Running Adams Products

On Linux

On Linux, use the Adams Toolbar to run Adams products and libraries of user-written subroutines

Modes in Which You Can Run Products

You can run Adams products in the following modes:

- **Interactive mode** - The product starts and waits for you to enter commands. When you select interactive mode, you can enter a command file that runs when the product starts.
- **Scripted** - The product runs with a command file that you specify. A command file is either a set of Adams View commands (.cmd) or Adams Solver (.acf) commands, depending on the product that you are running. The command file helps you automate the creation of a model, perform a simulation, or investigate simulation results.
- **Batch mode** - The product runs with a command file at a specified time. It also collects information on the batch run in a batch log file that you specify. Batch mode only applies to Adams analysis products.

You can set the same modes when you run a product with a user library.

In addition, you can set debug mode (also referred to as interactive debug mode) when you run a user library. Debug mode runs a debug utility, a system-level program, usually dbx, that steps you through, or isolates parts of, the subroutines in the user library. The debug utility helps you detect and locate any problems in the user libraries. You must have created the library in debug mode. To learn how to create a user library in debug mode, see Creating User Libraries.

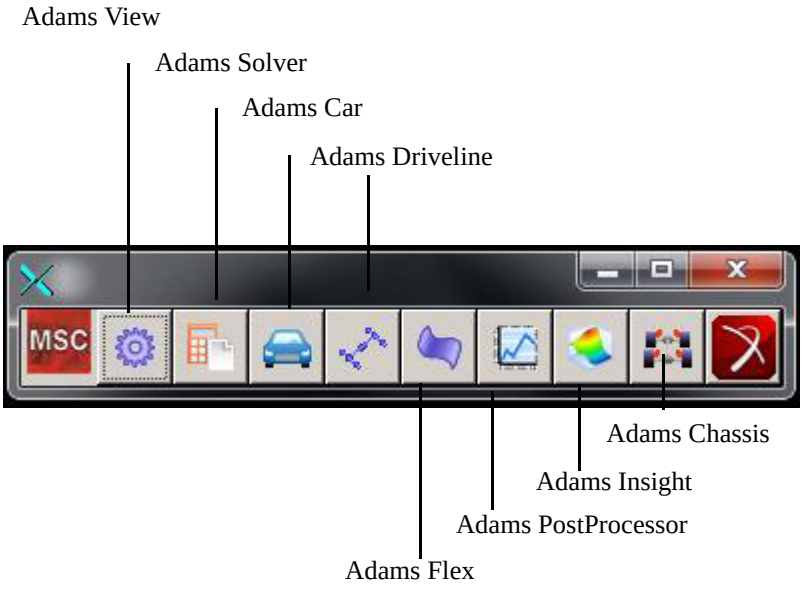
Standard Products

You can use the Adams Toolbar to run standard products by clicking the associated tool. Each Adams product runs using its default preferences.

Note: To run add-on modules or plugins, such as Adams Durability, Adams Flex, or Adams Vibration, you must first run the product in which the plugin runs. For example, to run Adams Vibration, first run Adams Car or Adams View, and then select the command to run Adams Vibration. For more information on running plugins, see their online help.

To run a standard product:

- Click the product tool.



Selecting the product's icon, with a left mouse click, starts the product. If the product default is to run in scripted mode, the product runs the specified command file.

For more information on running Adams products, refer to the online help for your product.

Template-Based Products

MSC Software provides several products built on Adams View, referred to as Adams template-based products. The products are:

- Adams Car lets you create, catalogue, and analyze suspension and full-vehicle assemblies.
- Adams Driveline lets you model drivelines to create and analyze virtual prototypes of driveline subsystems.

The template-based products let you select to run their user interface or their version of Adams Solver. In addition, you can select a binary file that the product reads at startup to change the look of menus, dialog boxes, and commands.

