Renesas Synergy™ Platform

Installing IAR Compiler into e² studio

R11AN0272EU0103
Rev.1.03
May 14, 2018

1. Install IAR Embedded Workbench® for Renesas Synergy™ (IAR EW for Synergy)

1. Go to the Development Tools page in the website:
   https://www.renesas.com/en-us/products/synergy/software/tools.html
2. Click the **Explore IAR EW for Synergy** link to open the IAR Embedded Workbench for Renesas Synergy page.
3. Scroll down to click the **Download** button to download the current public release of IAR Installer.
4. Accept the SSP Tool License agreement.
5. Click the **Acquire License** button and enter your email address if requested.
6. Double-click the downloaded file to install the **IAR tool chain**.
7. Continue the install using the **default option** provided until the installation is complete.

2. Install e² studio

1. Go to the Development Tools page in the website:
   https://www.renesas.com/en-us/products/synergy/software/tools.html
2. Click the **Explore e² studio** link to open the e² studio page.
3. Scroll down to click the **Download** link to download e² studio**.**
4. Double click the downloaded file (e² studio) to launch the Platform installer.

Note: Select the **default option** whenever possible.

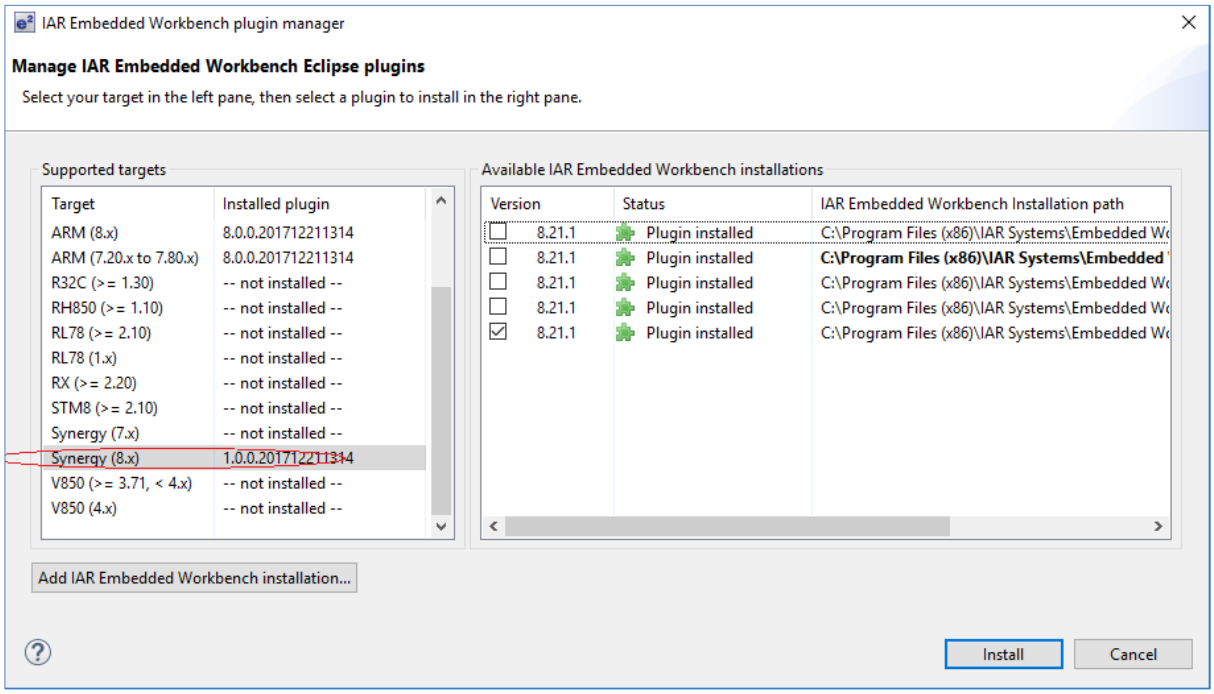
2.1 Install IAR plugins in e² studio

1. **Launch e² studio** once the installation is complete.
2. Go to the **Help** menu and select **IAR Embedded Workbench plugin manager**.

