

Generic Execution Plugin

Overview



The Generic Execution Plugin executes any configurable command or web service.

It can be used as a Monitor, Task or Action depending on if a measurement should be received, a task should be regularly performed or a command/web service should be executed in case of an incident.

If used as a monitor it matches the command's/web service's output against a regular expression and simply returns a success state if a match was found.

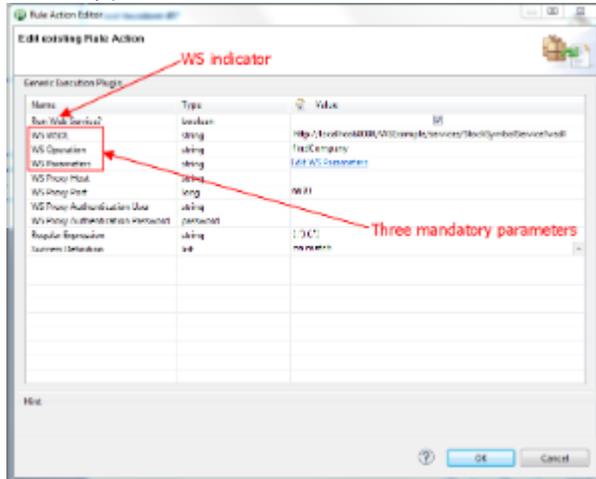
Name	Generic Execution Plugin
Downloads	Download plug-in  Generic Execution Plugin v5.5.36
Changes	New in Plugin for dynaTrace 4.1: Arguments can be passed to the command. Argument placeholders are allowed to query the execution environment. Monitors: {HOST} (with braces) represents the target host. Actions: {AGENT}, {APPSRV}, {DTSERVER}, {MSG}, {MEASURES}, {PROFILE}, {SEVERITY}, {SOURCE}, {STATE} (0 Open, 1 Closed, 2 Opened then Closed), {START}, {END}, {DURATION}, {RULE}, {RULEDESC} New in plugin version 5.5.0: <ol style="list-style-type: none">1. Fixes plugin hanging bug2. Plugin allows now to execute commands remotely for Unix/AIX/Linux based servers. No need to have dynaTrace Collector deployed on the server where command should be executed.3. Includes functionality of the SSH Action plugin. It is recommended to use the Generic Execution plugin instead of the SSH Action plugin.4. Maintains 105 external variables that can be used by the command. It is the same list of maintained variables that is supported by the Extended Email Action plugin.5. Performs shell quoting for the special characters in the maintained external variables.6. Slight change in syntax of variables: instead of the old style {variable-name} plugin supports \${variable-name} syntax.7. Removed the Arguments parameter of the plugin. The Command parameter of the plugin now contains command's arguments.8. Added Date Format parameter to format START_TIME and END_TIME variables. Default values is "yyyy/MM/dd-HH:mm:ss zzz". If Date Format is blank, the default locale format is used.

Below is information about maintained variables which are available when plugin is used as an action, monitor, or task.
Action: maintains 105 predefined variables which have the following syntax $\$(variable-name)$ (with dollar-sign and braces). The complete list of maintained variables is located [here](#).

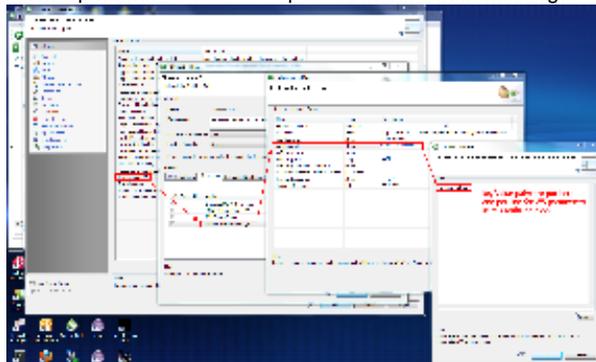
Monitor or Task: $\$(HOST)$ (with dollar-sign and braces) represents the target host, $\$(PORT)$ (with dollar-sign and braces) represents the target port

New in plugin versions 5.5.1 - 5.5.4:

1. The Generic Execution plugin can execute any web service now.
2. Added "Run Web Service?" parameter to the parameters list.
 - a. When "Run Web Service?" parameter is set to "false", old Generic Execution parameters are displayed and command will be executed by Action, Monitor, or Task
 - b. When "Run Web Service?" parameter is set to "true", parameters related to web service are displayed and web service will be executed by Action, Monitor, or Task
3. Web Service parameters are shown in the screenshot below. WS WSDL, WS Operation, and WS Parameters are mandatory parameters.



