AppLoader Getting Started

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Getting started – first time users

This section introduces you to the basic features and functions of AppLoader, as well as walks you through running your first load test.

Terminology

The following terms are used in AppLoader:

AppLoader Base and Web Controller:
The base and controller organize, drive, manage and monitor the load test.

Virtual Stations Manager:
Virtual Stations Manager initiates and manages terminal server sessions.

Vstation:
Vstation plays back scenarios and manages variables.

Vusers:
Vusers are the virtual users simulating actual users interacting with applications under test.

Injectors:
Injectors are the virtual environments created for load testing by Virtual Stations Manager.

Dashboard:
Dashboard is a comprehensive, flexible view of load tests, metrics and services. It is an intuitive representation of the performance information.

Backend Monitoring

Monitors
Monitors backend metrics of Systems, Logs, Applications, Tasks, Nodes, SNMP and custom monitors.

Systems
Monitors operating systems and databases metrics, such as CPU, memory, disk, file systems, processes, and services.

Tasks
Monitors availability and response time of your applications from the application layer perspective by executing user defined tasks.

Logs
Monitors logs from Systems, Databases, Applications and Syslog.

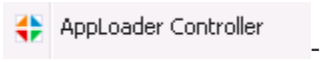
SNMP
Monitors any SNMP enabled network devices. The purpose is to collect data on device status, hardware environment (power supply, processor temperature, fan, etc), packets sent/received, uptimes, traffic errors, and more.

Nodes
Monitors availability/ response time of servers, routers, switches, and other vital network components as well as any TCP connect based applications. Opens application ports and performs pings and gives availability and response time results.

Groups
A group is a collection of monitors that share the following characteristics: alias, check frequency, connect time-out, and profile. There is no limit to the number of Groups that can be created. An admin can assign a user as the owner of the group and also specify the sharing privileges for the group.

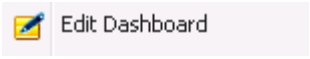
Services
Logical grouping of metrics (defined by the user). Services can also be comprised of other services. Alerts can be set on any level of service or metric.

Tools 

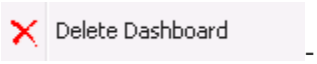


- Opens AppLoader Controller in a new window.

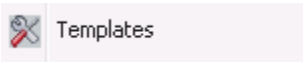
- Launches New Dashboard form.



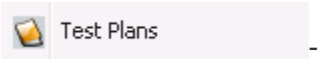
- Launches Edit Dashboard form.



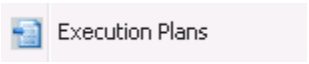
- Launches Delete Dashboard form.



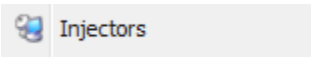
- Launches Templates home page.



- Launches Test Plans page.

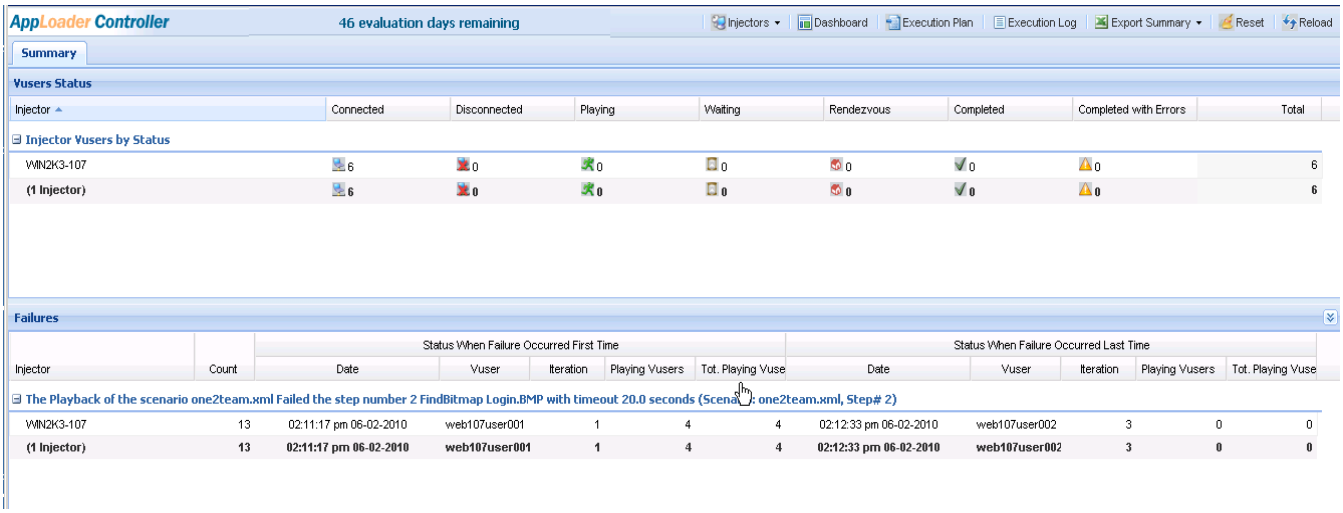


- Launches Execution Plans page.



- Launches Injectors page.

AppLoader Controller



Apploader Controller consists of 3 sections:

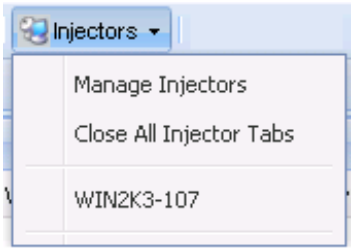
1. Tool Bar
2. Summary Tab
3. Failures Tab

Following is the detailed explanation about each section .

Apploader Controller – Tool Bar

Tool bar is located at top right corner of apploader and provides the following options:

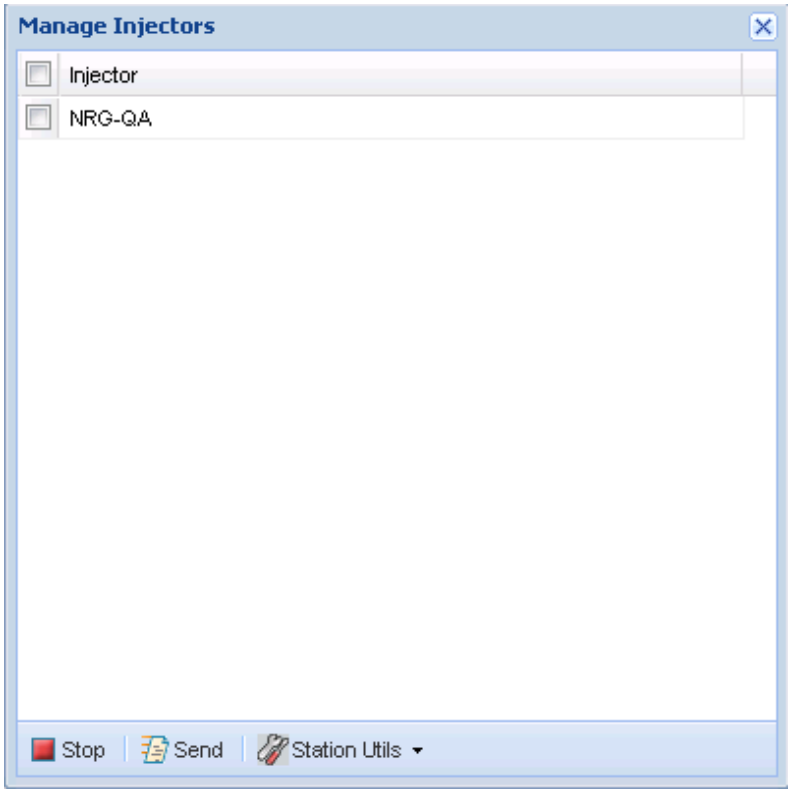
- Injectors



- Manage Injectors

Injectors can be managed by selecting “Manage Injectors” from Injectors menu. “Manage Injectors” allows user to apply an action on number of injectors simultaneously.