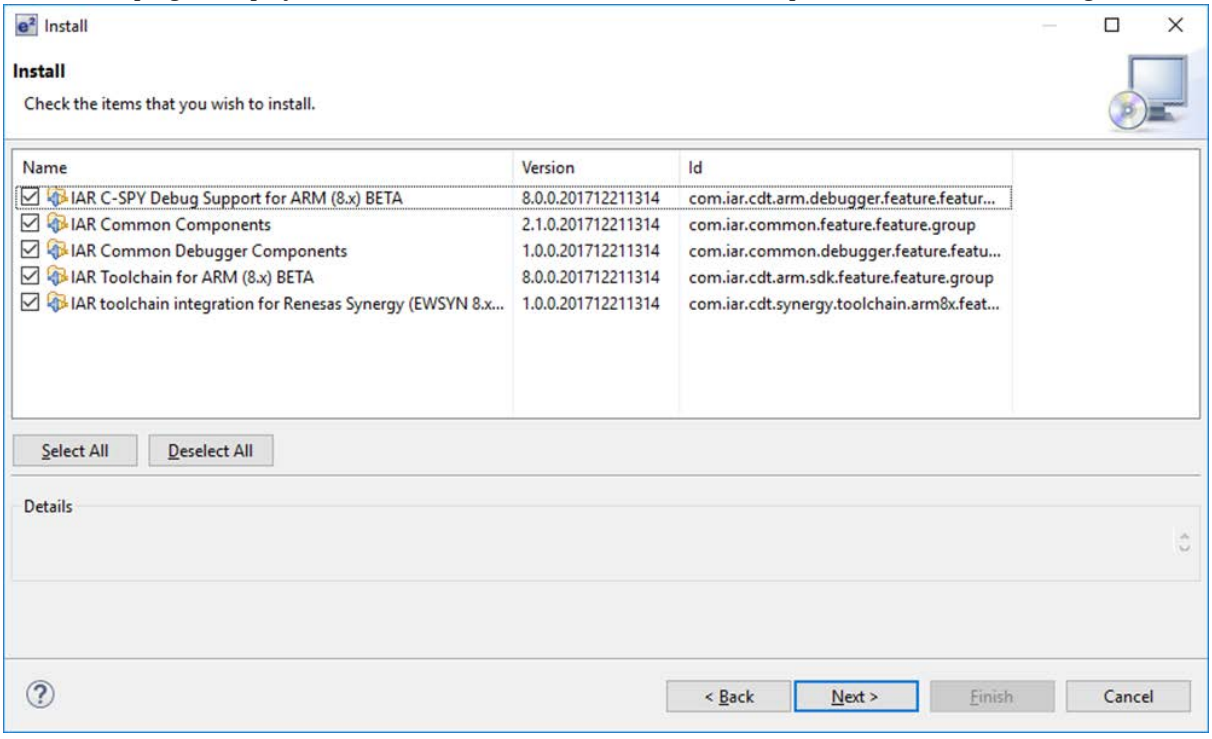
Note: This step requires e² studio to access an external server to download the necessary IAR plugins. You may need to configure HTTP and HTTPS proxy settings under **Window | Preferences | General | Network Connection**.

3. e² studio displays a list of available plugins that could be installed.
   A. The left pane displays the major versions of IAR Arm® compiler.
   B. The right pane displays the version of the selected IAR Embedded Workbench installation.