4. WS Parameter contains key/value pairs depicted on the screenshot below. They are used for substitution of keys with correspondent values. Values can contain any of 111 predefined variables from the list [here](#). Predefined variables should be embedded in the value using the following format: $\$(variable-name)$. Keys are names of simple data types of web service parameters which are passed in the SOAP message.



5. Plugin recognizes complex and simple data types based on provided wsdl for web services

New in plugin version 5.5.9

1. Added ability to use regular non-dynamic measures for returned from the command values. In order to use this feature user needs to create a Metric Group Monitor plugin as it is described [here](#) and deploy it together with the Generic Execution plugin. Used by the plugin measure names should be unique across multiple metric groups.
 - a. Example of a metric group plugin is [here](#)
 - b. Example of the script which is executed by the plugin is [here](#).
2. <https://github.com/Dynatrace/Dynatrace-AppMon-Generic-Execution-Plugin/tree/v5.5.9>

This version of the plugin is backward compatible with all previous 5.5.x versions.

New in plugin version 5.5.10

Fixes issue associated with losing SSH connection over the lifetime of the plugin.

New in plugin version 5.5.11

Allows to parse multi line output for remote executions

New in plugin version 5.5.13

Added timeout parameter to interrupt scripts which are executed locally. Default timeout is 60 seconds.

New in plugin version 5.5.14

1. For SOAP Web services added ability to gather returned measures from the SOAP output messages. Names of returned measures and their values are taken from the output message description in the web service WSDL file (see example [here](#)). The GE plugin populates these dynamic measures with values taken from the output SOAP message (see example [here](#)). In order to get returned measures populated by the plugin, the *isWSReturnedMeasures* configuration parameter needs to be checked (see example [here](#)).
2. Bug fixes.

New in plugin version 5.5.15

1. Improved logging for the web services

New in plugin version 5.5.16

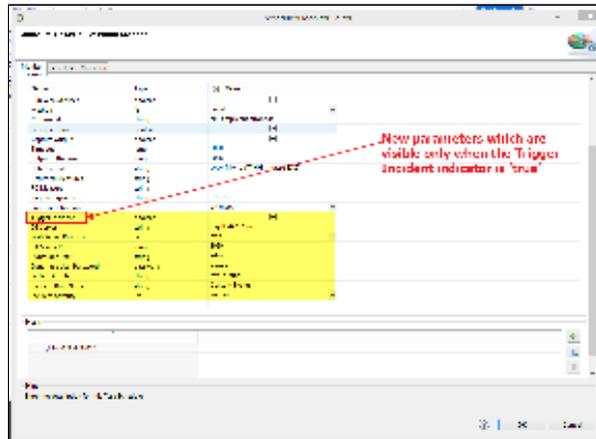
1. Fixed issue when web service has no input parts;
2. Improved integration with .NET web services.

New in plugin version 5.5.17

1. Added new parameter 'isEscapeChars': when true (default) it will escape special characters in supported by the plugin 150+ runtime variables, otherwise runtime variables will be substituted as is in the command. Previous versions of the plugin acted as if the 'isEscapeChars' parameter equals true.

New in plugin version 5.5.18

- Added ability to trigger incident when the STDERR stream of the executed by the plugin command is not empty.
 - If the 'Trigger Incident' indicator is set to 'true' and the STDERR stream is not empty plugin will trigger an incident described by the 'Incident Rule Name' parameter with the message content that is equals to the content of the STDERR stream.
 - If the Extended Mail Action plugin is set as an action for the incident rule that is set in the 'Incident Rule Name' parameter then notification e-mail will be sent when the GE plugin will execute command which has non-empty STDERR stream. The \${MESSAGE} variable, which is maintained by the Extended Mail Action plugin, will have content of the STDERR stream.
 - The following screenshot contains new configuration parameters which are used when incident needs to be triggered:



- If right click on the incident instance in the Incidents dashlet and chose 'Details...', the following popup screen will appear:



In this example, the description field of the incident contains information about creator of this incident, i.e. in our case it is the GE plugin, time stamp when incident was created, and executed command. Content of the STDERR stream will be displayed above under the Custom Events header.

- This feature is supported in the following Dynatrace environments:
 - Dynatrace 6.1.0.8305 and higher.
 - Dynatrace 6.2.0.1239 and higher.
 - In order to use this feature the following line needs to be added to the <DT-HOME>/server.ini file (see screenshot below):
 - -Dcom.dynatrace.diagnostics.triggerActionWithIncident=true



In order for this change to take effect the Dynatrace server needs to be re-cycled.

