



IT-Incident Management Workflow: Heartbeat Incident FCFS

English

Table of Contents

Introduction	3
Workflow Anatomy	4
Set up the workflow	5
Heartbeat	5
Create an activity	5
Configure the workflow	10
Monitor your web application	10
Define notification groups	10
Set reminders.....	11
Set up message templates	11
Further reading	12

Introduction

An incident can come from anywhere, whether it's a system failure, a business application going down or a security breach. This tutorial will walk through the development of a customized solution of a IT-incident management process. By the end of the tutorial you will have established your own IT-incident management which will be customized to your business needs.

The IT-Incident Management Workflow monitors a websites behavior, and when a failure occurs a "First Come, First Served"-process is initiated. A management team is notified, and the first staff member who undertakes the task will be responsible for the Incident. When the staff member has handled the incident, the workflow will notify the rest of the management team that the issue has been resolved.

This workflow serves as a template where you will define how a website should be monitored, set reminders and define notification groups. The tutorial is divided into three main parts. The first part is the **Workflow Anatomy**, where the components of the workflow is presented, to give a better understanding of the management process. The second part is where you **Set up the workflow**, import and create the basic structure of your solution. The final part is where you **Configure the workflow**. This is where you set up the parameters and customize the workflow to your organization.



Figure 1: Create your own IT Incident Management Workflow

Requirements

- This workflow must have the parameters defined to operate.

Workflow Anatomy

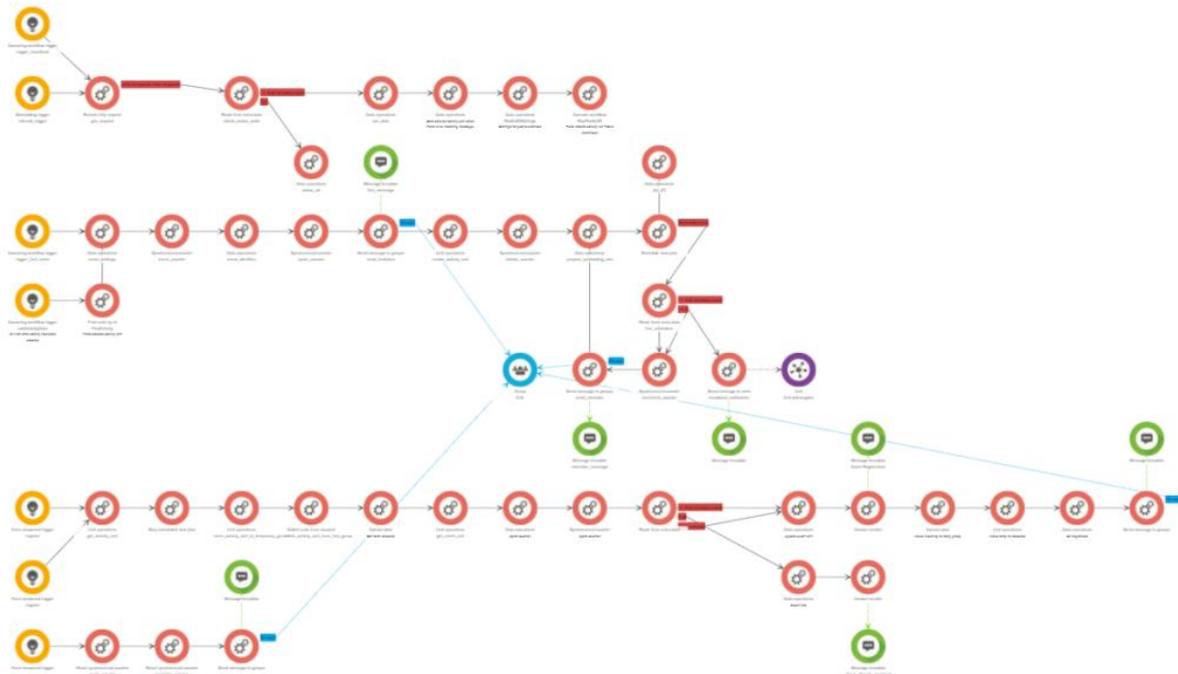


Figure 2: Live Result Snippet Workflow

One of the main reasons to use the workflow builder for your IT solutions is that it gives you the ability to easily modify the workflow as needs and requirements change. This chapter will provide an explanation of the workflow, making the set up and configuration easier as you go along.

