

SharePoint 2013: Workflow Manager Installation & Configuration

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SHAREPOINT SATURDAY, LAHORE

Agenda

- ▶ Overview of Workflow Manager
- ▶ Prerequisites
- ▶ Pre-install steps
- ▶ Installation of Workflow Manager
- ▶ Configuration of Workflow Manager & Service Bus
- ▶ Install and configure Workflow Manager Client
- ▶ Configure the SharePoint farm with the workflow farm
- ▶ Test Workflow

Overview of Workflow Manager

- ▶ Workflow Manager 1.0 allows you to host and manage long-running Windows Workflow Foundation (WF) applications.
- ▶ It extends the functionality originally delivered with Windows Workflow Foundation.
- ▶ Designed to meet the scale and multi-tenant needs of your modern enterprise applications
- ▶ Workflow Manager is the backing technology for SharePoint Workflows in SharePoint Server 2013 and next version of Office 365.
- ▶ Increase developer and administrator productivity
- ▶ Workflow Manager 1.0 is also supported in Windows Azure Virtual Machines.

Prerequisites

- ▶ Web Platform installer checks for these prerequisites.
 - ▶ .Net Framework 4 Platform Update 3 or .NET Framework 4.5
 - ▶ Service Bus 1.0
 - ▶ Workflow Client 1.0
 - ▶ PowerShell 3.0
- ▶ Additional requirements must be met before you can run Configuration Wizard to configure Workflow Manager
 - ▶ Instance of SQL Server 2008 R2 SP1, SQL Server Express 2008 R2 SP1, or SQL Server 2012
 - ▶ TCP/IP Connections or named pipes must be configured in SQL Server.
 - ▶ Windows Firewall must be enabled.
 - ▶ Ports 12290 and 12291 must be available.