- This feature is implemented only when command is executed locally by the GE plugin. This limitation will be removed shortly.

New in plugin version 5.5.21

- Added new configuration parameter 'WS Target Timezone' that sets a timezone that time data will be converted to from a current timezone. Please see [this](#) Excel spreadsheet for the list of available time zones.
- Improved integration with the .NET SOAP web services;
- Integration with the new infrastructure alerts.

New in plugin version 5.5.22

- Added compatibility with older plugin releases.

New in plugin version 5.5.23

- Fixed index out of bounds exception.

New in plugin version 5.5.24

- Fixed messages for measures with different units.

New in plugin version 5.5.25

- Fixed issue related to VIOLATION_HEADER fields.

New in plugin version 5.5.27

- Enabled use of Success Definition for web services;
- Now output can be captured for web services.

New in plugin version 5.5.28

- Improved compatibility between Axis based and .NET based SOAP web services.

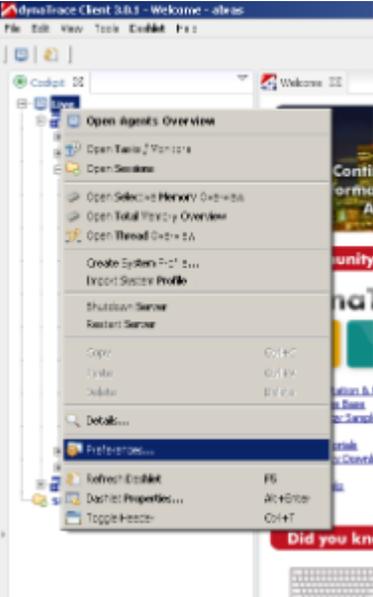
New in plugin version 5.5.29

- The 'Returned Measures' parameter is now multi-line.

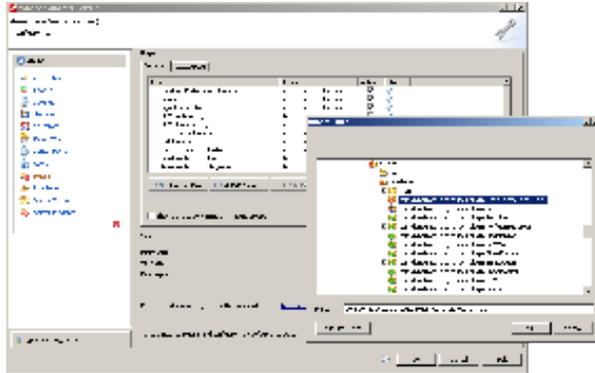
New in plugin version 5.5.30

- Added support for the following runtime variables:
 - APPLICATION_ALL,
 - VIOLATED_MEASURE_NAME_ALL,
 - VIOLATED_MEASURE_DESCRIPTION_ALL,
 - VIOLATED_MEASURE_VALUE_ALL,
 - VIOLATED_MEASURE_UNIT_ALL,
 - VIOLATED_MEASURE_SPLITTINGS_ALL,
 - VIOLATED_MEASURE_TRESHOLD_UPPER_SEVERE_ALL,
 - VIOLATED_MEASURE_TRESHOLD_LOWER_SEVERE_ALL,
 - VIOLATED_MEASURE_TRESHOLD_UPPER_WARNING_ALL,
 - VIOLATED_MEASURE_TRESHOLD_LOWER_WARNING_ALL,
 - VIOLATED_MEASURE_METRIC_NAME_ALL,
 - VIOLATED_MEASURE_METRIC_DESCRIPTION_ALL,
 - VIOLATED_MEASURE_METRIC_GROUP_ALL,
 - VIOLATED_MEASURE_METRIC_UNIT_ALL,
 - VIOLATED_TRIGGER_VALUE_SOURCE_TYPE_ALL,
 - VIOLATED_TRIGGER_VALUE_SOURCE_NAME_ALL,
 - VIOLATED_TRIGGER_VALUE_SOURCE_HOST_ALL,
 - VIOLATED_TRIGGER_VALUE_ALL.