This solution consists of three parts, **Heartbeat**, **Create an activity** and **First Come, First Served**. The heartbeat is responsible for monitoring of a webpage. The **Heartbeat** function will create periodic GET-requests to a web page and listen to the response, and unless the response status code will come back as something else than 200, the workflow will continue to listen to the responses.

If a status code other than 200 returns as a response, an IT-incident has occurred, and the management process will initiate. The first part of the management is to **Create an activity**. All activities are records and an ability to store and manage events. An external workflow will be called, and your administrator page will be updated.

After an activity has been created, the queuing system will take place. The system is structured in a **First Come, First Served** manner. Where the first assignee will acquire the task of managing the incident. A group of staff members will receive information about the incident and an entry form. If no one will sign the entry form for a specific period, a reminder will be sent out with a certain frequency. After a certain number of reminders, the notification will escalate, and an employee of higher hierarchy will be notified.

When the entry form has been submitted by an employee, all employees will be notified that the incident has been assigned to a staff member. The assigned staff member will receive a new form which will be submitted upon task completion. When this form is submitted, all staff members will be notified that the incident has been managed.

This workflow is customizable where messages templates, staff groups, higher hierarchy and reminders can be altered to the need of the organisation. This process will be explained in further detail in the *Configure the workflow*-section.

Set up the workflow

In this section the basic structure of the solution will be created. A step-by-step guide which will help you import all the necessary components to make the solution operative.

Heartbeat

The heartbeat functionality is a commonly used feature and can be imported as a predefined solution to your workflow. This template can be imported from the Workflow Library.

1. Open "Edit" in the top left corner of the Workflow Builder.
2. Scroll down to "Workflow Library" and open it.
3. Here you will see the Workflow Library which contains already build code snippets and predefined solutions which will help you streamline your work process. Expand the "Templates"-folder.
4. Select "Heartbeat Incident FCFS" to import it to the workflow canvas.

Create an activity

This process consists of five jobs which are explained below. Drag-and-drop the jobs from the toolbar of the left of the screen then connect them by selecting "Job", located on the top of the job-bubble and drag the arrow to the connecting job. Add the jobs below in the following order and connect the jobs.

1. Data operations. Consists of one *Concat* and one *Set data*. See Figure 3.

Figure 3: Create an Activity, job #1

2. Data operations. This job will configure the settings for the external workflow which will create the activity on your Incident-management page. The job is made up from five *Set data* and are presented in Figure 4 and Figure 5.

Figure 4: Create an Activity, job #2.1

Figure 5: Create an Activity, job #2.2

3. Execute workflow. This job will initiate the external workflow. See Figure 6.

Execute workflow

General

Name
RunPublicWf

Description
Runs 'create activity' on Public Workflows

Properties

Workflow search phrase
00000000-0000-0000-0000-000000000000

Trigger names
createActivityNoAdmin

Initiation tags

Search public
 Ignore current workflow meta data
 Allow recursive executions

Execute with meta data

Key	Value
-----	-------

Delay time for subsequent jobs

Metadata

Figure 6: Create an activity, job #3

4. Executing workflow trigger. This is where the workflow will proceed after the external workflow has been called. See figure 7.

Executing workflow trigger	
General	^
Name	addActivityData
Description	Will run after activity has been created
Properties	^
Execute when	WorkflowExecutes v
Metadata	v

Figure 7: Create an activity, job #4

5. Find units by id. Find and select the activity to store information to it. See Figure 8.

The screenshot shows a configuration window titled "Find units by id". It has a standard toolbar with icons for save, undo, redo, help, and close. The window is divided into three main sections:

- General** (expanded):
 - Name: FindActivity
 - Description: Finds created activity unit
- Properties** (expanded):
 - Id source: metadata.selectedactivity
 - Resource name: selectedactivity
 - Delay time for subsequent jobs: (empty field)
- Metadata** (collapsed): (empty section)

Figure 8: Create an activity, job #5

Connect all the jobs to each other, traversing from left to right, then connect the heartbeat to the first job 1. Data operation to complete the circuit.

