HarePoint Workflow Extensions for Office 365

For SharePoint Online (Office 365)

Quick Start Guide

December 13, 2018

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I. Introduction

Description

HarePoint Workflow Extensions for Office 365 is a software product that expands the capabilities of SharePoint Designer to create workflows for SharePoint Online (Office 365). This brings completely new capabilities to your workflows, making possible a widest range of automation and management scenarios.

After successful installation, you will get around 200 custom actions available in SharePoint Designer along with the out-of-the-box actions. Moreover, you can get a freeware [HarePoint Workflow Designer](#) from SharePoint Store and create your workflow in visual editor.

How it works?

Technically, all actions are executed in HarePoint cloud service;. The billing is based on **number of workflows** that use HarePoint actions. There are several billing plans available: 1 workflow, 5 workflows, 10 workflows, etc.

Terms and definitions

HarePoint Workflow Extensions for Office 365 billing account (hereinafter **Account**)
This Account is used for billing purposes. With a **single Account**, you can use HarePoint Workflow Extensions for Office 365 on **one, several or all site collections** in your SharePoint Online tenant.
You can also have **multiple Accounts**, **each for one or several site collections**. In this case, billing will be calculated for each Account individually.
Accounts are limited to certain SharePoint Online tenant. If you plan to use HarePoint Workflow Extensions on several SharePoint Online tenants, you would need at least one account for each of them.

II. App downloading and deployment

Prerequisites

In order to deploy HarePoint Workflow Extensions for Office 365, you need to:

- Have sufficient permissions to upload new apps to SharePoint **App Catalog** (usually it means you need to be a site collection administrator for App Catalog site collection)

- Be **site collection administrator** on your SharePoint Online site collections where you plan to deploy and use HarePoint Workflow Extensions.
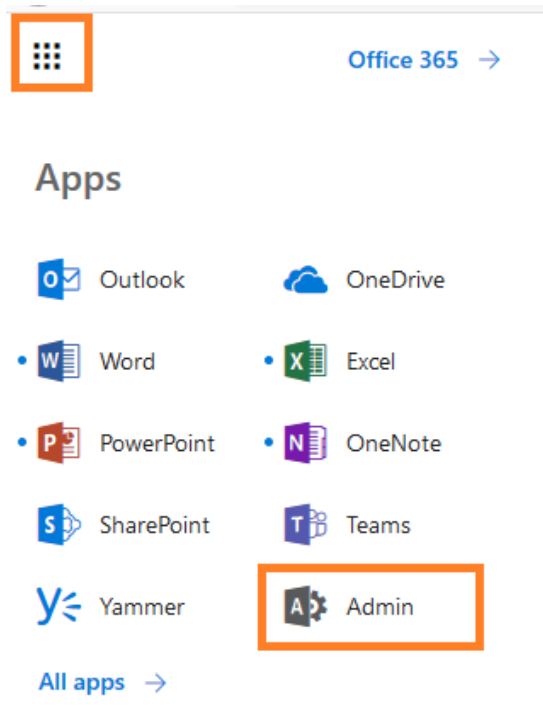
Tenant administrator privileges are not required to upload, deploy, install or use HarePoint Workflow Extensions
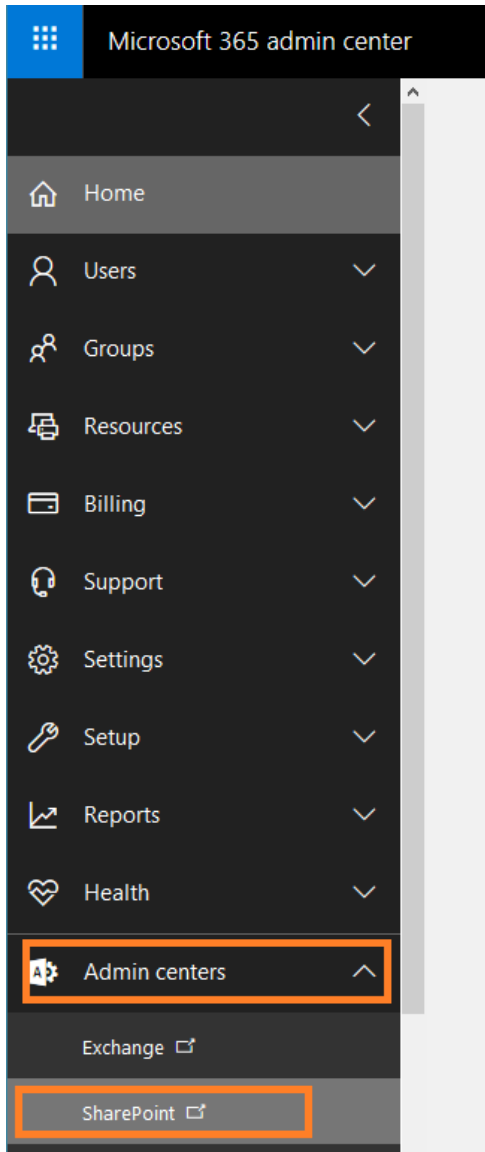
Getting the app

Download an app from HarePoint site using the following URL:

https://www.harepoint.com/DownloadProducts/HarePointWorkflowExtensionsO365.app

Open your **App Catalog Site**. To do this, go to **Admin** section of SharePoint Online:

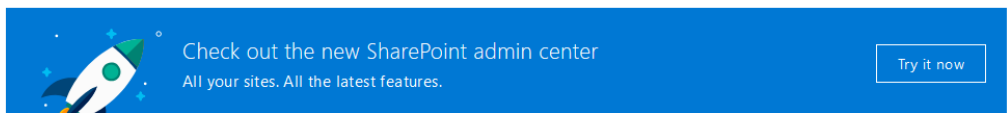Click on **Show more**… and select **Admin Centers – SharePoint**.

