Manual v1.0

Build System Monitor

Remote monitoring of automated build systems

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Content

1. Build System Monitor

Build System Monitor (BSM) is an application for monitoring the status of automated build systems (also known as Continues Integration software) such as Hudson.

1.1. Requirements

Operating systems: Windows XP, Windows Vista

.NET Framework: Microsoft .NET Framework 3.5

(http://www.microsoft.com/downloads/details.aspx?FamilyId=333325FD-AE52-4E35-B531-508D977D32A6&displaylang=en)

1.2. Job tasks

The applications focus is the scheduling of job tasks that perform the monitoring of other applications. Jobs are scheduled to run at certain time intervals and reports pack the status after each run to the application. A job's status can be marked as Green, Yellow, Red and it is up to the specific job type to decide what these different states represent.

1.3. Plug-ins

BSM has a plug-in architecture allowing for easy extension of new job types. The plug-in is responsible for provided a mechanism for creating new instances of a job as well as configuring it. It should also supply an icon for use in the graphical user interface.

1.4. BSM Application

The application runs mainly in the background and shows up as an icon in the tray-area of the Windows taskbar.

Default tray icon - picture 1.

The actual icon showing depends on the status of the scheduled jobs. The icon shown above is the default icon when no jobs are running.

1.4.1. General Usage

Tool bar (in order of appearance)

Create new job

Remove selected jobs. Pressing d*elete*-button accomplish the same thing
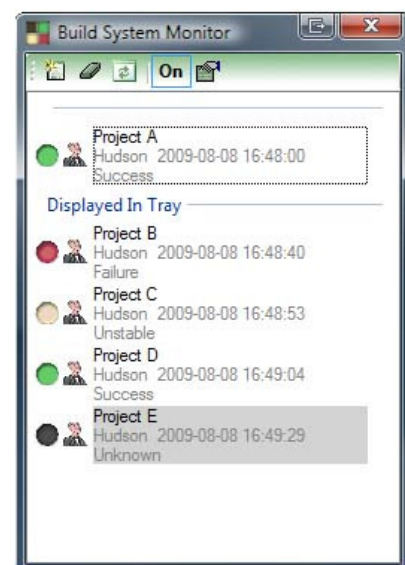
Refresh: All enabled jobs are rescheduled and run immediately.

On|Off: The schedulers state is shown as turned on or off.

Configure application settings

Double clicking on a job item will either launch the monitored application, job specific configuration or do nothing depending on general application settings. See *Configuring BSM Application* more information.

State is shown as Green, Yellow or Red by colored state icons. The icon directly next to the job-description is job-type specific.

Main window - picture 2.

The information provided about each job is (first row) Job Title, (second row) Job Type as well as when the last job was run. (Third row) Shows a status message from the last job run – providing extra information.

When the scheduler is turned on, jobs are run at, for the job specifically configured, time intervals and the result reported back to the application. Jobs run in the background and more than one job can hence execute at the same time. Disabling a job will exempt them from being run by the scheduler.

If too short run interval is chosen, jobs risk stacking up as new jobs are scheduled to run before the earlier have finished. This can result in low performance, unpredictable behavior, even crashes. Default is set to 300 seconds (5 min). Jobs should in general not take more than a few seconds so an update interval of 5 seconds or more is recommended. It is also an over all performance issue. The general performance of the system, the number of jobs scheduled and the actual need for most reason status should be factors weighing in when setting run intervals.

The red, x-marked close button on the Main window does not exit the application. It only closes the window. The application is terminated with using Exit on the Tray menu –see below.

1.4.2.   Tray menu

The tray menu, see picture 3 below, offers some of the features also found on the main window toolbar. *Configure* and *Refresh* works to the same effect as their namesake on the toolbar. *Open* is used to open the main window. Double clicking on the tray icon has the same effect.

The application is terminated by using the Exit menu option.

