



# VrayMultiStageRender

**VrayMultiStageRender** – utility for rendering animations and static scenes in 2 stages from an animated camera.

The first stage calculates the LightCache in fly-through mode and the Irradiance Map in incremental add to current map mode for the entire scene.

The second stage is the final rendering.

This approach allows all frames to receive the same high-quality Irradiance map in less time.

## Main Features:

Rendering in two stages for to obtain better results in less time.

Support for network rendering (BackBurner, Vray Distribute Render, Duma)

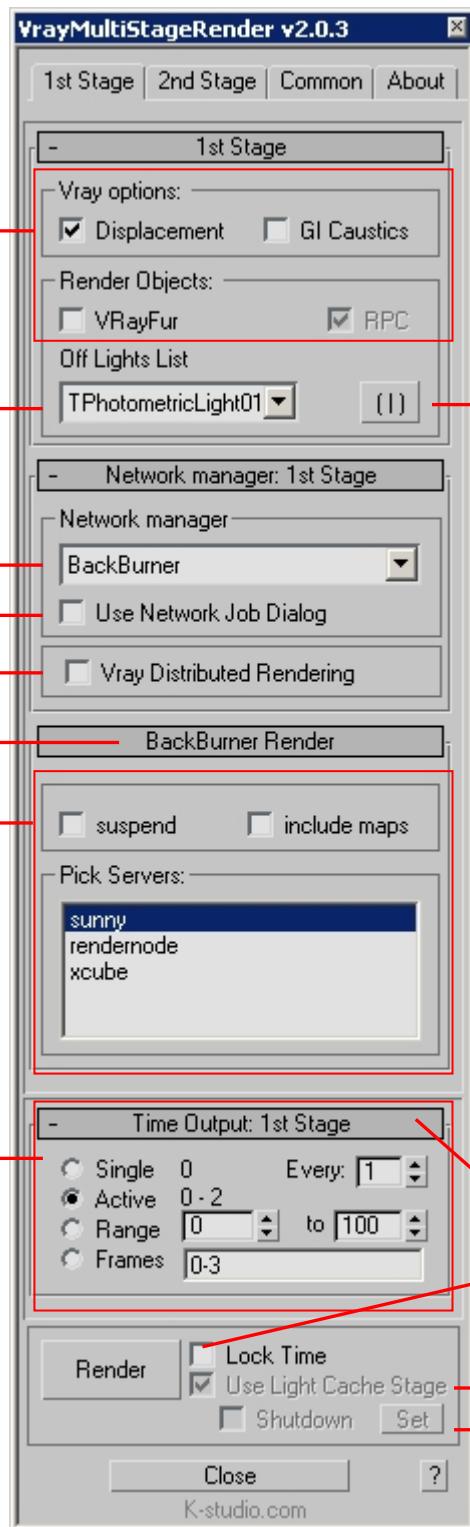
Ability to exclude from the Global Illumination rendering VrayFur, RPC, some lights and Displace.

Automatic creation of animated camera VrayCam.

Create subfolders for RenderOutput, RenderElements and irradiance map.

Automatized naming LightCache, Irradiance map, RenderOutput and RenderElements.