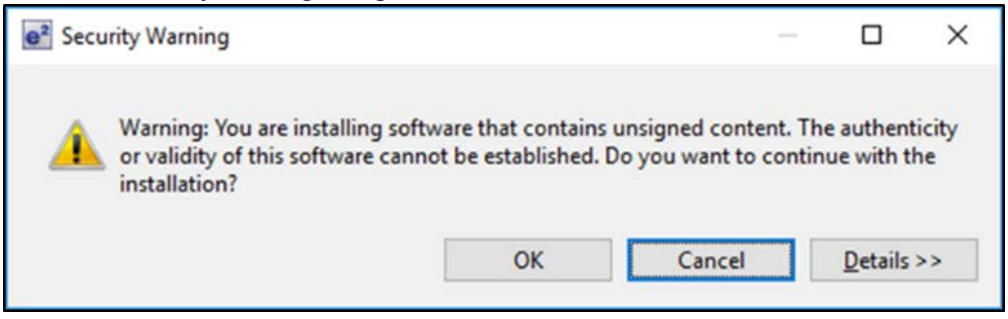
4. Select the appropriate version of the Synergy plugin and click **Install**.



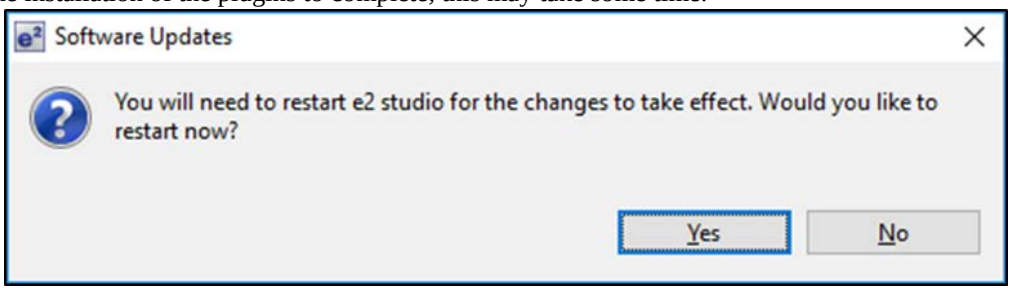
5. **Select all** the plugins displayed. Click **Next** to continue the install and accept the terms of the license agreement.



