

## Simulating in ModelSim-Altera Edition using NativeLink

### How do I perform simulation in ModelSim-Altera Edition using Quartus® II NativeLink?

Note: For general information on setting up 3<sup>rd</sup>-party simulators using Quartus II NativeLink, see the chapter [Simulating Altera Designs](#) in the Quartus II Handbook.

Here is an example of setting up Quartus II NativeLink to use ModelSim-Altera Edition for simulation.

1. Specify the path to the ModelSim-Altera Edition software
  - a. In the Quartus II software, select **Options** from the **Tools** menu
  - b. Choose the category **EDA Tool Options**
  - c. For ModelSim-Altera, give the path to ModelSim-Altera Edition installation directory as shown in Figure 1.

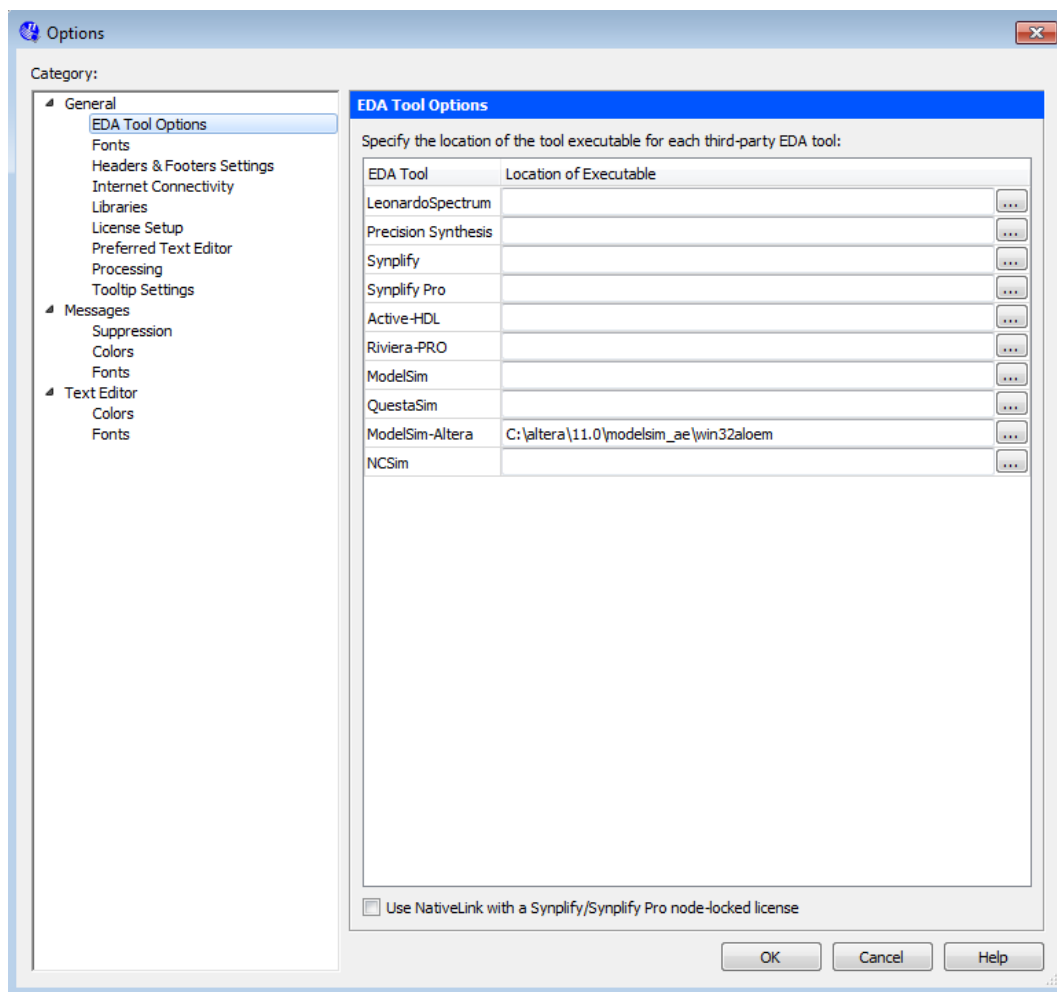


Figure 1

2. In the **EDA Tool Settings** box of the Quartus II software, specify the simulation tool and output netlist format.

- a. Under **Assignments**, choose **Settings**
- b. Choose **EDA Tool Settings** under **Category**
- c. Choose **ModelSim-Altera** under **Tool Name** for the **Simulation Tool Type**
- d. In the Simulation window as shown in Figure 2, choose **ModelSim-Altera** for **Tool name**