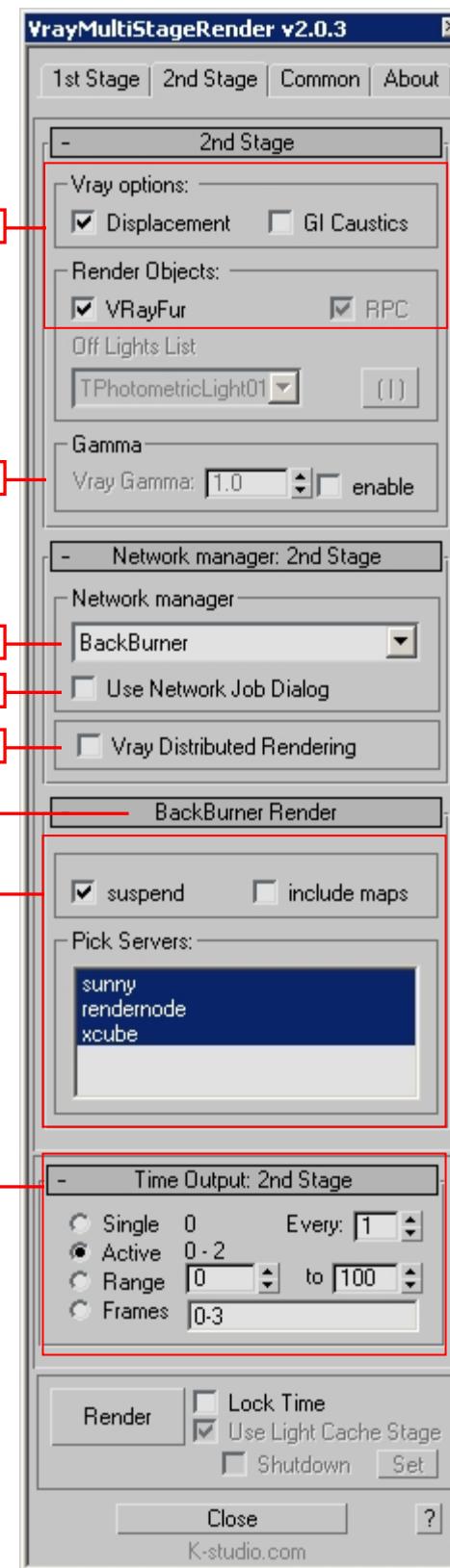
1. Interface.
3. Recommended settings for rendering animations.
4. Rendering multiple frames (interior or exterior)  
How work VrayMultiStageRender.
5. Tweaks.



### Settings for first Stage calculation.

Rendering the LightCache in fly-through mode and the Irradiance Map in incremental add to current map mode.

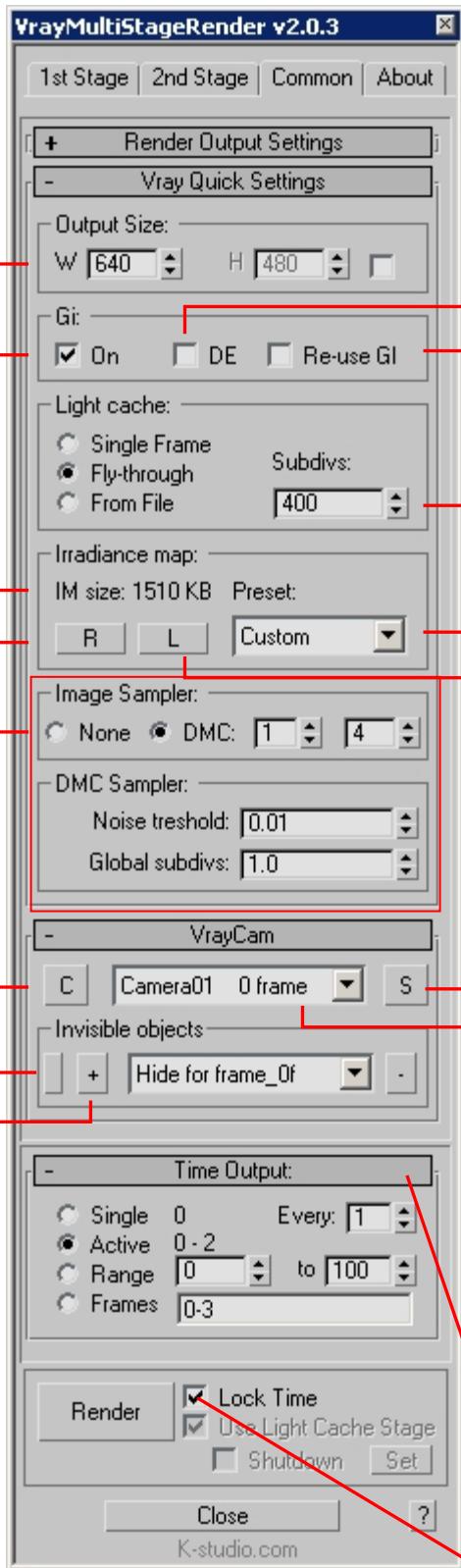
1. Settings for rendering Displacement, Reflective Caustics, VrayFur è Real People Creation(RPC) with irradiance map. Reflective Caustics should turn off when rendering irradiance map.
2. The list of the Lights which are switched off at rendering irr. map.
3. Addition/removal from the list of lights.
4. The menu of choice Network Manager. Values - Off, BackBurner, Duma are accessible. (Activated for both Stage)
5. Use Network Job Dialog - activate Network Job Dialog for more fine-tuning of network rendering.
6. Switching on Vray Distributed Rendering. Since version Vray 1.5 SP3 Vray DR supports the rendering irradiance map in a mode incremental add.
7. Settings for rendering with BackBurner. Selection of server for rendering 1-st Stage, Settings for suspend and include maps. For 1-st Stage is available only to one server.
8. For each of the Stage, you can specify your Time Output. For example: irradiance map can be calculated only for each 10-th frame, but the final images to calculate for each frame. This is rollout is available when checkbox Lock Time is off.
9. Use Light Cache Stage - is available for rendering the 1 st Stage with Vray Distributed Rendering. Now rendering Light Cache is not distributed on the network, even with the use of Vray Distributed Rendering. Use this option to ensure that your server is not running simultaneously on a miscalculation for that could not be distributed over a network.
10. Shutting down the computer after rendering completion. Available only for the local rendering.



