Magic Systems of Systems Architect (MSOSA)

Installation Instructions for CSU Systems Engineering Department

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Version 2025/12/30 @12:51

➞ Outline

1. Step 1: Download the Software
2. Step 2: Install the Software
3. Step 3: Connect to CSU Network
4. Step 4: Open and Add the License
5. Step 5: Create a Project

→ Initial Remarks

Remark

Installation Videos are available for each of the major OSs.

Remark

CSU Engineering Technology Services (ETS) and the Division of Information Technology for CSU do not provide support for this software, so please do not contact them with any questions. Please contact Dr. Herber (daniel.herber@colostate.edu) with questions.

Remark

Many of you might be familiar with Cameo Systems Modeler, MagicDraw, or similar tools. The Magic Systems of Systems Architect (MSOSA) is a modern version of these tools that supports SysML and many other languages and frameworks. Learning MSOSA will directly translate to expertise with Cameo.

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Step 1: Download the Software

⟶ Download the Software

- Download your desired type of Magic Systems of Systems Architect (MSOSA) installer from this OneDrive link using your CSU email:

  🔗 Magic Systems of Systems Architect

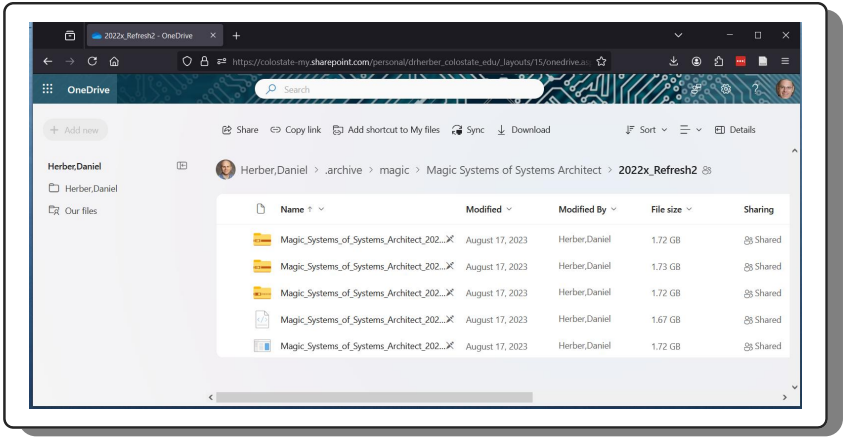
- Current release is 2026x_HF1 (only 2026x supported by the license)
  1. `*_win64.exe` — Windows (Windows 11 is recommended to avoid installation issues)
  2. `*_no_install.zip` — Windows version that is not installed but requires a separate Java installation[1]
  3. `*_mac.dmg` — older Macs
  4. `*_mac_aarch64.dmg` — newer Apple silicon Macs
  5. `*_unix.sh` — Linux

[1] 🔗 docs.nomagic.com/IL/2026x/installing-modeling-tools-272740398.html

➞ OneDrive Folder Screenshot

Remark

Note that release 2022x_Refresh2 is shown below. Be sure to select the current version from the previous slide.



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Step 2: Install the Software

⭢ Install the Software

- Follow the correct installation instructions for the version you selected on the previous slide:

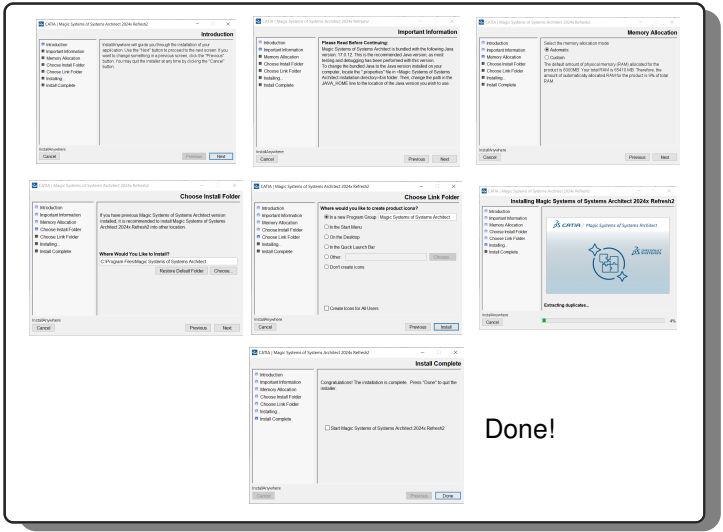
  docs.nomagic.com/IL/2026x/installing-modeling-tools-272740398.html

- Again, Installation Videos are available for each of the major OSs

Remark

> If you are having installation issues, it is recommended that you try installing the program with elevated privileges (administrator).

