

Launch Process Action Task

Overview & Purpose:

The Launch Process action task is a new type of action task available to users running MassTransit Enterprise or Professional Server, version 5.0.2x16 or later on the Mac OS X platform. This new type of action task enables users to configure an action that launches a UNIX executable file. Like other types of action tasks, Launch Process action tasks may be configured using the familiar "Configure Actions" interface within the MassTransit Administrator application.

Previously, users running MassTransit Enterprise or Professional Server on the Mac OS X platform were limited to using AppleScript scripts as that was the only type of script that MassTransit could launch as part of an action. Launch Process action tasks enable greater flexibility because users may configure the action task to run a variety of different executable file types. This new action task can launch binary command line tools, as well as scripts written in Perl, sh, bash, and tcsh. Since MassTransit data is accessible externally via MySQL, users may now use Launch Process action tasks to create custom MassTransit workflows more easily by using a variety of languages such as Python and Perl that include MySQL support.

How it Works:

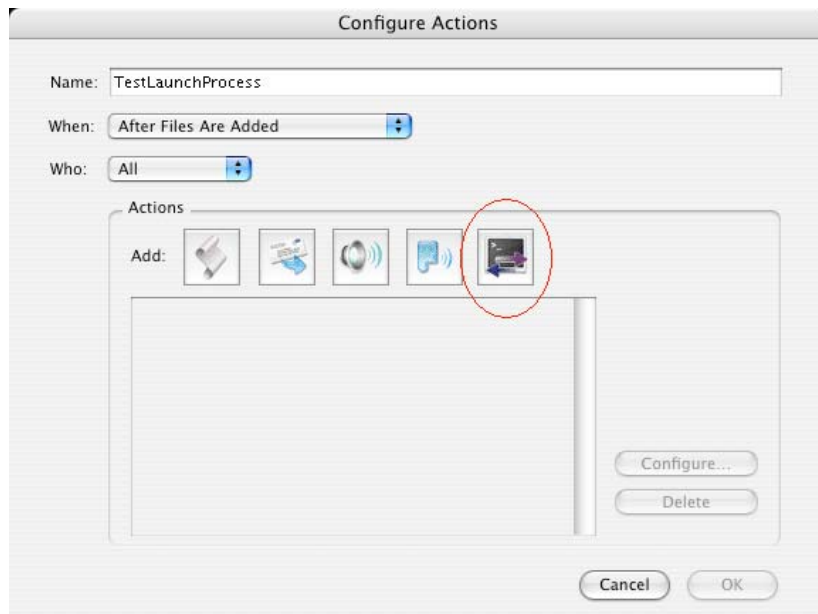
When a Launch Process action task has been triggered to run, MassTransit will do the following:

- Launch the specified executable file
- Pass a standard set of command line arguments to the file
- Define a standard set of predefined environment variables
- Define any additional environment variables that the user specified during configuration of the action task

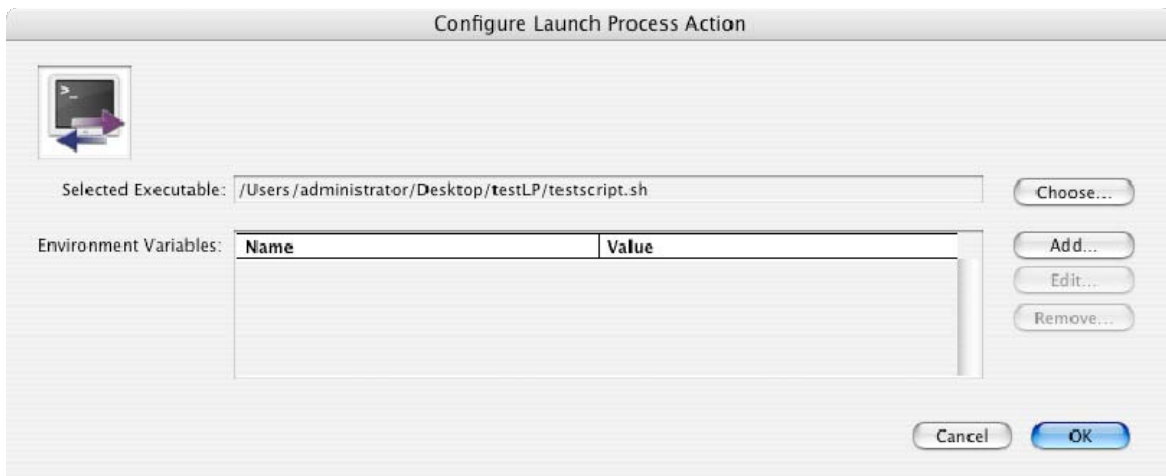
How to Configure:

1. Go to the "Configure Actions" window by opening the MassTransit Administrator application, connecting to a server, clicking the "Setup" icon, and then clicking the "Actions" tab.
2. Either click the "Add" button to create a new action or select an action in the list and click the "Configure" button to edit an existing action.

3. Within the "Configure Actions" window, edit the "Name", "When", and "Who" settings as desired and then click the new Launch Process icon (last icon on the right in the row of action task icons – please see screenshot below).



4. Within the "Configure Launch Process Action" window, click the "Choose..." button to select the executable file that MassTransit will launch when the action is triggered. After selecting the desired executable file, click the "Select" button. Within the "Configure Launch Process Action" window, the file name and path should now be displayed in the "Selected Executable" text field.

