

vManager setup

You will find the following **vManager/vPlanner** related files in your Project “**sim**” directory:

- 1) **ProjectVerificationPlanFall2018.vplanx** → This is a basic **vPlan** file which you can use with both **vManager** and **vPlanner**. Initially use it to explore and familiarize yourself with **vManager** and **vPlanner** usage. Ultimately you can use it as a basis for building your own **vPlan**.
- 2) **run_vm.vsif** → This is the “**launch**” file that you will use to have **vManager** execute your testcases. It is currently set up to just run the default Project testcase “**simple_random_test**” 5 times. These 5 tests will show up in **vManager** as “**test1**” thru “**test5**” but you can change this, as well as the actual **UVM** testcase name (once you add your own testcases), and also add additional tests (beyond the current 5) as you require.
- 3) **run_vm.f** → This is the **irun** run file used by **run_vm.vsif** to execute tests.

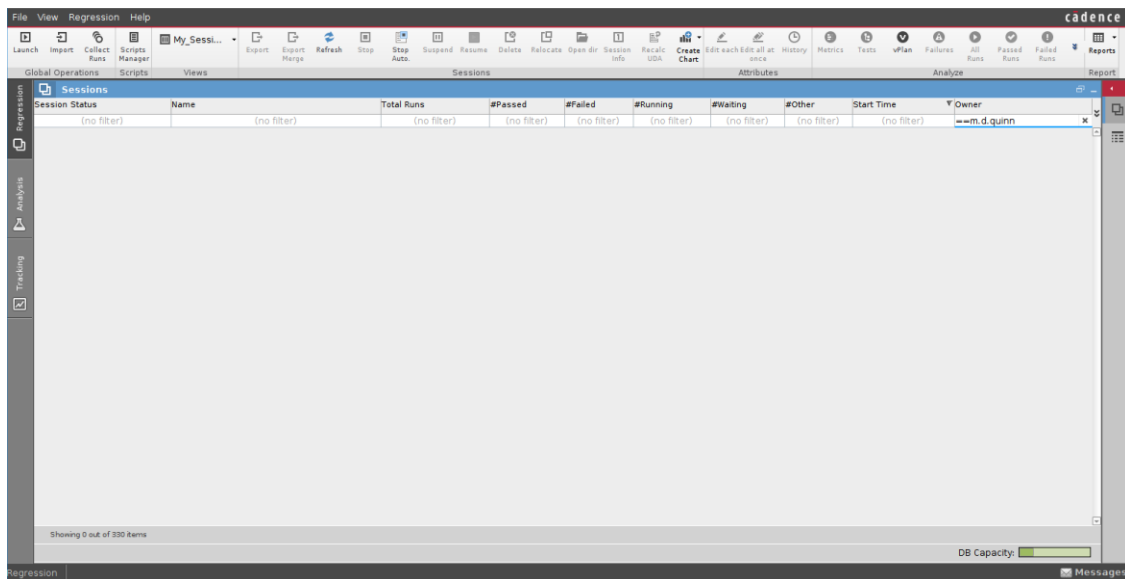
Follow the following steps to setup and run **vManager**:

- 1) Execute the following shell commands in your Project “**sim**” directory:
 - > **source ../../setup152.bash** (you should see “**Success**” printed out)
 - > **ncroot** (you should see “**/softwares/Linux/cadence/INCISIVE152**” printed out)
- 2) Now execute the following shell command to start **vManager**:
 - > **vmanager -cs &**

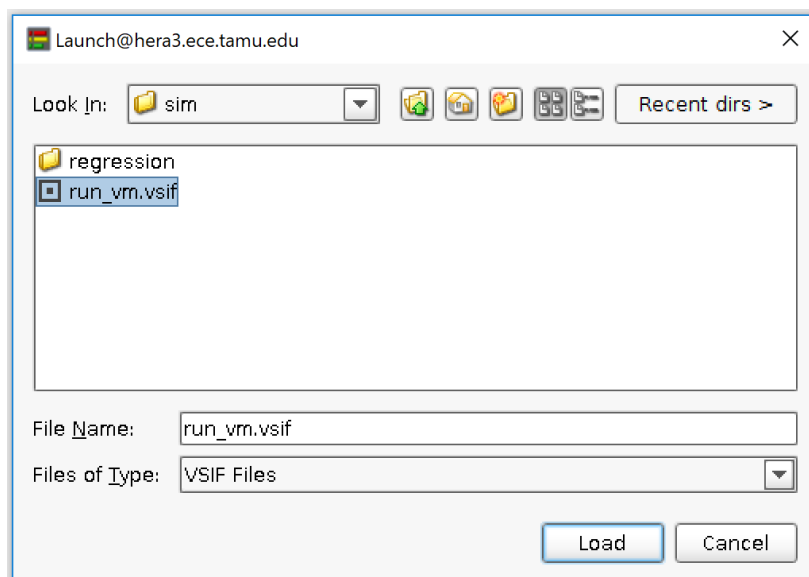
The first time you run **vManager** it will open up the following GUI:



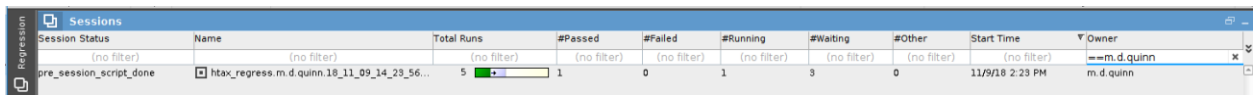
- 3) Click on the “**Launch, monitor, and import regressions**” below “**Regression Center**”
It will switch to the following GUI display (which will be the start-up GUI the next time you run vManager):



- 4) Click on “**Launch**” in upper upper left menu bar. It will open up a window like the one shown below. Select the “**run_vm.vsif**” file which should appear in the directory as shown below:

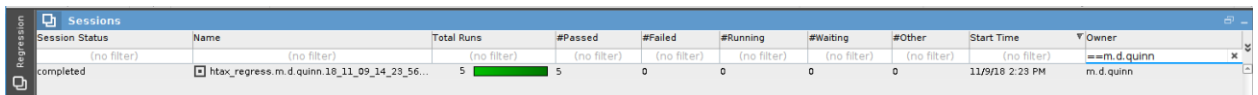


- 5) Now, click on **“Load”**. A new row will appear at the top of the **Sessions** list and you’ll need to wait till **“Session Status”** gets updated to **“completed”** as follows:



Session Status	Name	Total Runs	#Passed	#Failed	#Running	#Waiting	#Other	Start Time	Owner
(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	m.d.quinn
pre_session_script_done	htax_regres.m.d.quinn.18_11_09_14_23_56...	5	1	0	1	3	0	11/9/18 2:23 PM	m.d.quinn

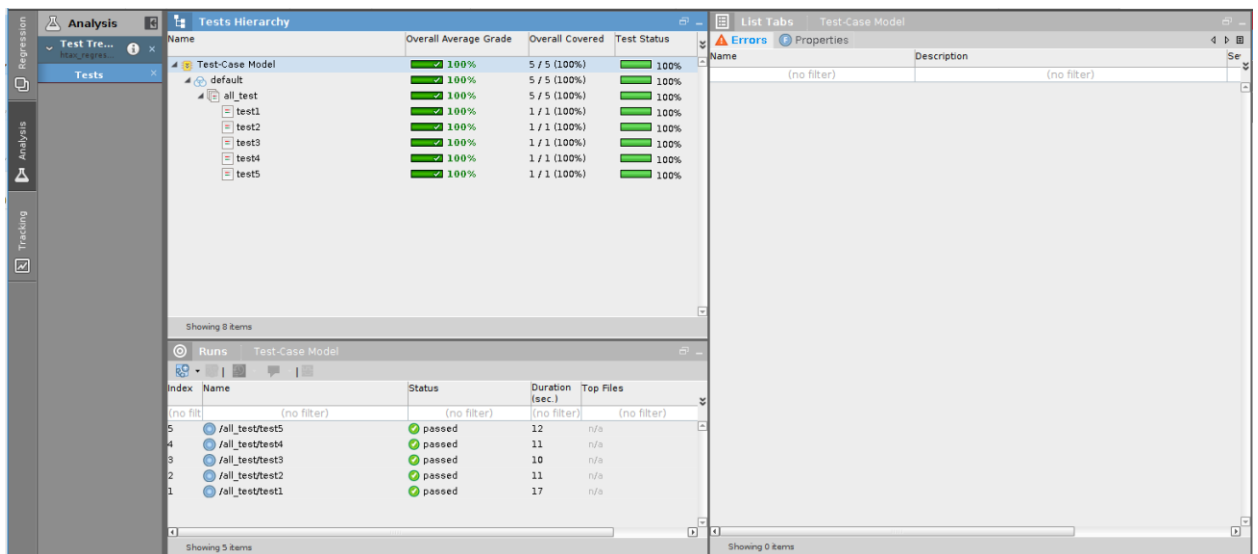
vManager will start the regression, which will complete test by test. The part which is still in progress will be “grey” and the part which is complete it will be “green”. Finally, once all regressions are completed, it will update the status as follows:



Session Status	Name	Total Runs	#Passed	#Failed	#Running	#Waiting	#Other	Start Time	Owner
(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	(no filter)	m.d.quinn
completed	htax_regres.m.d.quinn.18_11_09_14_23_56...	5	5	0	0	0	0	11/9/18 2:23 PM	m.d.quinn

(Note: the display will periodically update automatically, but you can press the **“Refresh”** button in the top menu of the GUI to update immediately.

- 6) After it is completed, double-left-click on the **“completed”** status. It will switch to the following **Analysis** window:

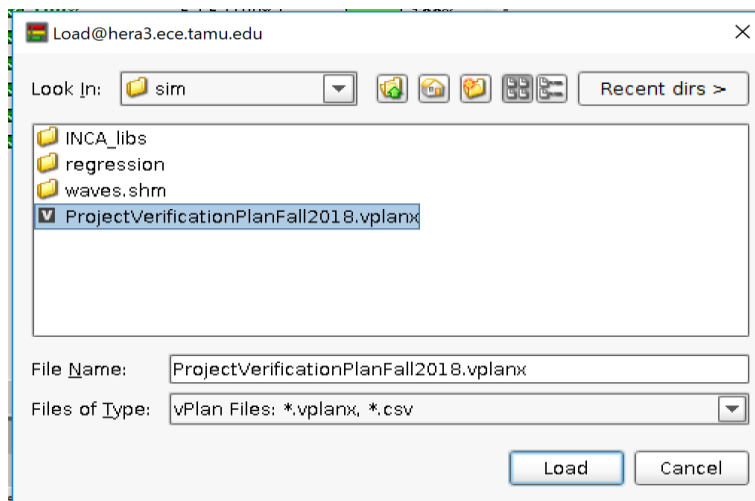


Test-Case Model			
Name	Overall Average Grade	Overall Covered	Test Status
Test-Case Model	100%	5 / 5 (100%)	100%
default	100%	5 / 5 (100%)	100%
all_test	100%	5 / 5 (100%)	100%
test1	100%	1 / 1 (100%)	100%
test2	100%	1 / 1 (100%)	100%
test3	100%	1 / 1 (100%)	100%
test4	100%	1 / 1 (100%)	100%
test5	100%	1 / 1 (100%)	100%

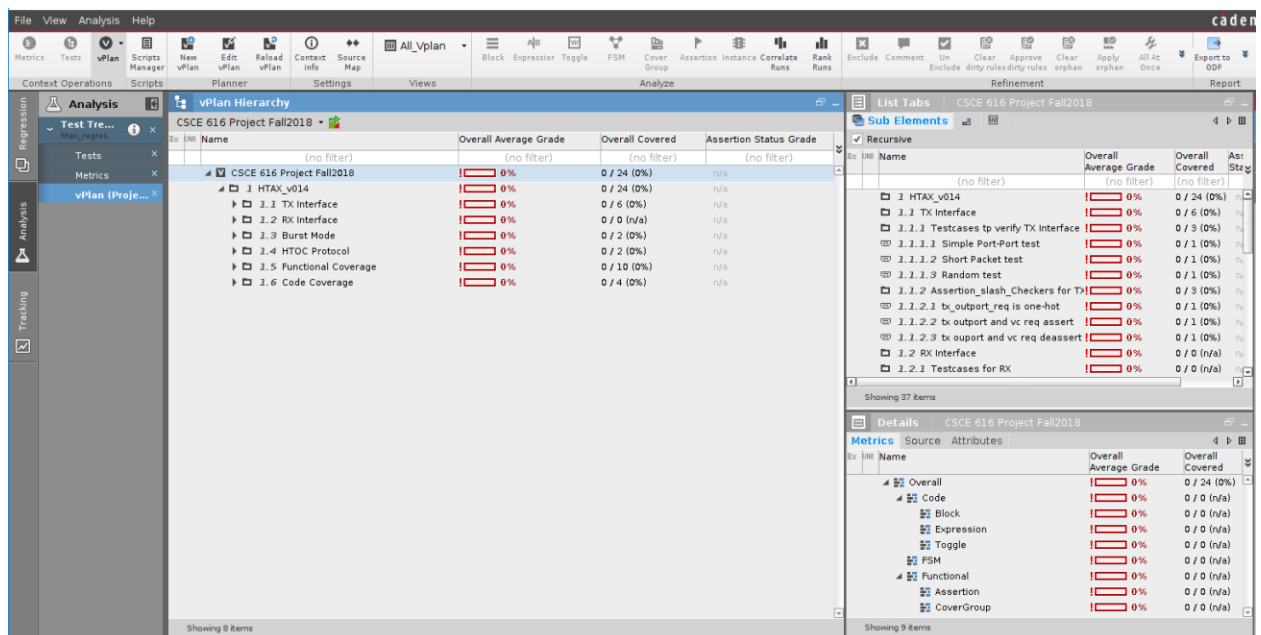
Runs			
Index	Name	Status	Duration (sec.)
5	/all_test/test5	passed	12
4	/all_test/test4	passed	11
3	/all_test/test3	passed	10
2	/all_test/test2	passed	11
1	/all_test/test1	passed	17