When you run a template-based product, the Toolbar searches the product's private, site, and standard location, in that order, for a user library to run. It runs the first library that it finds. If you want to run just the standard version of these products, be sure that there are no libraries in your private or site location.

The template-based product then reads the binary file that you have specified. You can specify that it read the binary file that is in either the private, site, or standard locations. You can also specify that it search the private, site, and standard location and read the first binary it finds.

To run template-based products with their interface and a particular binary:

- Right-click the product tool, point to **Run**, point to **[Product] - Interface**, and then select a binary. For example, for Adams Car, right-click the **Adams Car** tool, point to **Run**, point to **ACar - Interface**, and then select a binary.

To run template-based products with Adams Solver:

- Right-click the product tool, point to **Run**, and then select **[Product] - Solver**. For example, for Adams Car, right-click the **Adams Car** tool, point to **Run**, and then select **ACar - Solver**.

Running User Libraries

User libraries are subroutines that extend the functionality of Adams products to meet individual needs. For example, you can use a library of subroutines that define functions for motion or force magnitudes. You run a user library by selecting it from Adams Toolbar and then running it with its associated product. For more on user libraries, see User Library Overview.

When you select to run a user library with Adams View and Adams Solver, the associated product tool on the Toolbar changes to indicate that you are working with a user library. For example, for Adams View, the tool changes from  to  . You can then select to run the product with the user library as the default by clicking the tool.

You can also run Adams View with an Adams Solver user library by setting it as a default preference, as explained in Adams View Preferences.

For Adams Car, you cannot specifically select a user library. Instead, the Adams Toolbar searches your private, site, and standard locations, in that order, for a user library to run.

To run Adams View or Adams Solver with a user library:

1. Right-click the product tool, point to **Select Library**, and then select a user library.

   For example, for Adams Solver, right-click the **Adams Solver** tool  , point to **Select Library**, and select a library, such as **Asolver1**.

   The tool changes to indicate that the default is to run the product with the selected user library. For example, **Adams Solver** tool changes to  .
2. Click the product tool again.

On Windows

On Windows, use the Adams program folder and Selection Menu.

Running Adams on Windows

The Adams program folder and Selection Menu provide access to many of the Adams major products. Adams also has add-on modules or plugins, which expand the functionality of the major products, such as Adams Flex, Adams Controls, Adams Durability, and Adams Vibration. You run these products from within the major products. For example, to run Adams Vibration, you first run Adams Car or Adams View and then select the command to run Adams Vibration.

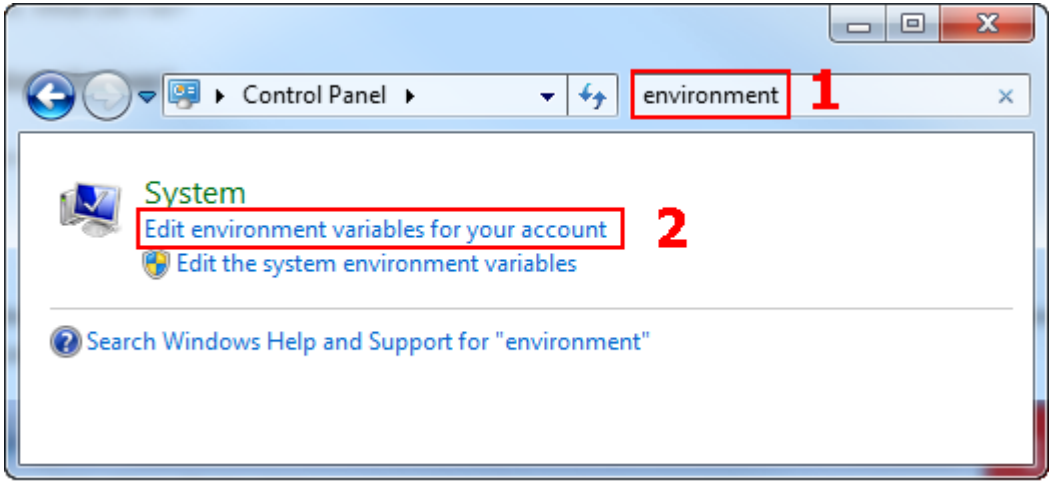
For instructions on running Adams products, refer to the online help for your product.