One or more Injectors can be selected from the “Manage Injectors” menu for further actions.

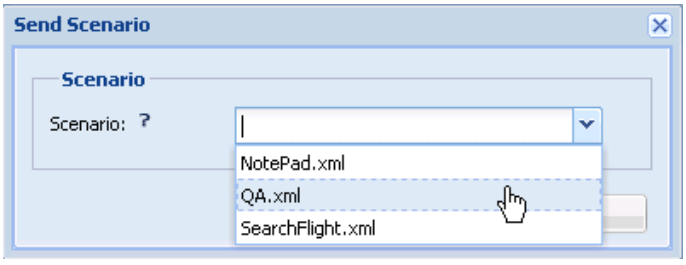


To stop an injector, select it and click on 

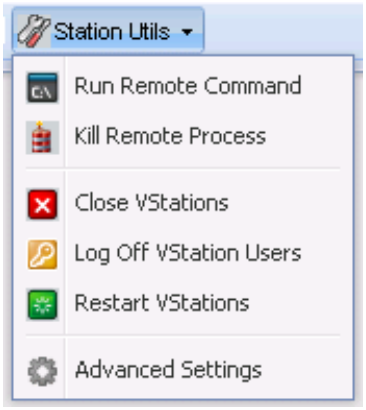
at the button.

To send a scenario to injectors, click on 

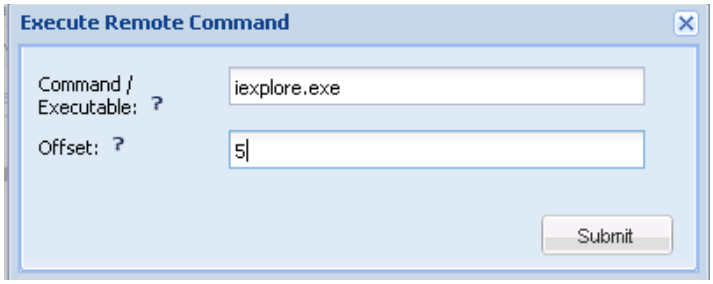
, select the desired scenario from drop down menu and click on send.



By selecting “Station Utils” user can perform the following actions.

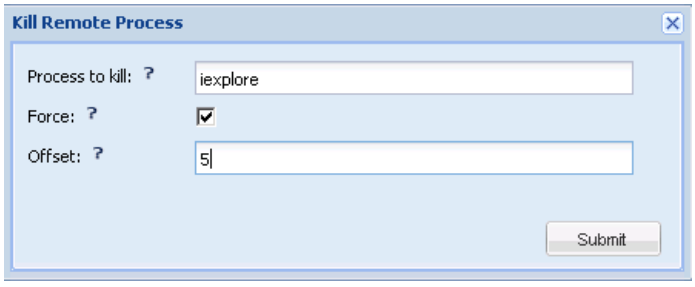


- Allows user to run a remote command for selected injectors.



- **Command/executable:** Specify the command/executable name along with any command line arguments to execute on the selected injectors. Please make sure that users on selected injectors have proper access and permissions to perform this action
- **Offset:** Specify the offset in seconds. Offset value is used as a delay for performing the action between subsequent vusers on the same injector.

- Allows user to kill remote process for selected injectors.



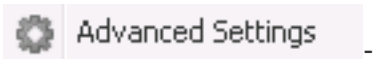
- **Process to kill:** Specify the name of the process along with its extension that you wish to terminate.
- **Force:** check if you wish to force the termination of this process.

- **Offset:** Specify the offset in seconds. Offset value is used as a delay for performing the action between subsequent vusers on the same injector.

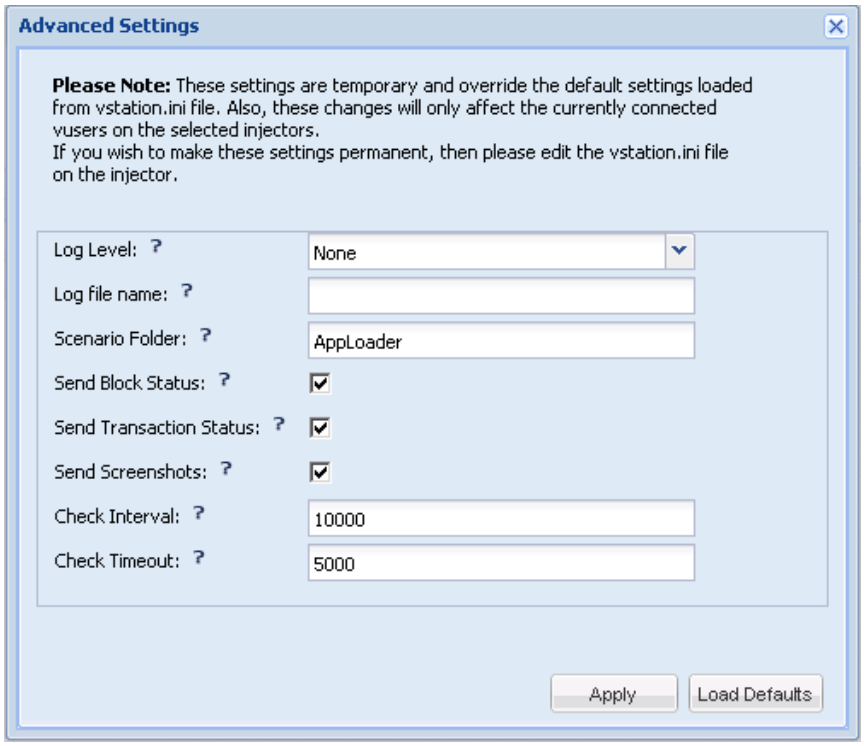
- Closes Vstation for selected injectors.

-Closes Vstation and log off vusers for selected injectors.

-Restarts Vstation for selected injectors.



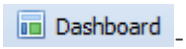
- By selecting the “Advance Settings” you can temporarily change settings in vstation.ini file for currently connected users. If you wish to make the permanent changes you need to edit vstation.ini file.



- Close All Injectors

  This option simply allows user to close all injectors tab.

- The injectors which have been connected to apploader through vstation or apploader itself will be listed here. You may have zero or many injectors connected to apploader.

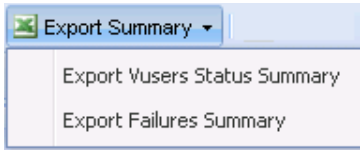


- Click to open the Dashboard window.

- Opens execution plan tab.

- Opens execution log tab which contains information for load tests which have been run on apploader.

- User can export two types of summaries at any time of the load test.