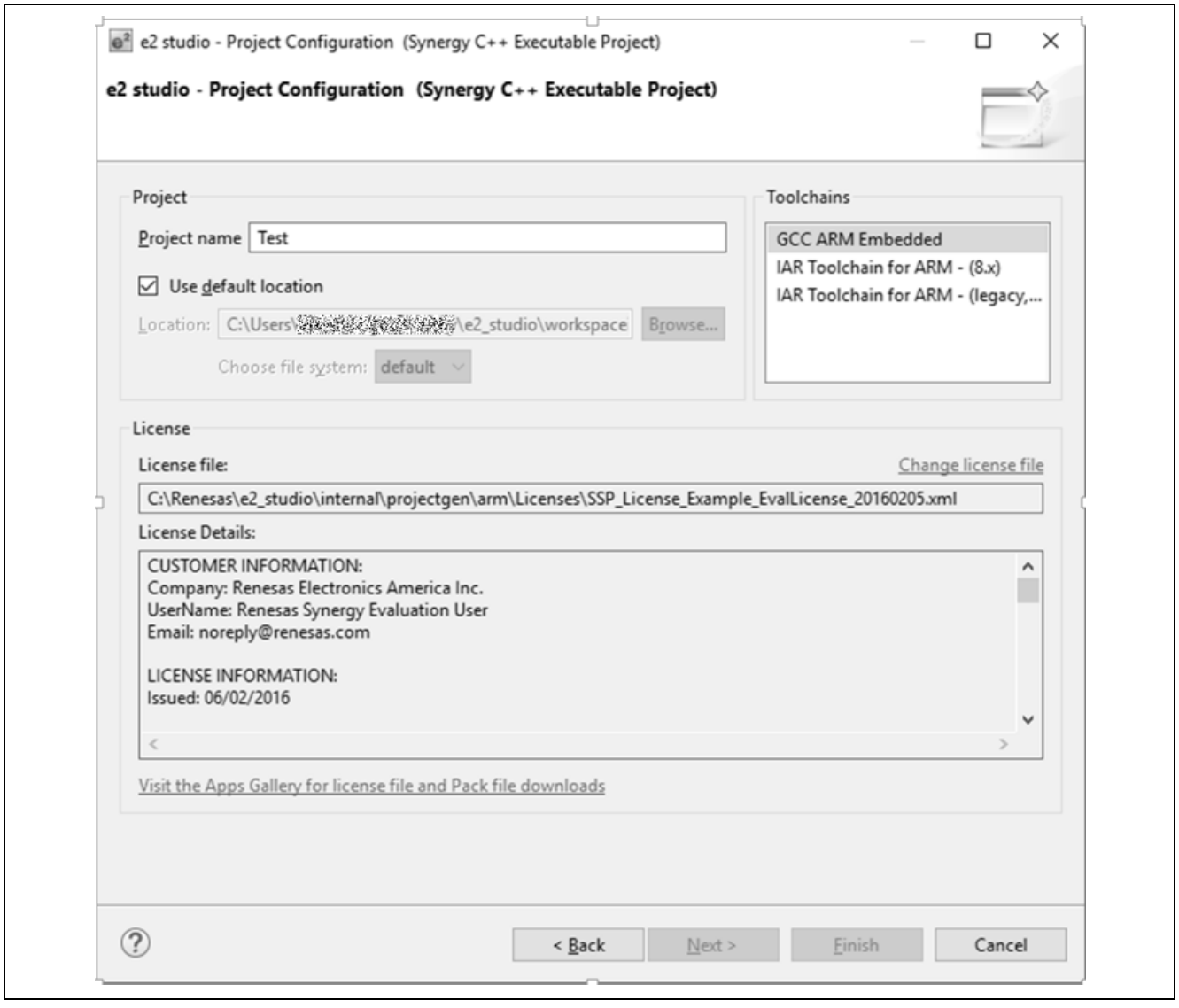
6. Click **OK** when the Security Warning dialog shows.



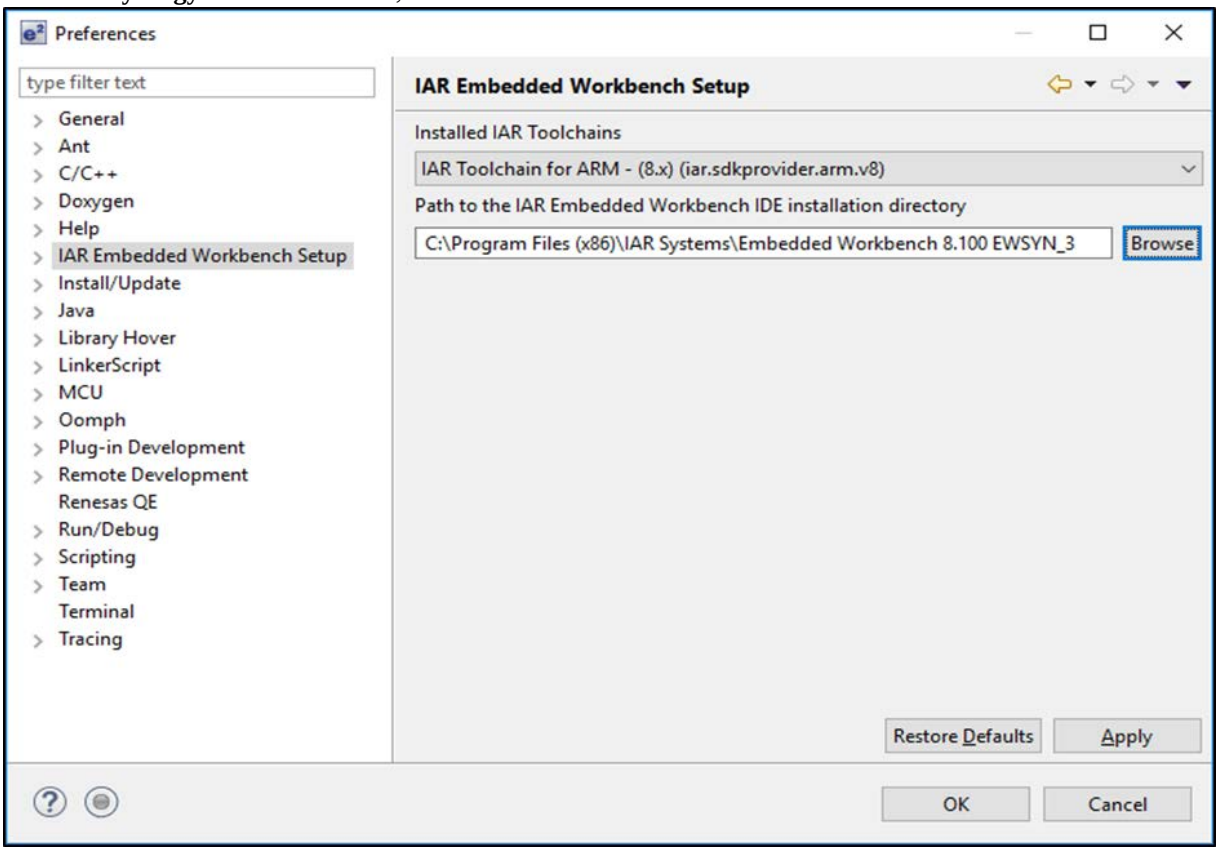
7. Allow the installation of the plugins to complete, this may take some time.



