



Autodesk 3ds Max 2020 is focused on delivering you **efficiency, performance, and stability** that will **speed up the content creation process**. New feature updates for Revit, OSL and the Chamfer Modifier provide more **flexibility, better organization of scenes, and faster iteration times**.

3ds Max 2020 updates

Performance Improvements

3ds Max 2020 performance improvements bring you faster playback speeds and a more responsive application.

- Viewport Framerate display (FPS) has been adjusted to deliver a more accurate playback performance indicator
- Validity Intervals limits evaluation of unchanged curves and geometry for faster playback speeds
- SetNormals MaxScript function has been optimized to be up to 10 times faster
- Optimizations have been made when interacting with the viewport with multiple grouped objects
- Unwrap UVW flatten mapping is drastically faster when working multiple islands. It also consumes much less memory and saves / reloads pixel snap settings
- Auto Backup is more responsive to cancel requests from the ESC key

Create Animation Preview

The Create Animation Preview feature's performance has been significantly improved and houses new functionalities.

- Creation on local drive is now up to 3 times faster
- Allows AVI codec selection
- Unlimited capture resolution, based on render settings in lieu of viewport dimensions
- Various user experience improvements include;
 - "Play when done" is accessible from Preview UI
 - "Quality" setting is accessible from Preview UI (Nitrous only)
 - Default preview filename now matches the scene name by default
 - 100% output resolution on by default
 - Default quality setting changed from 16 to 1
- MXS snippet can be executed per frame for custom strings
- Filename and MXS snippet values can be specified from MXS command line of Create Preview
- After executing the preview, the time slider is returned to the original starting frame

Chamfer Modifier Improvement

The new Chamfer Modifier updates make it more efficient and predictable for modeling.

- The new Fixed Weight Chamfer keeps a consistent chamfer width
- Weighted chamfering allows chamfer to be controlled on a per-edge basis with crease weights
- New presets allow you to save favorite or default settings
- Inset feature adds edge rings to chamfers for users who cannot use smoothing groups, such as models for game engines
- End Point Bias: edges that don't end at a corner terminate on the next parallel edge can bias between the near and far vertex
- Added Depth allows the profile of the chamfer to go from a depth of 1 (a sharp edge), to 0 (a straight edge), to -0.5 (an inverted curve)

OSL Shader Support

New OSL shaders have been added, allowing for more flexibility and customization in your rendering workflows.

- Viewport display of OSL Maps has greatly improved
- OSL shaders are now automatically converted to viewport shaders
- The GPU driven "Quicksilver Hardware Renderer" now supports OSL Maps
- Extended / Improved OSL Maps:
 - Bitmap Lookup: Now supports UDIM textures
 - Composite: Now supports blending modes
- 14 new OSL Maps including;
 - Color Key: Perform green-screening inside of 3ds Max
 - Color Space: Convert colors between, rgb, hsv, YIQ etc.
 - Halftone: Screen space dot pattern
 - Falloff: Get surface orientation to camera
 - Simple Gradient: Generate color gradients
 - Simple Tiles: Tile pattern generations with bump, corner roundness, and more.
 - Waveform: Animate effects in various patterns.
 - Weave: Can generate basket weave, cloth threads, or even carbon fiber patterns.
 - Also including UVW MatCap, Normal, Random Index by Number, Tri-tone, Threads and Toon Width

Revit Import Improvements

Various improvements allow for faster data import, and better organized and easier to manage scenes.

- Combine By options allows you to combine by material more selectively by choosing;
 - Combine by Revit Category and Revit Material
 - Combine by Revit Family Type and Revit Material
- Filter dialogue now displays the number of nodes that will be created in the scene's category or family type
- Import Revit 2017, 2018, and 2019 files into 2020 without the need to upgrade
*Revit Compatibility pack (for each supported version) needs to be installed on your machine for functionality
- IES lights imported from Revit are converted more accurately
- Daylight System Update; We removed reliance on Mental Ray, resulting in a better translation. We now leverage the physical sun and sky, where the translation is done automatically without interruption

Additional Improvements

Various enhancements have been made to Modeling workflows, Alembic support, IES lights and Civil View.

- Modeling: Copy + Pasted modifiers now retain their names, scripted booleans preserve materials
- Alembic: Playback controls, custom attributes on non-geometry (such as locators and dummies) are exported, Triangulation is improved on concave ngons
- IES Lights Light rendering is improved
- Civil View Textures are better rendered and represented in Arnold
- Point Cloud Support for ply and e57 Point Cloud formats

3ds Max to Arnold (MaxToA)

MaxToA integration updates have been made to smooth out workflows with Arnold.

- Export Points can be exported as Arnold point primitives
- New PFlow Instancer node means PFlow instances will render faster in Arnold
- Distribution of the Python API, allowing users to edit, write, render .ass files, without relying on kick only

Bringing your ideas to life

Autodesk is committed to responding quickly to 3ds Max user feedback. That's why this release includes many of which were submitted by the 3ds Max user community at [3dsmaxfeedback.autodesk.com](https://forums.autodesk.com/t5/3ds-max-feedback).

Highlights:

- Modifiers will keep their names when copy/pasted from one another (<https://forums.autodesk.com/t5/3ds-max-ideas/keep-modifiers-names-when-copy-paste-them-from-one-object-to/idi-p/8181673>)
- You can now change the color of the Maxscript listener window (<https://forums.autodesk.com/t5/3ds-max-ideas/listener-window-background-color/idi-p/7653908>)
- Procedural maps display properly in viewport (<https://forums.autodesk.com/t5/3ds-max-ideas/please-fix-procedural-maps-display-in-viewport/idi-p/6787119>)
- Improve the animation preview tool (<https://forums.autodesk.com/t5/3ds-max-ideas/improve-the-preview-animation-tool/idi-p/8467027>)
- More file options for animation preview (<https://forums.autodesk.com/t5/3ds-max-ideas/more-files-options-for-preview-animation/idi-p/8491753>)
- Change Chamfer modifier default settings (<https://forums.autodesk.com/t5/3ds-max-ideas/change-chamfer-modifiers-default-settings-please/idi-p/8642824>)

RESOURCES

Consult the [3ds Max 2020 Release Notes](#) for further information.

Visit the [3ds Max Product Portfolio Page](#) on One Team Source for the latest sales tools.