



Importing Models into DS-5

Version 1.0

Non-Confidential

Copyright © 2017 Arm Limited (or its affiliates).
All rights reserved.

Issue 01

102747_0100_01_en



Importing Models into DS-5

Copyright © 2017 Arm Limited (or its affiliates). All rights reserved.

Release information

Document history

Issue	Date	Confidentiality	Change
0100-01	11 May 2017	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 © 2017 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. Procedure.....

7

3. Customize your configuration.....

9

4. Related information.....

10

1. Overview

Learn how to add new Fixed Virtual Platforms to Arm DS-5 Development Studio.

Context

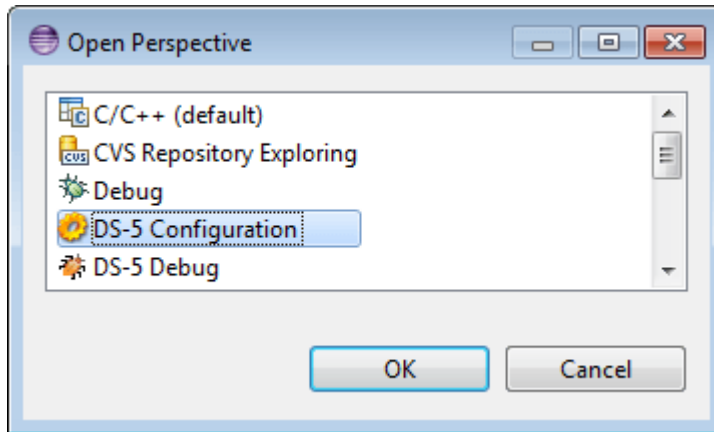
Working with Arm Fixed Virtual Platforms (FVPs) is a great way of cutting months from your project. Models give you a programmer's view of a complete Arm system, allowing you to test and debug software long before you have access to the Silicon. With the Models Platform Configuration Editor, it's easy to import, connect to and debug a model in DS-5.

2. Procedure

This chapter of this tutorial shows you how to import models into DS-5:

1. To open the DS-5 Configuration Perspective, select **Window > Perspective > Open Perspective > Other...** then select **DS-5 Configuration**.

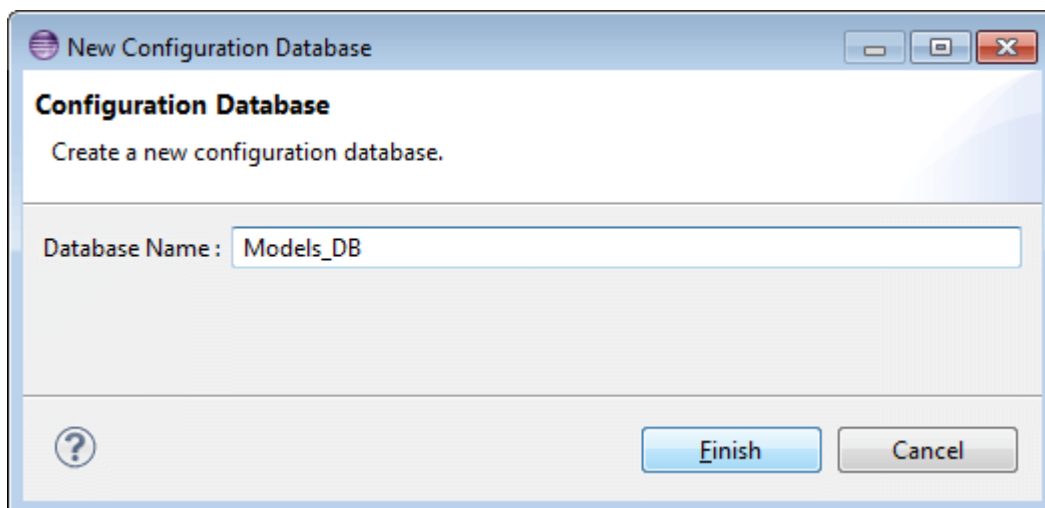
Figure 2-1: Open perspective window options



2. Select **File > New > Configuration Database** and enter a name for your database.

This creates a folder you can see in the **Project Explorer** view.