Allow e² studio to restart. Creating a new Synergy project will now show the options of the new toolchain.



8. In e² studio, go to the menu **Window > Preferences > IAR Embedded Workbench Setup** and browse to the **IAR EW for Synergy** installation folder, if needed.



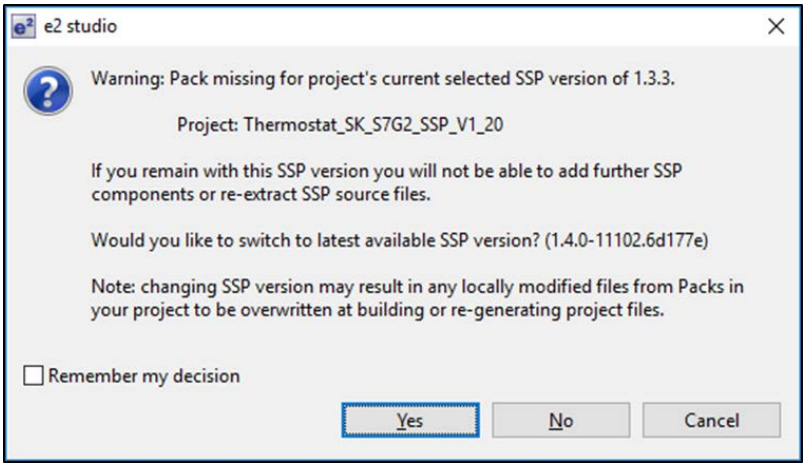
The IAR toolchain will now be available in the new Synergy Project dialog.

3. Migration of GCC project to IAR

Automatic migration of an existing GCC project to IAR is not supported. However, it is possible for you to manually port a project using the steps below.