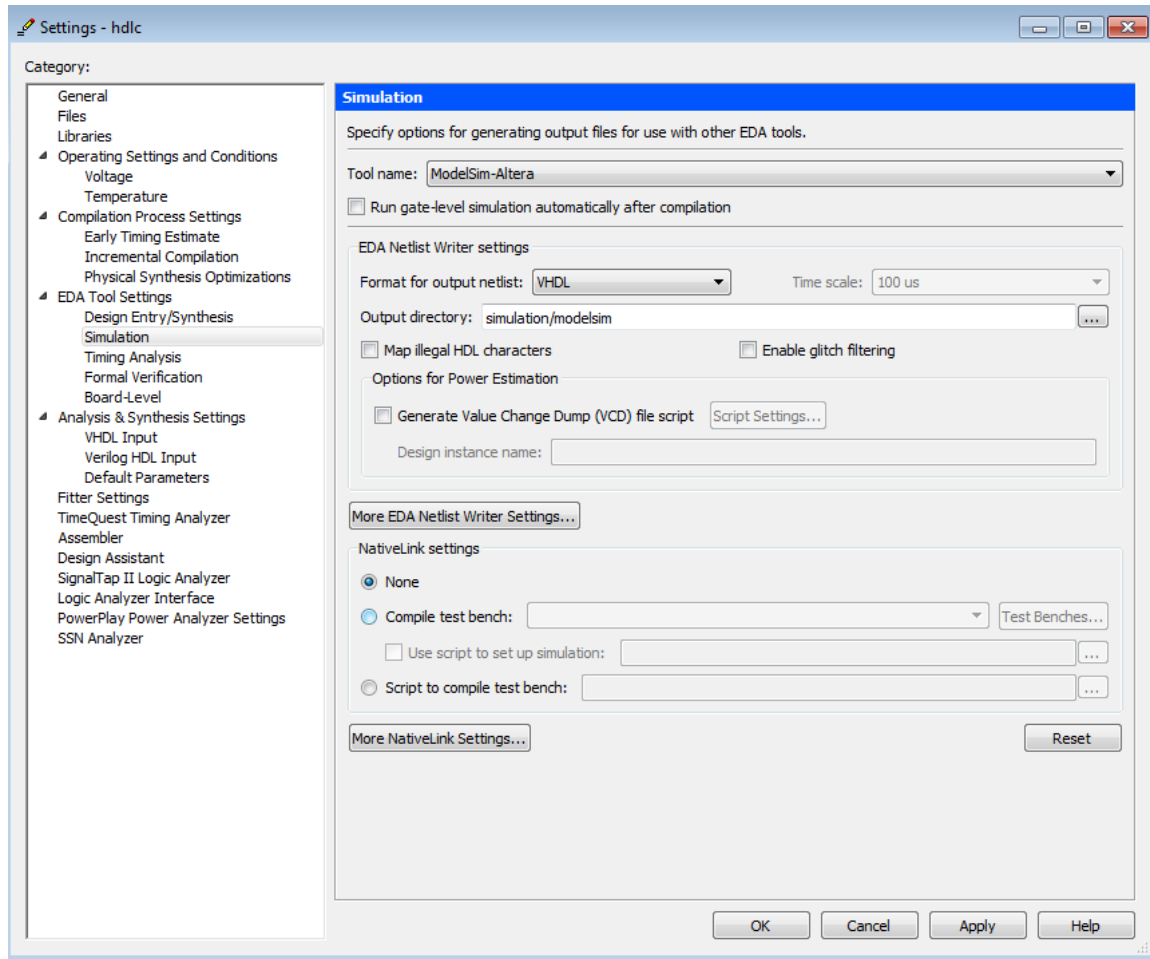


Figure 2

- e. Under **EDA Netlist Writer Settings**, select the format of the output file
3. Setting Up Testbench Files
    - a. Under **Nativelink Settings**, choose **Compile test bench**.
    - b. Click on **Test Benches**.
    - c. Click on **New**