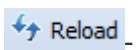
- **Export Vusers Status Summary:** Provides the summary of vuser statuse for all injectors in the following format:

  InjectorAlias,InjectorHost,Connected,Disconnected,Playing,Waiting,Rendezvous, Completed,Completed With Errors

- **Export Failures Summary:** Provides the summary of failures in the following format:

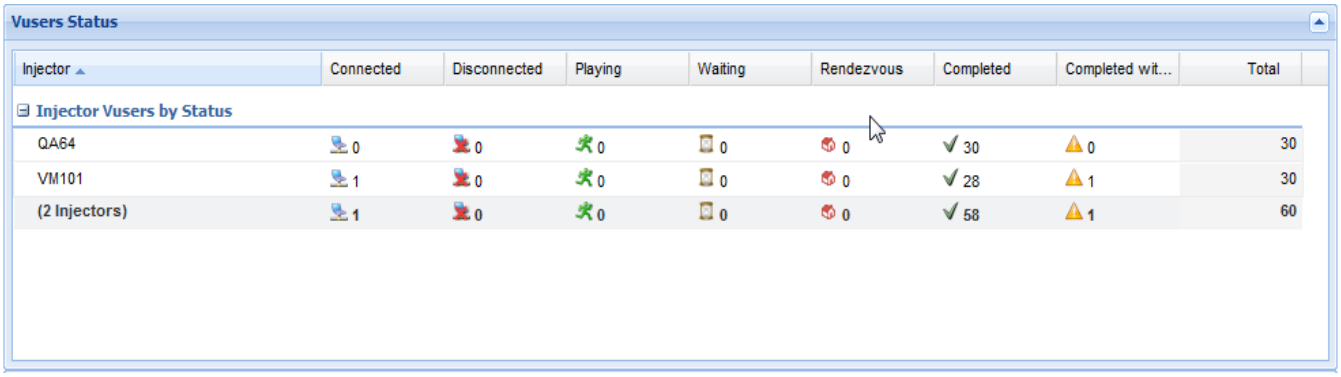
  Message,Injector,Count,First Occurance Date,First Occurance Vuser,First Occurance Iteration,First Occurance Playing Vusers,First Occurance Total Playing Vusers,Last Occurance Date,Last Occurance Vuser,Last Occurance Iteration,Last Occurance Playing Vusers,Last Occurance Total Playing Vusers

- Click to reset the controller. This action removes disconnected stations, stops playback and resets attributes for remaining stations.



- Click to reload the controller.

Apploader Controller – Summary Tab



Summary tab of AppLoader lets you know the Vusers Status as well as any failures that have occurred. Below is a brief description of the Summary tab.

Injector Column: Information about your injectors

Connected Column: Number of connected stations

Disconnected Column: Number of disconnected stations

Playing Column: Number of stations which are playing

Waiting Column: Number of stations which are waiting

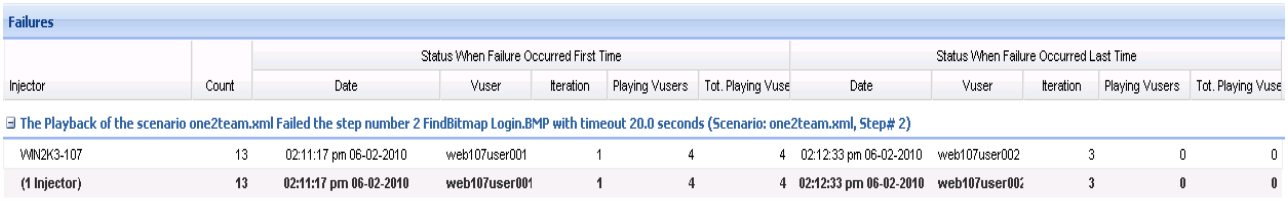
Rendezvous Column: Information about rendezvous points

Completed Column: Number of stations which have completed execution

Completed with Errors Column: Number of stations which have completed execution but with errors

Total Column: Number of stations per injector

Apploader Controller – Failure Tab



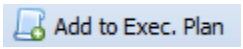
Failure tab, categorized the failures. For each failure user can see total count and the status when the failure occurred for the first and last time.

Injector Toolbar

You can select any injector, by clicking on Injectors on Apploader Controller tool bar and selecting the injector name.

 Click to select all stations within the injector tab.

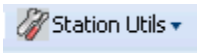
 - Toggle to enable/disable auto-refresh for AppLoader Controller.



- Click to add selected scenarios to execution plan.

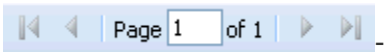
- Click to stop currently playing scenario(s) on selected stations.

- Click to send a scenario on selected stations.



- Click to show the Utils menu.

Execution Plan Toolbar



- Click to switch between pages

- Click to select the number of items to be shown per page

 - Click to show the Execution Plan Menu

 - Click to view existing Test Plans

 - Click to execute this test plan

- Click to manage rendezvous points options for this execution plan

- Click to delete selected steps from the execution plan

- Click to reload

- Click to view failed Vusers window. Failed Vusers can be selectively restarted from here.

Search - Click to search

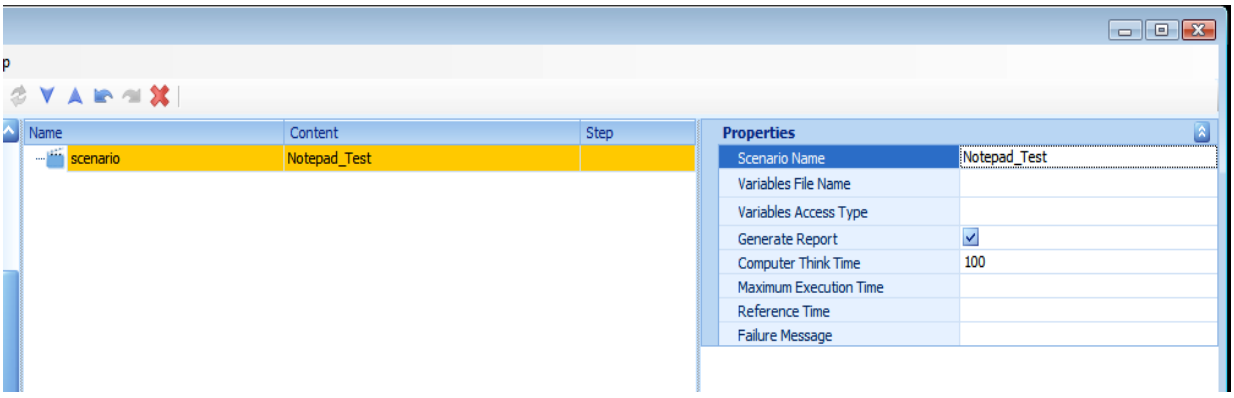
Run the first load test

The best way to learn how to use AppLoader is to practice running simple load tests. This section will walk you through step-by-step how to run a simple load test. We will now run our first load test.

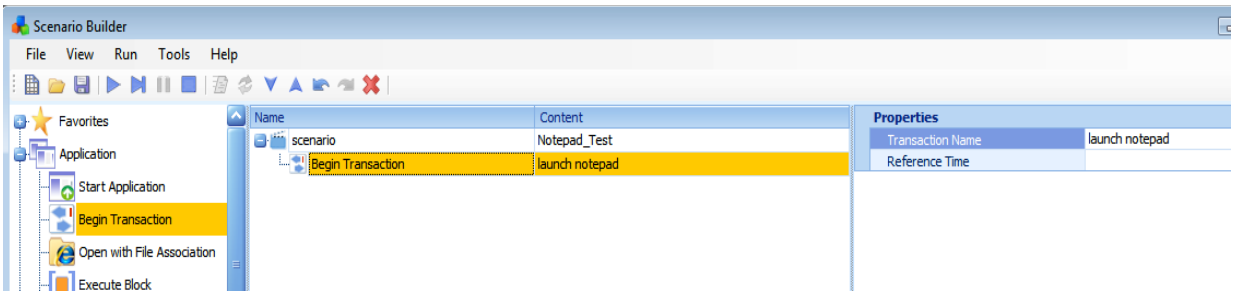
Create a Scenario using Scenario Builder

We'll launch the Notepad application, type a message, and then close the application.