Click on **apps**:

Select **App Catalog**. If it does not yet exist, create it.
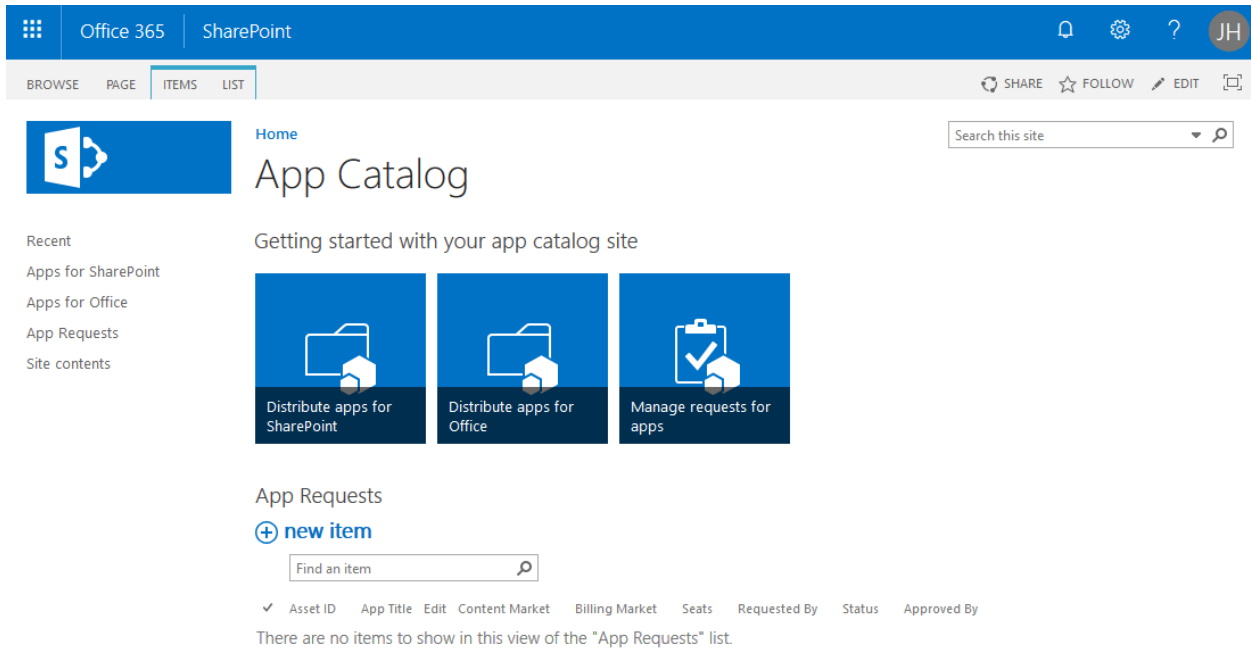
Open **Apps for SharePoint** in the left menu, click **Upload**:
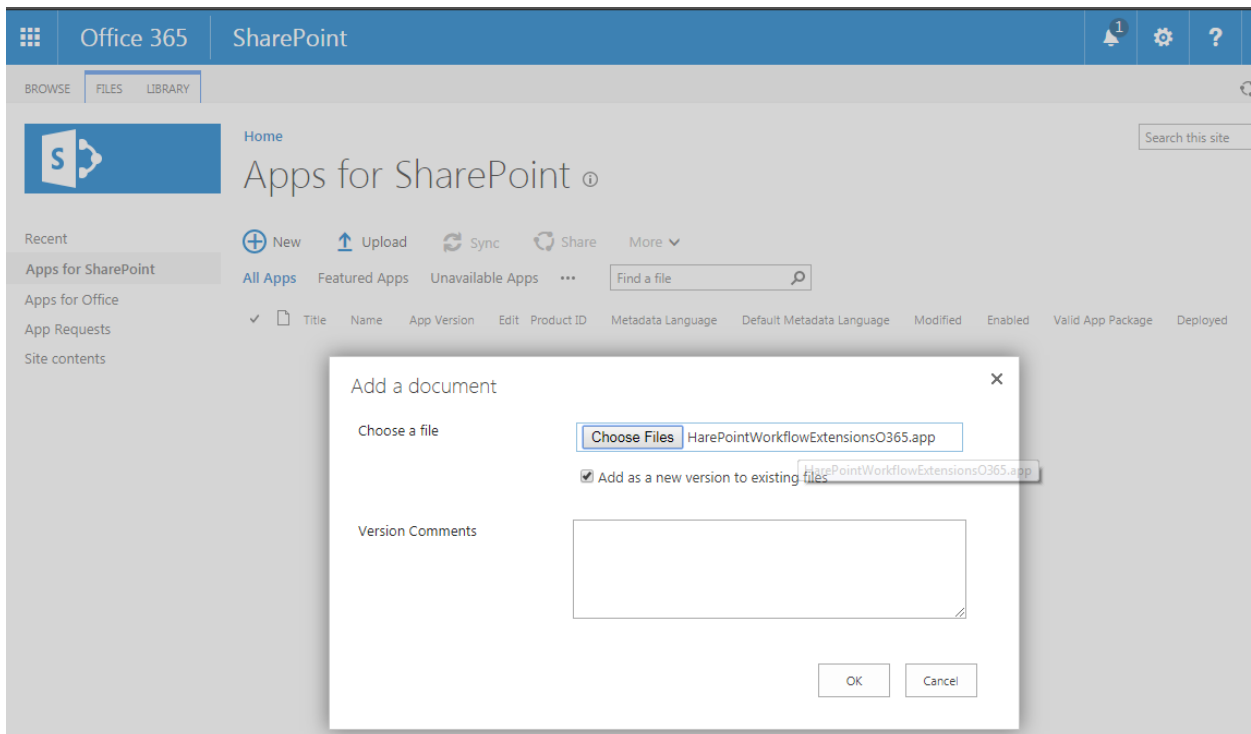
Choose **HarePointWorkflowExtensionsO365.app** file on your disk and click **OK**:
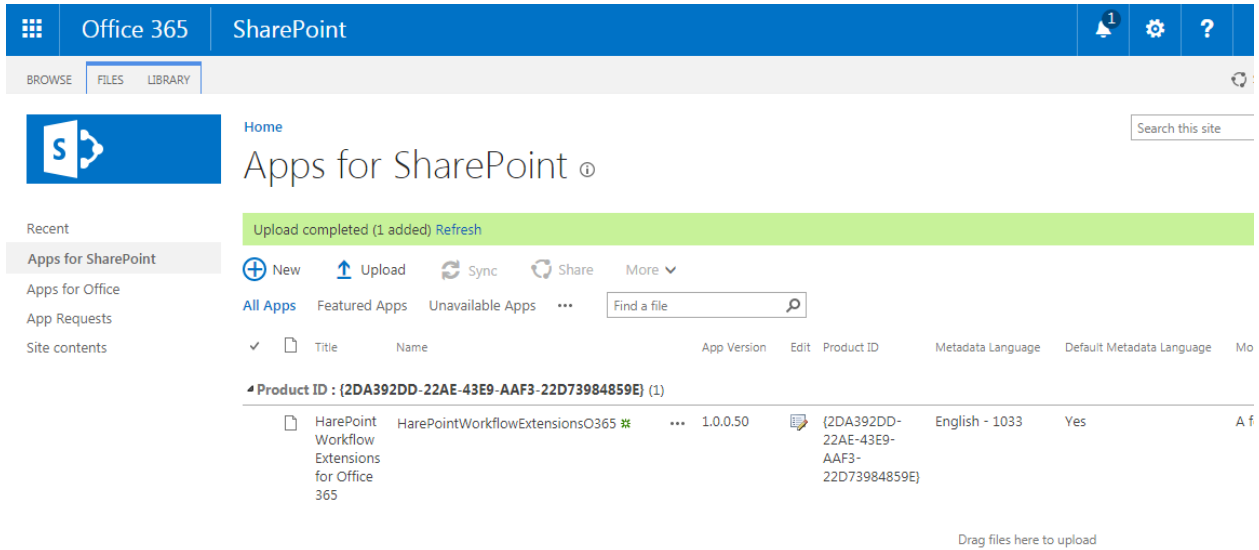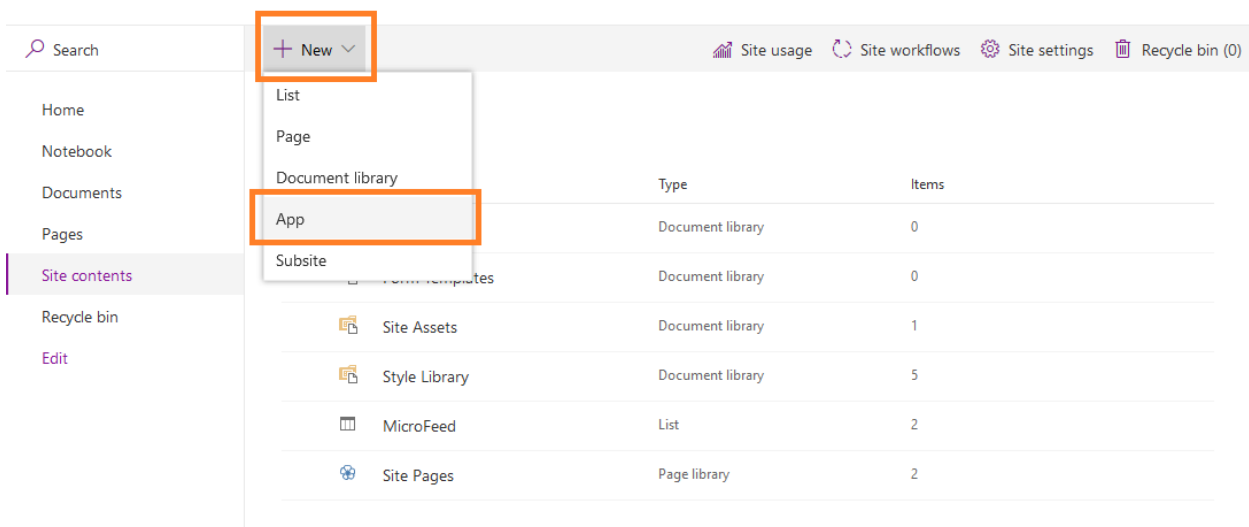

