

# Scheduled Task v1.0

## Grasshopper Component User Guide

DRAFT



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## 1 Description

ScheduledTask is a Grasshopper component that provides a way to persist a payload using the Windows Task Scheduler.

The ScheduledTask component uses the Windows Task Scheduler 1.0 COM interface to create a new scheduled task. The component installs a stub executable as the task; the stub is configured to run the input payload. The stub and payload are stored at user specified locations on the target file system.

The scheduled task may be configured to trigger on either system startup or user logon. The trigger can be configured to activate on a specific date; until the trigger is activated, the task will not run. Once triggered, the task can remain active for a specified duration. The task executable can be run periodically throughout the duration by specifying an interval. The trigger can be configured to kill the task at the end of the duration.

Once installed, the component will trigger the scheduled task immediately by default. However, it can be configured to wait until triggered naturally. The task may also be configured with a maximum run time.

## 2 Usage

### 2.1 Builder Command Line

```
add component scheduledtask NAME -t PATH -p PATH [-d DESC] [-r TYPE]
                                [--begin DATE] [--duration TIME] [--interval TIME]
                                [--kill-at-end] [--wait-to-run] [--max-run-time TIME]
```

NAME	cover name of the scheduled task
-t/--task PATH	target path of the task executable stub
-p/--payload PATH	target path of the payload
-d/--description DESC	cover description of the scheduled task
-r/--trigger TYPE	trigger type {logon startup} [default startup]
--begin DATE	date to activate trigger (yyyy-mm-dd) [default today]
--duration TIME	period for task to remain active once triggered [default None]
--interval TIME	interval to run task stub through duration [default None]
--kill-at-end	kill task after duration [default False]
--wait-to-run	wait until triggered to run [default False]
--max-run-time TIME	maximum time task allowed to run [default INFINITE]

### Example

```
(gh) add component scheduledtask
      ExampleTask
      -t "c:\windows\task.exe"
      -p "c:\windows\payload.exe"
      -d "An example of how to create a scheduled task component."
      -r logon
```

## 2.2 Supported Payload Types

ScheduledTask accepts input payloads in EXE or DLL formats for the x86 or x64 architectures. ScheduledTask is a terminating component and does not output a payload.

Input Type	Output Type(s)
x86 EXE	None
x64 EXE	None
x86 DLL	None
x64 DLL	None

## 2.3 Uninstall Procedure

### Manual

The manual uninstall procedure consists of the following steps:

1. Stop the scheduled task, if it is running.  
`schtasks /End /TN <TASK_NAME>`
2. Kill the process executing the payload (if payload was an EXE).  
`taskkill /F /IM <PAYLOAD_NAME>`
3. Remove the scheduled task from the Windows Task Scheduler.  
`schtasks /Delete /TN <TASK_NAME>`
4. Delete the stub and payload executables from the filesystem.  
`del /F <TASK_PATH> <PAYLOAD_PATH>`

### Autonomous

The autonomous uninstall procedure consists of the following steps:

1. Delete the payload from the filesystem.

When the stub detects that the payload has been deleted, it will execute the autonomous uninstall. The stub checks for the payload every 90 seconds. The autonomous uninstall will perform the following steps:

1. Remove the scheduled task from the Windows Task Scheduler.
2. Delete itself from the filesystem.

## 3 Footprint

### File System

- Payload Executable, located at a user specified location
- Payload Directory, may have been created
- Task Stub Executable, located at a user specified location
- Task Stub Directory, may have been created
- Scheduled Task XML, located at %SYSTEMROOT%\System32\Tasks\<TASK\_NAME>