To start a product from DOS shell in Windows:

- **Start → Adams 2017 → Command Prompt**
- An alternative is to add the **/bin** directory under the Adams installation directory to your user PATH environment variable. You can do this via the Control Panel:

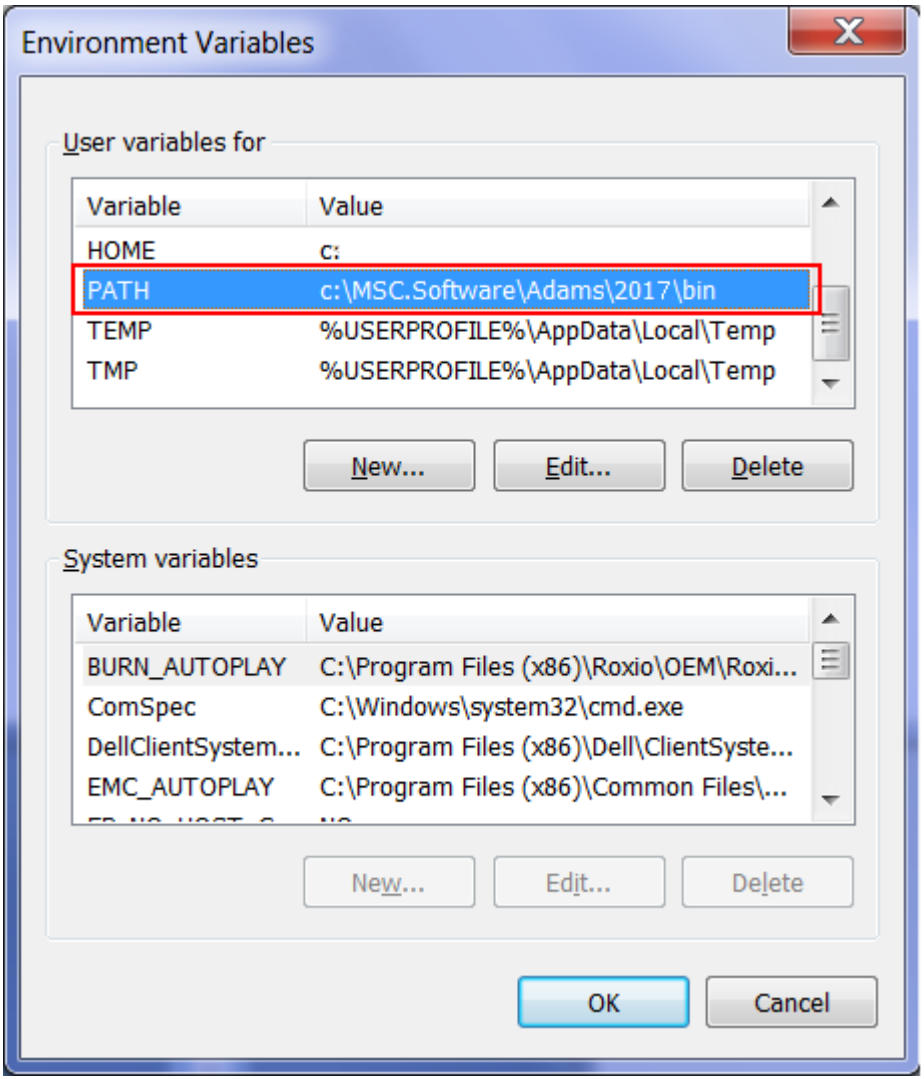
  a. Type **environment** in the Control Panel search box.

  b. Select the **Edit environment variables for your account** pick.