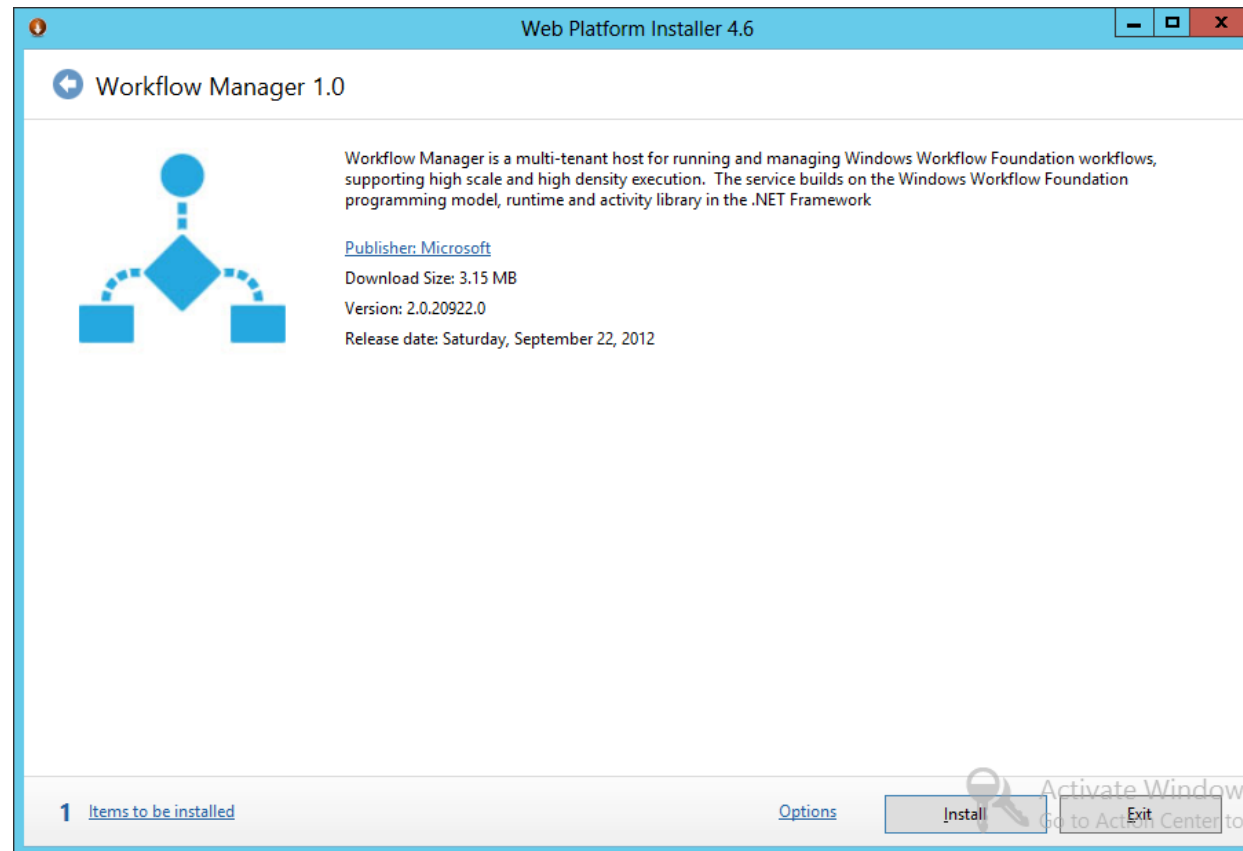
Pre-install steps

- ▶ Create setup, service accounts and Workflow Group in AD
 - ▶ Create Accounts on AD
 - WFSetup
 - WFSERVICE
 - ▶ Create Workflow Administration Group in AD
 - WFGROUP
- ▶ Add SharePoint setup Admin account to WFGROUP in AD
- ▶ Add WFSetup account to SQL Server security group and give him SysAdmin permission
- ▶ Add WFSetup to Workflow server in machine administrator group, so user can login as workflow administrator.

