



Importing DS-5 Example Projects

Version 1.0

Non-Confidential

Copyright © 2020 Arm Limited (or its affiliates).
All rights reserved.

Issue 01

102607_0100_01_en



Importing DS-5 Example Projects

Copyright © 2020 Arm Limited (or its affiliates). All rights reserved.

Release information

Document history

Issue	Date	Confidentiality	Change
0100-01	1 January 2020	Non-Confidential	First release

Proprietary Notice

This document is protected by copyright and other related rights and the practice or implementation of the information contained in this document may be protected by one or more patents or pending patent applications. No part of this document may be reproduced in any form by any means without the express prior written permission of Arm. No license, express or implied, by estoppel or otherwise to any intellectual property rights is granted by this document unless specifically stated.

Your access to the information in this document is conditional upon your acceptance that you will not use or permit others to use the information for the purposes of determining whether implementations infringe any third party patents.

THIS DOCUMENT IS PROVIDED "AS IS". ARM PROVIDES NO REPRESENTATIONS AND NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTORY QUALITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE DOCUMENT. For the avoidance of doubt, Arm makes no representation with respect to, and has undertaken no analysis to identify or understand the scope and content of, patents, copyrights, trade secrets, or other rights.

This document may include technical inaccuracies or typographical errors.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL ARM BE LIABLE FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF ANY USE OF THIS DOCUMENT, EVEN IF ARM HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This document consists solely of commercial items. You shall be responsible for ensuring that any use, duplication or disclosure of this document complies fully with any relevant export laws and regulations to assure that this document or any portion thereof is not exported, directly

or indirectly, in violation of such export laws. Use of the word “partner” in reference to Arm’s customers is not intended to create or refer to any partnership relationship with any other company. Arm may make changes to this document at any time and without notice.

This document may be translated into other languages for convenience, and you agree that if there is any conflict between the English version of this document and any translation, the terms of the English version of the Agreement shall prevail.

The Arm corporate logo and words marked with ® or ™ are registered trademarks or trademarks of Arm Limited (or its affiliates) in the US and/or elsewhere. All rights reserved. Other brands and names mentioned in this document may be the trademarks of their respective owners. Please follow Arm’s trademark usage guidelines at <https://www.arm.com/company/policies/trademarks>.

Copyright © 2020 Arm Limited (or its affiliates). All rights reserved.

Arm Limited. Company 02557590 registered in England.

110 Fulbourn Road, Cambridge, England CB1 9NJ.

(LES-PRE-20349|version 21.0)

Confidentiality Status

This document is Non-Confidential. The right to use, copy and disclose this document may be subject to license restrictions in accordance with the terms of the agreement entered into by Arm and the party that Arm delivered this document to.

Unrestricted Access is an Arm internal classification.

Product Status

The information in this document is Final, that is for a developed product.

Feedback

Arm® welcomes feedback on this product and its documentation. To provide feedback on the product, create a ticket on <https://support.developer.arm.com>

To provide feedback on the document, fill the following survey: <https://developer.arm.com/documentation-feedback-survey>.

Inclusive language commitment

Arm values inclusive communities. Arm recognizes that we and our industry have used language that can be offensive. Arm strives to lead the industry and create change.

We believe that this document contains no offensive language. To report offensive language in this document, email terms@arm.com.

Contents

1. Overview.....	6
2. DS-5 Welcome page.....	7
3. Open the CC++ or DS-5 Debug Perspective.....	8
4. Import the Example Projects.....	9
5. What Next?.....	12

1. Overview

The Arm DS-5 Development Studio installation includes a wide range of example projects for bare-metal and Linux. This tutorial will guide you through importing the DS-5 example projects so you can quickly get started debugging code, either on a Fixed Virtual Platform, which is an Arm model running on your host, or a development board.

2. DS-5 Welcome page

The first time you open DS-5 you are taken to the DS-5 Welcome page. If you've closed it, you can find it again under **Help > Welcome to DS-5**. In this case go ahead and close the **Welcome page**.

The Welcome page provides you with a good way of getting started with DS-5, including cheat sheets that will directly import all the projects into your workspace. However, this tutorial shows you the individual steps, so that you can learn how to import any general project.

3. Open the CC++ or DS-5 Debug Perspective

Once you close the Welcome page, DS-5 defaults to the **C/C++** perspective. This contains the **Project Explorer** view, which is where we will import the projects from. The **DS-5 Debug** perspective, which is where you will probably spend most of your time also contains the Project Explorer view.

