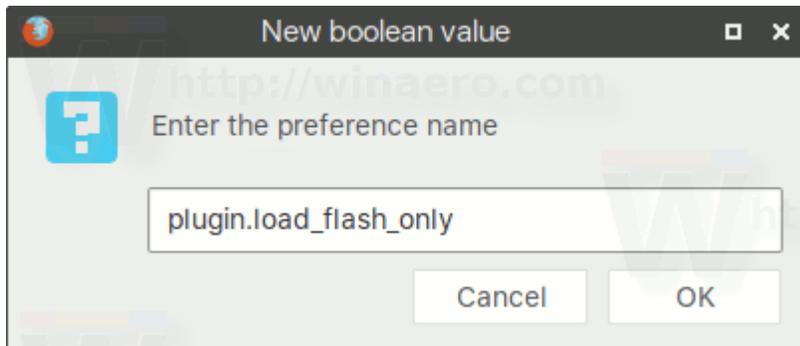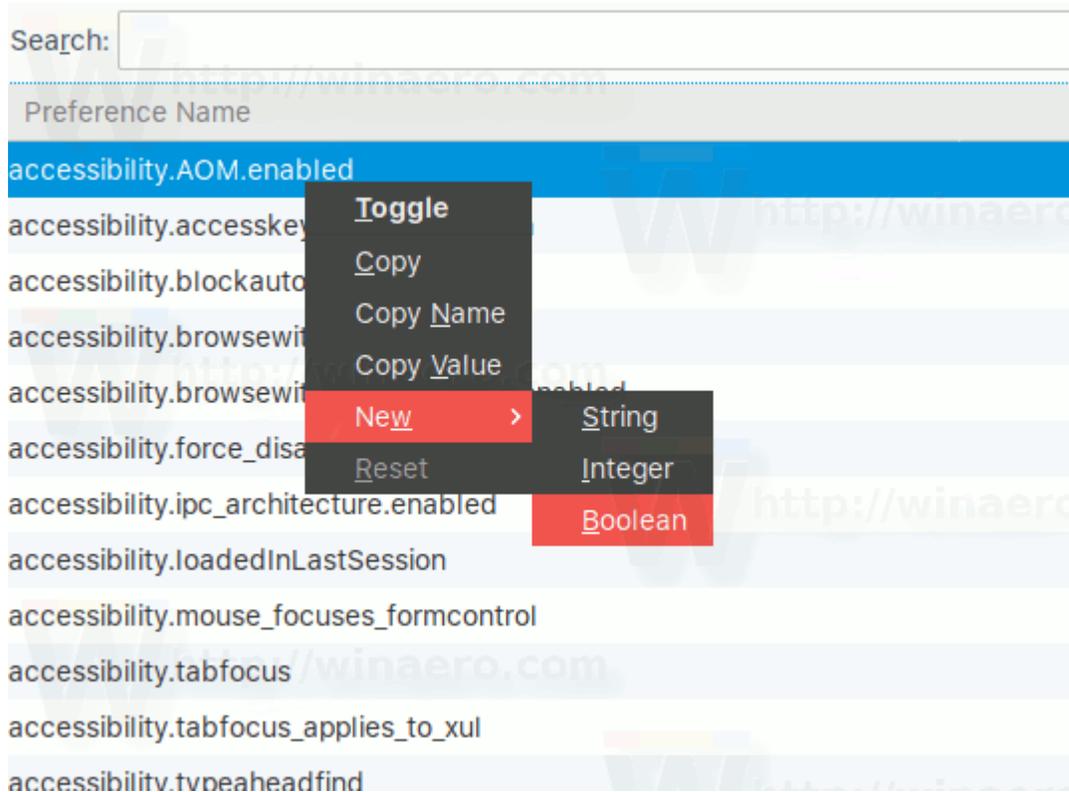
1. Open a new tab in Firefox and enter the following text in the address bar:
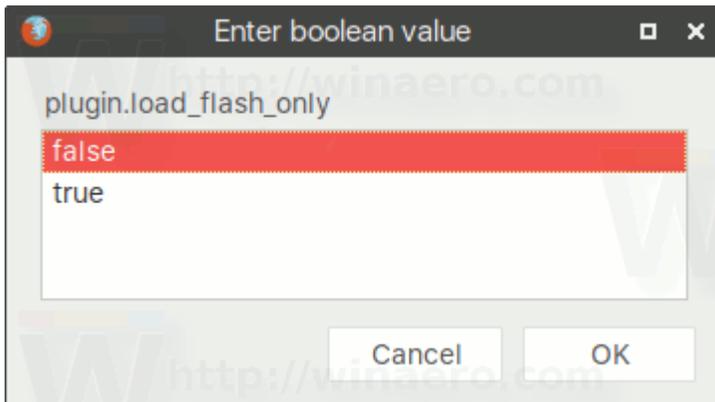
   about:config