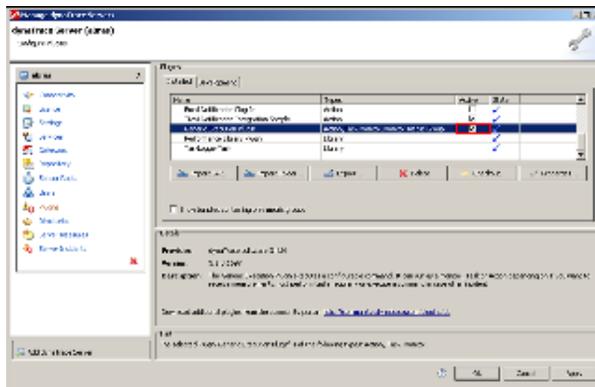
New in plugin version 5.5.32

Key benefits	<ul style="list-style-type: none"> • Generic use case scenarios: Execute any web service or shell command. • The plugin is very flexible. Can be used as a monitor, task or/and action. • Easy customizable to fit to your needs. • Integrates with dynaTrace 3+, centrally deploy to globally distributed collectors • Open Source: adapt the Generic Execution Plugin to your needs
Key features	<ul style="list-style-type: none"> • execute any web service or command • configurable as monitor, task or action (in case of an incident) • ability to recognize simple and complex data types for web services • automatic generation of SOAP messages based on wsdl file for web services • pass multiple arguments to command • regex match on command's output • set timeout for command • configurable success condition: match / no match is success • chartable success state • alerting on success state • OS independent • depending on settings captures no/last 2048/first 2048 chars of command output
Limitations	<ul style="list-style-type: none"> • plugin does not take care of hanging process/child processes • no limitations/checks about what command is started and the consequences of this command
Technical overview	<ul style="list-style-type: none"> • JAX-WS software stack • OS independent
Install Description	<ol style="list-style-type: none"> 1. Open dynaTrace Server preferences (right click on dynaTrace Server Node in cockpit and then select preferences from context menu).  <p>The screenshot shows the 'dynaTrace Client 3.0.3 - Welcome - alias' window. A context menu is open over the 'dynaTrace Server' node in the left-hand tree view. The menu items include: 'Open Agents Overview', 'Open Traces / Monitors', 'Open Sessions', 'Open Selected History Details', 'Open Total History Overview', 'Open Thread Details', 'Create System Profile...', 'Export System Profile', 'Shutdown Server', 'Restart Server', 'Copy', 'Paste', 'Delete', 'Details...', 'Preferences...' (which is highlighted), 'Refresh/Enable', 'Dashboard Properties...', and 'Toggle Header'. A 'Did you know' notification is visible at the bottom of the window.</p>