Configure the workflow

Once the workflow is set up, some final configurations are necessary to make the solutions operative. This is also the section where it is possible to customize the workflow to your organization.

Monitor your web application

The heartbeat lets you monitor your web application. To define which web application, select the *Remote http request-job*, and submit the URL you wish to monitor in the *Url*-field.

To define the frequency of the monitoring, select the Scheduling Trigger and expand *Minute scheduling rule*. Select the time interval by filling in the *Interval*-form (minutes).

Define notification groups

These are the groups that should be notified when an IT-incident has occurred. To define the groups, drag a group-bubble from the toolbar to the left of the Workflow builder, search for the group you wish to notify and then connect all the jobs *Send message to groups* to the newly added group.

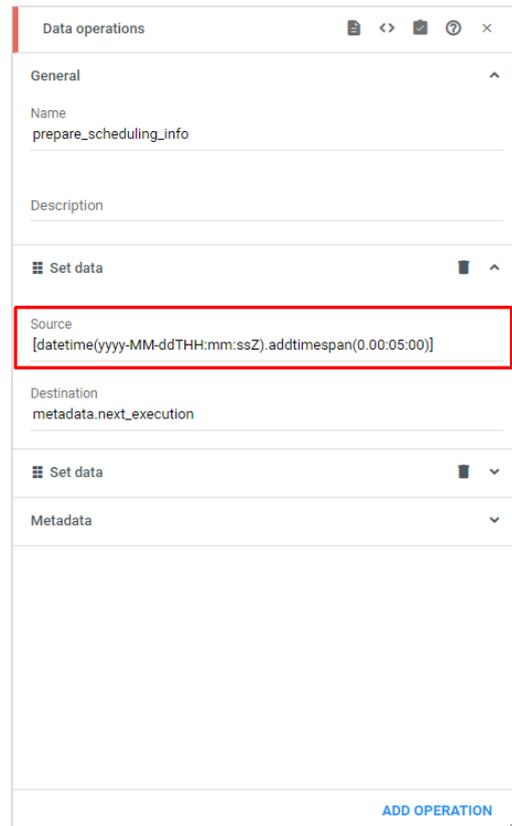
When a certain number of reminders has been sent without response, a higher hierarchy of your organization can be notified. Drag a unit from the toolbar, search for the specific unit and connect it to the *Send message to units*-job named "escalated_notification". If you wish to notify a group instead of a single unit, you can replace the *Send message to units*-job with a *Send message to groups*-job. Remember to connect the jobs to each other to complete the circuit.

Set reminders

You can specify the frequency as well as the amount of reminders that the workflow will send out.

Reminder frequency: Select the *Data operation* named “prepare_scheduling_info”, expand the first *Set data* and change the timespan. In Figure 9 the reminder frequency has been set to five minutes.

Reminders until escalated notification: Select the *Synchronized counter*-job named “initiate_counter” and expand the *Properties*-section. The *Counter limit* is the field that defines how many notifications will be sent before the escalated reminder will be sent.



The screenshot shows a configuration window titled "Data operations". It has several sections: "General" (Name: prepare_scheduling_info), "Description", "Set data" (Source: [datetime/yyyy-MM-ddTHH:mm:ssZ).addtimespan(0.00:05:00)]), "Destination" (metadata.next_execution), another "Set data" section, and "Metadata". The "Source" field in the first "Set data" section is highlighted with a red border. At the bottom right, there is an "ADD OPERATION" button.

Figure 9: Set reminder frequency

Set up message templates

To set up the message templates for the message mailings, locate all the *Message Template*-jobs, expand the *Sms message*-section and fill in the *Sender name* and *Body*. Remember to keep the [form]-tag to insert the form submit for the staff.

Further reading

Additional documentation and information about Bosbec integration and functionality can be found at <https://help.bosbec.io/>.