



Conduit

USER MANUAL

Conduit finds every external file your .blend depends on: textures, HDRIs, linked .blend files, sounds, fonts, caches and VDB volumes. It shows which ones are missing, and it copies the ones you need into a clean delivery folder, with the paths in your scene pointed at the copies.

Everything happens in one sidebar tab in the 3D view. This manual covers installing, activating and using Conduit 0.5.2, and the Conduit + DataSweep bundle.

Version 0.5.2 · Blender 4.0 or newer · Windows, macOS, Linux

1. What Conduit does

- **Scan:** lists every external file the scene uses, with its status (found, missing or packed), its source and its size.
- **Trace:** lists only the files used by the objects you have selected.
- **Pack a delivery folder:** copies files into a folder you choose, sorted into subfolders by type, and can remap the paths in your .blend to the copies.
- **Unpack and repack:** writes files that are packed inside the .blend out to disk, or packs external files back into the .blend.
- **Locate:** opens the folder of a file in your file browser, or jumps to the file's data in Blender.
- **Unlink:** removes a file's data from the .blend (the file on disk is never deleted).
- **Metadata:** gives a file a readable name, a category and tags, saved next to your .blend.
- **CSV export:** writes the file list to a spreadsheet, for a client, a checklist or an archive.

Conduit does not search for missing files and relink them. For that, use Blender's File > External Data > Find Missing Files, or DataSweep if you have the bundle (see section 12).

2. Requirements

Item	Details
Blender	4.0 or newer
System	Windows, macOS or Linux
Licence key	One key, from your order email
Internet	Needed once, to activate the licence

3. Installing

1. Download the zip from your order page: `omniviz_conduit_v0.5.2_licensed.zip`. Do not unzip it.
2. In Blender, open **Edit > Preferences > Add-ons**.
3. Click the small arrow at the top right of the window and choose **Install from Disk**. In Blender 4.0 and 4.1 the button is called **Install....**
4. Pick the zip as it is and confirm.
5. Find Conduit in the list (type "Conduit" in the search field) and tick its checkbox to enable it, if it is not ticked already.
6. Close Preferences.

If your computer unzipped the download by itself, do not install the folder. Download the zip again, or zip the folder again.

If an older Conduit is installed

Remove it first, or the old code can stay in use.

1. In **Edit > Preferences > Add-ons**, find the old Conduit, untick it and remove it.
2. Quit Blender completely and open it again.

3. Install the new zip as described above.

4. Activating your licence

Until Conduit is activated, the OmniViz tab only shows a panel called **OmniViz Conduit: activation**.

1. In the 3D view, press **N** to open the sidebar and click the **OmniViz** tab.
2. Copy your licence key from your order email.
3. Paste it into the **Key** field. Spaces before or after the key are ignored.
4. Make sure you are online and click **Activate License**.

When it works, the status bar says "OmniViz Conduit activated" and the activation panel is replaced by the Conduit panels.

What to know

- Conduit contacts the OmniViz licence server only when you click **Activate License**. After that it works offline, also after you restart Blender.
- One key can be activated on up to 2 computers that you use.
- The activation is saved in Blender's user settings folder on this computer, not in the .blend. It does not travel with your files.
- If you install another version of Blender, it has its own settings folder, so Conduit may ask for the key again there. Paste the same key and click **Activate License**.

Messages you may see

Message	What to do
Enter your license key to activate	Not activated yet. Paste your key and click Activate License .
Paste your licence key first	The Key field is empty.
Cannot reach the licence server: check your internet connection	Check that you are online, then try again. A firewall or proxy can also block it.
This licence key is not for OmniViz Conduit	The key belongs to another product. Each key unlocks only the product you bought.
License expired: please re-enter your key	Go online, paste your key again and click Activate License .
Licence not valid on this computer: please re-enter your key	The saved activation does not match this computer. Paste your key again while online.

The licence server may also return its own message, for example when a key is already in use on 2 computers. If you need a new computer, write to support@omniviz.studio.

5. Finding your way around

In the 3D view, press **N** and click the **OmniViz** tab. The main panel is called **OmniViz Conduit v0.5.2**, so you can always see which version is running.