Now you can add **HarePoint Workflow Extensions for Office 365** to your site.

Access the root site of your site collection.

Important note: App needs to be added to a root site so it can be used for any site within this site collection.

Go to **Site Contents** on your site and click **New** – **App**:

In the **Apps you can add** section, click on **HarePoint Workflow Extensions for Office 365**:

Click **Trust It** in the pop up window:
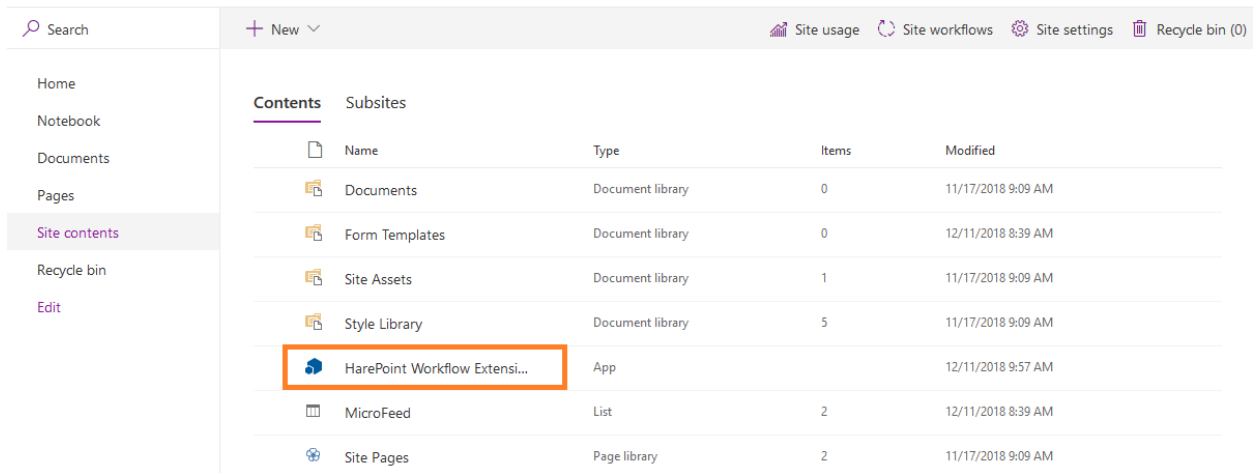
HarePoint Workflow Extensions for Office 365 app will shortly appear under **Site Contents** on your site:

Specifying an Account

Click on app icon to proceed. The app will open and you will see HarePoint Workflow Extensions Management Console.

When the app is launched for the first time, the **Registration window** will pop up:

At this point, you need to specify **what Account** (HarePoint Workflow Extensions billing account, see [Introduction](#) for more details) **this site collection should be connected to**. All the costs for the running workflow instances that use HarePoint Workflow Extensions will be charged for that Account.

You can either **create a new Account**, simply by typing the new Account name in the upper field, or **select from existing Accounts** (if there are any available) using the lower drop-down.

This Account can be changed afterwards in the settings.

Note: Please refer to complete Administrator Guide for more details on Accounts.

Installing solution

Note: in order to be able to use HarePoint Workflow Extensions actions in SharePoint Designer, the solution need to be deployed, after an app is added.

At first time, in Management Console, you will see a warning that the solution is not installed yet:

Click on **Install** in the warning message, or select **Install** in the main section below on the page and click **Next**.

At the step 2, select **sites where HarePoint Workflow Extensions actions need to be available**.
Note: this can be not only the root site, but also several or all subsites. Make sure you checked the sites as needed.

Click **Next** and review the summary before the Installation begins.

Click **Next** to proceed with the installation:

Click **Next** to review the installation results.

Click **Finish**.

III. Management Console overview

Click on app icon to open Management Console for HarePoint Workflow Extensions for Office 365.

HarePoint Workflow Extensions Management Console has two modes:

- Site Collection management mode
- Account management mode

To switch between these modes, use **Switch to Account** and **Switch to Site Collection** links in the left pane.

Site Collection management mode

Each site collection where HarePoint Workflow Extensions for Office 365 app is added has its Management Console.

Home

On this page you can review the **Current Site Collection Status**.

In particular, you can check the currently installed version of HarePoint Workflow Extensions, solution activation state.