If you import any project, or anything that relies on a folder-based hierarchy into Eclipse, it will appear in the Project Explorer view.

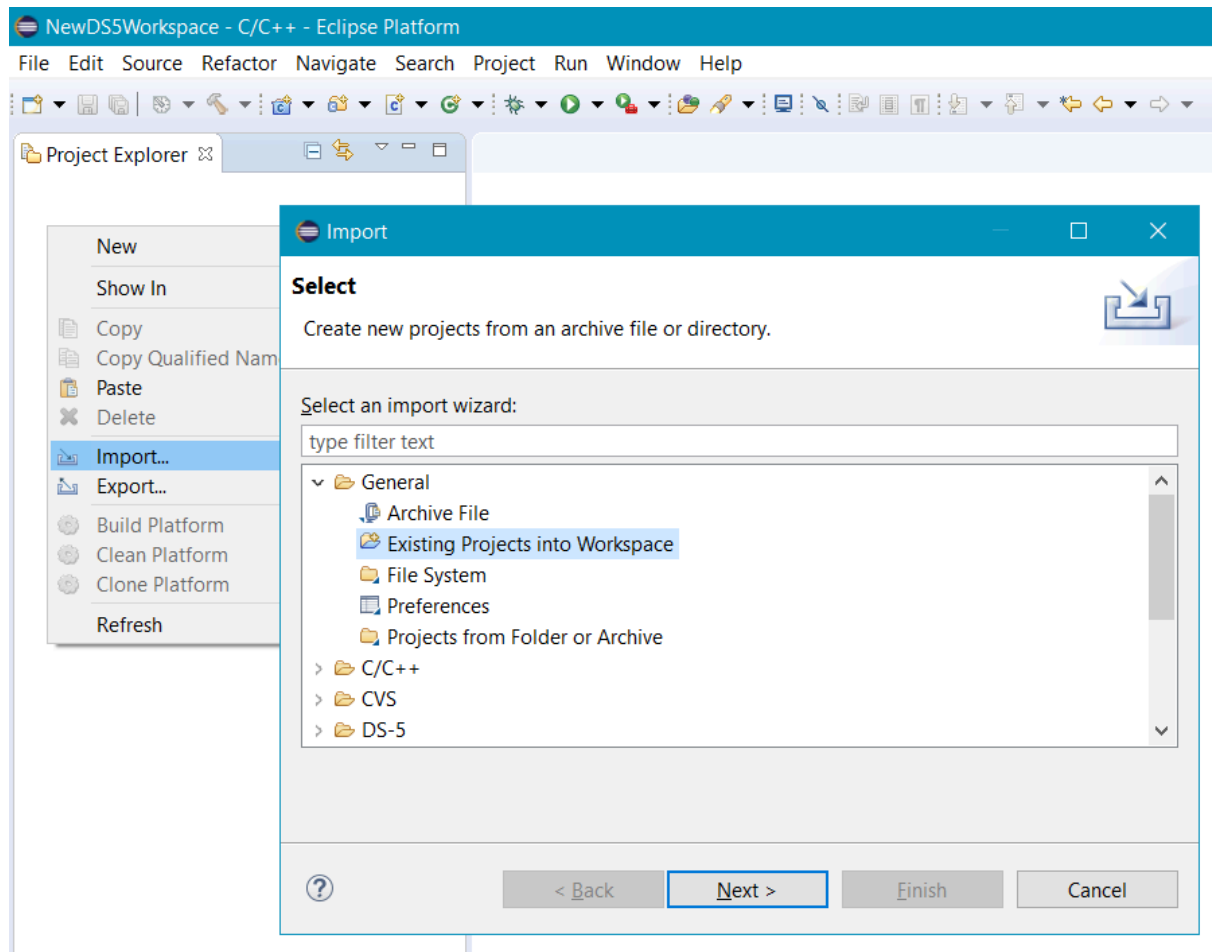
In Eclipse, you can carry out “contextual” actions by right-clicking in a view, or alternatively by using the top menu. It’s simply down to your personal preference, but worth bearing in mind.