- Check to see if you already have a PATH variable defined under "**User variables**". If it exists then edit it, add a semicolon ";" to the end of the existing value, and then add the "bin" directory under the Adams installation directory. Otherwise select **New...**, use PATH for the variable name and add the "bin" directory under the Adams installation directory as the value. The default location of this directory is:

  ```
  Win64 Adams:        C:\MSC.Software\Adams\2017\bin
  ```



- Once you are done click **OK**.

Note: Windows appends your User PATH to the System PATH environment variable, so there is no need to copy the existing System PATH variable to your user PATH variable. This behavior is unique to the User PATH variable. For all other environment variables, a User variables definition overrides a System Variables definition.

Running Adams Solver

You can run either standard Adams Solver or Adams Solver with a user library, as explained below.

Standard Adams Solver

You can select to run Adams Solver without the Adams View graphical interface. Adams Linear and Adams Tire are analysis modules of Adams Solver. You access them by selecting the Adams Solver option, if you are licensed to do so.

To run Adams Solver:

1. Do one of the following:
   - From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select **Adams Solver**.
   - From the Adams Selection Menu, enter **ru-standard**.

     A window appears prompting you for information.
2. Enter the name of the Adams command file (.acf), if you have created one, or press **Enter**.

   Adams Solver starts running.

For more information on the commands and execution of Adams Solver, see the Adams Solver online help.

User Libraries with Analysis Products

You can run user Adams Solver libraries from either the Program Folder or the Selection Menu, as well as run user libraries with Adams Tire.

To run a user library:

1. From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select **Command Prompt**.
2. Enter **ru-user**.
3. Enter the name of the custom library that you want to run.
4. Enter the name of the Adams command file (.acf), if you have one, or press **Enter**.

   Adams Solver starts running.

For more information on the commands and execution of Adams Solver, see the Adams Solver online help.

Running Adams View

Adams View is a powerful modeling and simulating environment, which helps you solve your design problems. You can use Adams View to build, simulate, and refine virtual models of any mechanical system. You can run Adams View from the program folder or the selection menu, as well as run it with

user libraries. Running Adams View from the Selection Menu lets you select the mode in which to run Adams View.

For information about working with Adams View, refer to its online help.

- Adams View from the Program Folder
- Standard Adams View from the Selection Menu
- User Libraries with Adams View

Adams View from the Program Folder

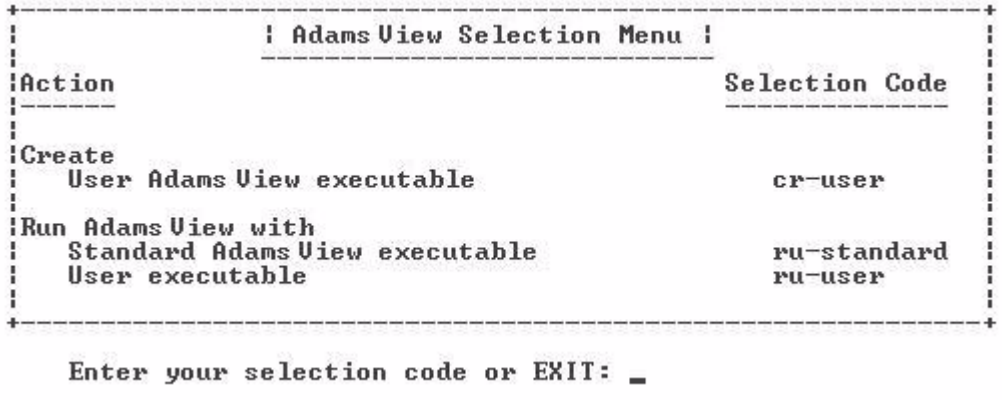
To run Adams View from the program folder:

- From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select **Adams View**.

  The Adams View main window appears.

Standard Adams View from the Selection Menu

You use the Adams View Selection Menu that appears when you select aview from the main Selection Menu to run and create Adams View user libraries.