Initially this window contains the sections **“Analysis”**, **“Test Hierarchy”** and **“Errors”** (read the **vManager Users Guide** for how to use these and other display sections). In the **“Test Hierarchy”** section you can see results of the tests just run.

- 7) Now click on the “**vPlan**” button on the upper left side of the window. It will pop-up the below window to select and load the **vPlan** as follows (the **vPlan** file name should now be **ProjectVerificationPlanFall2018.vplanx** rather than what is shown below):



- 8) It will open-up the below “**vPlan Hierarchy**”, “**Sub Elements**” and “**Details**” sections (again, read the **vManager Users Guide** for how to use these and other display sections):



Note that currently there are no results shown (i.e. everything shown in **red** at **0%**) and this is because we have not yet linked **vPlan** items to actual simulation results (how to do this linkage will be covered in another Lab video, or read the **vPlanner Users Guide** to figure it out yourself :^).

In the “**vPlan Hierarchy**” section individual **vPlan** items can be left-clicked on to expand, explore and analyze:

The screenshot displays the Cadence vPlan Hierarchy tool interface. The main window shows a tree view of test cases under the heading "vPlan Hierarchy". The tree is organized into a hierarchy of test cases, with the following structure:

- CSCE 616 Project Fall2018
 - 1 HTAX_v014
 - 1.1 TX Interface
 - 1.1.1 Testcases to verify TX Interface
 - 1.1.2 Assertion_slash_Checkers for TX
 - 1.2 RX Interface
 - 1.3 Burst Mode
 - 1.4 HTOC Protocol
 - 1.5 Functional Coverage
 - 1.5.1 TX Interface
 - 1.5.1.1 In port
 - 1.5.1.2 Outport Request
 - 1.5.1.3 TX VC Request
 - 1.5.1.4 TX VC Grant
 - 1.5.2 HTAX TX Packet
 - 1.5.2.1 Packet Dest Port
 - 1.5.2.2 Packet Length
 - 1.5.2.3 Packet VC
 - 1.5.2.4 Dest Port CROSS Length
 - 1.5.2.5 Dest Port CROSS VC
 - 1.5.2.6 Length CROSS VC
 - 1.6 Code Coverage
 - 1.6.1 Block
 - 1.6.2 Expression
 - 1.6.3 Toggle
 - 1.6.4 FSM

Each item in the tree has a corresponding "Overall Average Grade" and "Overall Covered" status, represented by a red bar and a percentage. The "Overall Covered" status is shown as "0 / 24 (0%)" for the root, and "0 / 1 (0%)" for the leaf nodes.

On the right side of the interface, there is a "Details" section. This section provides a breakdown of the coverage metrics for the selected item (1.6.4 FSM). The details are organized into a table with the following columns: "Name", "Source", "Attributes", "Overall Average Grade", and "Overall Covered".

Name	Source	Attributes	Overall Average Grade	Overall Covered
Overall			0%	0 / 4 (0%)
Code			0%	0 / 0 (n/a)
Block			0%	0 / 0 (n/a)
Expression			0%	0 / 0 (n/a)
Toggle			0%	0 / 0 (n/a)
FSM			0%	0 / 0 (n/a)
Functional			0%	0 / 0 (n/a)
Assertion			0%	0 / 0 (n/a)
CoverGroup			0%	0 / 0 (n/a)

Note above the **Functional Coverage** and **Code Coverage** in the “**vPlan Hierarchy**”. Selecting these (by left-clicking on them) results in additional information appearing in the “**Details**” section.