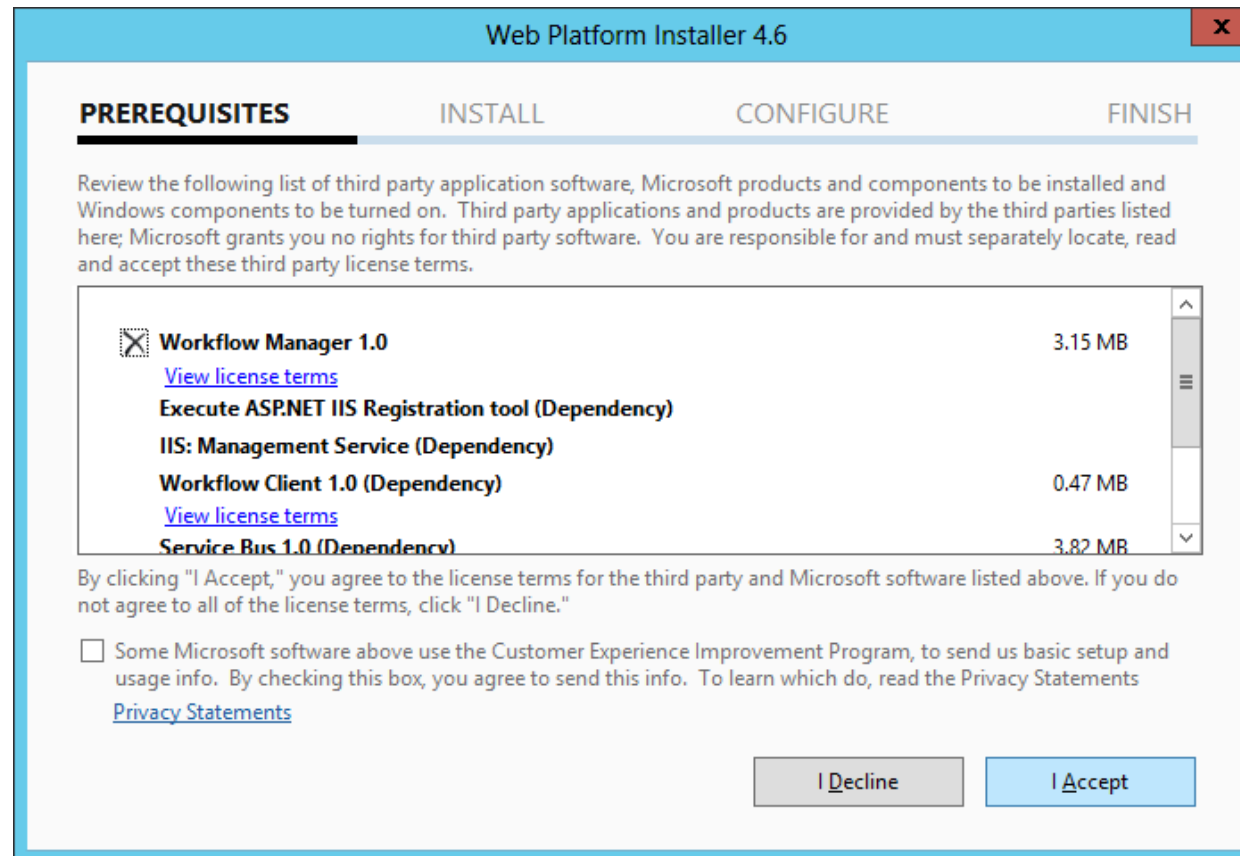
Installation of Workflow Manager

- ▶ Login on workflow server using WFSetup account
- ▶ Start internet browser and search "SharePoint 2013 Workflow Resource Center" on google and select first link or directly click on this link <http://technet.microsoft.com/en-us/sharepoint/jj556245.aspx>
- ▶ Click on installation link and save file **WorkflowManager.exe** on your machine.
- ▶ Now execute the installation file to install Workflow Manager 1.0
- ▶ After installation, do not run Workflow Manager Configuration Wizard, will complete it later, at this time just closed the window.
- ▶ Now run setup wizard with default options. After installation, close the window, and search for latest update on "Workflow Manager 1.0" on Microsoft.com/downloads. Download latest Cumulative Update of Workflow Manager 1.0 and install.
- ▶ Also search for newest "Service Bus" update on microsoft.com/download, it can be Cumulative Update for Service Bus 1.0, download it and then install.
- ▶ Add Active Directory certificate on MMC. After this you will be ready for workflow manager configuration.