This selection code:	Provides this action:
cr-user	Leads you through the creation of an Adams View library.
ru-standard	Selects standard Adams View.
ru-user	Runs Adams View with a user library.

When you run a Adams View, you can select the following modes:

- **Interactive mode** - The product starts and waits for you to enter commands. When you select interactive mode through the Selection Menu, you can often enter a command file that runs when the product starts.
- **Batch mode** - The product runs with a command file that you specify at a specified time. It also collects information on the batch run in a batch log file that you specify.

To run standard Adams View through the Selection Menu:

1. In the Adams Selection Menu, enter **aview**.
2. Enter **ru-standard**.
3. Select the mode in which you want to run the executable.
   - To run in interactive mode, select **i** or press **Enter**.
   - To run in batch mode, select **b**.
4. If you selected batch mode, enter the name of a file containing Adams View commands.

   The Adams View main window appears.

User Libraries with Adams View

You can run Adams View with user libraries that you created, including Adams Solver user libraries.

Note: You can also set the Adams Solver user library after you've started Adams View. For information on setting the Adams Solver user library after starting Adams View, select **Settings** -> **Solver** -> **Executable**, and then press **F1** for help.

To run Adams View with a user library:

1. From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select **Command Prompt**.

   The Selection Menu displays.
2. Enter **aview**.
3. Enter **ru-user**.
4. Enter the name of the Adams View user library.
5. Enter the name of an Adams Solver user library.

   Adams View begins running.

Running Template-Based Products

MSC Software provides products built on Adams View, referred to as Adams template-based products. The products are:

- Adams Car lets you create, catalogue, and analyze suspension and full-vehicle assemblies.

- Adams Driveline lets you model drivelines to create and analyze virtual prototypes of driveline subsystems.

You can run the template-based products alone or with different user libraries in your private, site, and standard locations. Adams Car, or Adams Driveline runs the first user library that it finds as it searches your private, site, and, finally, the standard location. If you use the Selection Menu to run a product, you can also choose the binary (for example, acar.bin) you want to use. A binary contains the database information for a customized interface.

For information on the different products, see the online help for that product. For information on creating user libraries, see Custom Template-Based Product Libraries.

Template-Based Products from the Program Folder

The Adams program folder lets you run the template-based products through Adams View or Adams Solver. When you enter a command to run a template-based product, the product searches the private, site, and standard locations for a user library to run. It runs the first library it finds.

Tip: If you want to run the standard version of the product without a user library, be sure that there are no user libraries in your private or site location.

To run template-based products from the program folder:

- Depending on whether you want to run the product through Adams Solver or Adams View, do one of the following:
  - From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select the appropriate command. For example, select **Adams Car (solver)**.

    The Adams Car, Adams Driveline (Solver) main command window appears.
  - From the **Start** menu, point to **Programs**, point to **Adams *x*** (where ***x*** is the release number), and then select the appropriate command. For example, select **Adams Car (view)**.

    The Adams Car, or Adams Driveline, (View) main window appears.