4. Import the Example Projects

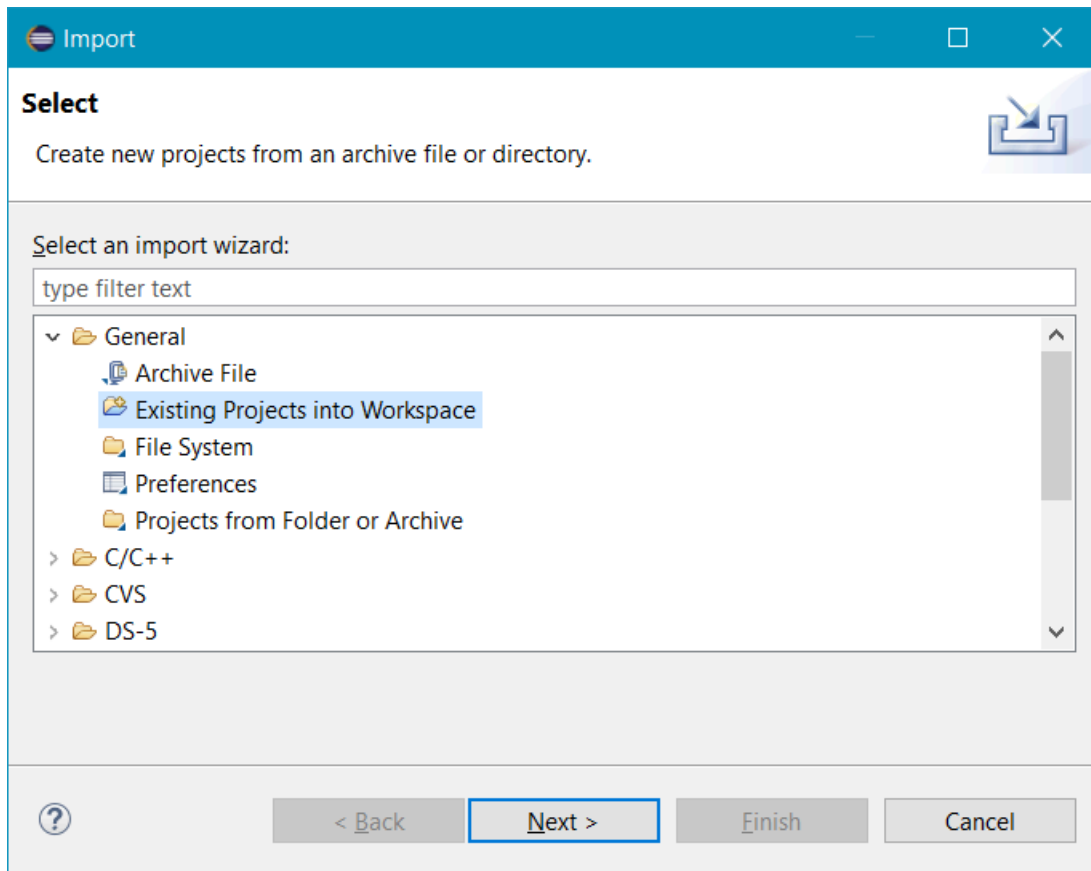
The following steps show you how to import the example projects.