From top to bottom you find:

Part	What it holds	Open by default
Main panel	Scan filters, Scan Scene , Trace Selected , Unpack All , Repack All , and the found / missing / both buttons after a scan	Always open
Asset List	Every file found by the scan, with sort, ticks, locate and unlink buttons	Closed
Trace Results	The files of the selected objects	Closed
Smart Pack	Types, options and the Pack Dependencies button	Open
CSV Export	Export options and the Export CSV button	Open
Asset Metadata	Name, category and tags of the file you clicked in the Asset List	Closed

Click a panel's header to open or close it.

Scan results live in memory only. They are not saved in the .blend. After you open another file, change the scene, or restart Blender, click **Scan Scene** again.

6. Scanning the scene

Scan filters

The toggles at the top of the main panel choose what the scan looks for. All are on by default.

Toggle	What it finds
Textures	Image files, image sequences, movies and movie clips
HDRI	.hdr files, and any image used by an Environment Texture node in a World
Linked .blend	.blend files linked into the scene
Sounds	Sound files
Fonts	Font files used by text objects (Blender's built-in font is skipped)
Caches	Cache files, for example Alembic
VDB Volumes	OpenVDB volume files

An .exr file that is not used in a World counts as a texture, not as an HDRI.

The **More types** button opens three more toggles: **SVG Files**, **IES Lights** and **Models (OBJ/FBX/ABC)**. In version 0.5.2 the scan does not use them yet.

If you switch every toggle off, the scan looks for all types.

Run the scan

1. Set the toggles.
2. Click **Scan Scene**.

The status bar shows a summary, for example "Found 42 files, 3 missing." Three buttons appear under the scan buttons: **42 found**, **3 missing** and **Both** (the numbers are yours). They choose what the Asset List shows.

What "missing" means

- A file is **found** when it exists on disk at the path Blender has for it.
- A file is **missing** when that path leads nowhere.
- A file packed inside the .blend always counts as found: its data is inside the file.

- Data that comes from a linked .blend counts as found. What matters there is the linked .blend itself, which is listed as its own line.

The same file used in several places is listed once.

7. The Asset List

Open the **Asset List** panel after a scan. If it says "Run Scan first.", click **Scan Scene**.

Reading a row

From left to right, each row shows:

- A tick box, to select the file for Pack, Unpack, Repack or Unlink.
- A source icon: a package for a file packed inside the .blend, a chain link for data from a linked .blend, a file icon for an external file.
- A small size marker. It changes with the file size: under 1 MB, 1 to 10 MB, 10 to 50 MB, over 50 MB. It shows a different marker when there is no file on disk to measure.
- The file's name, with a status icon: a tick for found, a warning sign for missing, a package for packed. If you gave the file a name in **Asset Metadata**, that name is shown.
- A folder icon: **Locate on Disk**.
- An outliner icon: **Locate in Blender**.
- A broken link icon: **Unlink File**.

Filter and sort

- Click **found**, **missing** or **Both** in the main panel to filter the list.
- Use the drop-down at the top of the list to sort by **Name**, **Type**, **Size (small→large)**, **Size (large→small)** or **Status** (missing files first).

Select files

- Click a tick box to tick or untick one file.
- The ticked box icon at the top of the list ticks every file shown with the current filter. **Select All** at the bottom does the same.
- The empty box icon at the top unticks everything.

When files are ticked, a line appears at the bottom with the count (for example "5 selected") and three buttons:

- **Pack**: copies the ticked files into a folder you choose (see section 8).
- **Unpack**: writes the ticked files that are packed in the .blend out to disk.
- **Repack**: packs the ticked external files into the .blend.

Ticks are not cleared by a new scan. After each scan, click the empty box icon first, then tick the files you want.

Locate a file

- **Locate on Disk** (folder icon) opens your file browser with the file selected. On Linux it opens the folder. It cannot open a packed file (it has no file on disk) or a missing one: the status bar tells you why.
- **Locate in Blender** (outliner icon):

- For an image: shows it in an Image Editor. Open an Image Editor area in your layout first, or the status bar asks you to.
- For a linked .blend: selects the objects that come from it in the current view layer.
- For other types, the status bar names the data so you can find it yourself.

Unlink files

Unlink File (on a row) and **Unlink Selected** (for ticked files) remove the file's data from the .blend. Blender asks you to confirm first. Files on disk are never deleted.