### Settings for second Stage calculation.

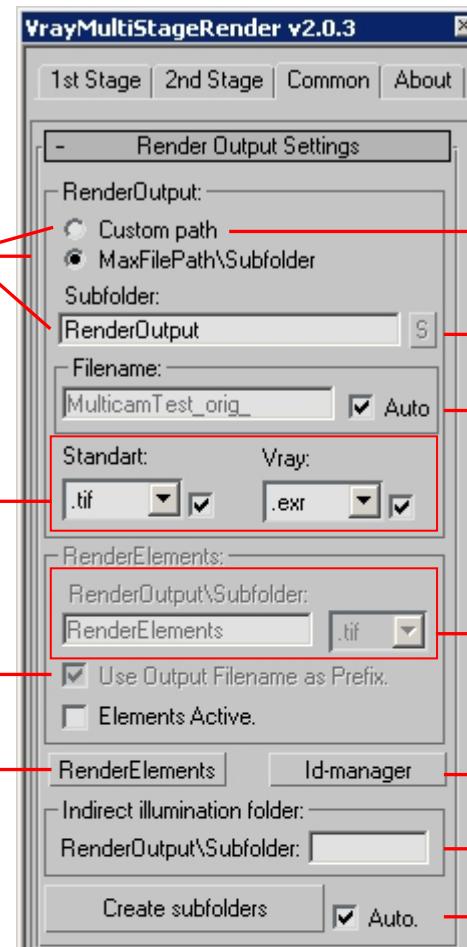
Final rendering.

1. Settings for rendering Displacement, Reflective Caustics, VrayFur è Real People Creation(RPC). \*Reflective Caustics will work only with Detail Enhancement.
2. Final rendering with output gamma 1 or other. Useful for postprocessing the sequence frames into the compositing program.
3. Menu to select the Network Manager. Available values - Off, BackBurner, Duma. (Activated for both Stages)
4. Use Network Job Dialog - If this option is selected, then for rendering management with BackBurner for each Stage will be show Network Job Dialog box for manual fine-tuning of network rendering. The rollout BackBurner Render will be unavailable. (Activated for both Stages)
5. Switching on Vray Distributed Rendering. Since version Vray 1.5 SP3 Vray DR supports the rendering irradiance map in a mode incremental add.
6. Settings for rendering with BackBurner. Selection of servers for rendering 2-nd Stage, Settings for suspend and include maps. For 2-nd Stage is available the selection of multiple servers.
7. For each of the Stage, you can specify your Time Output. For example: irradiance map can be calculated only for each 10-th frame, but the final images to calculate for each frame. This is rollout is available when checkbox Lock Time is off.