The **Usage Chart** below represents how HarePoint Workflow Extensions actions are used in this specific site collection over the last month. The detailed information is available on **Statistics** page, see below.
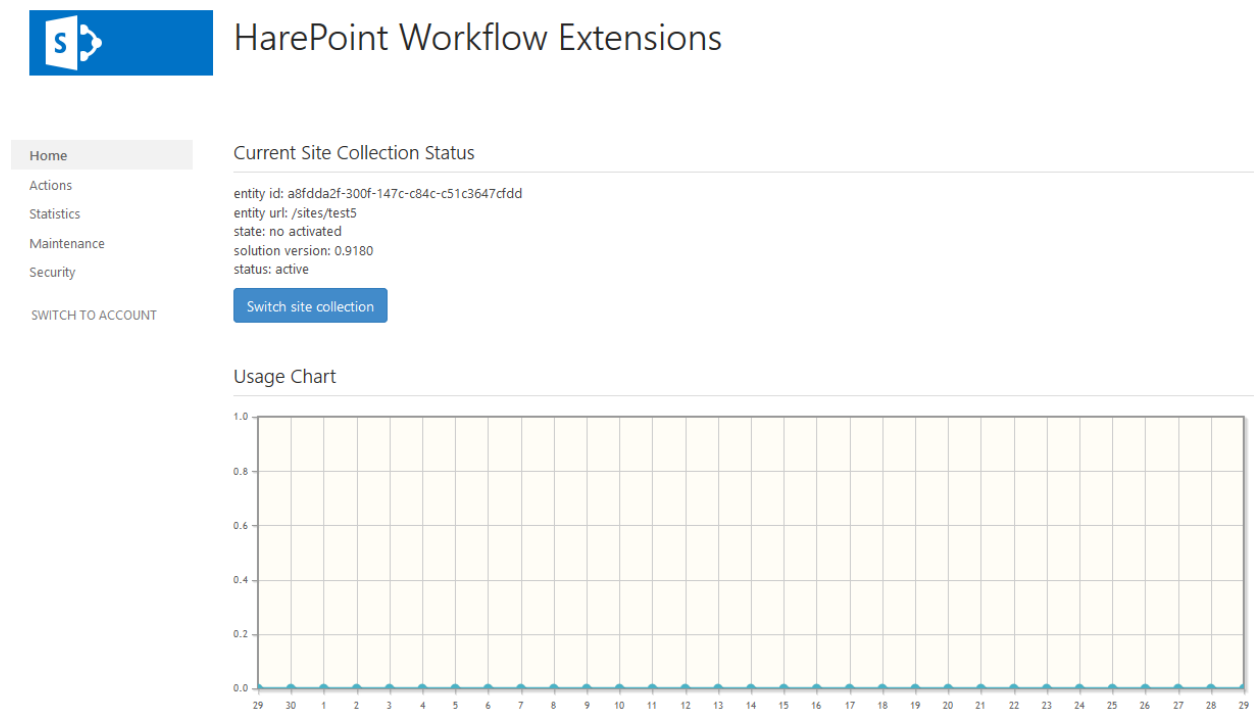
Actions

On this page you can browse a **list of available actions**, get the **detailed description** for each action.

Available Actions

Search [Type for search...]

Title ▲	Category	Weight ▼
Accept Revision Changes in Word Document	HarePoint Activities - Office	1
Activate Feature By GUID	HarePoint Activities - Administration	1
Add an Item to a Dictionary	HarePoint Activities - Dictionary	1
Add Content Type to List	HarePoint Activities - Lists	1
Add Existing Column to Content Type	HarePoint Activities - Lists	1
Add Language To Term Store	HarePoint Activities - Taxonomy	1
Add New Row into Word Document	HarePoint Activities - Office	1
Add Users to SharePoint Group	HarePoint Activities - Administration	1
Add Users to SharePoint Site	HarePoint Activities - Administration	1
Alternate CSS and Site Logo	HarePoint Activities - Administration	1

Showing 1 to 10 of 188 entries   [10 ▼] records per page   << 1 2 ... >>

HarePoint Workflow Extensions Manual

▼ I. Actions
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  ▶ 2. Cloud Print
  ▶ 3. Date/Time
  ▶ 4. Development
  ▼ 5. Dictionary
    5.1. Add an Item to a Dictionary
    5.2. Get Dictionary Item by Index
    5.3. Get Index of Dictionary Item
    5.4. Insert Dictionary Item at Index
    5.5. Remove Dictionary Item by Index
    5.6. Remove Duplicated Values from Dictionary

5.1. Add an Item to a Dictionary

This workflow action is used to add new item to the dictionary variable.

Changes can be made to an existing dictionary variable, or a new dictionary variable can be created.

Note: an item is always added to the **end** of the dictionary variable. In case of you need to insert an item to a **specific index**, use " Insert Dictionary Item at Index" action.

See Also: Understanding Dictionary actions in SharePoint Designer 2013 (http://msdn.microsoft.com/en-us/library/office /jj554504(v=office.15).aspx)

Add <u>item</u> as <u>String</u> with <u>this</u> name to the end of the <u>dictionary variable</u>. Result at: <u>Variable: outputDictionary</u>.

Parameters:

<u>**item**</u>	Text of variable of any supported type.
<u>**String**</u>	Type of the new dictionary item. The following types are supported: *Date/Time, Integer, Number, String, Boolean, Dictionary, Guid.*
<u>**this**</u> name	Name of the new dictionary item.
<u>**dictionary variable**</u>	the source dictionary variable.
<u>**Variable: outputDictionary**</u>	the target dictionary variable.
	The source dictionary variable can be specified here as well; in that case all changes will be made to it.

Statistics

On this page you can review the detailed **Usage Charts**, including **Usage by Actions** chart.
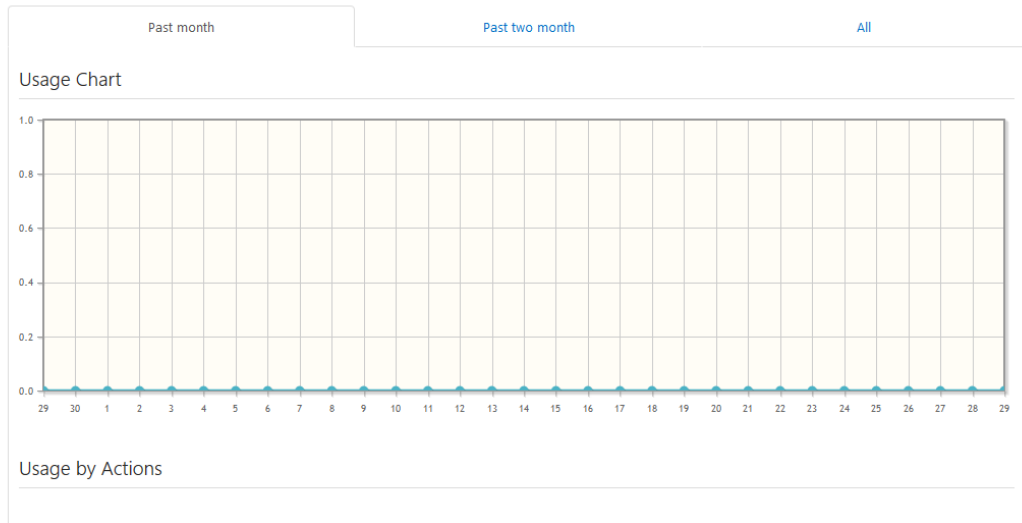
Maintenance

On this page you can **Install**, **Upgrade**, **Reinstall** and **Uninstall** the solution, as well as **Change** the sites in this site collection where HarePoint Workflow Extensions are installed.