- This works for images, sounds and fonts.
- Linked .blend files are skipped. Use Blender's File > External Data to manage them.
- Anything still using an unlinked image, sound or font loses it. Save a copy of your .blend first if you are not sure.

8. Smart Pack: build a delivery folder

Smart Pack copies the scanned files into a folder you choose. It does not change the files themselves. With remapping on, it points the paths in your scene at the copies.

Types to pack

Toggle	On by default
Textures	Yes
HDRIs	Yes
Libraries (linked .blend files)	Yes
Fonts	Yes
Sounds	No
Caches	No
Volumes	No

The **More types** button in Smart Pack only shows a note: SVG, IES and model files cannot be packed yet.

Options

Option	What it does
Max file size (MB)	Skips files larger than this. 0 means no limit.
Subfolders by type	Puts each type in its own subfolder: textures, libraries, sounds, fonts, caches, volumes. Off: everything goes in one folder.
Remap paths after packing	Points the paths in your .blend at the copied files. Off: the copies are made and your scene is left as it was.

Pack the whole scene

1. Click **Scan Scene**.
2. In **Smart Pack**, set the type toggles and options.
3. Click **Pack Dependencies**.

4. In Blender's file browser, choose or create the destination folder and confirm.
5. If **Remap paths after packing** was on, save your .blend (Ctrl+S) to keep the new paths.

Pack only some files

1. Tick the files in the **Asset List**.
2. Click **Pack** in the line at the bottom of the list.
3. Choose the destination folder and confirm.

Files you tick by hand are always packed, whatever the type toggles say. **Max file size (MB)**, **Subfolders by type** and **Remap paths after packing** still apply.

The pack report

When it finishes, the status bar says how many files were copied and why others were skipped, for example "Packed 12 files. Skipped: 2 missing, 3 already packed in blend."

Reason	Meaning
missing	The file is not on disk, so there is nothing to copy.
wrong type	Its type is switched off in Smart Pack (only for Pack Dependencies and Pack All).
oversized	It is larger than Max file size (MB) .
already packed in blend	Its data is inside the .blend. Run Unpack All first if you want it as a file.
linked from library	It comes from a linked .blend. Pack the linked .blend itself with Libraries on.

If a copy or a remap fails, the report ends with an error count. The details are in Blender's System Console (on Windows: Window > Toggle System Console; on macOS and Linux, start Blender from a terminal to see it).

Good to know

- If a file with the same name but different content is already in the destination folder, the copy gets a number added to its name. Nothing is overwritten.
- Save your .blend at least once before packing with remapping on. Then the new paths are relative to the .blend (they start with //). If the .blend was never saved, Blender gets full paths, which break when the project moves.
- Paths are made relative to where the .blend is saved at the moment you pack. To send a self-contained folder, save the .blend into the delivery folder first (see section 11).
- Linked .blend files are copied as they are. The files they use themselves are not collected.

9. Unpack and repack

Some imports (SketchUp, for example) pack textures inside the .blend. Conduit can write them out to disk, or pack external files back in.

Unpack All

Writes every packed image, sound and font to a folder, and points the scene at the new files.

1. Save your .blend first. Conduit asks you to if it is not saved.
2. Click **Unpack All** in the main panel.

3. The file browser opens in the .blend's own folder. Confirm it, or choose another folder.
4. Files go into subfolders: textures, sounds and fonts.
5. Save your .blend, then click **Scan Scene** again: the files are now listed as external.

The status bar says how many files were written, by type. Multi-file images (UDIM tiles, image sequences) are unpacked with Blender's own method, next to the .blend.

Unpack (ticked files)

1. Save your .blend.
2. Tick packed files in the **Asset List** or in **Trace Results**.
3. Click **Unpack** and confirm.

This uses Blender's own unpack, which writes the files next to the .blend, in Blender's usual subfolders. It works for images, sounds and fonts.

Repack All

Click **Repack All** and confirm. Blender packs every external file it can into the .blend. Your .blend then becomes one file you can send alone, but it gets larger. Save it afterwards.

Repack (ticked files)

Tick files and click **Repack**, then confirm. Only images, sounds and fonts can be packed into a .blend; others are reported as "cannot be packed into the .blend".

10. Trace Selected, Asset Metadata and CSV Export

Trace Selected

Shows only the files used by the objects you select.

1. Select one or more objects in the 3D view.
2. Click **Trace Selected** in the main panel.
3. Open the **Trace Results** panel.