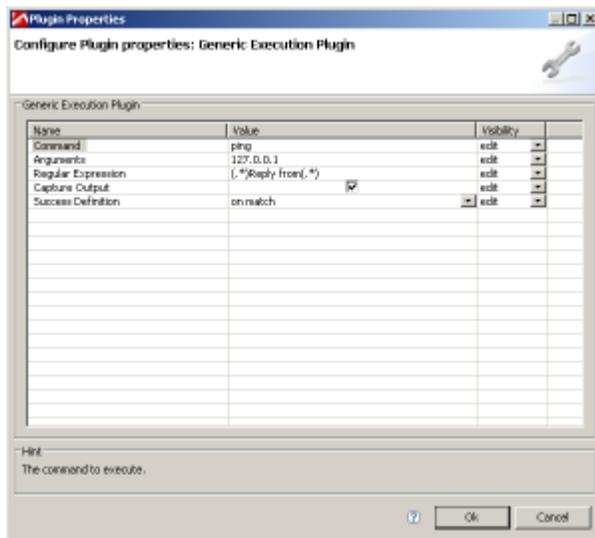
2. Import Generic Execution Plugin



3. Activate Generic Execution Plugin in dynaTrace Server preferences.



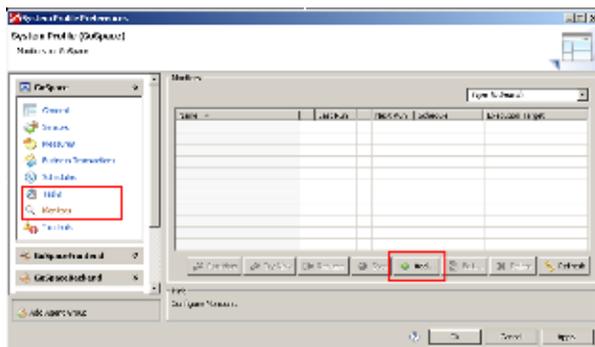
4. Adapt server-wide plug-in properties



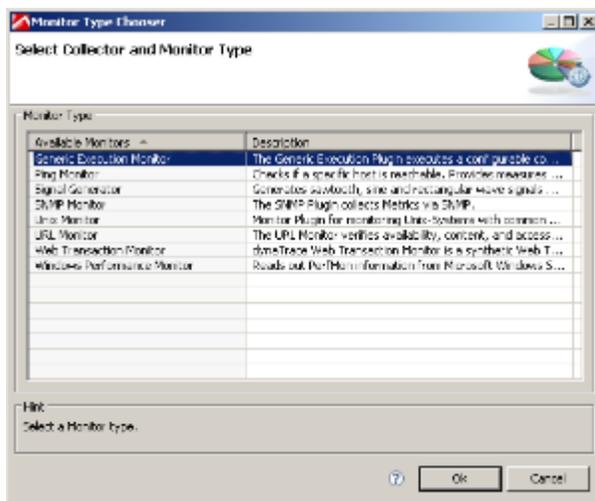
In the server-wide plug-in properties (dynaTrace Server preferences >> Plug-ins) you can edit the default values and set the state. Every newly added Generic Execution Plugin will receive these default values. You can choose between "Edit", "Read" or "Hidden", so the default Settings can be edited, read-only or are not visible in the individual Generic Execution Plugin settings.

Setup Monitor / Task

1. How to create a Generic Execution Monitor / Generic Execution Task
 - a. Open System Profile >> Preferences
 - b. Choose "Monitors" or "Tasks" from the configuration panel (Property Navigation)
 - c. Choose Add...



- d. Choose Generic Execution Monitor / Task from available Types



e. Rename your Generic Execution Monitor / Task and adapt description

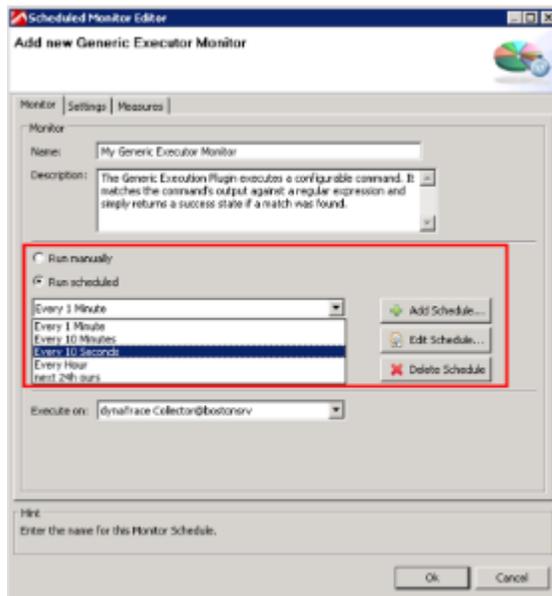


f. Confirm.

2. **How to schedule a Generic Execution Monitor / Generic Execution Task**
 - a. Open System Profile >> Preferences
 - b. Choose "Monitors" or "Tasks" from the configuration panel (Property Navigation)
 - c. Select the Monitor/Task you wish to edit and click "Edit..." button
 - d. Preferences dialog opens.



- e. Select a predefined schedule or create your own schedule if none fits.



- f. Confirm.

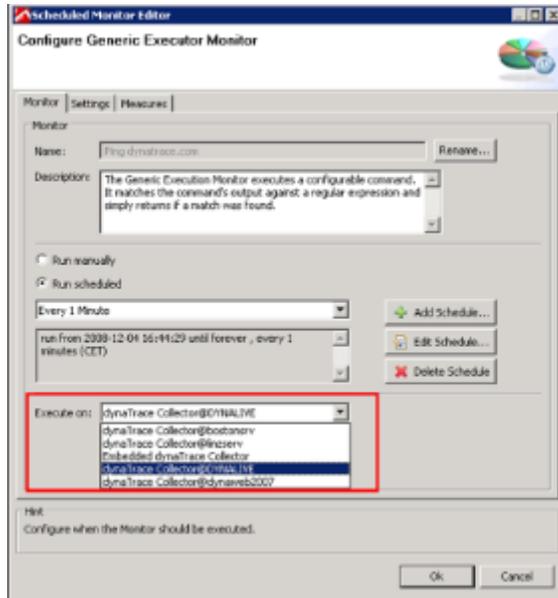
3. How to configure a Generic Execution Monitor / Generic Execution Task

- a. Open System Profile >> Preferences
- b. Choose "Monitors" or "Tasks" from the configuration panel (Property Navigation)
- c. Select the Monitor/Task you wish to edit and click "Edit.." button
- d. Select the "Settings" tab



- e. You can now configure:
 - i. Command - The command to execute.
 - ii. Arguments - Argument(s) which should be passed to command.
 - iii. Regular Expression - The regular expression the command's output should be matched against.
 - iv. Capture Output - Defines if the output of the executed command should be captured and returned as message.
 - v. Success Definition - Defines condition under which monitor returns success: if regular expression matches or not.