➞ Install Process Screenshots



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Step 3: Connect to CSU Network

➞ Connect to CSU Network (1)

- Once the tool is installed, connect to the CSU network
- If you are not directly connected to the campus network (e.g., a distance student or off campus), you will need to use the CSU VPN — instructions for setting it up are here:

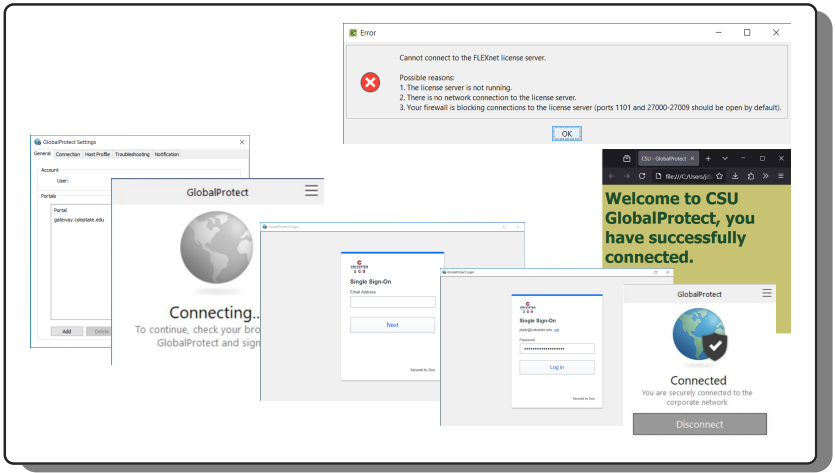
www.engr.colostate.edu/ets/vpn

Remark

You must use NetID@colostate.edu when logging into the VPN, not first.last@colostate.edu. Please the link[1] below for more information.

[1] csusystem.freshservice.com/support/solutions/articles/23000145226

➞ CSU VPN Screenshots



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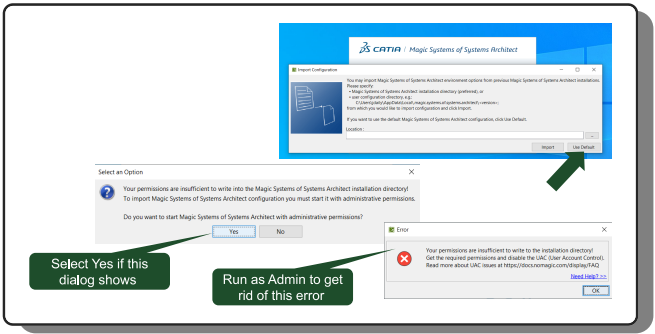
Step 4: Open and Add the License

⟶ Initial Opening of MSOSA

- Now, open the tool for the first time!
- If you see the Import Configuration dialog box ⟶ Select Use Default

Remark

You may need to have administrative permissions to address the additional dialog boxes below.



➞ Add the License

- You should eventually see the License Manager dialog box[1] ⟶ select “Use Floating License”
- You now want to obtain a floating license[2]. Enter the appropriate license information from the next slide (server and vendor port)

Remark

Consider using the Offline option to use a floating license without needing to connect to the CSU network for some period of time. Please refrain from using this with the research licenses so that they remain broadly available.

Remark

If you receive an error, please be sure to check that you are connected to the CSU network through the VPN (see Slide 8).