The status bar says how many files were found, for example "Found 6 files linked to 'Sofa'." With several objects selected, their files are combined and each file is listed once.

Trace looks at:

- image textures in the object's materials,
- the fonts of a text object (regular, bold, italic, bold italic),
- Mesh Cache and Mesh Sequence Cache modifiers,
- the linked .blend of a linked object or a linked collection instance.

Each row shows a tick box, the source icon, the type and name (for example "[IMAGE] wood_diffuse"), and the same **Locate on Disk**, **Locate in Blender** and **Unlink File** buttons as the Asset List.

At the bottom of **Trace Results**:

- **Export CSV**: writes the traced files to a CSV file.
- **Pack All**: shown when nothing is ticked. Copies all traced files to a folder, using the Smart Pack type toggles and options.
- **Pack, Unpack, Repack**: shown when files are ticked. They work like the same buttons in the Asset List.

- **Unlink Selected** and **Select All**.

Asset Metadata

Give a file a readable name, a category and tags. They show in the Asset List and in CSV exports.

1. Save your .blend first. Metadata is stored next to it.
2. Scan the scene and click a file's name in the **Asset List**.
3. Open **Asset Metadata**. It shows the file's type and size.
4. Fill in **Name**, choose a **Category**, and type **Tags** separated by commas (for example: oak, floor, 4k).
5. Click **Save Metadata**.

The categories are: Uncategorized, Chair, Table, Sofa, Bed, Storage, Lighting, Decor, Material, HDRI, Model, Texture, Cache, Sound, Font, Other and **Custom....** Choose **Custom....**, type your own category in the field below and click the **+** button. It is added to the list for this .blend.

Metadata is saved in a small text file next to your .blend, with the same name and the ending `.omniviz.json` (for `kitchen.blend`: `kitchen.omniviz.json`). Keep it with the .blend if you want to keep the metadata.

Metadata is stored per file path. If a file moves, for example after packing with remapping on, its saved name, category and tags no longer apply to it.

CSV Export

1. Click **Scan Scene**.
2. In **CSV Export**, choose what to include:
 - **Found** and **Missing**: which files to export. At least one must be on.
 - **Split**: writes two files, one ending in `_found.csv` and one in `_missing.csv`, instead of one.
 - **Include types**: Textures, HDRIs, Libraries, Sounds, Fonts, Caches, Volumes.
 - **Selected object only**: limits the export to the files of the active object.
3. Click **Export CSV**, choose a name and a place, and confirm.

The CSV opens in Excel, Numbers, LibreOffice or Google Sheets. Its columns:

Column	Content
Name	Your metadata name, or Blender's name for the data
Category	From Asset Metadata (Uncategorized by default)
Tags	From Asset Metadata
Type	Image, MovieClip, Library, Sound, Font, CacheFile or Volume
Subtype	IMAGE, EXR, HDRI, MOVIE, BLEND, SOUND, FONT, CACHE or VDB
Source	INTERNAL (packed), LINKED or EXTERNAL
Status	OK or MISSING
Size (MB)	File size on disk (0.00 when there is no file on disk)
Path	Full path of the file

The **Export CSV** button in **Trace Results** writes the traced files, with the same columns and the same **Include types** toggles.

11. Typical workflows

Send a scene to a client

1. Open your .blend and click **Scan Scene**.
2. Click the **missing** button. Fix any missing files first (see "Fix missing textures" below), then click **Both**.
3. Use File > Save As to save the .blend into a new, empty delivery folder.
4. In **Smart Pack**, check the type toggles, leave **Subfolders by type** and **Remap paths after packing** on.
5. Click **Pack Dependencies** and choose the same delivery folder.
6. Save the .blend (Ctrl+S).
7. Optional: in **CSV Export**, click **Export CSV** and save the list in the delivery folder.
8. Zip the delivery folder and send it.

The paths in the delivered .blend are relative, so the folder works on the client's computer.

Prefer one single file? Click **Repack All** instead, then save. The .blend carries its images, sounds and fonts inside.

Archive a project

1. Click **Scan Scene**. Make sure **0 missing** is shown, or note what is missing.
2. Save the .blend into the archive folder with File > Save As.
3. Set **Max file size (MB)** to 0 and switch on every type you want to keep, including **Sounds**, **Caches** and **Volumes** if the project uses them.
4. Click **Pack Dependencies** and choose the archive folder.
5. Save the .blend.
6. Export a CSV of the full list into the archive folder, as a record of what the project used.

