**Table of Contents**

1. Installing Simcenter 3D Low Frequency EM ............................................................................................................................................. 1
2. Setting the Site and User Material Library Format for Simcenter 3D Low Frequency EM ........................................................................................................ 4
   2.1 Setting the material library defaults ......................................................................................................................................................... 4
   2.2 Setting the material library defaults for a first time user of Simcenter ........................................................................................................ 8
1 Installing Simcenter 3D Low Frequency EM

This setup will integrate Simcenter's Low frequency electromagnetics package to your Simcenter 3D 2020.1 application.

Prerequisite:

- Simcenter 3D is already installed.
- You have obtained your Simcenter 3D Low Frequency EM license from Siemens.
- You have placed the “Simcenter3DLowFrequencyEM20201x64.exe” in a temporary folder.

1. From the temporary folder, double-click “Simcenter3DLowFrequencyEM20201x64.exe” to activate the setup program.
2. When prompted “Do you want to allow this app to make changes to your device”, click Yes.
3. The following windows appear:
4. The setup has installed a Start menu item under “Siemens Simcenter 3D Low Frequency EM”.

**IMPORTANT** This remains the only way to access Simcenter 3D with the Low Frequency EM option.

5. The setup is complete.
2 Setting the Site and User Material Library Format for Simcenter 3D Low Frequency EM

Default library locations are specified in the Customer Defaults under Gateway, Materials/Mass. These defaults can be set for the User, Group or Site.

See System Administration, Customizing the NX Installation, Customer Defaults in the Doc Center for more information on setting customer defaults.

2.1 Setting the material library defaults
These instructions are required so that when you are using Simcenter 3D Low Frequency EM, the program points to the electromagnetics material library.

Note If you have never used Simcenter 3D before, please disregard these steps and follow the ones listed under “Setting the material library defaults for a first time user of Simcenter”.


2. From the Customer Defaults dialog, select Gateway item “Materials/Mass”.

3. From the Locations tab, set "Site and User Material Library Format" to "Directory of MatML Files".

4. To set the defaults for “Site MatML Library” section, do the following:
   - Check the "Enable" and “Allow User Control” options.
   - Change the Windows "Directory Name" entry to be: “C:\Program Files\Siemens\Simcenter3D_2020.1 Low Frequency EM\SIMULATION\magnet\materials”.

5. If you want to create your own materials, set the defaults for "User MatML Library" section by doing the following:
   - Check the "Enable" and “Allow User Control” options.
   - Change the Windows "Directory Name" entry to be: “C:\Program Files\Siemens\Simcenter3D_2020.1 Low Frequency EM\SIMULATION\magnet\materials\usermaterials”.
6. Optionally, in the “Default Material Library” section, if you don't want to see the default Simcenter materials in the Manage Materials dialog, do the following:
   - Uncheck the "Enable" option.

   **Note** This is the preferred setting for Simcenter 3D Low Frequency EM since the standard Simcenter materials have no electromagnetic properties.

7. Close and reopen Simcenter.

   **Note** Changes to customer default options do not take effect until you have restarted your Simcenter 3D session.

8. Open a *.fem or *.sim file.

   **Note** This is required to gain access to the Manage Materials dialog.

9. From Home/Properties, select “Manage Materials”.

10. Check “Site MatML Library” and set it to “C:\Program Files\Siemens\Simcenter3D_2020.1 Low Frequency EM\SIMULATION\magnet\materials”

    **Note** This is the same path as Step 4 above.


    **Note** Changes to customer default options do not take effect until you have restarted your Simcenter 3D session.


13. From the Customer Defaults dialog, select Gateway item “Materials/Mass”.
14. Uncheck "Allow User Control" for "Site MatML Library".

15. Close and reopen Simcenter.

**Note**  Changes to customer default options do not take effect until you have restarted your Simcenter 3D session.
2.2 Setting the material library defaults for a first time user of Simcenter


2. From the Customer Defaults dialog, select Gateway item “Materials/Mass”.

3. From the Locations tab, set "Site and User Material Library Format" to "Directory of MatML Files".
4. To set the defaults for “Site MatML Library” section, do the following:
   - Check the "Enable" option
   - Uncheck the “Allow User Control” options
   - Change the Windows "Directory Name" entry to be: “C:\Program Files\Siemens\Simcenter3D_2020.1 Low Frequency EM\SIMULATION\magnet\materials”.

5. If you want to create your own materials, set the defaults for "User MatML Library" section by doing the following:
   - Check the "Enable" and “Allow User Control” options.
   - Change the Windows "Directory Name" entry to be: “C:\Program Files\Siemens\Simcenter3D_2020.1 Low Frequency EM\SIMULATION\magnet\materials \usermaterials”.

6. Optionally, in the “Default Material Library” section, if you don't want to see the default Simcenter materials in the Manage Materials dialog, do the following:
   - Uncheck the "Enable" option.
   **Note** This is the preferred setting for Simcenter 3D Low Frequency EM since the standard Simcenter materials have no electromagnetic properties.

7. Close and reopen Simcenter.

   **Note** Changes to customer default options do not take effect until you have restarted your Simcenter 3D session.