

# Running V-Ray from an Arbitrary Location

This page provides information on running V-Ray on a machine that does not have it locally installed.

The following instructions apply to 3ds Max 2021 and earlier. Find instruction for 3ds Max 2022 and later at the [Running V-Ray Autodesk app packages from Arbitrary Location](#) page.

## Overview

It is possible to run V-Ray from an arbitrary location, rather than installing it locally.

1. Run the regular V-Ray installer, but prefix the Program Files folder with some temporary directory for all four paths. This gives you a folder that contains everything that V-Ray puts in both the 3ds Max folders and its own Program Files folders.
2. Copy that temporary folder to some network location (preferably one that also indicates the V-Ray version and/or build number and the 3ds Max version).
3. Uninstall V-Ray and remove any files that remain after the uninstallation.
4. In the temporary folder, create a plugin.ini file with the absolute paths to the V-Ray plugins:

### plugin.ini

```
[Directories]
VRay=\\server\share\vray_adv_max2021_x64.25566\Program Files\Autodesk\3ds Max 2021\plugins\
vrayplugins=\\server\share\vray_adv_max2021_x64.25566\Program Files\Autodesk\3ds Max
2021\plugins\vrayplugins\
```

5. In the temporary folder, create a .bat file that contains [environment variables](#) that are needed by V-Ray and runs 3ds Max with the custom plugin.ini file:

### run\_max.bat

```
SET PATH=%~dp0Program Files\Autodesk\3ds Max 2021;%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin;%
PATH%
SET VRAY_FOR_3DSMAX2021_MAIN=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin
SET VRAY_FOR_3DSMAX2021_PLUGINS=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin\plugins
SET VRAY_MDL_PATH_3DSMAX2021=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\mdl
SET VRAY_OSL_PATH_3DSMAX2021=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\opensl

"C:\Program Files\Autodesk\3ds Max 2021\3dsmax.exe" -p %~dp0\plugin.ini
```

6. In the temporary folder, create a .bat file that contains environment variables that are needed by V-Ray and runs V-Ray spawner with the custom plugin.ini file:

### run\_vrayspawner.bat

```
SET PATH=%~dp0Program Files\Autodesk\3ds Max 2021;%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin;%
PATH%
SET VRAY_FOR_3DSMAX2021_MAIN=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin
SET VRAY_FOR_3DSMAX2021_PLUGINS=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin\plugins
SET VRAY_MDL_PATH_3DSMAX2021=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\mdl
SET VRAY_OSL_PATH_3DSMAX2021=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\opensl

vrayspawner2021.exe -AppName="C:\Program Files\Autodesk\3ds Max 2021\3dsmax.exe" -cmdparams="-p %
~dp0\plugin.ini"
```

7. Use the specified .bat files to run 3ds Max or V-Ray spawner with the specific V-Ray version.

The preceding commands work with V-Ray 6 for 3ds Max. If using V-Ray 5, use the following commands:

```
SET VRAY5_FOR_3DSMAX2021_MAIN=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin
SET VRAY5_FOR_3DSMAX2021_PLUGINS=%~dp0Program Files\Chaos Group\V-Ray\3ds Max 2021\bin\plugins
Starting with V-Ray 6, update 1, the VRAY_OSL_PATH_3DSMAX20## environment variable no longer needs to be set.
```

## stands for the number of 3ds Max version.

## Limitations

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This approach works well for render servers where V-Ray is used only for rendering. However, it has a few limitations when 3ds Max is used in interactive mode because some 3ds Max paths cannot be controlled; these limitations can be avoided by expanding the .bat file above to copy some additional files from the network location to the local 3ds Max user folder:

- MaxScripts provided by V-Ray are not available (V-Ray scene converter, V-Ray Bitmap to V-RayBitmap converter, and others). To make MaxScripts available, copy them to the "scripts\startup" folder of 3ds Max.
- "Realistic" view of V-Ray materials and maps in the Nitrous viewport is not available and attempting to use this mode might lead to crashes. To make the "Realistic" view work, copy the AMG folder from <\\server\share\network\_location>\Program Files\Autodesk\3ds Max ####\AMG into the 3ds Max installation C:\Program Files\Autodesk\3ds Max ####\AMG. Note that there is already an AMG folder in the 3ds Max installation. It contains shaders for some Autodesk materials. More information is available [here](#). #### stands for the number of 3ds Max version.
- The viewport shaders must be copied to the relevant 3ds Max folder ("AMG" for 3ds Max 2017 and later) in C:\Program Files\Autodesk\3ds Max 20##\AMG.
- Icons for the V-Ray toolbar are missing and some buttons might not work properly. To make the icons appear, copy them to the 3ds Max "UI\_In" folders, and copy the V-Ray MaxScripts to the "scripts\startup" folder.
- The .vrmat editor is not available. To make it work, additional files must be copied to the 3ds Max "python" folder.
- V-Ray OSL shaders does not work when started from a network location. OSL shaders only work if run\_max.bat (or run\_vrayspawner.bat) is started from network or local drive. In order to use V-Ray OSL, the shared folder must be mapped as a network drive.
- Viewport IPR is not available. To make it available, copy the V-Ray folder (*arbitrary location...3ds Max 2021\scripts*) to the "scripts" folder of 3ds Max.