### Common Settings. Rollout "Vray Quick Settings"

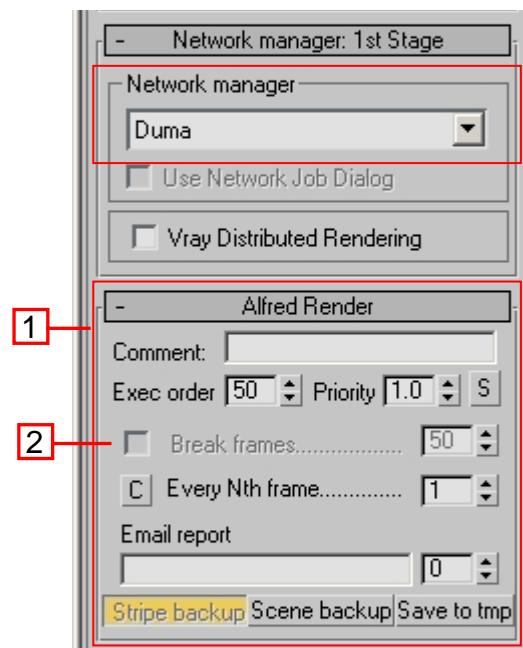
1. Render Output Size.
2. Global Illumination
3. Detail Enhancement.
4. Switching Irradiance map and Light Cache to mode From File (On) or Irradiance map to Incremental Add to current map and Light Cache to Fly-through mode.
5. Subdivs for Light Cache.
6. Information about the size of Irradiance map on the hard drive
7. Remove Irradiance map from RAM.
8. Loading Irradiance map to RAM from hard disk. Use SHIFT key for open the file selection dialog.
9. Irradiance map preset.
10. Settings for Image Sampler and DMC Sampler.
11. Create the animated camera VrayCam from visible cameras, Length of the animation will be equal to the number of cameras. VrayCam will be animated dependent from the names of parent cameras and inherit most of their parameters - such as the Environment range, Clipping Range and so on. Important: For correctly transferred the options the Environment range and Clipping Range to the VrayCam, they must be switched on in all cameras, but their significance is, of course, may be different.
12. The list of parent cameras for VrayCam camera. (unhidden cameras)
13. Select and change current view from active in the list camera Use SHIFT key for applying parameters to all VRayPhysicalCameras from parameters of selected camera (such as vignetting, whiteBalance, f\_number, shutter\_speed, ISO, clipping ) All parameters for animated Vraycam camera will be updated .
14. Mode for visual inspection of objects, shielding the current view. Used for setting clipping.
15. Make selected objects invisible when rendering in the active frame for the camera, \* Does not work with network rendering. \* There may be black spots on the place of hidden objects
16. TimeOutput parameters are common for both Stage when checkbox Lock Time is off.



### Common Settings. Rollout "Render Output Settings"

1. Set path for RenderOutput file. Custom path - set full path. MaxFilePath - set path relative to path of scene.
2. Set full path to RenderOutput file. Active with Custom path mode.
3. RenderOutput file name.
4. Set Output file format and switch on of saving in Common Render Tab and Vray Frame buffer.
5. Set RenderElements file format and set relative to RenderOutput folder path for RenderElements.
6. When you turn on, the Output file name is added to name of RenderElements files. For example: VRayRawShadow\_.tif or ProjectName\_VRayRawShadow\_.tif
7. Open RenderElements dialog.
8. Open utility EffectsChannelSet for management material and object ID. Also you can create in automatic mode render element MultiMatteElement.
9. Set relative to RenderOutput folder path for irradiance map and light cache.
10. Creation of Output folders.