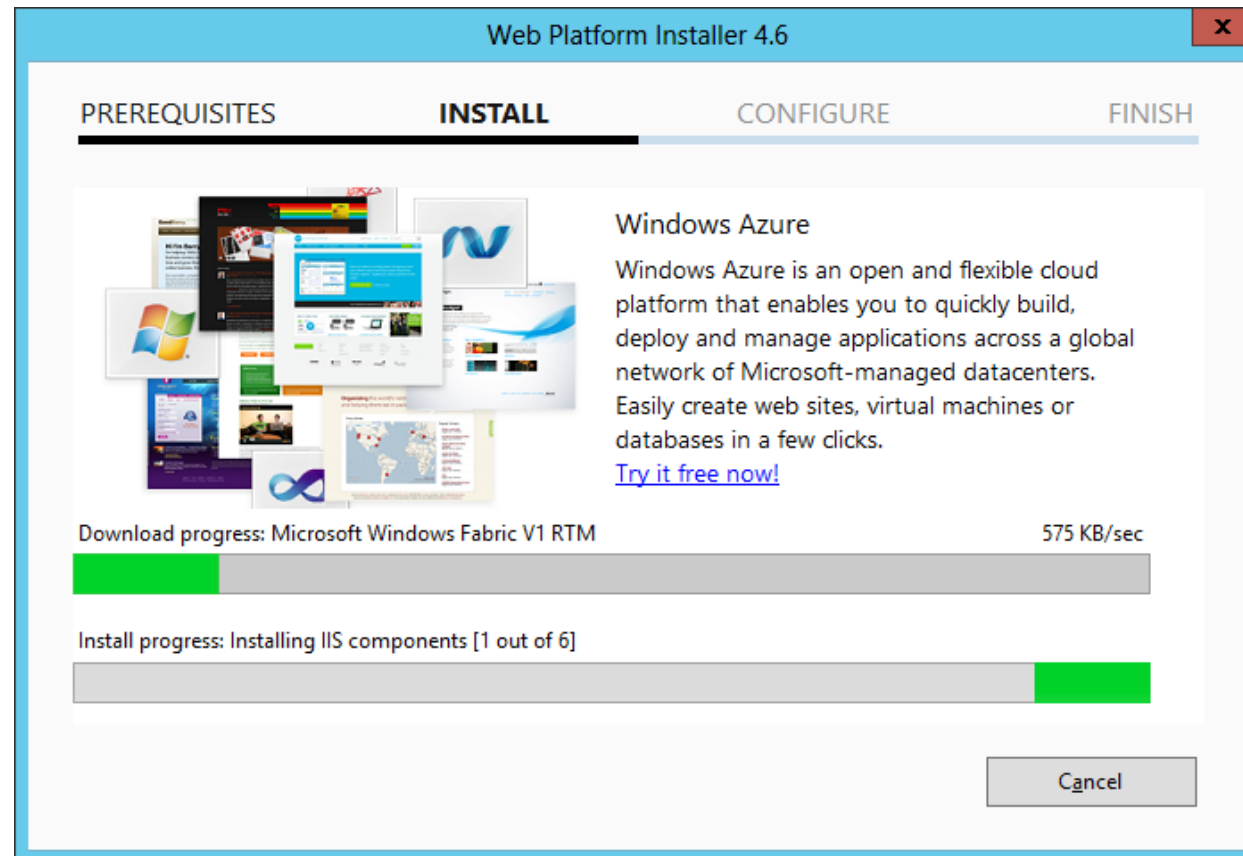
Installation Steps



Installation Steps (Ctd..)



Installation Steps (Ctd..)



Configuration of Workflow Manager & Service Bus

- ▶ Go to start, run Workflow Manager as Administrator, and click on Configure Workflow with Custom settings.
- ▶ Enter database server IP and check its availability.


Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Workflow Manager Configuration


Workflow Manager farm uses the following databases, certificates, and ports. Default values have been provided.

Configure Farm Management Database

SQL SERVER INSTANCE
DBServer  Test Connection

▼ Advanced Options

☒ Use the above SQL Server instance and settings for all databases

DATABASE NAME
WFManagementDB 

Configure Instance Management Database

SQL SERVER INSTANCE
192.168.1.2 Test Connection

DATABASE NAME
WFInstanceManagementDB

Configure Resource Management Database

Navigation icons: back, forward, cancel, and a search icon.

Configuration (Ctd..)

Workflow Manager Configuration Wizard

Workflow Manager Configuration

Workflow Manager farm uses the following databases, certificates, and ports. Default values have been provided.

Configure Resource Management Database

SQL SERVER INSTANCE

192.168.1.2

Test Connection

DATABASE NAME

WFResourceManagementDB

Configure Service Account

User account under which the services will run (RunAs Account) using the format 'domain\user' or 'user@domain'. Credentials for the same account are required every time you join a computer to the Workflow Manager farm.

USER ID

wfadmin@MPLAB

PASSWORD

••••••••

Configure Certificates

Workflow Manager requires SSL and outbound signing certificates. To provide custom certificates, uncheck the Auto-generate option.

☒ Auto-generate

◀ ▶ ↺ ↻

Configuration (Ctd..)

- ▶ User WFSservice account in Configure Service Account section
- ▶ In Certification Generation KEY, if certificates are not available then check auto generate Certification key. I have entered "P@ssw0rd" in the Certificate Generation Key.
- ▶ When you click on next button, if no error occurs then it will take you to next step where you need to configure Service Bus.