Figure 2-2: New configuration window options



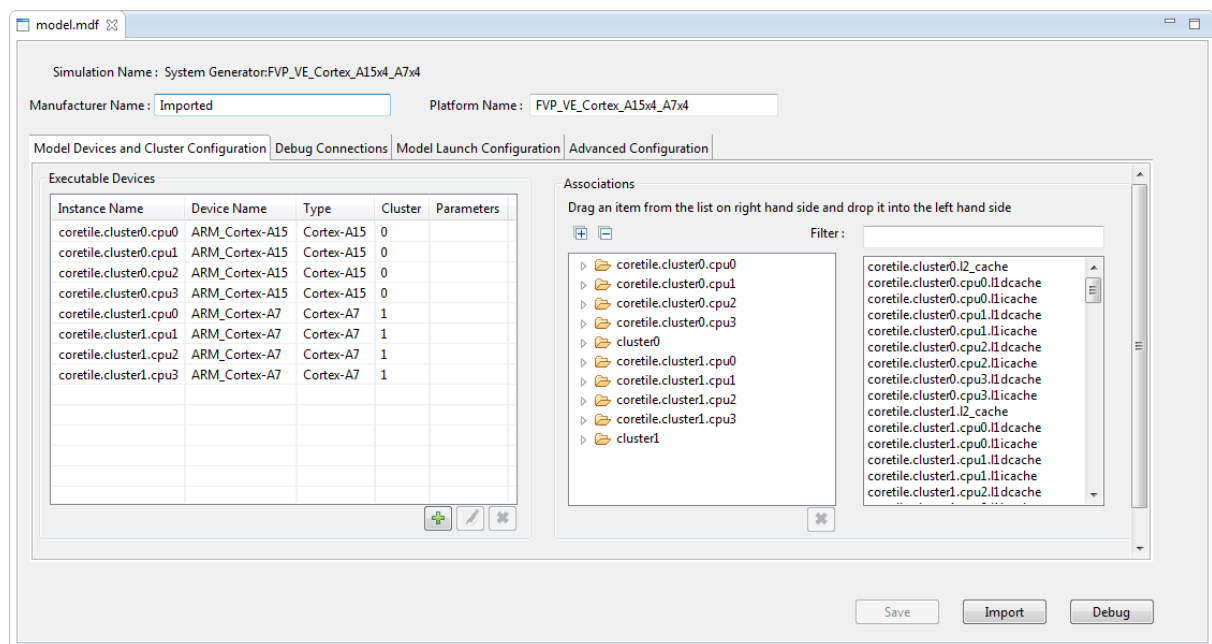
3. Right-click in the **Project Explorer** view and select **New > Model Configuration**. Choose the database to create the entry, and click **Next**.
4. Select **Launch and connect to specific model**, and then click **Next**. To browse to the folder where your model is located, click **File**. Select the model executable, for example `FVP_VE_Cortex-A15x4-A7x4.exe`, and then click **Finish**.



You may find that any file dependencies that the model executable might have, such as .dll files need to be in the same folder as the model executable. You should consider this if you decide to copy your executable into the DS-5 /bin directory.

DS-5 launches the model for you and detect its configuration. This is presented as a view in DS-5 with the title **model.mdf**.

Figure 2-3: Options in the model.mdf file



- To import your configuration, click **Import**.

This creates a new entry in the DS-5 configuration database, which allows DS-5 to debug the model.

- To debug your model configuration, click **Debug**.

The **Debug Configurations** dialog loads and contains your imported model ready to debug.

3. Customize your configuration

You can customize your configuration with the following options:

Model Devices and Cluster Configuration Tab

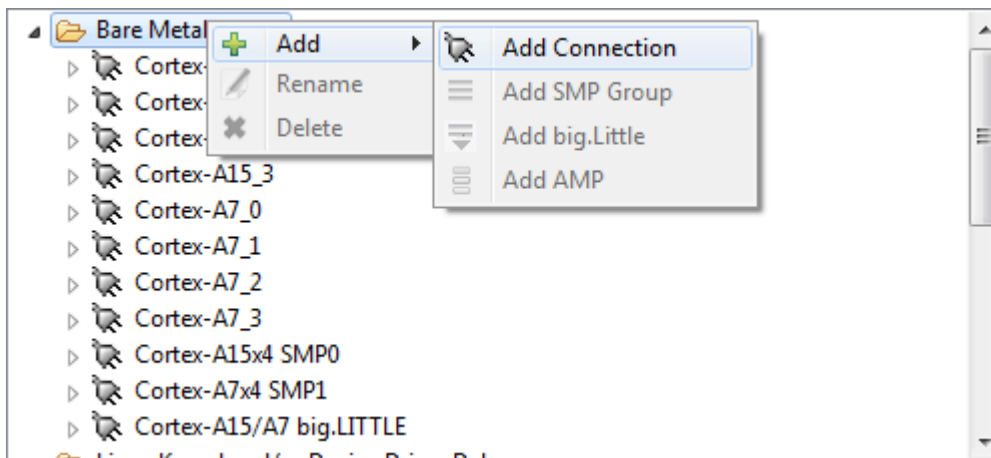
This is the default tab, which allows you to customize the core and cluster configuration, along with associations for peripherals such as flash, mouse and keyboard.

For each CPU, you can view and edit L1 instruction and data cache associations, as well as translation lookaside buffers. Likewise, you can do the same with the L2 cache for each cluster.

Debug Connections Tab

In this tab, you'll see a list of all the available debug connections. To create a new connection, right-click on the top level folder and then define whether it's big.LITTLE, SMP or AMP by right-clicking the **new connection**. To populate the connection, drag and drop cores or clusters from the list in the right hand panel.

Figure 3-1: Available debug connections



Model Launch Configuration

This tab allows you to pass the model launch parameters, which you would normally either add to a batch file or define in the **Debug Configurations** dialog.

Advanced Configuration

The final tab in the configuration enables you to generate a CADI or RDDI log when the model runs.

4. Related information

Here are some resources related to material in this guide:

- [Resources](#)
- [Tutorials](#)
- [DS-5 documentation](#)