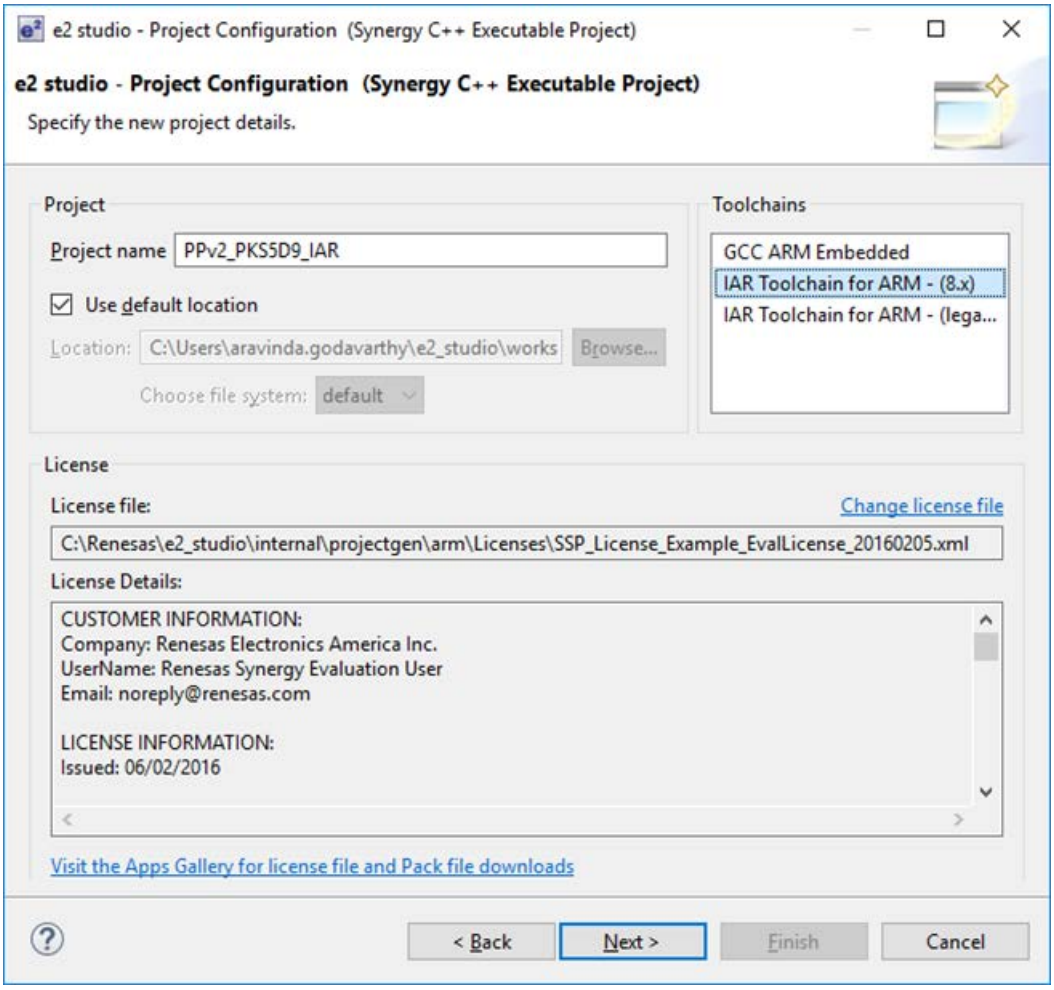
Note: You can follow this approach at their own risk. Compiler settings, user setting, linker script changes, and so on that were made in the GCC project will not be carried across to the new project. It is your responsibility to make the necessary changes and perform suitable testing to ensure the project functionality.

1. **Open** the existing GCC project in e² studio and then open the configurator by **double clicking** on the **configuration.xml** file.
2. If the SSP pack of the selected project is missing (see the following example), install the Synergy Software Package version needed.



Note: You will need to sign in to MyRenesas to see **All Versions** of the SSP near the bottom of the page.