   Confirm that you will be careful if a warning message appears for you.
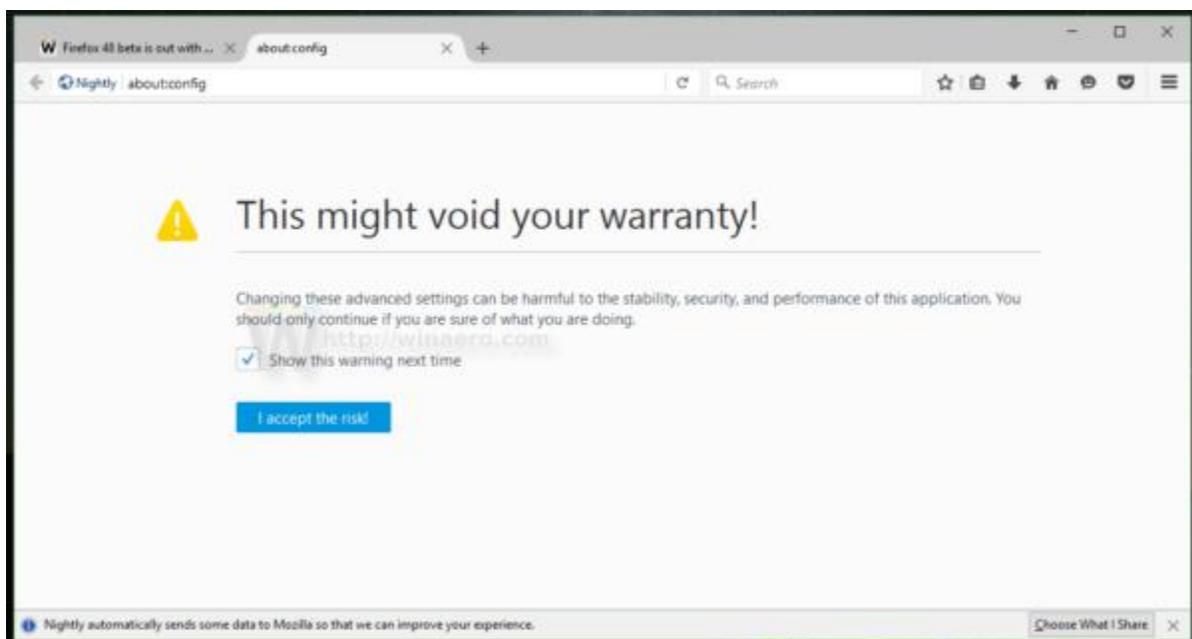
2. Create a new boolean option and name it **"plugin.load_flash_only".**

3. Set the plugin.load_flash_only option to false.

places.frecency.unvisitedTypedBonus	default	integer	200
places.history.enabled	default	boolean	true
places.history.expiration.transient_current_max_pages	user set	integer	125686
plain_text.wrap_long_lines	default	boolean	true
plugin.default.state	default	integer	1
plugin.defaultXpi.state	default	integer	2
plugin.disable_full_page_plugin_for_types	user set	string	application/pdf
plugin.importedState	user set	boolean	true
plugin.java.mime	default	string	application/x-java-vm
plugin.load_flash_only	user set	boolean	false
plugin.override_internal_types	default	boolean	false
plugin.persistentPermissionAlways.intervalInDays	default	integer	90
plugin.sessionPermissionNow.intervalInMinutes	default	integer	60
plugin.state.flash	default	integer	2
plugin.state.java	default	integer	1
plugin.state.libgnome-shell-browser-plugin	user set	integer	2

4. Restart Firefox.

Note: With Firefox 53, the ability to restore Java plugin support will be removed completely.