Select the required action (note that some actions might not be available at that moment), click **Next** and follow the instructions of the Wizard that will guide you through the whole process.

Security

On this page you can **generate tokens** to access various sites and services from a workflow with HarePoint Workflow Extensions.

You can also **encrypt** workflow values, tokens or credentials for improved security.

Important note: Please refer to complete Administrator's Guide for the detailed description of the functionality available on this page.

Account Management mode

Each Account has its individual HarePoint Workflow Extensions Management Console.

Home

On this page you can review the **Licensing Status** for this Account, as well as the **Usage Chart** that represents how HarePoint Workflow Extensions actions are used over the last month.
Note: this is a **summary data** for **all site collections** connected to the given Account.
The detailed information is available on **Statistics** page, see below.

HarePoint Workflow Extensions for Office 365
Account Home Page

Licensing Status

Current Plan: A1-Free Subscription (1 workflow) (change...)   30 days left   Account ID: 39b3244b-09eb-4ba4-b111-efcaa1fc23cb
Credits Included: Unlimited   Average Usage: 0.0 credits per day   Account Title: harepoint demo
Billing Period: 31   Date Purchased: 12/11/2018
                                                                                         Current Billing Period: 12/11/2018 - 1/11/2019

[Switch an Account]
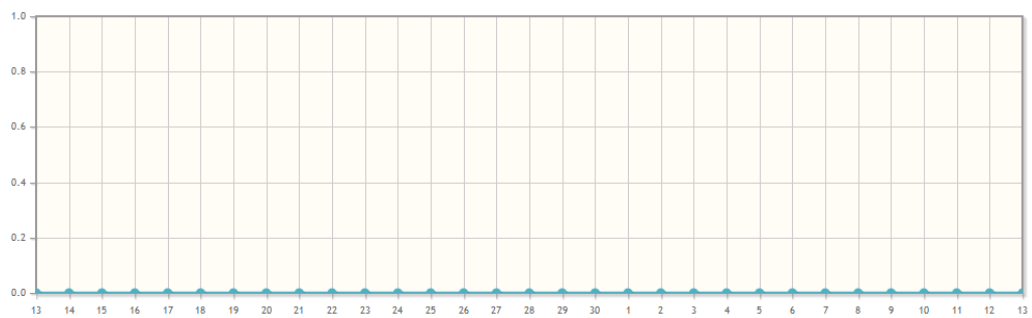
Home
Statistics
Billing
Roles
Site Collections
Tenant

SWITCH TO SITE COLLECTION

Usage Chart

Statistics

On this page you can review the detailed **Usage Charts**, including **Usage by Actions**.

Note: this is a **summary data** for **all site collections** connected to the given Account.

/sites/test3 › Statistics

Home
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SWITCH TO SITE COLLECTION

| Past month | Past two month | All |

Usage Chart
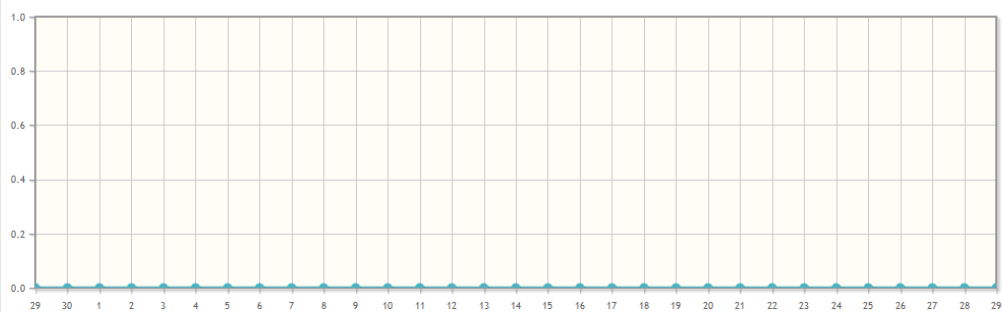
Usage by Actions

Billing

On this page you can choose the **billing plan** and proceed with the payment, as well as review the **list of workflows** where HarePoint Workflow Extensions actions are activated.

Billing plans

Trial plan is used to evaluate HarePoint Workflow Extensions for Office 365, within this plan you can use all the available actions for 30 days and in unlimited number of workflows.

With **A1-Free Subscription** plan, you can use all the actions except PDF conversion, only in one workflow. Click on this plan to switch to it:

Change Billing Plan

Current plan: Trial

A1-Free Subscription (1 workflow)
Free of charge license allows operation with one workflow

Switch to Free Subscription

A5 Subscription (5 workflows)
Plan with monthly billing, allows operation with up to 5 workflows

A10 Subscription (10 workflows)
Plan with monthly billing, allows operation with up to 10 workflows

Click on **Switch to Free Subscription**:

A1-Free Subscription (1 workflow)   ✕

Tell us about yourself. This information will help us serve you better.

First Name	John
Last Name	Hurley
Address	Blair st, 462
City	Toronto
Zip	M4B 3N6
Country	Canada
Company	HarePoint demo
Phone	+1 112 223 21 **
Email	JH@harepointdemo.com

Switch to Free Subscription   Cancel

Fill in the form and click **Switch to Free Subscription.**

The billing plan will switch to **Freeware License** shortly.

If you need to run **more than one workflow** with HarePoint Workflow Extensions actions, choose the **paid subscription plan.**

You can choose an appropriate plan and proceed to payment right from the management console via **2Checkout** (part of Avangate) provider.

Click on **Pay via 2Checkout** button to proceed. You will be forwarded to our payment provider page. Multiple payment methods are supported.

List of Active Workflows

Under the list of billing plans, there is a **List of Active Workflows**:

This list will only contain the active workflows – the ones that contain HarePoint Workflow Extensions actions and that are allowed to run according to the currently selected billing plan.

For example, the **Free Subscription** only allows using HarePoint actions in **one workflow**. That is, there is only one slot available in the **List of Active Workflows** for this plan.