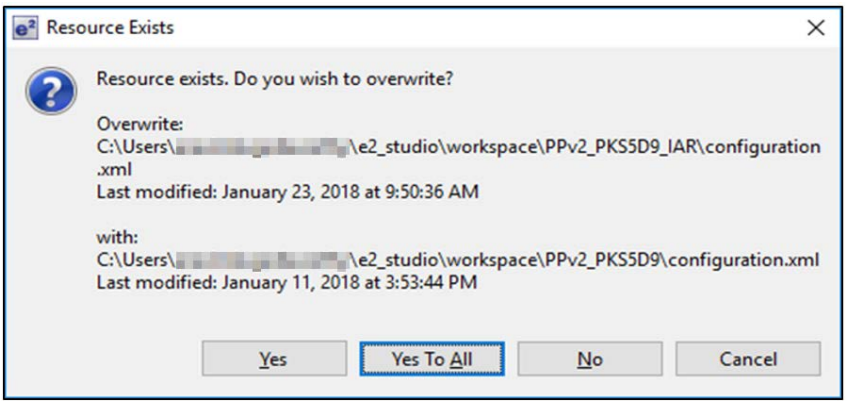
3. Create a new project selecting the IAR compiler and the same device as the GCC project.



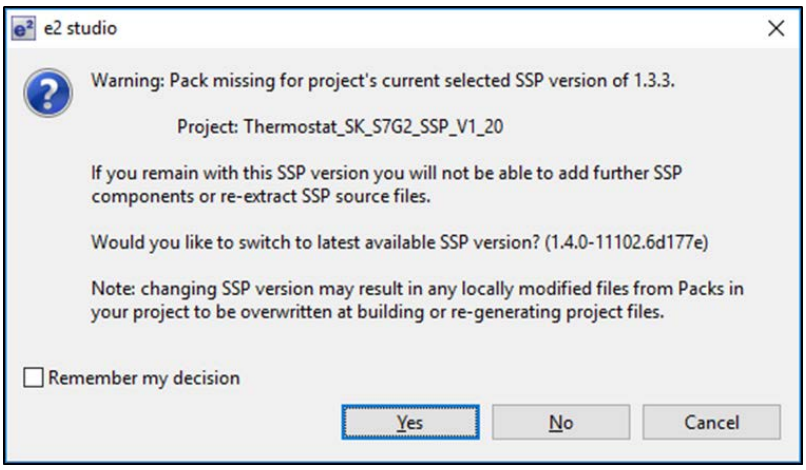
4. Where possible be sure to select the **same** SSP version as the original GCC project.

Note: If this is not possible, you will be asked to update the project (as above) when the configuration file is opened in following steps.

5. Delete the `src` folder from the new IAR project.
6. Select the `src` folder in the **GCC project** and copy it (right click and select **copy** from the options or use CTRL+C).
7. Select the new **IAR project** and paste the `src` folder to the new project (right click and select paste from the options or use CTRL+V).
8. Copy the **configuration.xml** file from the **GCC project** and paste it into the new **IAR project**.
9. Click **Yes To All** if a message dialog pops up.