[1] docs.nomagic.com/IL/2026x/license-manager-272740436.html
[2] docs.nomagic.com/IL/2026x/obtaining-a-floating-license-for-a-modeling-tool-272740584.html

➞ CSU License Information

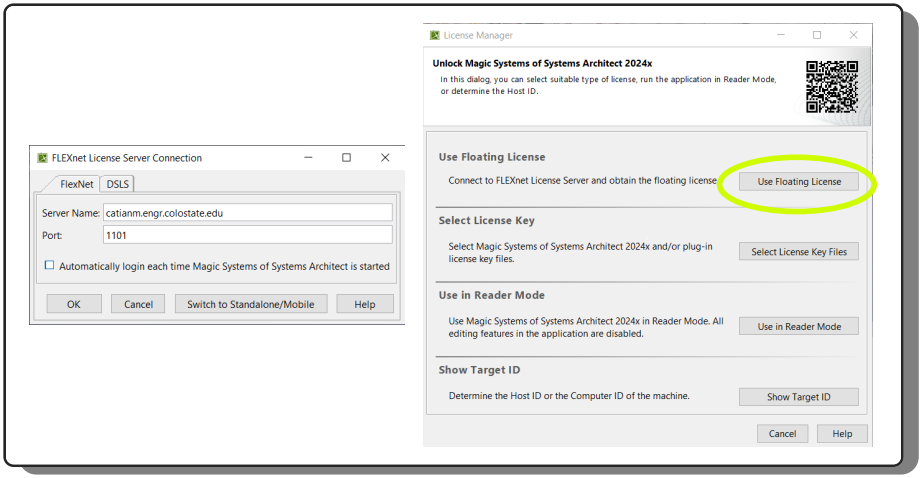
- Teaching License information (for courses like SYSE 530 or 567, or class projects with SysML):

```
Server Name = catianm.engr.colostate.edu
Port = 1101
```

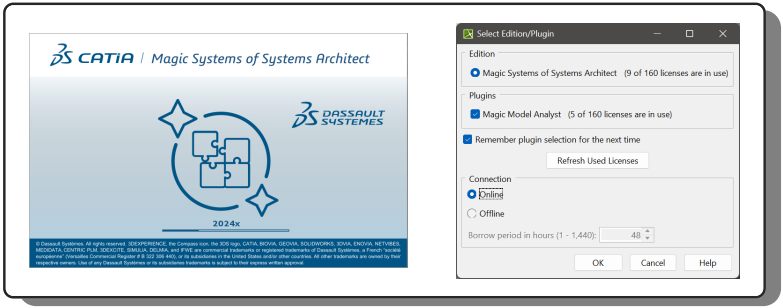
- **Temporarily unavailable** ~~Research License information (for general academic research, graduate-level thesis work, professor-led research, etc.):~~

```
Server Name = catmagic.engr.colostate.edu
Port = 1101
```

➞ License Manager Screenshots



➞ Application Opening and Edition/Plugin Selection Screenshots



- Allow OpenJDK Platform binary to use the Domain and Private networks if a Windows Security Alert dialog box appears

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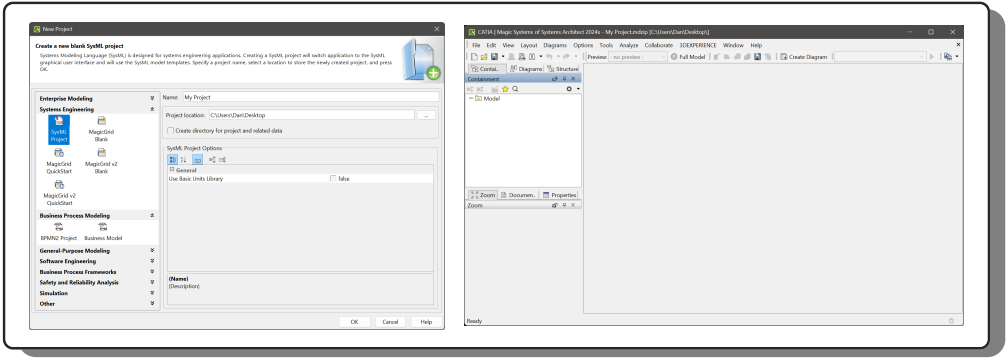
Step 5: Create a Project