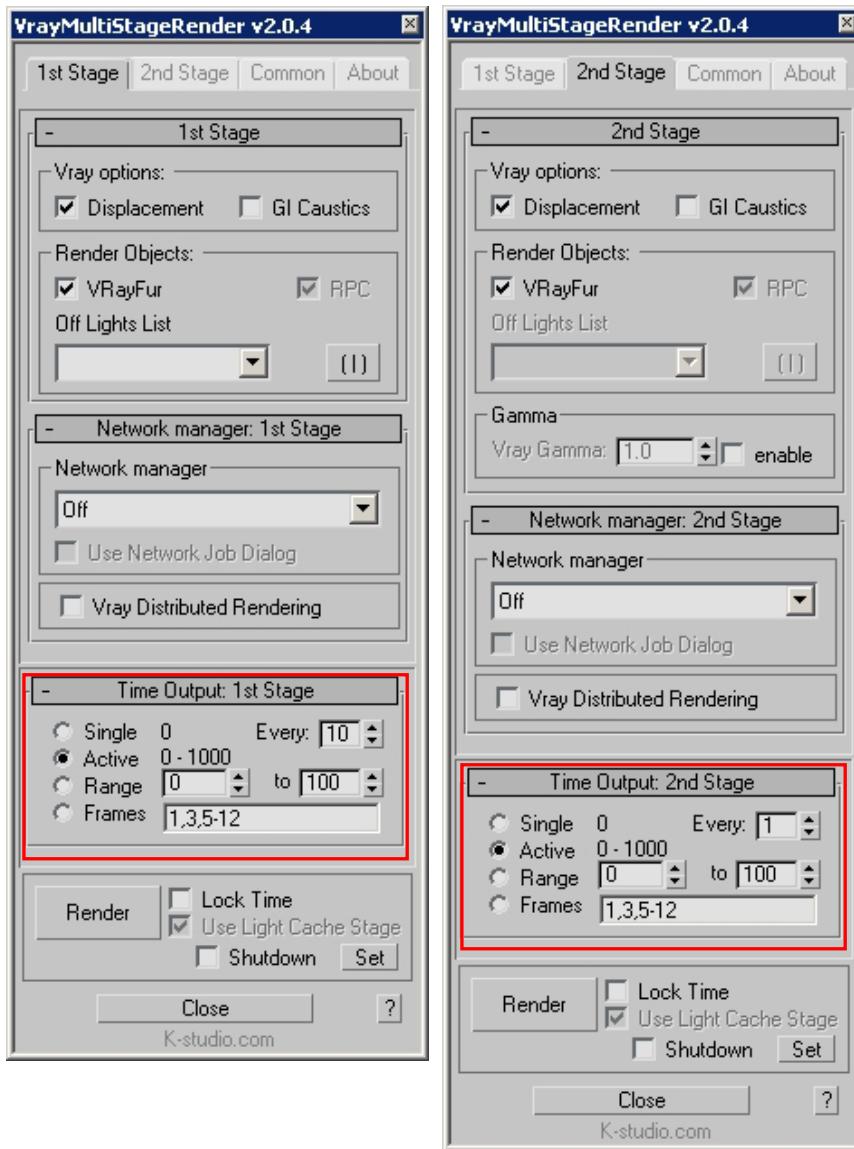
### Settings for Duma Network Manager.