1. Right-click in the **Project Explorer** view and click **Import...** to bring up the **Import** dialog.

Figure 4-1: Import examples project explorer view

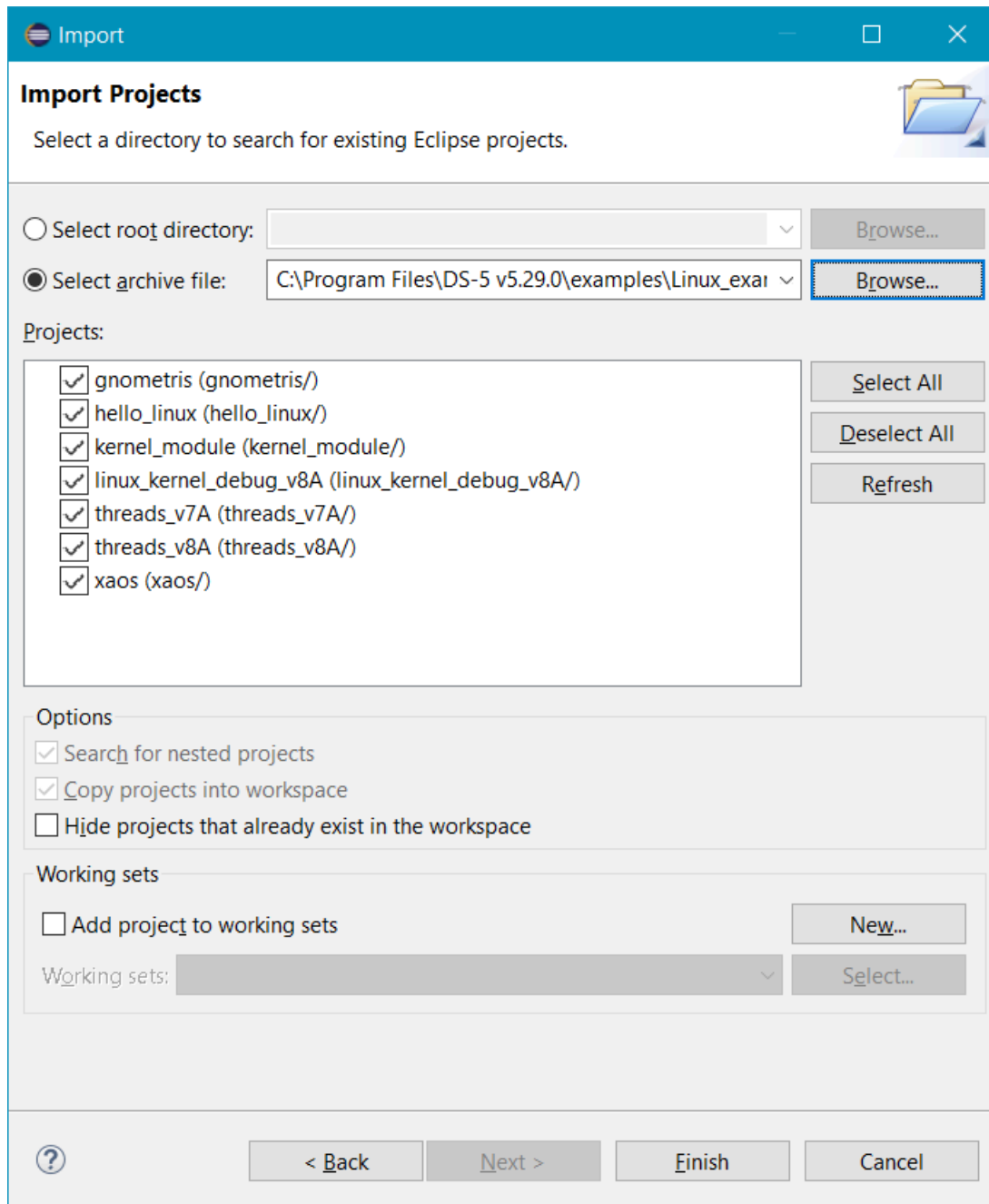


2. Select **General > Existing Projects into Workspace** and in the next window, click **Browse...** to navigate to the folder that contains the DS-5 example projects. This is located at `c:\Program Files\DS-5\examples`.

Figure 4-2: Import examples view**What kind of examples are provided?**

There are several examples for Linux, including XaoS, threads, hello world and gnometriz, along with startup code for supported processors and demonstration code for TrustZone. You'll also find bare-metal hello world examples for a range of development boards which will run from the on-chip RAM.

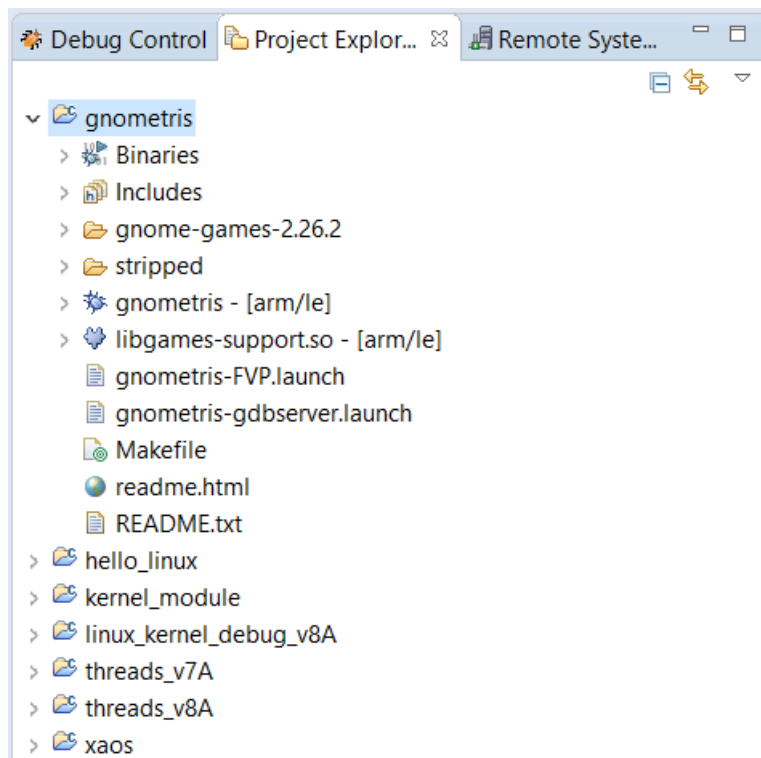
For now, select the Linux examples and hit **Open**. Finally, select the projects that you're interested in and click **Finish**.