To use SSL-VPN in Linux, two things are required

- Java to be installed configured with its proper security settings and must enable in the browser.
- Network Connect Client to be installed.

How to install java in your machine (Open terminal window to complete the following steps)

- **Install Java 32 bit and 64 bit** First, download two Java packages (both Linux and Linux_x64) from the internet

- For Java 32 bit:

  sudo mkdir /usr/java32/
  sudo mv /home/"your_user_name"/Downloads/jdk-xxxx.i586.tar.gz /usr/java32/
  cd /usr/java32/
  sudo tar xzf jdk-xxxx.i586.tar.gz

- For Java 64 bit:

  sudo mkdir /usr/java64/
  sudo mv /home/"your_user_name"/Downloads/jdk-xxxx.x64.tar.gz /usr/java64
  cd /usr/java64/
  sudo tar xzf jdk-xxxx.x64.tar.gz

- So now we have 2 Java packages: 32 bit and 64 bit.
  Let's define alternatives for Java. Add new packages to list of Java installations:

  sudo update-alternatives --install /usr/bin/java java /usr/java32/jdk.version/bin/java 10

  sudo update-alternatives --install /usr/bin/java java /usr/java64/jdk.version/bin/java 1

- And configure 64 bit Java as a main one:
  sudo update-alternatives --config java

- Choose Java 64 bit as a default one.

Check that Java 64 bit chosen as a default one (check phrase "link currently points to"):

sudo update-alternatives --display java

- java – manual mode

  link currently points to /usr/java64/jdk.version/bin/java
  /usr/java32/jdk.verison/bin/java – priority 10
  /usr/java64/jdk.version/bin/java – priority 1
  'best' version is '/usr/java32/jdk.version/bin/java'.

1. **Install Java plugin for Firefox**

   - **mkdir ~/.mozilla/plugins**

   - **ln -s /usr/java64/jdk.version/lib/amd64/libnpjp2.so ~/.mozilla/plugins/**

   - **sudo apt-get update && sudo apt-get upgrade**

2. **Network Connect is using update-alternatives listing to decide if 32-bit jre is installed.**

   - **Command = /bin/sh -c /usr/sbin/update-alternatives --display java 2>&1 | grep -v "/bin/sh:" | grep ^/ | cut -d " " -f 1 | tr " " " "**

   - **sudo ln -s /usr/bin/update-alternatives /usr/sbin/**

   - **sudo apt-get install libstdc++6:i386 lib32z1 lib32ncurses5 lib32bz2-1.0 libxext6:i386 libxrender1:i386 libxtst6:i386 libxi6:i386.**