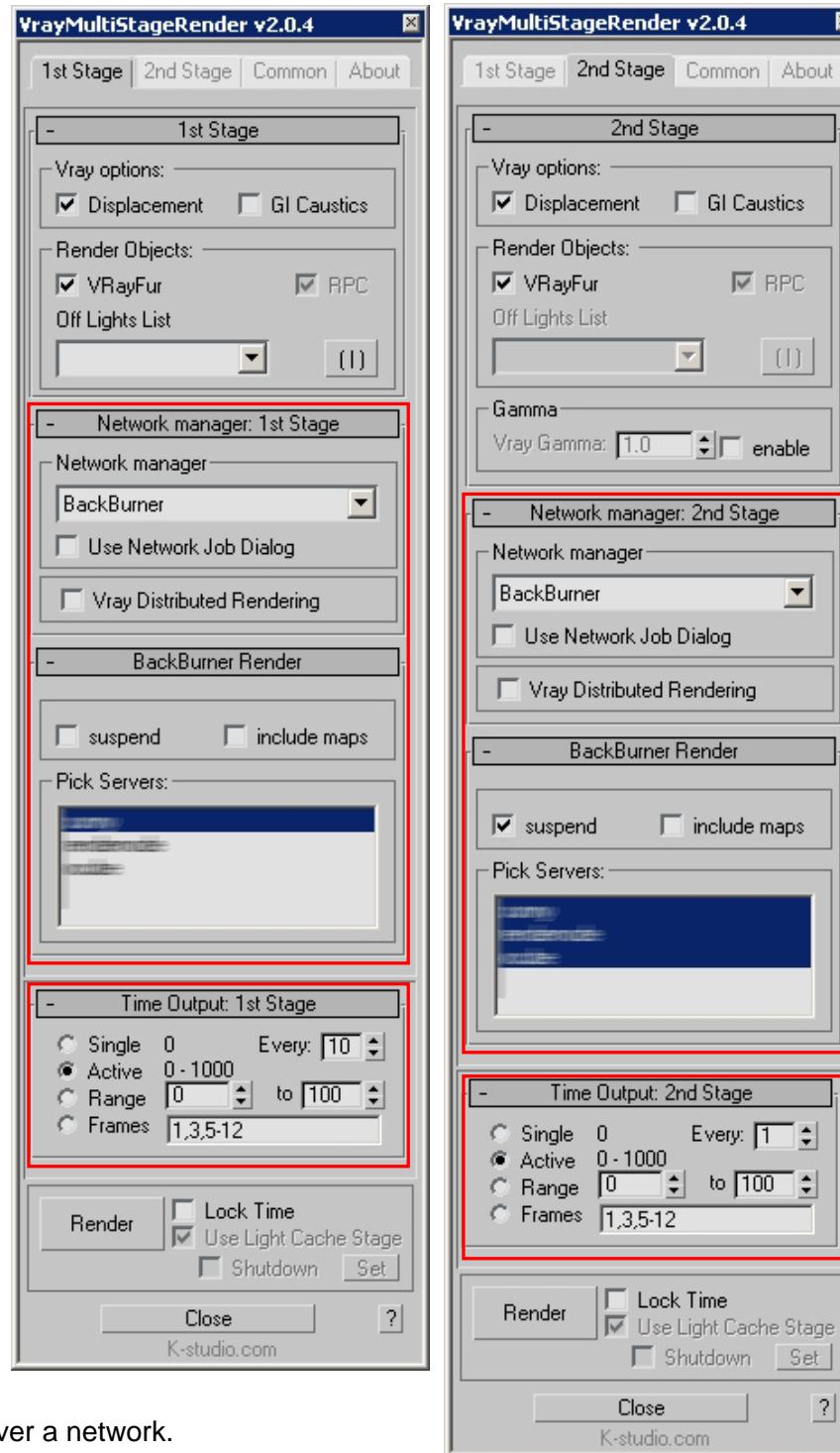
1. The most of the configuration of the rollout coincides with the standard settings of dialogue Alfred render. (See help for DUMA)
2. Break frames - now Duma Network Manager in mode Every Nth frame is make renders on a single render-node without restarting 3dsMax, but with limited to 50 frames (general limit of about 60 + / - This limitation is the length of the line DOS) For the animation rendering with a large number of frame sequence need to break into pieces of 50 frames. For the 2 nd Stage encouraged to include mode of Tasks per Node. The option providing Use Light Cache Stage encouraged to include and Lock Time set to off.