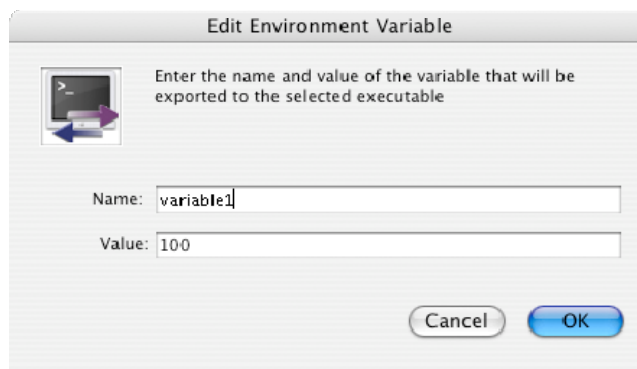


5. In addition to the standard set of command line arguments and predefined environment variables that MassTransit always provides to the executable file, users have the option to define additional environment variables that may be accessed by the executable file.

If additional environment variables are not needed for the executable file to run as desired, then click the “OK” button to complete configuration of the action task and proceed directly to step 6.

If additional environment variables are needed for the executable file to run as desired, then please follow the steps below.

- a. Click the “Add” button to add an additional environment variable.
- b. In the “Edit Environment Variable” window, enter the name of the variable and the corresponding value that MassTransit should assign to that variable. Please note that the “Value” field cannot be left blank. When done entering the information, click the “OK” button to save the environment variable.



- c. In the “Edit Environment Variable” window, the list of environment variables should have refreshed to include the environment variable that was just defined. At this point, users may either:
 - i. Add additional environment variables by following the instructions in step b above
 - ii. Edit or remove environment variables currently in the list by clicking the corresponding row in the list and then clicking either the “Edit” or “Remove” button to perform the desired function
 - iii. Save the current configuration by clicking the “OK” button.
6. In the “Configure Actions” window, click the “OK” button to save the action.
7. In the “Setup” window click the “Save” button to save all changes and exit the “Setup” section of the application.

Predefined Command Line Arguments:

Argument #	Contents/Value	
1	Comma-separated list of file IDs that are related to this event <i>(will return 0 if there are no related files)</i> *Relevant table in MT DB: "dfiles"	
2	Contact ID of the contact that the event triggered for <i>(will return 0 if there was not a contact related to the event)</i> *Relevant table in MT DB: "dclient"	
3	ID of any related log entry <i>(will return 0 if there are no related log entries)</i> *Relevant tables in MT DB: "dlog" and "dlogmsgs"	
4	ID of any related job ticket <i>(will return 0 if there are no related job tickets)</i> *Relevant table in MT DB: "djob"	
5	Which MassTransit event triggered this action <i>(will return a numeric digit, please refer to the key below)</i>	
	<ul style="list-style-type: none"> 1) Connection Completes 2) Connection Fails 3) File Transfer Fails 4) After Files are Added 5) After Files are Sent 6) Files are Received 7) Before a File is Processed 8) After a File is Processed 9) Output Processing Fails 10) All Errors 	<ul style="list-style-type: none"> 11) Contact Added 12) Contact Deleted 13) Before Log Entries are Deleted 14) Before File Entries are Deleted 15) After Each File is Sent 16) After Each File is Received 17) Before Files are Transmitted 18) Database Disk Space Low 19) Mailbox Disk Space Low

*File ID, Contact ID, Log ID, and Job Ticket ID are all referring to specific columns within the MySQL database schema that stores MassTransit data.

(section continued on next page)

Accessing the Command Line Arguments

How the above-referenced command line arguments are accessed will vary depending on the language that was used to develop the executable file.

For C/C++ files, users may access the arguments using the usual argv/argc mechanism. For shell script files (like SH) the arguments will typically be specially defined environment variables (in BASH for example they are available as \$1, \$2, \$3, \$4, and \$5 respectively).

Predefined & User-defined Environment Variables:

List of Predefined Environment Variables

Variable Name	Contents/Value
MT_DBHOST	IP or DNS address of the MySQL server hosting the MassTransit database; same value as the DATABASE_HOST in the MassTransitEngine.cfg file
MT_DBNAME	Name of the MassTransit database; same value as the DATABASE_NAME in the MassTransitEngine.cfg file
MT_DBUSER	Name of the MySQL user account that MassTransit uses to connect to the database; same value as the DATABASE_USER in the MassTransitEngine.cfg file
MT_DBPASSWD	Password used to connect to the database using the MySQL user account specified above; same value as the DATABASE_PASSWORD in the MassTransitEngine.cfg file

Accessing the Predefined & User-defined Environment Variables

How the above-referenced predefined environment variables are accessed will vary depending on the language that was used to develop the executable file.

For example, BASH environment variables are the name of the variable prefixed with a dollar sign [\$], so "\$MT_DBHOST" (without the quotes) would be used to access the predefined environment variable "MT_DBHOST".

User-defined environment variables (configured by the user in the MassTransit Administrator application) may be accessed in the same way that predefined environment variables are accessed.

Troubleshooting:

Problem:

Nothing happens when the Launch Process action task should have triggered

Solution:

First, ensure that the executable file can be run manually (outside the context of MassTransit) and achieve the desired results before attempting to run the executable file in a MassTransit Launch Process action task.

If the executable file does not run as expected outside the context of MassTransit, then it may be one of two common issues:

- 1) Ensure that the executable file is using UNIX line endings *(the file may have Macintosh or DOS/Windows line endings which are preventing it from running properly)*. Text editors often have default line break/ending settings that may need to be adjusted to specify that UNIX line endings should be used.
- 2) Ensure that the executable file has the proper file permissions. At a minimum, the user account that MassTransit is running within will need read & execute permissions for the executable file.