Configuration (Ctd..)

Workflow Manager Configuration Wizard

Workflow Manager Configuration

Workflow Manager farm uses the following databases, certificates, and ports. Default values have been provided.

Configure Certificates

Workflow Manager requires SSL and outbound signing certificates. To provide custom certificates, uncheck the Auto-generate option.

☒ Auto-generate

CERTIFICATE GENERATION KEY

This key is required every time you join a computer to the Workflow Manager farm.

CONFIRM CERTIFICATE GENERATION KEY

Configure Ports

WORKFLOW MANAGER MANAGEMENT PORT

Port on which Workflow Manager listens for management requests.

HTTP PORT

The unsecured HTTP port on which Workflow Manager listens for management requests. Note that this feature should not be enabled in production deployments.

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Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Workflow Manager Configuration

Workflow Manager farm uses the following databases, certificates, and ports. Default values have been provided.

CONFIRM CERTIFICATE GENERATION KEY

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Configure Ports

WORKFLOW MANAGER MANAGEMENT PORT
Port on which Workflow Manager listens for management requests.

12290

HTTP PORT
The unsecured HTTP port on which Workflow Manager listens for management requests. Note that this feature should not be enabled in production deployments.

12291

☒ Allow Workflow management over HTTP on this computer

☒ Enable firewall rules on this computer

Configure Admin Group

This user group will be granted access to all the databases configured as part of the Workflow Manager farm. You must restart this computer if an administrators group is created as part of this configuration.

MPLab\WFGGroup

Navigation icons: back, forward, search, and a list of icons.

Configuration (Ctd..)

- ▶ Service Bus configuration has the same screen, just select same service account and Certification Generation Key.
- ▶ Enter WFGroup in Configure Admin Group Section.
- ▶ Press next button, it will save all configuration settings and show you a summary window.
- ▶ Summary screen will show all settings of Workflow Manager and Service Bus configuration.
- ▶ If all look good then press install button which may take up to 10 minutes.

Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Service Bus Configuration

Workflow Manager runs on a Service Bus deployment. Service Bus uses the following databases, certificates, and ports. Default values have been provided.

Configure Farm Management Database

SQL SERVER INSTANCE

10.32.33.30

Test Connection

DATABASE NAME

SbManagementDB

Configure Gateway Database

SQL SERVER INSTANCE

10.32.33.30

Test Connection

DATABASE NAME

SbGatewayDatabase

Configure Message Container Database

SQL SERVER INSTANCE

10.32.33.30

Test Connection

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Configuration (Ctd..)


WORKFLOW MANAGER CONFIGURATION WIZARD

Service Bus Configuration


Workflow Manager runs on a Service Bus deployment. Service Bus uses the following databases, certificates, and ports. Default values have been provided.

Configure Message Container Database

SQL SERVER INSTANCE

10.32.33.30  Test Connection

DATABASE NAME

SBMessageContainer01 

Configure Service Account

User account under which the services will run (RunAs Account) using the format 'domain\user' or 'user@domain'. Credentials for the same account are required every time you join a computer to the Service Bus farm.

☒ Use the same service account credentials as provided for Workflow Manager

Configure Certificate

Service Bus requires a farm certificate. To provide a custom certificate, uncheck the Auto-generate option.

☒ Auto-generate

CERTIFICATE GENERATION KEY

This key is required every time you join a computer to the Service Bus farm.

☐ Use the same certificate generation key as provided for Workflow Manager

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Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Service Bus Configuration

Workflow Manager runs on a Service Bus deployment. Service Bus uses the following databases, certificates, and ports. Default values have been provided.

☒ Auto-generate

CERTIFICATE GENERATION KEY

This key is required every time you join a computer to the Service Bus farm.

☐ Use the same certificate generation key as provided for Workflow Manager

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CONFIRM CERTIFICATE GENERATION KEY

.....