If you need to make another workflow active (applicable for any plan), do the following:

- Click **Forget** button for a workflow in a list that you would like to deactivate. The workflow itself will not be removed, it just will be deactivated for HarePoint Workflow Extensions.
- Start a workflow that you need to activate in HarePoint Workflow Extensions.
- That's it. Refresh the **Billing** page to make sure the workflow you've started now appeared in the **List of Active Workflows**.

Note: Workflows that do not contain HarePoint Workflow Extensions actions will not be appearing in the List of Active Workflows.

Roles

On this page you can define the **Account Managers** – the SharePoint Online user accounts that will be permitted to perform all actions on the Account.

By default, Account Manager is the user account you have been logged in when you were creating this Account.

You can optionally specify **Account Viewers** which can only view Account information, but not able to make any changes.

You can optionally enter **e-mail addresses** to receive **usage and billing notifications**.
Note: Account Managers are subscribed to these notifications **by default**.

Important note: Please refer to complete Administrator's Guide for more details on Roles for an Account.

Site Collections

On this page you can review the site collections connected to this account.
You can also **manage** site collections: **connect new site collections**, or **disconnect the existing ones**.

Note: All the costs for running workflows that contain HarePoint Workflow Extensions actions will add up and will be charged to this Account.
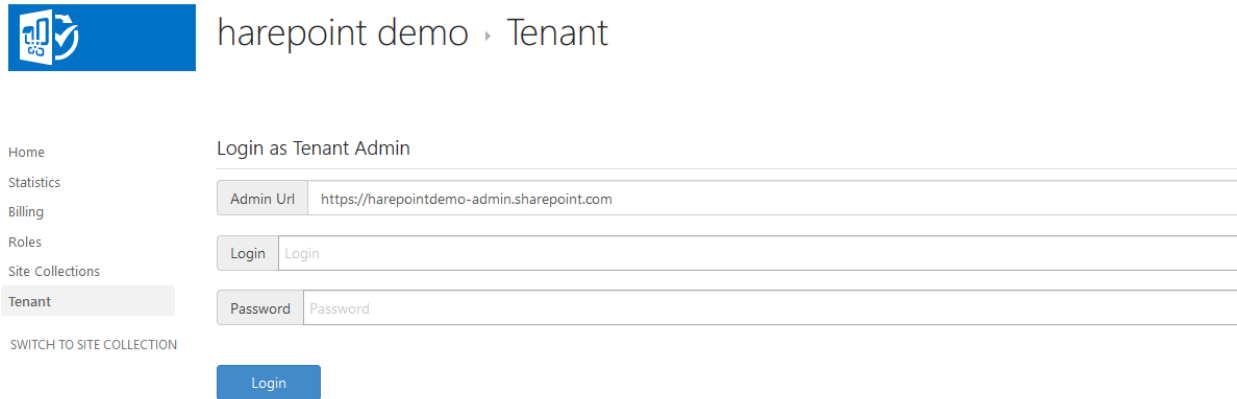
Tenant

On this page SharePoint Online tenant administrator can perform certain **high-level operations**, such as merge all Accounts for all site collections in this tenant into one.

Important note: Please refer to complete Administrator's Guide for more details on tenant administrator capabilities.

IV. Creating a first workflow

Now, the product in installed and initial configuration is completed. We can create a first workflow that will use HarePoint Workflow Extensions. The workflows are created using the standard tool – SharePoint Designer.

Scenario

We will create a simple list workflow for **Documents** library **on one site collection** that will log newly added documents to **Documents Log** list **on another site collection**. Generally speaking, users that add documents do not have permissions for the target site collection, so we will **impersonate** as site collection administrator of the target site collection to be able to create list items there.
This example will demonstrate how to use actions from HarePoint Workflow Extensions, and how to generate and use token to connect to another site collection and act on behalf of another user.

Connecting SharePoint Designer

Launch **SharePoint Designer** and click **Open Site**:
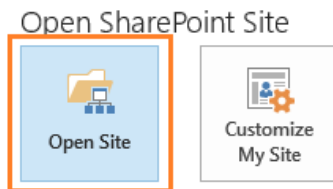
Enter the site URL for the **first site collection** (where **Documents** library located).
Note: The site URL should start with **https://**

Click on **Workflows** in the **Navigation** pane:
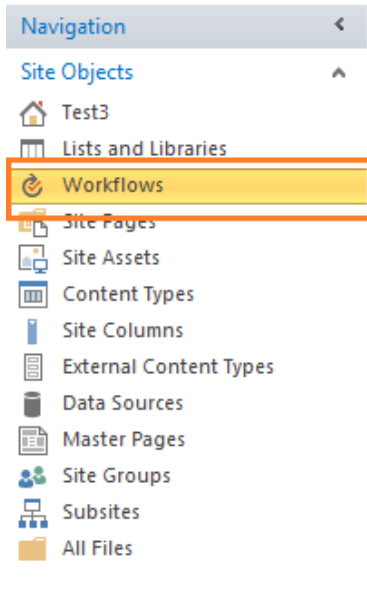
Your existing workflows (if any) will be displayed in the right pane:

Creating a workflow

In our example, we will create a new List Workflow.
On the ribbon, click **List Workflow** and point to **Documents** library.
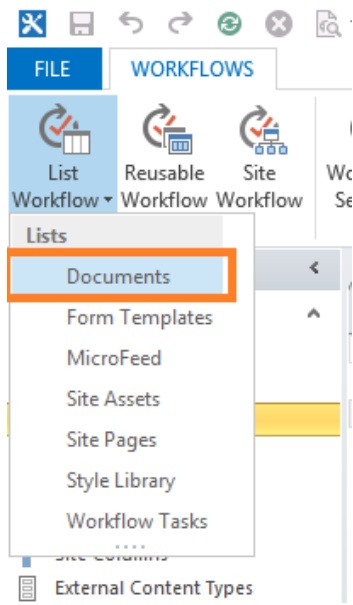
Enter the **name** for the new workflow.

New workflow will be created and opened for editing.

1. Impersonation

First, we need to impersonate as site collection administrator of the target site collection. For that, we will use **Set Authentication** action.

Use this token or login and password to authenticate to this

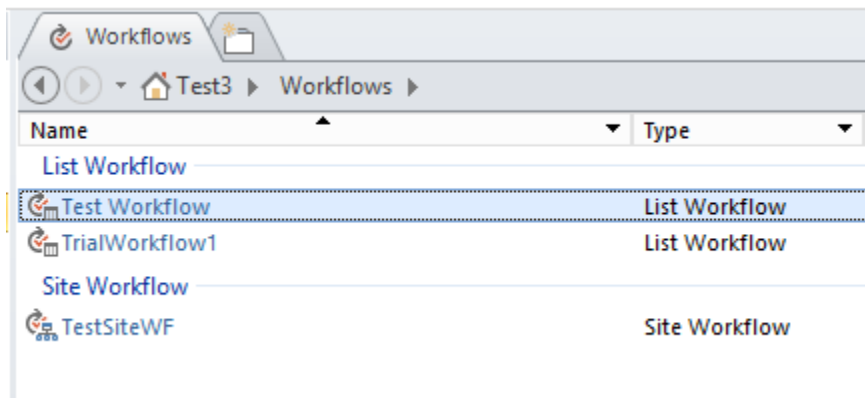This action accepts either a **token generated by a user to impersonate as**, or **encrypted credentials of the user to impersonate as.** Both can be obtained from HarePoint Workflow Extensions Management Console – **Security** section.