3. **Restart your machine.**

How to use Network Connect in your machine

1. Type the following URL in the browser.
   https://sslvpn.tifr.res.in/linuxuser

2. Log on to it with your credentials.

3. After successful login, Network Connect will be automatically launched and connection be established as shown below.

4. Click to Allow 'JAVA(TM)' Plugin. If asked you can click on Allow and Remember Button.
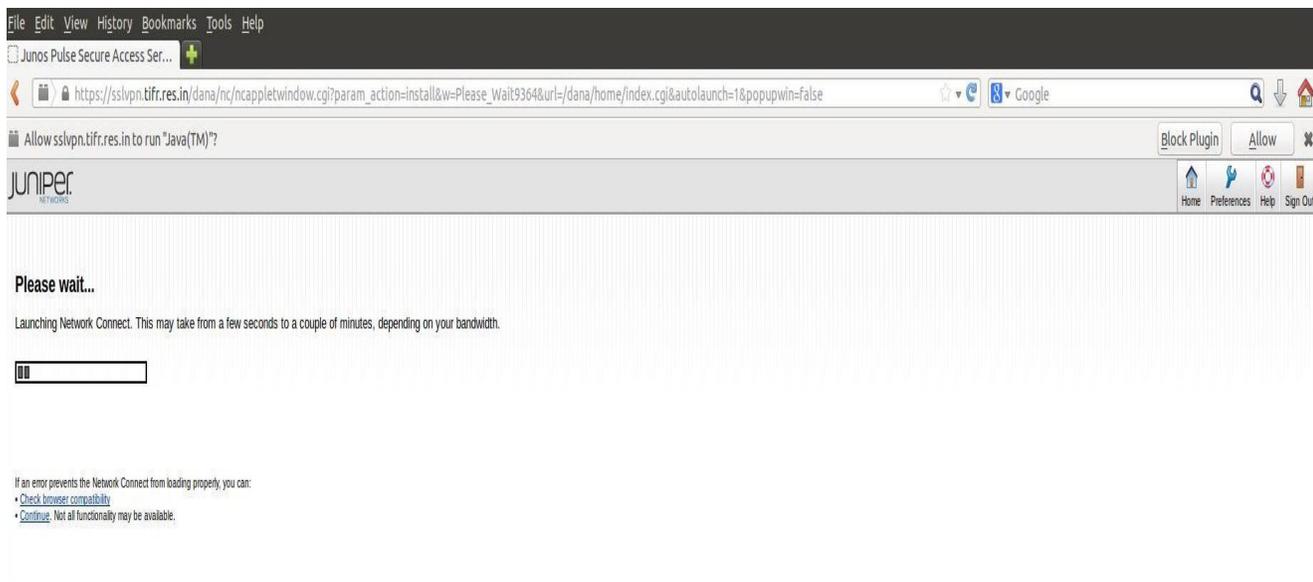
5. Following screen is displayed. Click on Continue button to proceed.
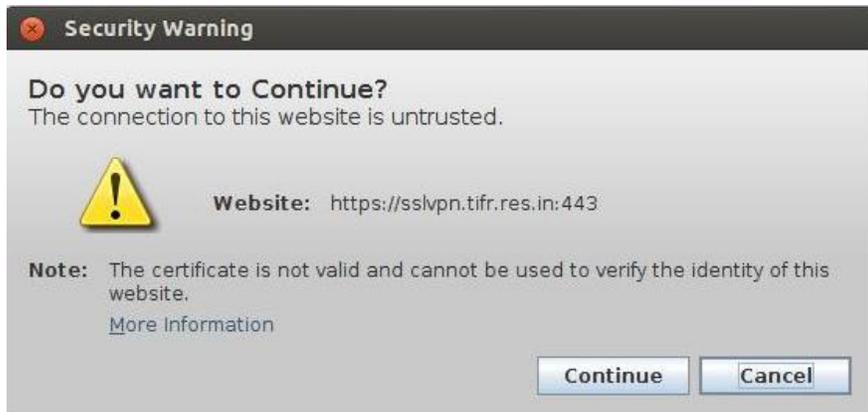
6. The Network Connect Client will be downloaded. Please click on Always button to proceed.

7. Installation process will ask you for the root permission. Enter your root credentials as shown below.

8. Your Session will be established and you will get IP address in the range on 158.144.38.x as per shown below.
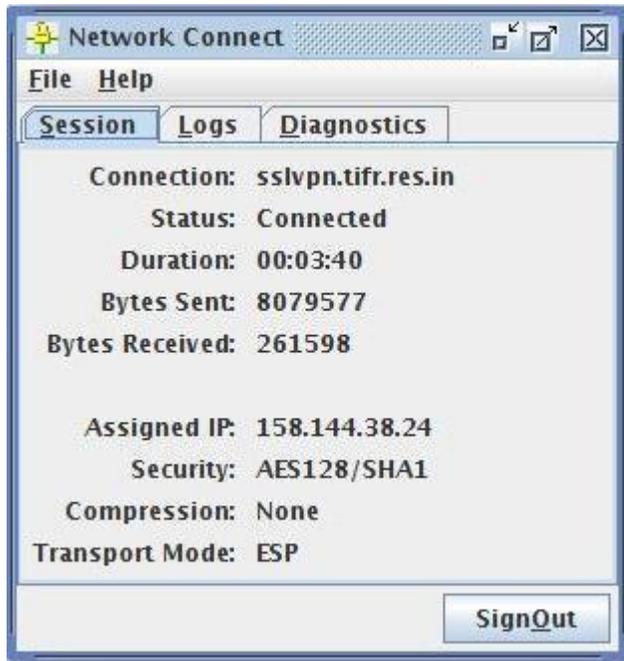
9. To maintain the VPN connectivity, do not kill the browser. Minimize the browser as well as Network Connect Client and you can proceed. To Sign out from the VPN session Click on either of the SignOut button of Network Connect Client or from the Browser.

10. Once above steps are performed succcessfully, for next session login via browser and network connect client will be automatically launced and connected.