Configure Ports

HTTPS PORT
SSL accessible port for a Service Bus deployment

9355

TCP PORT
Network-accessible port for a Service Bus deployment

9354

MESSAGE BROKER PORT

1

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Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Service Bus Configuration

Workflow Manager runs on a Service Bus deployment. Service Bus uses the following databases, certificates, and ports. Default values have been provided.

TCP PORT
Network-accessible port for a Service Bus deployment

9354

MESSAGE BROKER PORT
This port is used for message broker port communication

9356

INTERNAL COMMUNICATION PORT RANGE
Port range used for communication between Service Bus computers in the farm. The port configured here is the starting port for a range of 5 ports.

9000

☒ Enable firewall rules on this computer

Configure Admin Group

This user group will be granted access to all the databases configured as part of the Service Bus farm. You must restart this computer if an administrators group is created as part of this configuration.

Alliance\WFGGroup_Prod

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Navigation buttons: back, forward, help, close

100



Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Configuration progress

Applying configuration. This may take up to 10 minutes to complete.

Create a new Service Bus farm.

Create a new Workflow Manager farm.

Add host to Service Bus farm.

Create Service Bus service namespace.

Get Service Bus client configuration.

Add host to Workflow Manager farm.

✓

✓

✓

✓

✓

✓

Details:

(View Log)

Installing auto-generated certificate.
Granting 'Log on as Service' privilege to the RunAs account.
Workflow Manager configuration starting.
Configuring Workflow Manager runtime settings.
Workflow service starting.
Updating database and local registry.
Successfully added this host to the farm.
Microsoft.Workflow.Deployment.Commands.WFFarmInfo
Processing completed

Configuration (Ctd..)

- ▶ The installer is taking time as it creates databases and saves the configuration.
- ▶ If all node get green then Workflow Manager is successfully install & configured.
- ▶ If any error occurs then you can check details through log.

Configuration (Ctd..)

WORKFLOW MANAGER CONFIGURATION WIZARD

Configuration progress

Applying configuration. This may take up to 10 minutes to complete.

Create a new Service Bus farm.

Create a new Workflow Manager farm.

Add host to Service Bus farm.

Create Service Bus service namespace.

Get Service Bus client configuration.

Add host to Workflow Manager farm.

Details:

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Workflow Manager configuration starting.
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Updating database and local registry.
Successfully added this host to the farm.
Microsoft.Workflow.Deployment.Commands.WFFarmInfo
Processing completed

(View Log)

Install and Configure Workflow Manager Client

- ▶ Once you have installed/Configured Workflow Server, you need to register the workflow service to SharePoint Server.
- ▶ Login to the SharePoint Server with SharePoint Administrator account.
- ▶ Now you need to download workflow manager client, you can download it from SharePoint 2013 workflow resource center as we did in case of Workflow Manager.
- ▶ Search “SharePoint 2013 workflow resource center” on any internet search engine.
- ▶ select first link or directly click on this link <http://technet.microsoft.com/en-us/sharepoint/jj556245.aspx>
- ▶ Complete the installation on SharePoint Server

Workflow Manager Client (Ctd..)

- ▶ The Workflow Manager creates an HTTPS endpoint at port 12291 and HTTP port at 12290
- ▶ If you use HTTP for communication you need to provide 'AllowOAuthHttp' switch in the PowerShell command.