1. First, click the New Scenario Icon in the toolbar to start a new scenario.
2. In the right Properties pane, assign a name for your scenario file: Notepad_Test

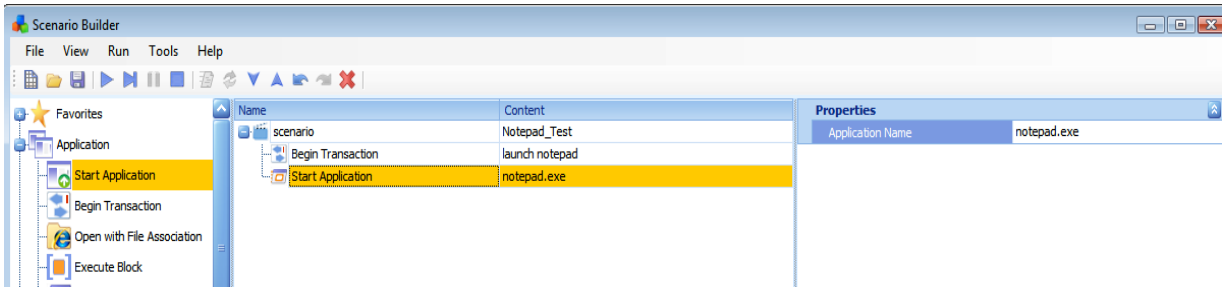


3. Double click on Begin Transaction (under Application) in the left pane to add it to your scenario. In the right Properties pane, assign the Transaction a name: launch notepad.

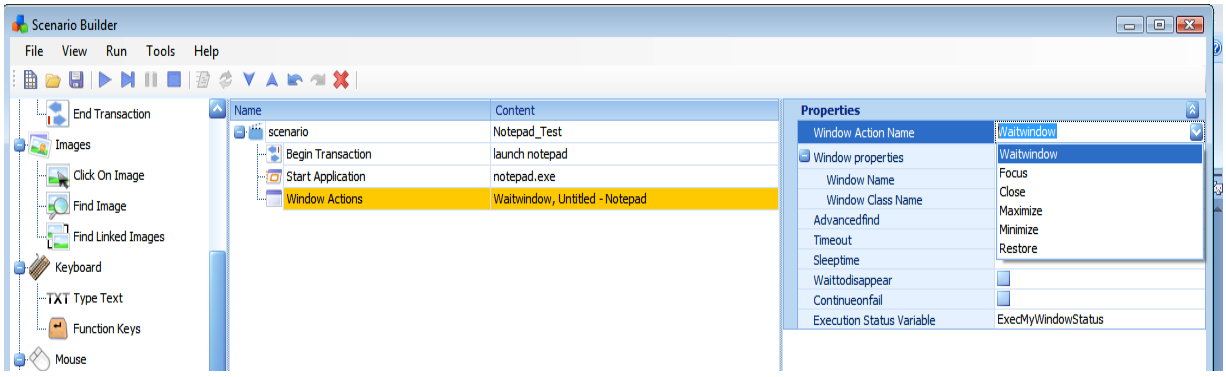


4. Double click on Start Application (under Application) in the left pane to add it to the scenario. In the right Properties pane, type the application to be launched: notepad.exe

   Note: Don't forget to include the .exe extension



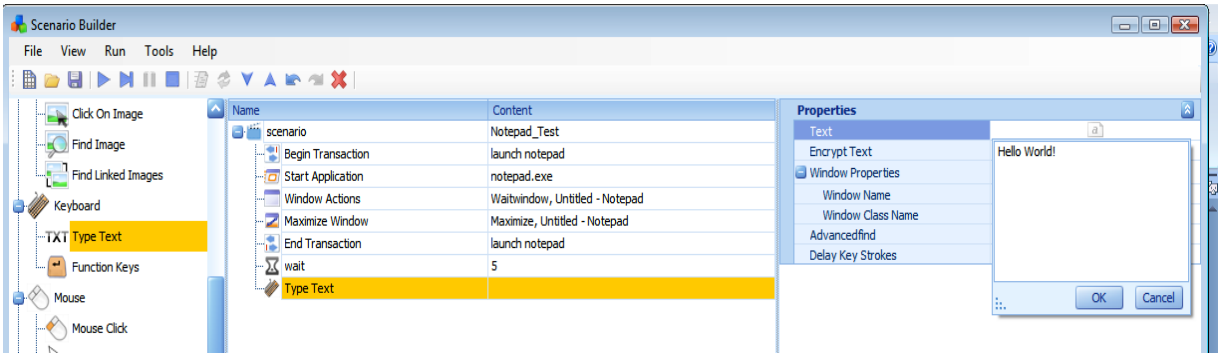
5. Next, double click on Window Action (under Window). In the right properties pane, configure the Window Action Name. Use the pull-down menu to select Wait Window. Also, enter the Window Name: Untitled – Notepad Note: You can select the window by clicking on the 'browse for a window' icon located in the windows property panel or find the name of a Window in its top title bar.



6. Next, double click on Window Action (under Window). In the right properties pane, configure the Window Action Name. Use the pull-down menu to select Maximize. Enter the Window Name: Untitled – Notepad. This means that as soon as the notepad windows opens, it will be maximized.

7. Double click on End Transaction (under Application) in the left pane to add it to your scenario. In the right Properties pane, use the pull-down menu in Transaction Name to select the transaction end: launch notepad. This means that the test will record a time measurement for all the steps that occurred between Begin Transaction and End Transaction. In this case, the test will give a measurement of the total time taken to: launch notepad and maximize the window.

8. Next, double click on Type Text (under Keyboard). In the right properties pane, click on the Text field to open the text window. Enter your desired text to be typed (i.e Hello World) and click OK. If we had skipped the Waitwindow action in Step 5 or Notepad is running in injector or Citrix environment, we would need to enter the Window Name: Untitled – Notepad. This means the text will be entered in the Notepad window.



9. Double click on Close Application (under Application). In the right Properties pane, type the application to be closed: notepad.exe

10. The scenario is not quite done yet, since upon closing Notepad, the application will ask if you want to save your changes. Therefore, to successfully close the application, we'll need to accommodate for these steps.

    Double click on Function Keys (under Keyboard). In the right Properties pane, use the pull-down menu to select Tab.

    Next, double click on Function Keys (under Keyboard) again. This time in the right properties pane, use the pull-down menu to select Enter. Since we know the "Don't Save" option is the second selection in the Exit Notepad window, hitting the combination of Tab, then Enter will successfully close the application (without saving the file).