➞ Create a Project

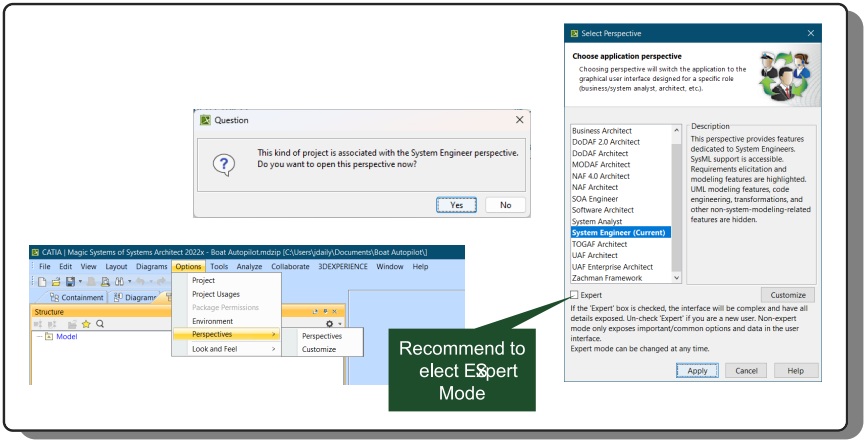
- Once you have opened the tool, you will be greeted by a dialog box asking you to select a project type — you may be looking for the SysML project option, as shown below

➞ New Project Screenshots



➞ Perspectives

- Use the System Engineer perspective, if it is not already selected



➞ [Optional] Install the Magic Model Analyst Plugin

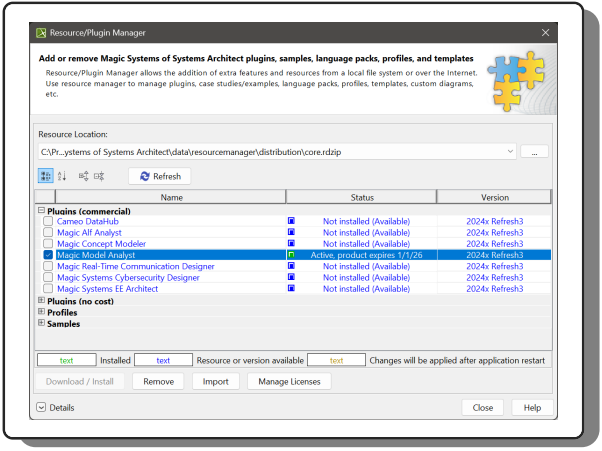
- To install the Magic Model Analyst plugin[1], go to `Help -> Resource/Plugin Manager -> Check Magic Model Analyst -> Select Download / Install`
- Restart MSOSA and be sure to check Magic Model Analyst to check out a license for the plugin

Remark

> This plugin was formerly known as the Cameo Simulation Toolkit.

[1] With this plugin, you can do automatic requirements verification, trade studies, Monte Carlo analysis, mass/cost/power rollups, time duration analysis, co-simulation, and user interface prototyping

→ [Optional] Magic Model Analyst Plugin Screenshot



➞ Other Resources

- Books:
  - *SysML Distilled: A Brief Guide to the Systems Modeling Language*
  - *A Practical Guide to SysML: The Systems Modeling Language*
  - *Architecting Spacecraft with SysML: A Model-based Systems Engineering Approach*
  - *Effective Model-Based Systems Engineering*
  - *SysML for Beginners: Using CATIA No Magic Products*

➞ References

- J. Borky and T. Bradley (2019). *Effective Model-Based Systems Engineering*. Springer. DOI: 10.1007/978-3-319-95669-5
- L. Delligatti (2013). *SysML Distilled: A Brief Guide to the Systems Modeling Language*. Addison-Wesley Professional
- S. Friedenthal, A. Moore, and R. Steiner (2012). *A Practical Guide to SysML: The Systems Modeling Language*. Morgan Kaufmann Publishers. DOI: 10.1016/C2013-0-14457-1
- S. Friedenthal and C. Oster (2017). *Architecting Spacecraft with SysML: A Model-based Systems Engineering Approach*.
- D. Hetherington, O. Casse, and F. Braun (2022). *SysML for Beginners: Using CATIA No Magic Products*. Asatte Press