## Recommended settings for rendering animations with VrayMultiStageRender:

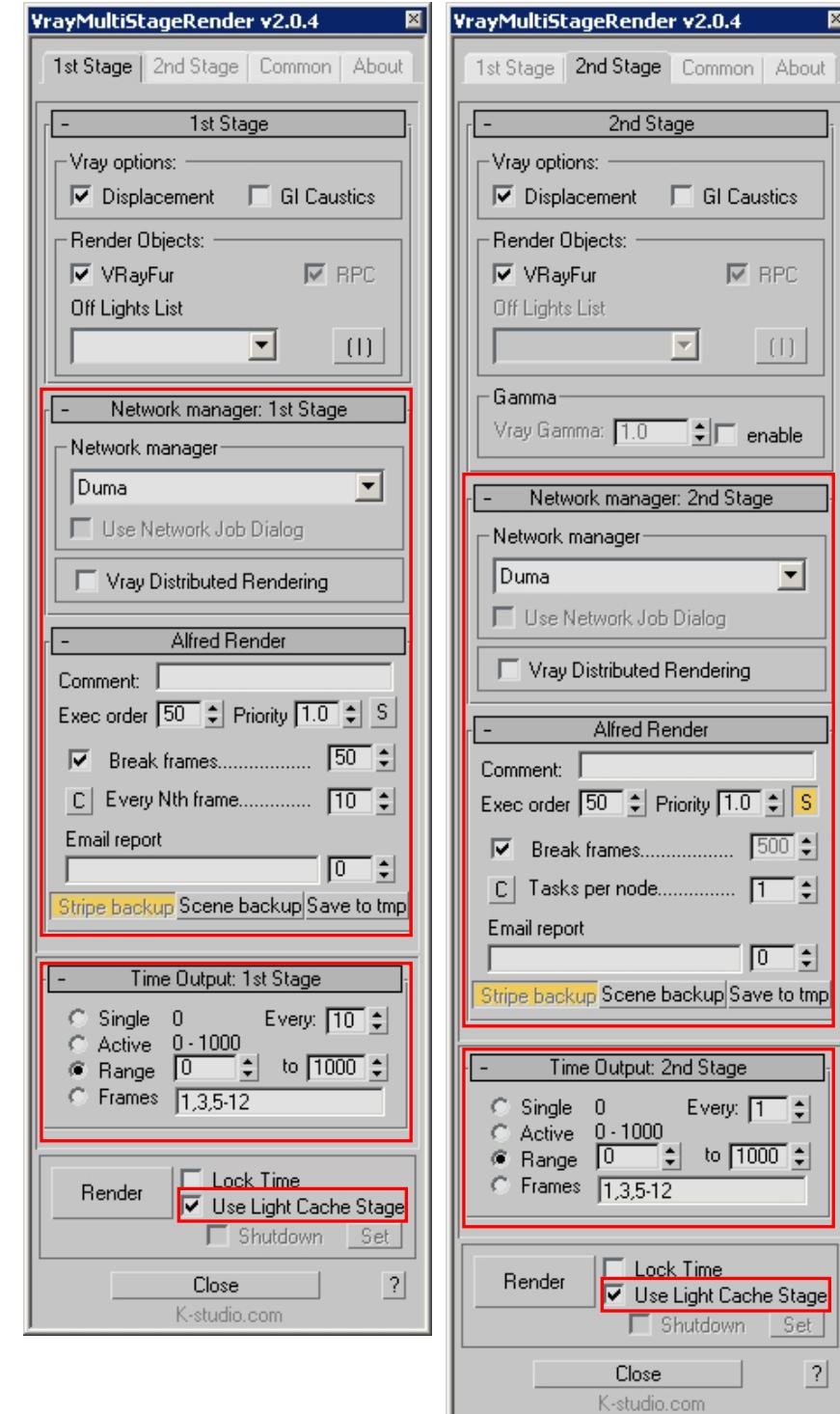
### Local Rendering:



### BackBurrer Network Rendering:



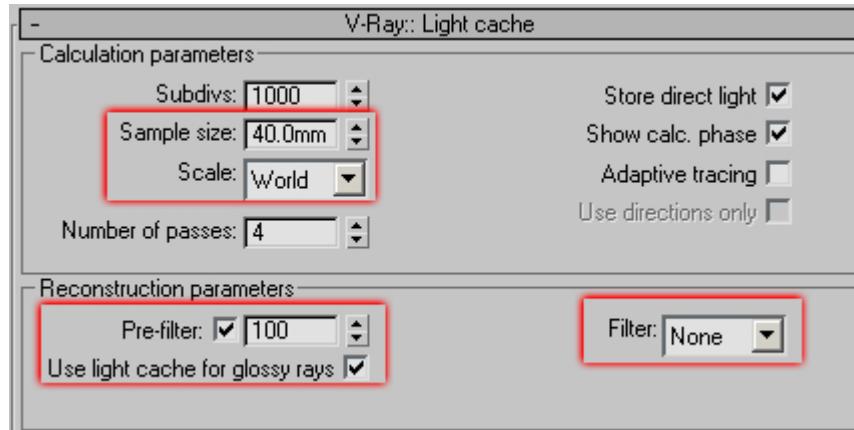
### Duma Network Rendering:



Beginning with Vray 1.5 SP3 supports rendering of irradiance map in mode incremental add to current map with Vray Distributed Rendering.

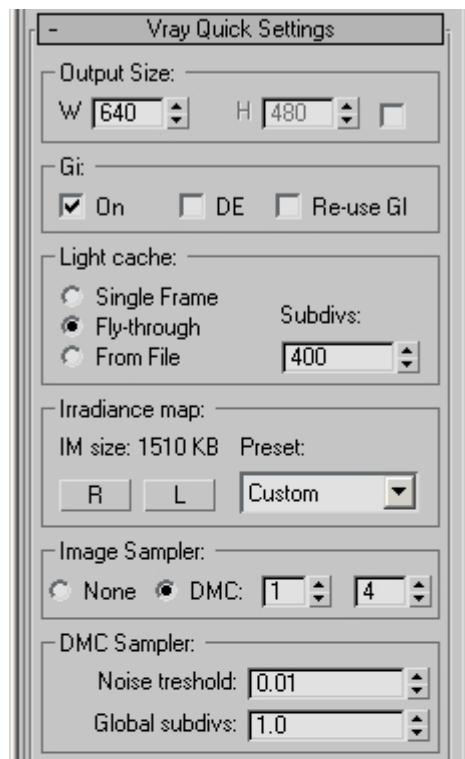
But rendering of Light Cache is not distributed on the network, even with the use of Vray Distributed Rendering. Use this option to ensure that your server is not running simultaneously on a miscalculation for that could not be distributed over a network.

## Recommended settings for Light cache



## Rollout "Vray Quick Settings"

Using this rollout, you can quickly set up Vray for a test or the final rendering. For quick rendering reduce "Lightcache subdivs" to 300 and increase the "Noise threshold", for example up to 0.2 - 0.5 and reduce the Global subdivs, for example up to 0.5. Before the next test miscalculation do not forget to Reset Irradiance map. Also, for quick rendering you can disable the "Detail Enhancement".



## As works the VrayMultiStageRender.

### 1 Stage:

Switching on **don't render final image**.

If the mode rendering the **lightcache** not installed in the position **from file**, then he switched to **fly-through**.

(The parameter **lightcache scale** is recommended to set up in a mode **world**) **Irradiance map** is calculated in the **incremental add to current map** mode.

Switching off **Lights**, specified by the user in the utility.

At unhidden objects **VrayFur** and **RPC** switching off/switching on the **renderable**.

In the Vray settings switching off/switching on the **displacement** and **Reflective gi caustics**.

The following settings are handled by the utility and do not have the settings in the interface.

Switching off **DreamScape Cloud Stratus** è **Cirrus**.

Switching off **Effects** in Common Settings.

Switching off **RenderElements**.

Switching off **Vray Raw image File** and **Save Separate Render Channels**.

Begins rendering Irradiance map and Light Cache.

### 2 Stage:

Switching off **don't render final image**.

**Lightcache** and **Irradiance Map** switched to **from file** position.

Switching on **Lights**.

At unhidden objects **VrayFur** and **RPC** switching off/switching on the **renderable**.

In the Vray settings switching off/switching on the **displacement** and **Reflective gi caustics**.

The following settings are handled by the utility and do not have the settings in the interface.

Returned to its former position adjustment **DreamScape Cloud Stratus** and **Cirrus**.

Returned to its former position adjustment **Effects** in Common Settings.

Returned to its former position adjustment **RenderElements**.

Returned to its former position adjustment **Vray Raw image File** and **Save Separate Render Channels**.

Begins final rendering.