11. Here's the final scenario:

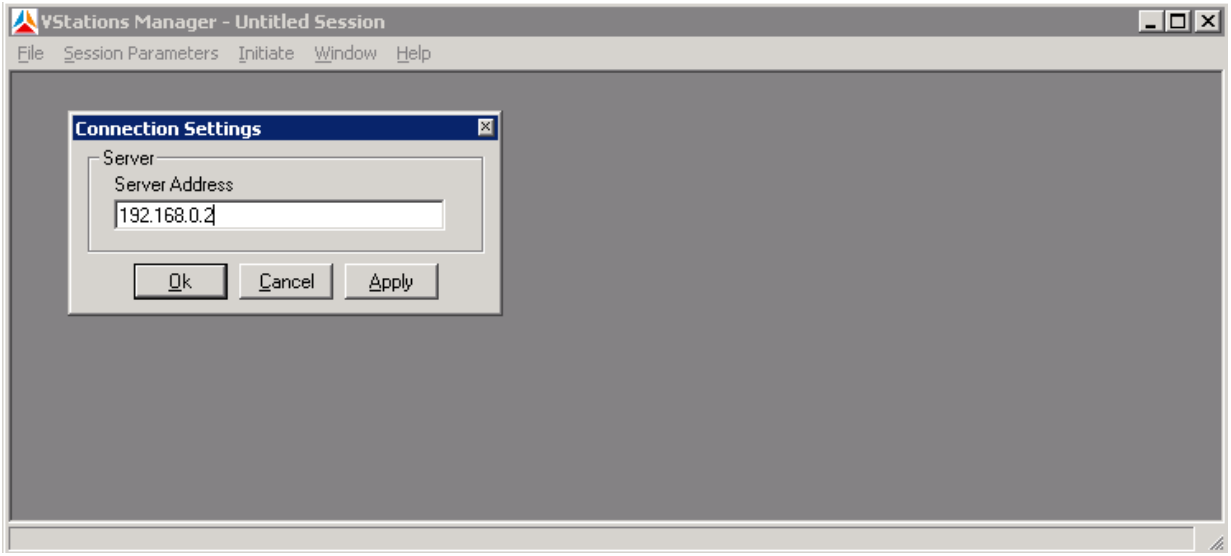
Send Scenario to the AppLoader Base

12. Mouseover on “Run” tab and click on “Send”. You will see a dialog box saying “Send successful”.

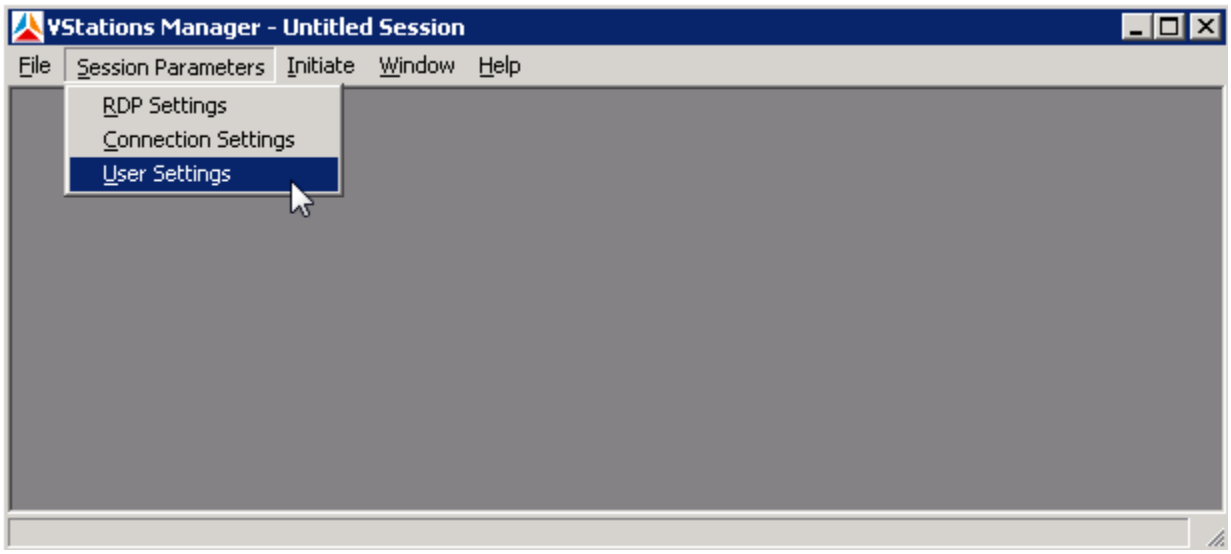
Launch Vusers via Virtual Stations Manager

13. Double click on Virtual Stations Manager icon.

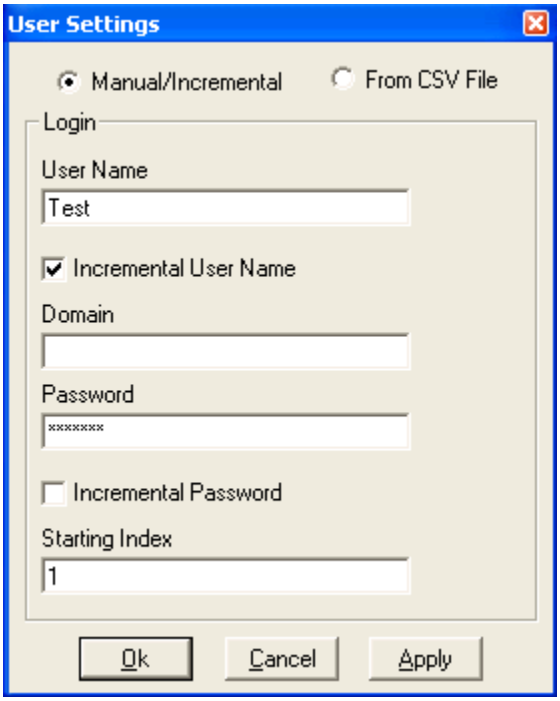
14. Specify the IP Address / Hostname for the Terminal Server:



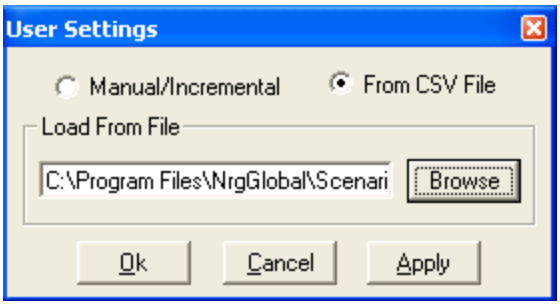
15. Specify the user settings:



a) You can input parameters manually:



b) You can input parameters from a CSV file:



The file must be in the following format:

User,password,domain,host

Example:

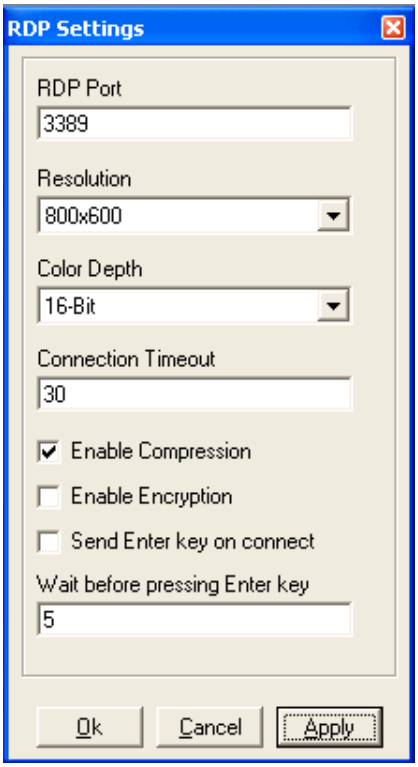
user001,zebra,mydomain.com,192.168.0.18

Using a CSV file allows sessions for different hosts to be initiated in the same Virtual Stations Manager window.

Note:
All values must be specified for each row in the CSV file.