1.4.3.   Launch Application Being Monitored

The purpose of this feature is to launch the Build System Application. When status changes to yellow or red something has gone wrong and need to be attended. Launch the application by selecting the job item from the main window, right click and select *Launch Monitored Application*.
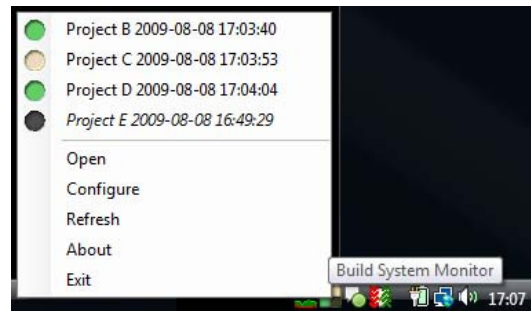
1.4.4.   Display Jobs in Tray

Jobs can be marked to be displayed in the tray. Doing so will make them available on the tray application menu. The action taken when clicking on a job item depends on general application configuration (see *Configuring BSM Application* for more information).

The actual tray icon displayed for the application will depend on the current status of the jobs displayed in the tray. Black is displayed when the status is unknown or when the tray is not full. Up to four jobs can be displayed in the tray at a time.

Tray application menu - picture 3.

For more information on how to add jobs to the tray, see *Configuring Job Tasks*.

1.4.5.   Configuring BSM Application

The application can be configured to display messages at:
- The end of every job run
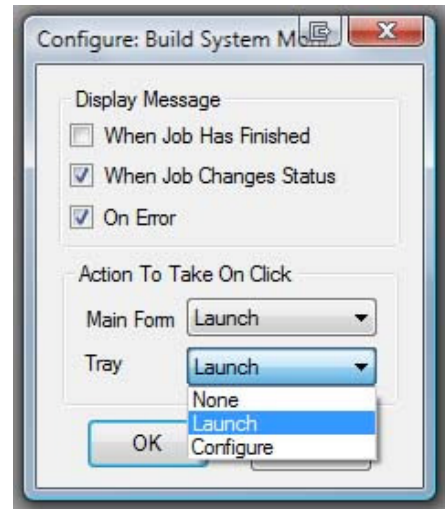- When a job changes status
- If an error occur

The message is displayed in the form of a balloon notification above the tray icon.

Message balloon - picture 4.

The action to take when clicking on a job in the main form or in the tray can also be selected to:
- Do nothing
- Launch the application being monitored
- Open the job configuration window

Application configuration - picture 4.

1.4.6.   Configuring Job tasks

There are two parts to a job. The default settings that come with every job, and the type specific.
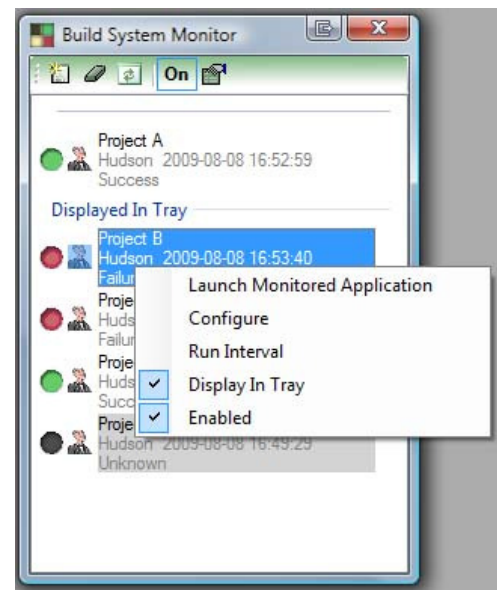
Job title can be changed by single clicking an already selected item.

Drag and drop between zones (Display In Tray and not) can be done with one or more selected items.

The general configuration is done by right clicking on a job in the main form. Some operations can only be performed on a single job at a time. These are *Configure* and *Launch Monitored Application*.

Run Interval, *Display In Tray* and *Enabled* can be used on a group of jobs.

By selecting Configure, the type specific options are made available.

Job item context menu in Main window - picture 5.