In our example, this needs to be performed by **John Smith**, the **target site collection administrator**.

/ › Security

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SWITCH TO ACCOUNT

Access Token Generation

Current Site Collection
Generate access token for the current site collection

Office 365
Allows HarePoint to access Office 365 services, such as Exchange Online

Google
Allows HarePoint Workflow Extensions to access services assigned to specified Google account

Yammer
This token allows to access Yammer social networking service

Encryption

Workflow value
Encrypt general workflow value.

Access Token
Encrypt any access token.

Login and Password
Encrypt login and password pair.

Reset encryption key
Use with caution!

John Smith goes to **Access Token Generation – Current Site Collection**:

Specify a Site ✕

| SharePoint Site Url | https://hwo.sharepoint.com/sites/test3 |

Generate token

Types in the **site collection URL** , clicks **Generate Token**:

eyJUeXBlljoy˜˜llc0VuY3J5cHRIZCl6ZmFsc2UslkRhdGEiOiJleUpTWldaeVpYTm9WRzlyWlc
0aU9pSkpRVUZ˜˜˜˜˜FHVTVjUzFJZEαxTGJrNWtVRκ˜˜'?5waWRsaFJOa3d4ZUVaR1p
UTnZOV˜FnY0dvd2JFUkphV3r˜˜˜˜'ΩWvprSldjblYxWnpKΩ˜˜˜U5OMHh6ZFhGMFNpMD
FWMk5TTj˜˜˜˜ΩzcFNhWEJ4ZERGemvι˜˜˜˜SGN4UzFseFkzS1v˜˜˜˜MJ0RaNmNXSTNS
amRuU3pkVk1U˜ι˜˜˜˜˜˜˜GMNGJGTkRlbG8xYp˜˜˜RuWkhjbGgzZGpouε˜˜˜YliM1kyT
UVjM\˜˜ιFXbGszUVRCVFFVaHˍˍˍˋ˜˜˜ICTFpESktkRvιˍˍ˜˜oweFlTMFpYvε˜˜˜lU0
yTjRWVlZLε˜˜MloxaHRWa1puZWpSclRFVκω˜˜˜hV0VKUGMzZFˌˌˌ˜˜˜Wms5M2NF
UTVaRlJvV1Vakε˜˜˜˜7NhFp6VFRoUWFFVk5kRXh4Tvι˜˜˜drOVFVVk5wVlvκ˜˜?6bEZ
NbUp˜˜Wpod2JGRkhjbEˍˌˌ˜˜˜G9OMnBOWkhwUFdˌˌ˜˜Ωa3QzTjNGcU5sˇˌ˜˜˜
a05rVFdFε˜7HVTakJJVjBOMk9WWκˇˇˍˍ˜˜hsWlJsbGFaeUlzSˇˇ˜˜?FXVnVkRWxrS
WpvaU9XUTBaε˜˜ΩMVRNdFlqWTVPQzAwTldFNUxˍ˜˜FI0WkRBd01ESmιˍˍ˜J1TW1
FMElpd2lTWE56ZFdˇˌ˜˜˜ImxJam9pWEM5RVlYUmxLREUwικRjd01USTNPRFF4TnpBcF
hDOGlMQ0pWY21raU9pSmˇˍ˜˜˜Y3pvdkwyaDNieTV6YUdGeVpYQnZhVzUwTG1OdmJT
OXphWFJsY3k5MFpYTjBNeThpZlE9PSJ9

Then copies the displayed token and transfers it securely to workflow author.

Alternatively, John Smith can encrypt his credentials using **Encryption – Login and Password**:

Encrypt Login and Password   ×

| Login | smith |
| Password | •••••••••••••••• |

Encrypt

John types in his credentials, clicks **Encrypt**:

Success
eyJUeXBlljo1LC˜˜ΩVuY3J5cHRIZCl6dHJ1ZSwiRGF˜Sl6InpRdHlyZ0tyclU2STMzbEpEZytq
Qk9PT2N2b0ZSTUˏ˜˜ˏΩ9xMncxbGY5c1ZtbUNrd0gzˍ˜˜ΩHMUN1a2c2cWNoMmo4
bmM1YTdNbDh2bFZIOWˌˌ˜˜˜NTO4MjJFdmthdFAxUkV1RWNˌˌ˜˜˜dOMXhPKzJrb
VNRWll6eVhXdnJNNm51eGVUTDhvaˌˌ˜˜˜ΓIˇV1pXa0dZRG5wd3AzRTRoeEFLSιˍ˜˜Z
HYWNTNkU1SE1LUWQwS3VFeFN5NUU2aVJyUSˌˌ

Copies the displayed code and transfers it securely to the workflow author.

Note: these two methods work only when **both site collections are in the same tenant**. If they are not, **External SharePoint site** option should be used. Please refer to Administrator Guide for more details.

Now we can **paste** the token or code obtained from John Smith to a workflow action, first parameter; in the second parameter select **SharePoint site**:

Use eyJUeXBIljoyLCJJc0VuY3J5cHRIZCl6ZmFsc... to authenticate to SharePoint site

2. Creating a new List Item

After we gained access to the target site collection, we can **create a list item** in **Document Log** list. For that, we use **Create List Item at URL** action:

then Create list item with specified values at this list URL . Store new list item URL in Variable: itemUrl .

In **specified values**, we need to specify the values the new list item should contain. We will fill two columns: **Title** and **Creator**.