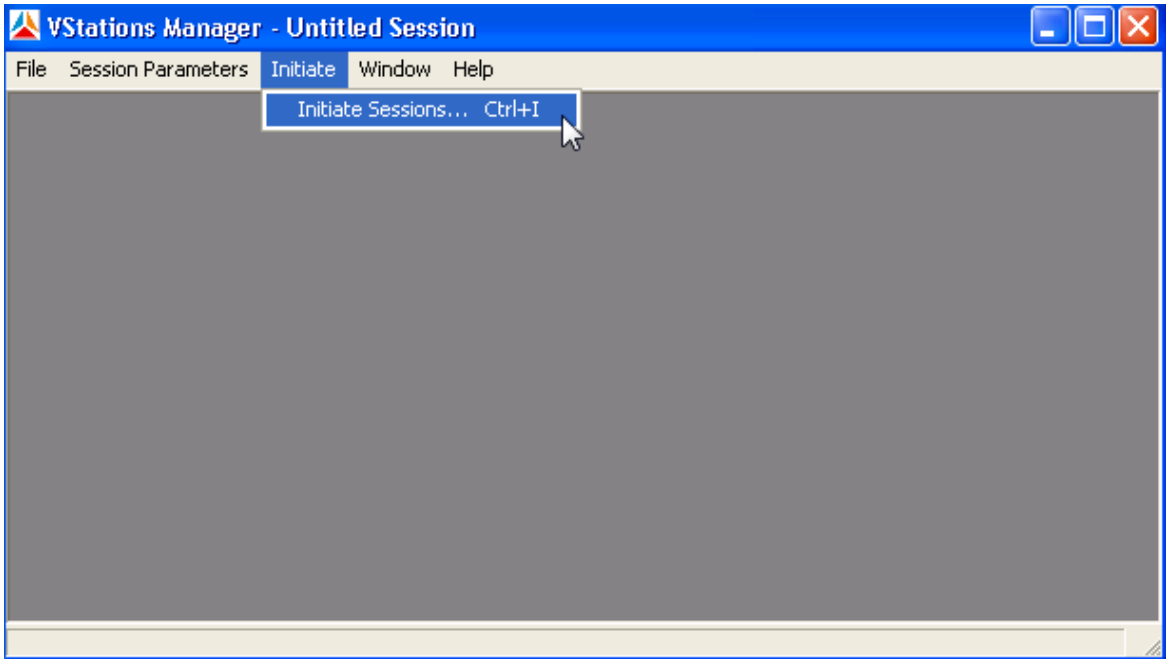
User	Password	Domain	Host
t001	123	monaco	172.15.0.14
test002	welcome	kob	172.15.0.15
test	123	10.0.0.18	172.15.0.18

16. RDP Settings (the default settings are usually ok)



17. Open sessions:

Click on Initiate and select Initiate Sessions.



Number of Sessions: This is the number of sessions that will be initiated on Injectors.

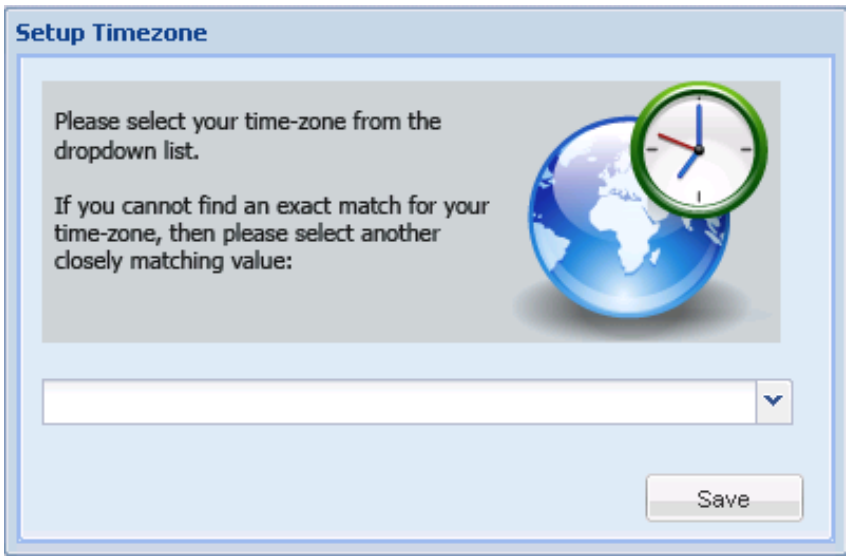
Launch Delay (seconds): This is the interval between initiating subsequent sessions.

(If 15 sessions are specified then you should see 15 windows open in Virtual Stations Manager and 15 Vstations connected in the Controller)

18. Double click on the AppLoader icon. It will open in your default browser.

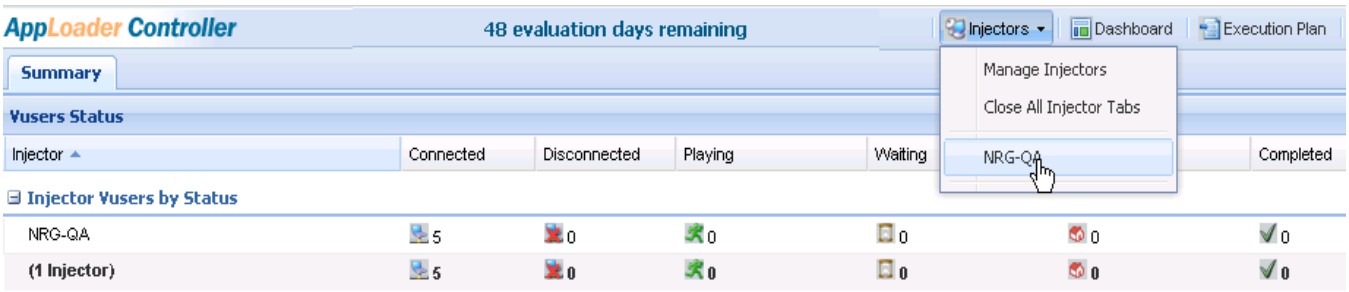
19. Login using your User Name and Password. (The default User Name and Password are “admin” and “admin”).

20. For the first time login, Apploader will ask you to select a time zone depending on where it’s installed, and it will restart the application automatically after saving the settings.



21. By selecting the apploader controller tab, you will see the number of vusers(virtual users) which you have created using **Virtual Station Manager** on **Summary** tab under **Connected** column.

22. To see the list of all users you can either click on  icon beside the number of connected vusers or select the desired injector within the **injectors** tab.



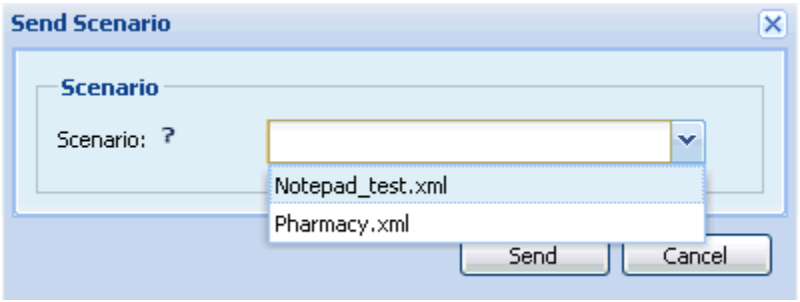
The result is shown below.

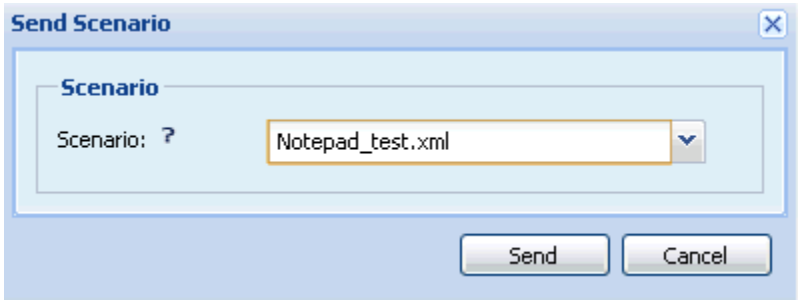
Now you can select the vusers on which you want to run the scenario. You can select a vuser by clicking on it. Or, if you want to select all of them at once then click on this image  from injector tool bar.