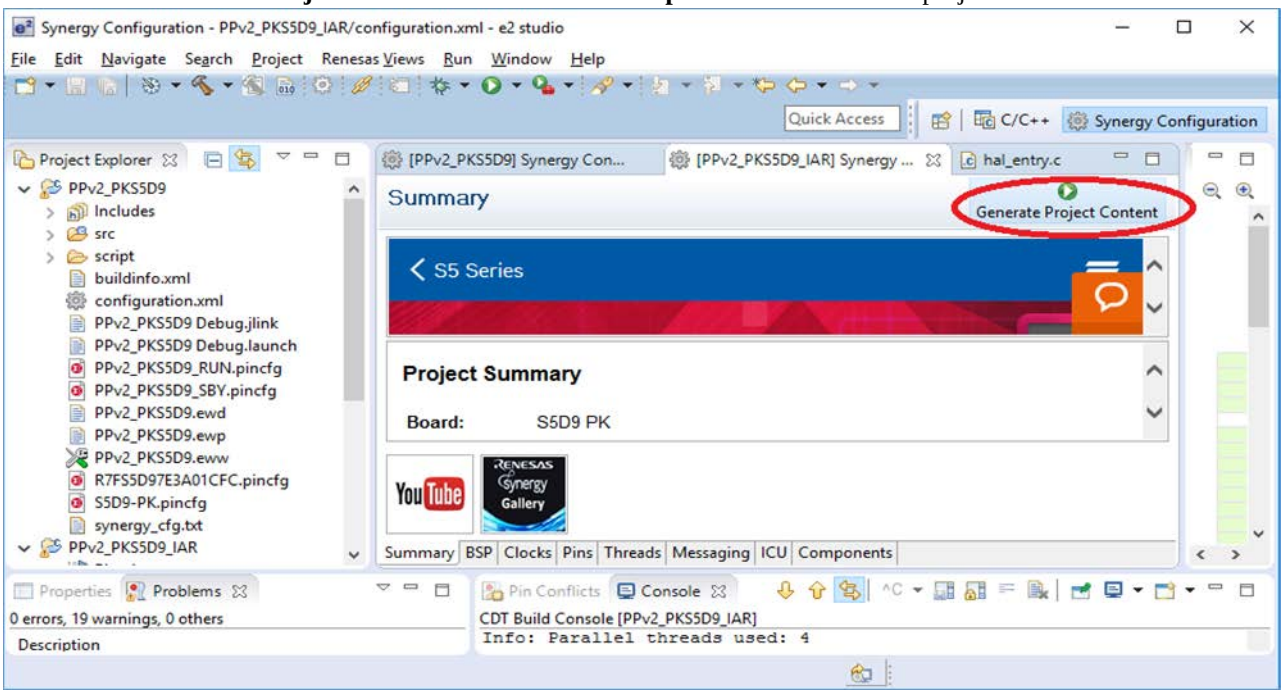


10. Copy `*.pincfg` from the GCC project to the **IAR project**.
11. Open the **configuration.xml** file.
    If the SSP pack of the selected project is missing (see the following example), install the needed Synergy Software Package version or update the project as needed.



Note: You will need to sign in to MyRenesas to see **All Versions** of the SSP near the bottom of the page.

12. Click the **Generate Project Content** to add the **IAR compatible SSP files** to the project.



13. Manually update any compiler and linker settings as needed.
14. Build the project that will now use the IAR compiler.

Note: Default compiler and linker settings will be used and may need to be modified to suit the target application.

15. Test the built project.

4. Migration of existing project with old version of IAR toolchain to a new major version of IAR toolchain

Projects created with an old version of the IAR toolchain might not always migrate correctly to a major, new version of IAR toolchain when opened in e² studio, causing the build to fail. Follow the steps from section 3, **Migration of GCC project to IAR**, to open an existing project with old version of IAR toolchain.

To summarize:

1. Create a new project using the new major version of IAR (for example, IAR V8.x) with same SSP version used by the existing project with old version of IAR toolchain (for example, IAR 7.x).
2. Copy the `src` folder, `configuration.xml`, and `*.pincfg` from the existing project to the new project.
3. Open `configuration.xml` file from the new project and generate project content.
4. Build and test the new project.

Website and Support

Support: https://synergygallery.renesas.com/support

Technical Contact Details:

- America: https://www.renesas.com/en-us/support/contact.html
- Europe: https://www.renesas.com/en-eu/support/contact.html
- Japan: https://www.renesas.com/ja-jp/support/contact.html

Revision History

		Description	
Rev.	**Date**	**Page**	**Summary**
1.00	Feb 14, 2018	—	Initial version
1.01	Mar 12, 2018	—	Workaround for the issue of migrating the IAR7.x project to IAR8.x
1.02	Apr 18, 2018	—	Fixed graphic layouts, links, and made minor corrections.
1.03	May 14, 2018	1, 5	Minor update of the hyperlink in section 2 and screen shot of Resource Exists.

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(Rev.4.0-1 November 2017)

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