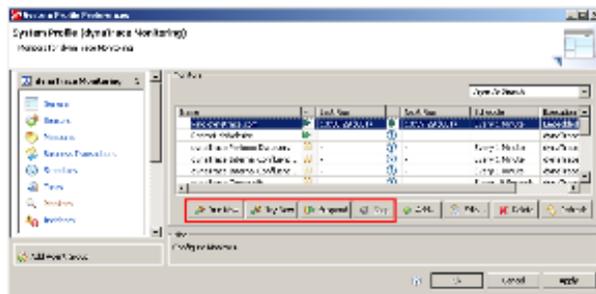
4. How to centrally deploy a Generic Execution Monitor to different global locations



In general monitors always run on dynaTrace Collectors. Like presented in the previous screenshot you can decide centrally from your dynaTrace Client (in the monitor's settings) on which Collector a specific Monitor Task should run on.

Note: Tasks are always executed on the server, Monitors are executed on a collector.

5. How to test, run, suspend a Generic Execution Monitor / Generic Execution Task

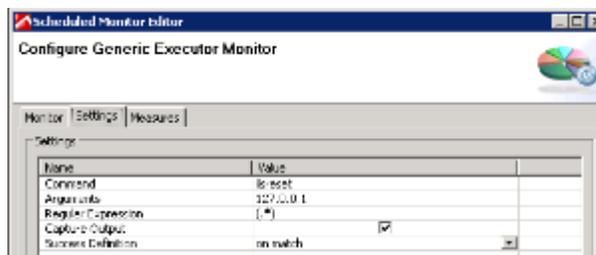


Setup Action

Please see "Actions" in [How to Setup Alerting](#) (dynaTrace 3.0 documentation)

Usage

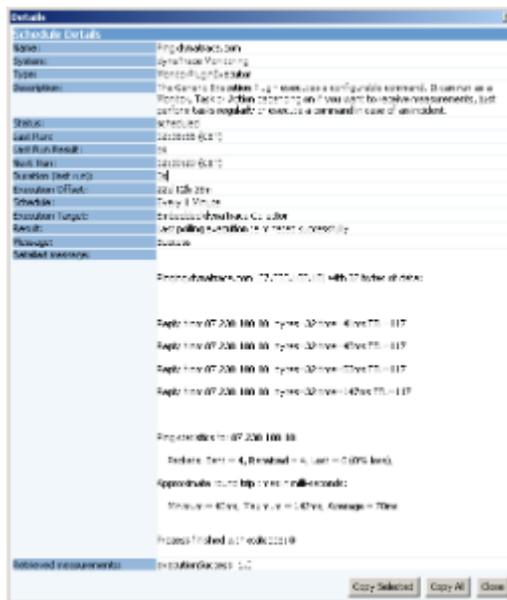
Restart IIS



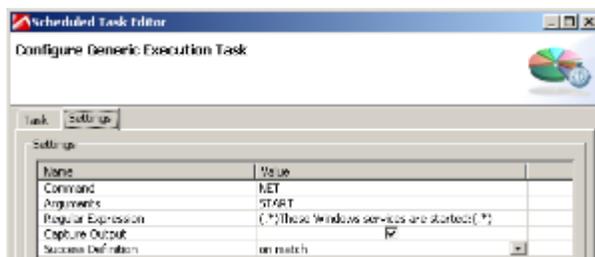
Ping a network address



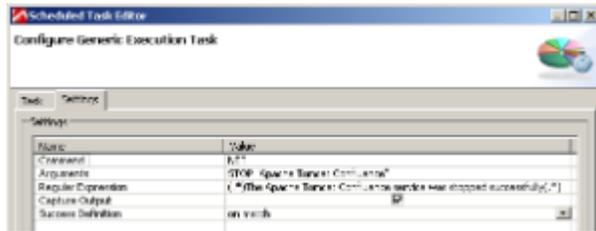
Click to enlarge result:



List running windows services



Start/Stop a windows service



Known Problems

none

Contribution

Feel free to contribute any changes on [Github](#)

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