Distribute Scenario to Vusers

23. Now click on 

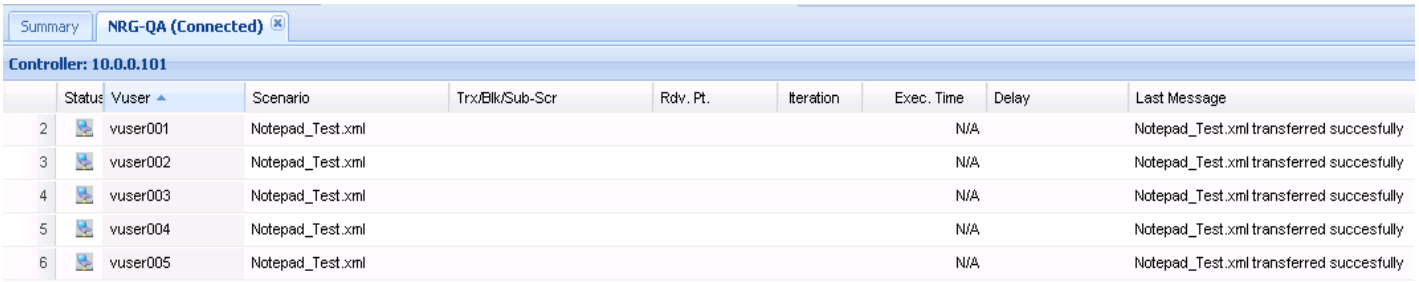
image. A pop up window will appear. Select your scenario from the drop down list.





Click on Send.

24. You will now see that the scenario has been assigned to the vusers that you had selected.



	Status	Vuser	Scenario	Trx/Blk/Sub-Scr	Rdv. Pt.	Iteration	Exec. Time	Delay	Last Message
2		vuser001	Notepad_Test.xml				N/A		Notepad_Test.xml transferred succesfully
3		vuser002	Notepad_Test.xml				N/A		Notepad_Test.xml transferred succesfully
4		vuser003	Notepad_Test.xml				N/A		Notepad_Test.xml transferred succesfully
5		vuser004	Notepad_Test.xml				N/A		Notepad_Test.xml transferred succesfully
6		vuser005	Notepad_Test.xml				N/A		Notepad_Test.xml transferred succesfully

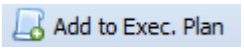
25. Click on 

image. A dialog box will appear. Select your scenario from the drop down menu.

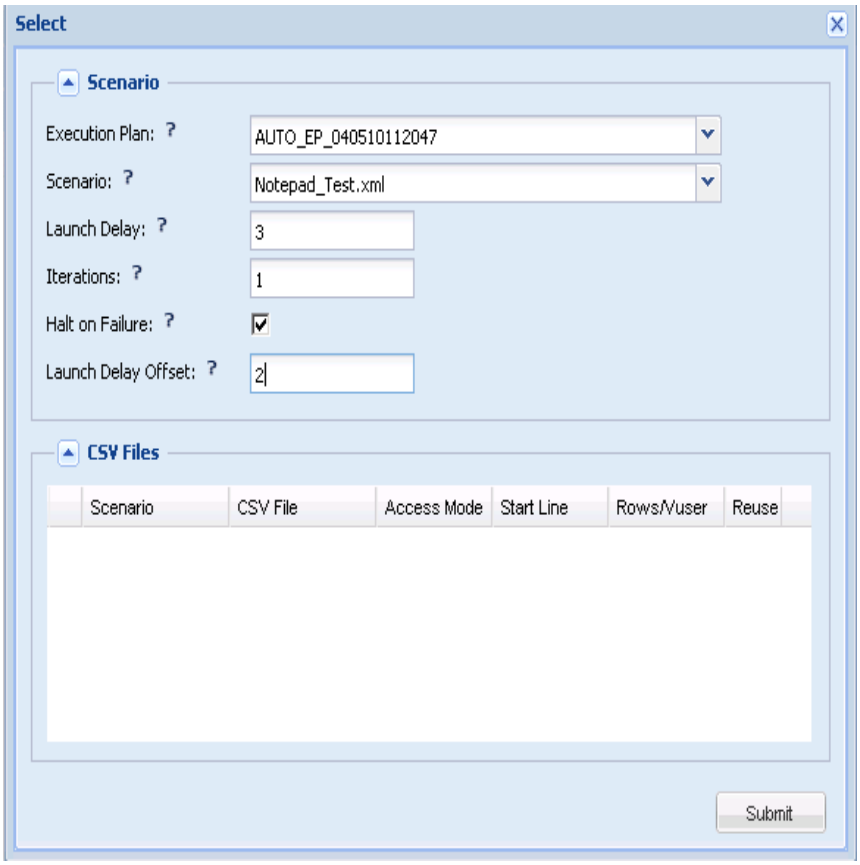
    Execution Plan: To select the execution plan you can either select one of the existing ones or create a new execution plan. The name for the new execution plan would be assigned automatically.

    Launch Delay: Specify the Launch Delay in seconds. For each subsequently selected station, the start of scenario playback is delayed by this amount. For Random Launch Delay Range enter values like: 5-10 (for random delay between 5 and 10 seconds).

    Iterations: Specify the number of times each scenario should be played on each of the selected stations.

    Halt on Failure: If it is checked, playback for any remaining iterations will be halted if one of the iteration fails.

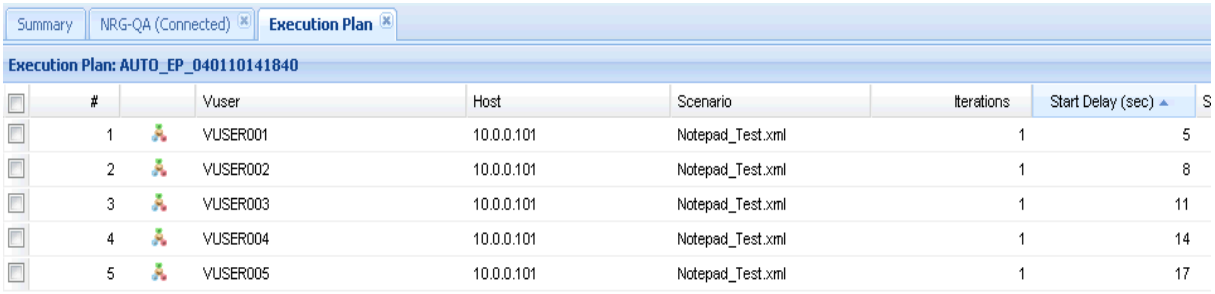
    Launch Delay Offset: delays the playback of the scenario for the amount entered in Launch Delay Offset. For example, if the Launch Delay is 3, and the Launch Delay Offset is 2, scenario starts after 5 seconds and for each subsequently selected station, the start of the scenario playback will be delayed for 3 seconds.