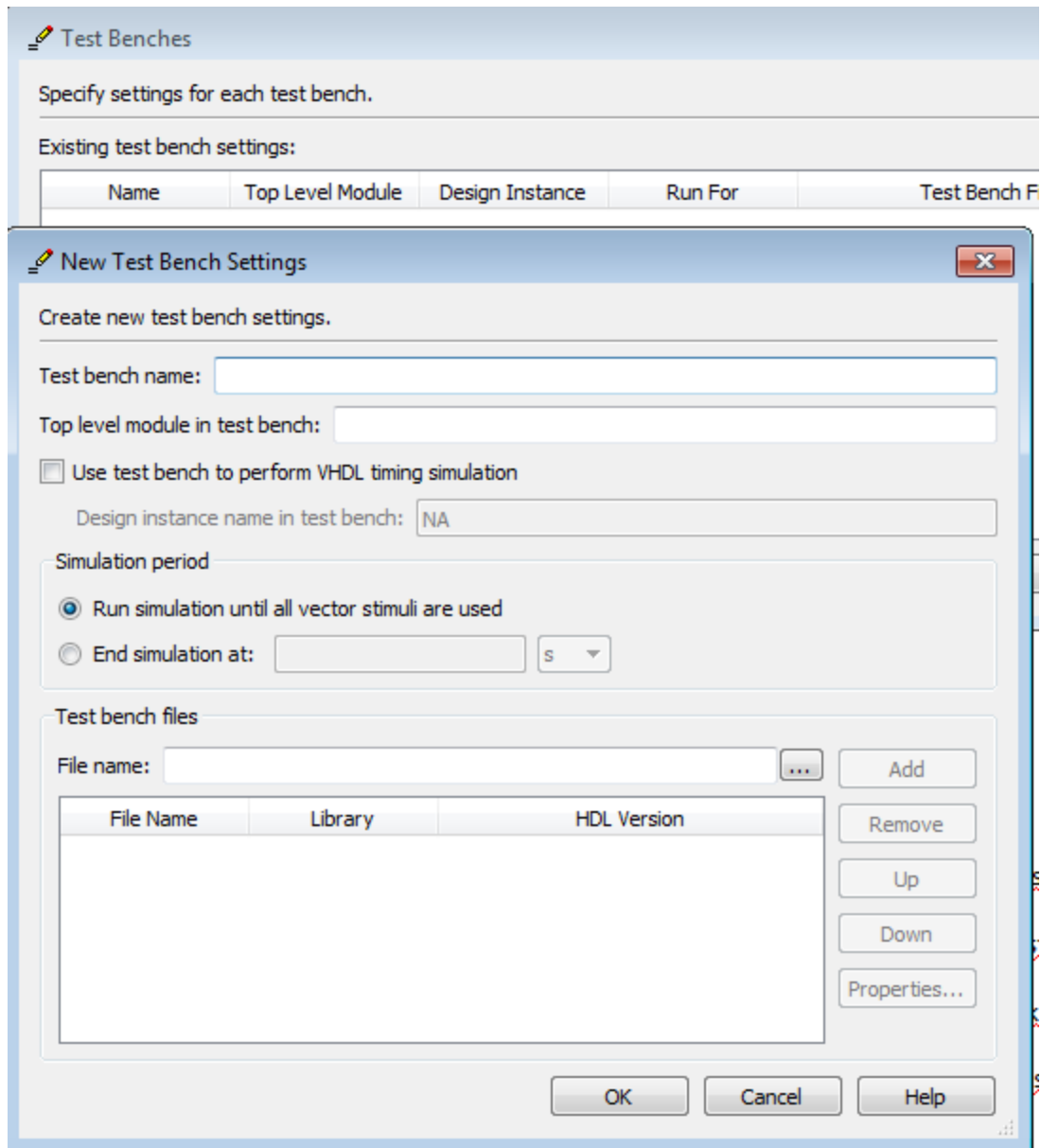


Figure 4

- d. **New Test Bench Settings** window opens up as shown in Figure 4
- e. Give the name of your test bench in **Test bench name**
- f. Give the top level module name in **Top level module in test bench**
- g. Include the test bench file and any other 3<sup>rd</sup> party vendor model that you might use to simulate the design. Make sure you click **Add** once you have selected your file(s).

4. Launch the Simulation
  - a. To run RTL simulation, perform Analysis and Synthesis for the project; to run gate-level simulation, perform a full compilation including EDA Netlist Writer for the project.
  - b. Click on **Tools**
  - c. Choose **Run Simulation Tool**
  - d. Click on **RTL simulation** for RTL simulation or **Gate Level simulation** for gate-level simulation

If you want to run the EDA simulator in command-line mode, follow these steps:

1. On the **Simulation** page, click **More NativeLink Settings**. The **More NativeLink Settings** dialog box appears.
2. Under **Existing option settings**, click **Launch third-party EDA tool in command-line mode**.
3. In the **Setting** box, click **On**.
4. Click **OK**.

If you want to generate only the simulation script without launching the EDA simulator during NativeLink simulation, follow these steps:

1. On the **Simulation** page, click **More NativeLink Writer Settings**.
2. Under **Existing option settings**, click **Generate third-party EDA tool command scripts without running the EDA tool**.
3. In the **Setting** box, click **On**.
4. Click **OK**

## Revision History

Revision	Changes Made	Date
V1.0	Initial release.	FEB 2012

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