Figure 4-3: Import examples browse and select projects view

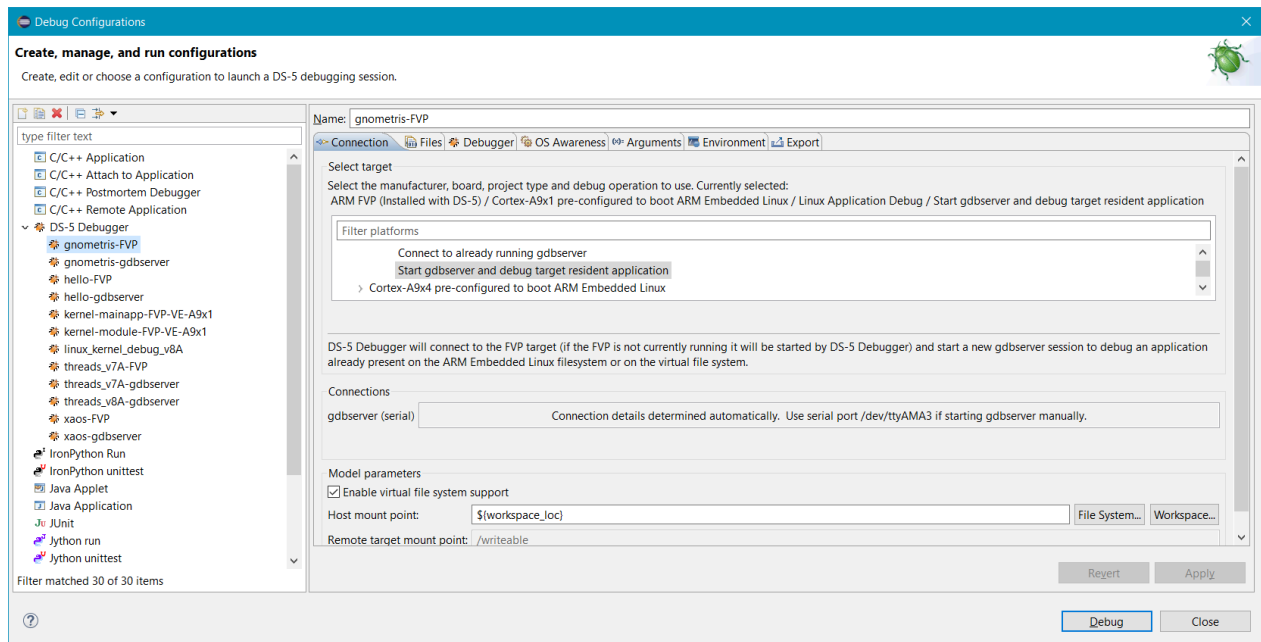
5. What Next?

The projects that you've just imported all contain readme files, which give you some further tutorial tasks. They also contain un-stripped and stripped binaries so that you have access to the debug symbols.

Figure 5-1: Import examples populated and expanded view



Conveniently, if you navigate to the **Debug Configurations** view, under **Run > Debug Configurations**, you'll see that DS-5 has also imported ready-to-use debug configurations for these projects.

Figure 5-2: Import examples debug view

Next, try double-clicking on one of the FVP examples in the **Debug Configurations** window, or simply hit **Debug**. The model will launch, along with DS-5 Debugger. Hit **Continue** (the green “play” button”) to run the program.