Click on “Submit”

Select Vusers into Execution Plan

26. You will see the vusers added to the Execution Plan — which you can see by clicking on Execution Plan tab.

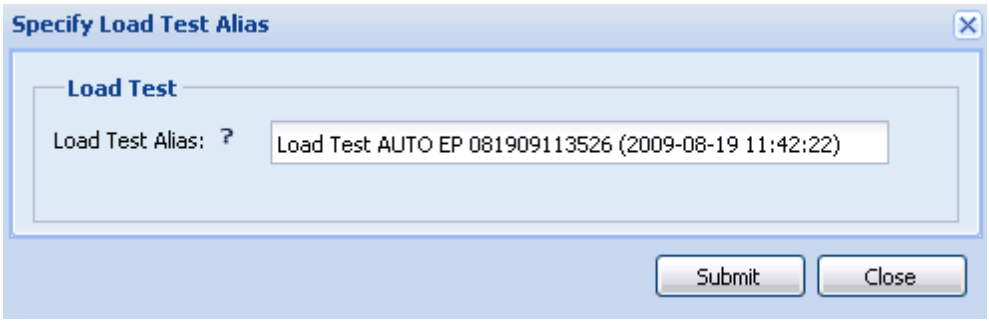


#		Vuser	Host	Scenario	Iterations	Start Delay (sec)	S
1		VUSER001	10.0.0.101	Notepad_Test.xml	1	5	
2		VUSER002	10.0.0.101	Notepad_Test.xml	1	8	
3		VUSER003	10.0.0.101	Notepad_Test.xml	1	11	
4		VUSER004	10.0.0.101	Notepad_Test.xml	1	14	
5		VUSER005	10.0.0.101	Notepad_Test.xml	1	17	

Execute Load Test

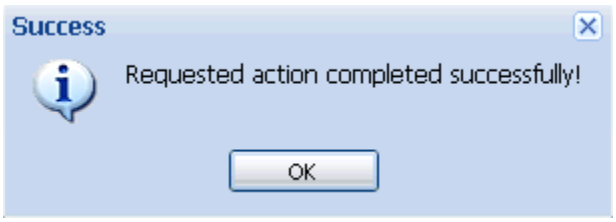
27. Now to execute this Execution Plan, click on  image.

28. You will see a dialog box



Click on Submit.

29. You will see a dialog box



Click on “OK”.

30. Execution of scenarios will begin on the station.

	Status	Vuser	Scenario	Trx/Blk/Sub-Scr	Rdv. Pt.	Iteration	Exec. Time	Delay	Last Message	Last Update
1	✓	vuser001	variable_Test.xml	Scenario variable_Test		5/5	1.38	0.38 (37.5%)	Last Execution Successful, Total Steps executed: 3, 15 successful exec	09-11-2009 16:49:14
2	✓	vuser002	variable_Test.xml	Scenario variable_Test		5/5	1.77	0.77 (76.6%)	Last Execution Successful, Total Steps executed: 3, 15 successful exec	09-11-2009 16:49:14
3	✓	vuser005	variable_Test.xml	Scenario variable_Test		5/5	1.44	0.44 (43.8%)	Last Execution Successful, Total Steps executed: 3, 15 successful exec	09-11-2009 16:49:14
4	✓	vuser004	variable_Test.xml	Scenario variable_Test		5/5	0.94	-0.06 (-6.3%)	Last Execution Successful, Total Steps executed: 3, 15 successful exec	09-11-2009 16:49:14
5	✓	vuser003	variable_Test.xml	Scenario variable_Test		5/5	1.36	0.36 (35.9%)	Last Execution Successful, Total Steps executed: 3, 15 successful exec	09-11-2009 16:49:14
6	✓	vuser010	Notepad_test.xml	Scenario Notepad_test		5/5	1.52	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
7	✓	vuser009	Notepad_test.xml	Scenario Notepad_test		5/5	1.36	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
8	✓	vuser008	Notepad_test.xml	Scenario Notepad_test		5/5	1.42	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
9	✓	vuser006	Notepad_test.xml	Scenario Notepad_test		5/5	1.5	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
10	✓	vuser007	Notepad_test.xml	Scenario Notepad_test		5/5	1.39	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
11	✓	vuser011	Notepad_test.xml	Scenario Notepad_test		5/5	1.45	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
12	✓	vuser012	Notepad_test.xml	Scenario Notepad_test		5/5	1.39	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
13	✓	vuser013	Notepad_test.xml	Scenario Notepad_test		5/5	1.47	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
14	✓	vuser015	Notepad_test.xml	Scenario Notepad_test		5/5	1.56	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14
15	✓	vuser014	Notepad_test.xml	Scenario Notepad_test		5/5	1.39	N/A	Last Execution Successful, Total Steps executed: 3, 10 successful exec	09-11-2009 16:49:14

In the controller you can check the “Last Message” field to see what is happening on the stations.

How to See Reports

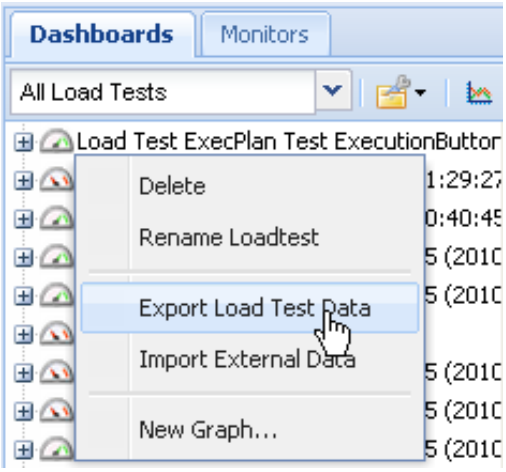
Reports enable you to know the status of your tests. There are many reports to view. To see the reports, you can click on the Reports tab within the dashboard or select export summary from Apploader Controller tool bar for different reports

A sample “Load Test Summary Report” is shown below:

Load Test Summary Report (2009-08-14)

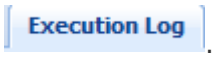
Name	Scenario	Users	Max. Loop #	Avg. Exec. Time (...	Max. Exec. Time (...	Min. Exec. Time (...	# of Successes
Notepad_test.xml		5	5	1.0	1.0	1.0	1

When the load test is completed and the test in summarized user can export load test data by going to dashboard→selecting a proper dashboard→right click on proper load tes and select “Export load test data”.



Apploader also allows you to **Import External Data** you are interested to graph for comparison purposes. For example, let's assume user wants to check the backend performance for the time which failures happened. To do so, user needs to import the backend data which haven't been monitored by apploader and apploader will create the graphs for whole data; external and internal ones.

How to See Execution Log

You can easily see the logs by clicking on the "Execution Log" tab 

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A sample log is shown below:

Execution Log

Date	Action	Load Test	Message
Apr 5, 2010, 11:45:29 am	End	Load Test AUTO EP 040510112047 (2010-04-05 11:42:56)	Ended by AppLoader
Apr 5, 2010, 11:36:16 am	End	Load Test AUTO EP 040510112047 (2010-04-05 11:33:14)	Ended by AppLoader
Apr 5, 2010, 11:24:15 am	End	Load Test AUTO EP 040510110256 (2010-04-05 11:20:58)	Ended by AppLoader
Apr 5, 2010, 1:17:42 pm	Start	Load Test AUTO EP 040510112047 (2010-04-05 13:17:34)	Started by Administrator
Apr 5, 2010, 11:43:03 am	Start	Load Test AUTO EP 040510112047 (2010-04-05 11:42:56)	Started by Administrator
Apr 5, 2010, 11:33:19 am	Start	Load Test AUTO EP 040510112047 (2010-04-05 11:33:14)	Started by Administrator
Apr 5, 2010, 11:21:02 am	Start	Load Test AUTO EP 040510110256 (2010-04-05 11:20:58)	Started by Administrator