Template-Based Products from the Selection Menu

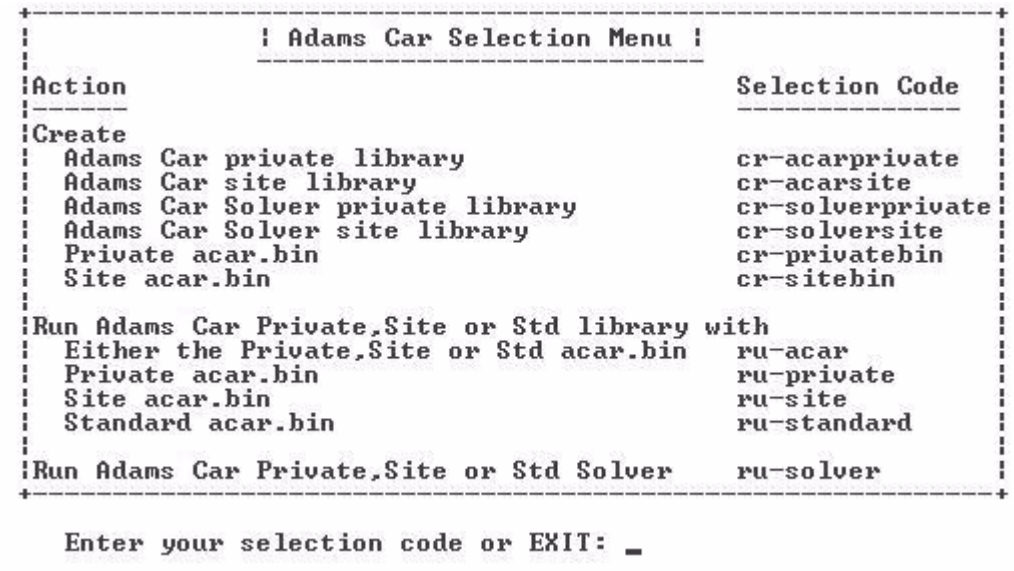
The Selection Menu lets you run the template-based products and choose the binary that you'd like to use. The following sections explain how to use the Selection Menu to choose the version for the product to run:

Displaying the Selection Menu

To display the template-based product's selection menu:

- At the Adams Selection Menu, enter a**car**, or **adriveline** .

A Selection Menu appears. The following figure applies to Adams Car. The Adams Driveline, Selection menu contain the same type of options.



The code(s):	Do(es) the following:
cr-acarprivate, cr-acarsite, cr-solverprivate, cr-solversite	Creates a user Adams Car library and places it in your home (private) or site directory. The string after the cr- identifies where Adams Car places the library and whether the version runs with Adams View or Adams Solver.
cr-privatebin, cr-sitebin	Creates a custom Adams Car binary file that Adams Car runs when it starts up. The string after the cr- identifies where Adams Car places the binary. **Note:** We strongly encourage you to review your product's log file (acar.log, aride.log, and so on) for any warnings or error messages that may have occurred during the building of the binary file.
ru-acar	Runs the first private, site, or standard library of Adams Car that it finds. It also uses the first version of the Adams Car binary that it finds as it searches the private, site, and standard locations.
ru-private, ru-site, ru-standard	Runs the first private, site, or standard library of Adams Car that it finds and then uses the specified private, site, or standard binary. The string after the ru- identifies which binary to use.
ru-solver	Runs the Adams Car version of Adams Solver that it finds as it searches your private, site, and standard locations.

Running Template-Based Products with Adams View

When you enter a selection code to run a template-based product, the product searches the private, site, and standard locations for a library to run. It runs the first library that it finds.

Tip: If you want to run the standard version of the product without a user library, be sure that there are no user libraries in your private or site location.

The template-based product then reads the binary file that you have specified. You can specify a binary file in the private, site, or standard locations. You can also specify to search the private, site, and standard locations and read the first binary found.

To run template-based products with Adams View:

1. At the Adams Selection Menu, enter **acar**, or **adriveline**.
2. At the Selection Menu, enter one of the selection codes depending on the binary file that you want to read. For more information on the selection codes, refer to the table above.

Running Template-Based Products with Adams Solver

You can run the standard version of a template-based product with Adams Solver or run user libraries that are in the private or site locations. The Selection Menu searches the private, site, and standard locations and runs the first user library that it finds.

Tip: If you want to run the standard version of the product without a user library, be sure that there are no user libraries in your private or site location.

To run template-based products with Adams Solver:

1. At the Adams Selection Menu, enter **acar**, or **adriveline**.
2. Enter **ru-solver**.
3. At the command file prompt, do one of the following:
   - Press **Enter**.

     A main command window appears.
   - To launch the product with a command file, type the name of the command file and press **Enter**.

     The product reads in your command file and its main command window appears.