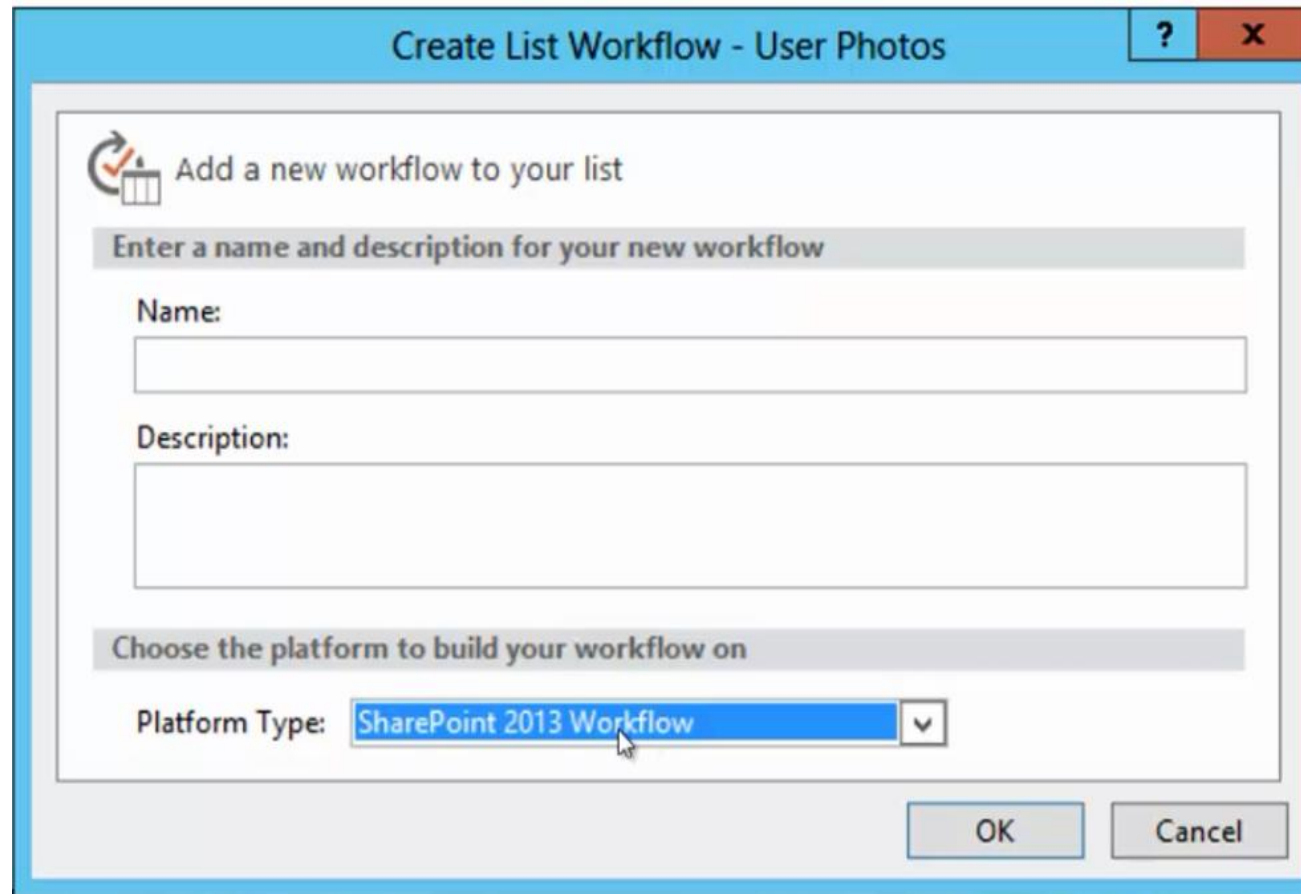
- ▶ Communication over HTTP

```
Register-SPWorkflowService -SPSite "http://SharePoint-SiteUrl" -WorkflowHostUri  
"http://WorkflowHost:12291" -AllowOAuthHttp
```


- ▶ Communication over HTTPS

```
Register-SPWorkflowService -SPSite "http://SharePoint-SiteUrl" -WorkflowHostUri  
"http://WorkflowHost:12290"
```

Configuration Completed



Create List Workflow - User Photos [?] [X]

 Add a new workflow to your list

Enter a name and description for your new workflow

Name:

Description:

Choose the platform to build your workflow on

Platform Type: SharePoint 2013 Workflow ▼

OK Cancel