Fix missing textures

1. Click **Scan Scene**, then the **missing** button.
2. Sort by **Status** to see the missing files first. The path Blender expects is in the CSV export, or in the status bar when you click **Locate on Disk**.
3. To see which object uses a missing file, select objects and click **Trace Selected**: missing files show a warning sign.
4. Relink the files with Blender's File > External Data > Find Missing Files, pointing it at the folder where they now are. With the bundle, DataSweep can relink missing files from a folder too.
5. Click **Scan Scene** again to check that **0 missing** is shown.

Clean up after a SketchUp import

1. Save the .blend.
2. Click **Unpack All** and confirm the .blend's folder.
3. Save, then click **Scan Scene**. The textures are now external files you can pack, rename or replace.

12. Conduit + DataSweep bundle

The bundle zip `conduit_v0.5.2_datasweep_v1.4.2_licensed.zip` holds both add-ons. They sit side by side in the same **OmniViz** sidebar tab and one licence key unlocks both. DataSweep has its own manual.

Install

1. In **Edit > Preferences > Add-ons**, use **Install from Disk** and pick the bundle zip as it is.
2. Tick both Conduit and DataSweep in the list to enable them.

Activate both with one key

1. In the **OmniViz** tab, each add-on shows its own activation panel.
2. Paste the key into either one and click **Activate License**.
3. Conduit and DataSweep are both activated. The status bar says so, for example "OmniViz Conduit activated (also OmniViz DataSweep)".

The second add-on is activated at the same time only if it is already enabled. If you enable it later, its **Key** field is already filled in with the key: just click **Activate License**.

A key bought for Conduit alone does not unlock DataSweep, and the reverse.

13. Troubleshooting

The OmniViz tab does not appear

- Check that Conduit is ticked in **Edit > Preferences > Add-ons**.
- Press **N** in a 3D view; the tab is in the sidebar.
- Restart Blender. If it still does not show, write to us with your Blender version, your system and a screenshot of the Add-ons list.

I only see the activation panel

Conduit is not activated on this computer yet. See section 4.

The scan finds nothing

- Check the scan filter toggles.
- The scene may use no external files.

Many files are listed as packed

They are stored inside the .blend. Run **Unpack All** if you want them as files on disk.

An HDRI is listed as a texture

Only .hdr files and images used by an Environment Texture node in a World count as HDRIs. An .exr that is used anywhere else is listed as a texture. Switch both **Textures** and **HDRIs** on to be sure you see it.

The list shows files from another scene

Results stay in memory until the next scan. Click **Scan Scene** again.

Paths are broken after packing

- Save the .blend after packing. The new paths are only kept when you save.
- Save the .blend into the delivery folder before packing, so the paths are relative to it.

Pack copied nothing

Read the pack report in the status bar (section 8). Common causes: the files are packed in the .blend, missing, larger than **Max file size (MB)**, or their type is switched off.

CSV export gives no rows

Switch on **Found**, **Missing** or both, and check the **Include types** toggles. With **Selected object only** on, the active object must use some of the scanned files.

Metadata is not saved

The .blend has never been saved, so there is no place for the `.omniviz.json` file. Save the .blend first.

Locate in Blender does nothing for an image

Open an Image Editor area in your layout, then click the button again.

14. Updating

1. Download the new zip from your order page.
2. In **Edit > Preferences > Add-ons**, untick and remove the old Conduit.
3. Quit Blender completely and open it again. Blender keeps the old code in memory until it restarts.
4. Install the new zip with **Install from Disk** and enable it.
5. Check the version in the main panel title.

Your activation is saved in Blender's user settings, not in the add-on folder. If the activation panel shows after the update, paste your key and click **Activate License**.

15. Licence summary

- One licence key per purchase.
- Up to 2 computers that you use.
- Personal and commercial use, including client work.
- Not transferable. You may not share, resell or publish the add-on or the key.
- Updates within the same major version are free.

16. Support

- Email: support@omniviz.studio
- Questions and answers: <https://omniviz.studio/#faq>

When you write, include your order email address, your Blender version, your system, and the exact message from the status bar or the activation panel.