# Fleet Management App Workflow Sample

This sample demonstrates how to use a state machine style workflow to route the workflow to different states depending on different actions and events. It also shows how to create custom events and utilize the workflow Client Side Object Model (CSOM).

## Description of the sample

The sample allows a company, such as a cable company, to better manage is fleet of vehicles. A fleet manager workflow instants starts when a new vehicle is added to the fleet (as an item in a SharePoint list). Three months (simulated in the sample as 3 minutes, but easily changed) following the last maintenance cycle, the workflow instance takes the vehicle out of service and assigns a task to the maintenance department to do an oil change. When the task is completed the vehicle is put back in service.

If out-of-cycle maintenance is required on a vehicle, the app allows users to enter a maintenance request. Under the hood, this maintenance request page sends a custom even to the workflow to put the vehicle into maintenance.

## Prerequisites

This sample requires the following;

Installed & configured SharePoint 2013 RTM environment that is connected to a configured Workflow Manager 1.0 farm

Service Bus 1.0 February 2013 Cumulative Update applied

Workflow Manager 1.0 February 2013 Cumulative Update applied

SharePoint 2013 March 2013 Public Update applied

Visual Studio 2012 RTM

Office Developer Tools for Visual Studio 2012 RTM

## Key components of the sample

FleetManagementApp.sln is the Visual Studio solution containing the entire SharePoint hosted app and workflow.

The folder Fleet List within the Visual Studio solution contains list used by the workflow.

The folder Workflow Dependencies within the Visual Studio solution contains a custom task outcome column, content type and the workflow lists used by the workflow.

The Fleet Management Workflow contains the workflow and the custom initiation form.

The Pages folder contains a MaintenanceRequest.aspx that serves as the trigger for the custom event.

## Configure the sample

Follow these steps to configure the sample app.

1. Ensure you have a site collection created using the Developer Site template.
2. Open the solution in Visual Studio 2012.
3. Change the Site URL property on the project to be the URL of the Developer Site.
4. Ensure you have at least one person in Active Directory.
5. Run a full synchronization of the User Profile Application.
6. Grant this users access to the Developer Site.

## Build the sample

1. Build FleetManagementApp.sln.

## Run and test the sample

1. Open the FleetManagementApp.sln and press F5 (ensuring it has been configured to point to the Developer Site).
2. When the app deploys it will open the homepage that contains links to the Fleet Management List.
3. Click the Fleet Management List link and create a new vehicle. Only two fields are required, but leave the Service Status field to “In Service”. This field will change when the vehicle is taken out of service for maintenance.
4. Navigate to the document’s detail page and start the Manuscript Approval Workflow.
5. After submitting the item, the workflow will start automatically.
6. Watch the workflow debug console window as it will report the current transition and state the workflow is in. After 3 minutes it will show the workflow has transitioned into a different state.
7. Refresh the item in the browser to see the status has changed to Out of Service.
8. Go to the workflow status page and notice the status of the workflow. When you open the associated task you will see it was created for scheduled service.
9. Edit the task and click Complete… notice in the workflow debug console window the transition and state changed.
10. Refresh the list item and notice the Service Status field has been updated.
11. Before another 3 minutes passes, go to the All Items view of the Fleet Management List and use the Item Menu (aka: edit control block) to select the Manual Service Request custom action.
12. Enter a reason for the service and click the Submit Maintenance Request button.
13. Go back to the workflow status page to see a new maintenance request has been submitted which also includes the request.

## Troubleshooting

If the workflow fails it is likely due to one of two things. Either the users have not been imported into the User Profile Application or the environment has not been configured to send emails. The latter will report errors, but it will not keep the workflow from running.

## Change log

First release December 21, 2012

Updated April 9, 2013

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