Columns

A column stores information about each item in the list. The following columns are currently available in this list:

Column (click to edit)	Type	Required
Title	Single line of text	✓
Creator	Person or Group	
Modified	Date and Time	
Created	Date and Time	
Created By	Person or Group	
Modified By	Person or Group	

This is how the **String Builder** for this parameter will look like (use **Add or Change Lookup** button to paste the values **[%Current Item:Name%]** and **[%Current Item: Created By%]):**


```
String Builder

Name:
Title=[%Current Item:Name%]
Creator=[%Current Item:Created By%]
```
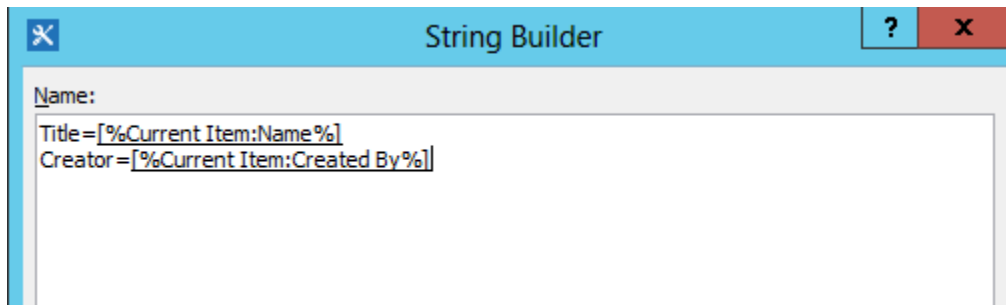
In the second parameter, **this list URL**, put the full URL of the target list. It should look as follows:

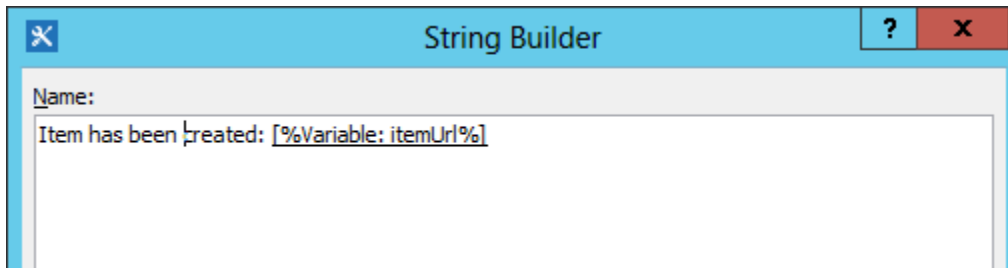_https://hwo.sharepoint.com/sites/test3/Lists/Document Log/_

Note: It should **not** contain _Allitems.aspx_, hashes (_#_) or anything like this.

3. Logging the result

After the item has been created, we can **log a message** confirming this to workflow history. We will use **Log to Workflow History** action for this:

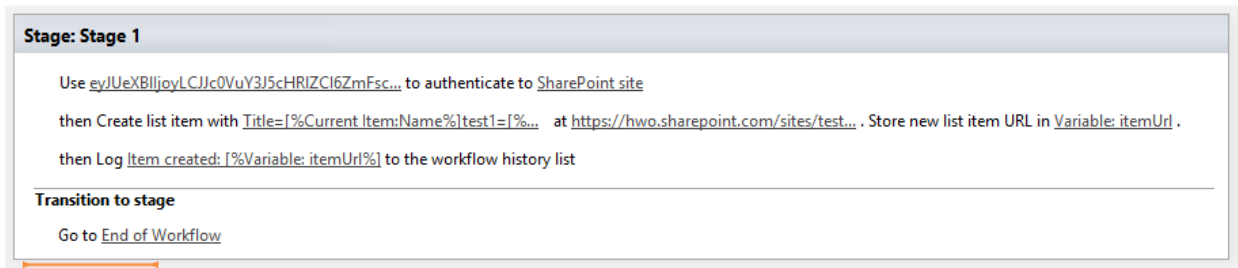then Log message to the workflow history list.

In our case, the message is:

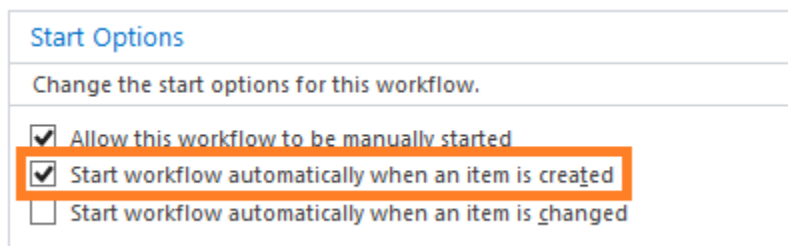(use **Add or Change Lookup** button to paste **[%Variable: itemUrl%]**).

In **Transition to stage** set **Go to End of the Workflow**.

4. Summary and launch options

Finally, the workflow looks like this:

Go to workflow options in SharePoint Designer and check **Start workflow automatically when an item is created**:
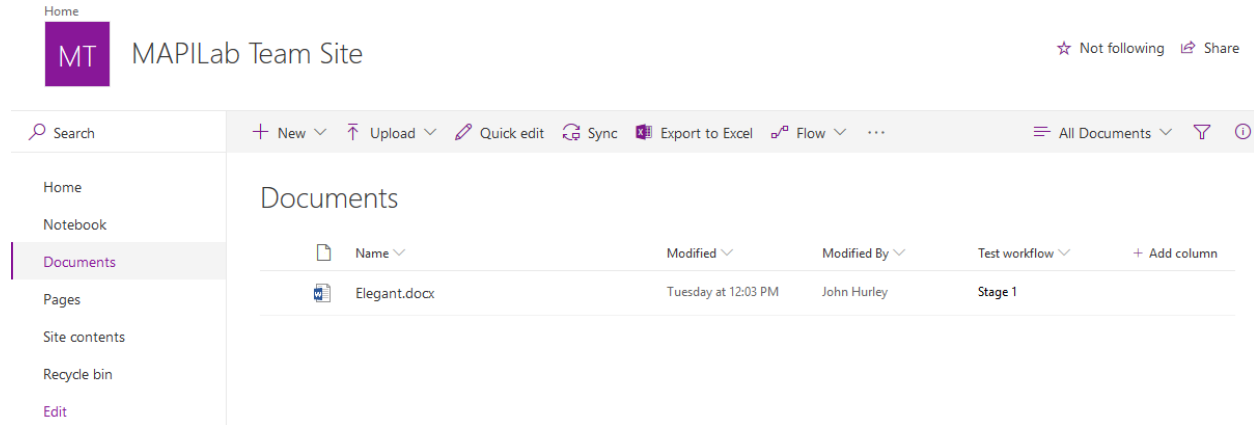

Save and **publish** the workflow.

5. Testing the workflow

Let's test the workflow.

Go to **Documents** library on a first site collection, and upload a document there:

In our case it's *Search Guide.txt*:

Click on **Stage 1** to get more details on a workflow status:

As you can see, the item has been created successfully in a target site collection.

We can ask John Smith, the target site collection administrator, to check the list:

As you can see, the new item for Search Guide document has been successfully created by HarePoint Workflow Extensions Online on behalf of John Smith.

Appendix A. Further questions

In case if you have any further questions, please do the following:

- Refer to full **Administration Guide** for HarePoint Workflow Extensions for Office 365 for the detailed information
- Create a **ticket** in our **HelpDesk** on https://www.harepoint.com/Support
  OR
- Send us an **e-mail** to support@harepoint.com