# Joget Workflow SharePoint SSO Integration

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## Introduction

Recently, there have been questions from customers, partners and the community asking for comparisons between Joget Workflow and Microsoft SharePoint. Actually, the two products are not competing, but in fact complement each other.

SharePoint is a web application portal platform for team collaboration, intranets and enterprise document and content management. While it is possible to extend the capabilities of SharePoint through apps, developing apps for SharePoint is not easy as it requires traditional programming, as described in the SharePoint 2013 development overview article at https://msdn.microsoft.com/en-us/library/office/ji164084.aspx.

On the other hand, Joget Workflow is a platform to easily build web apps and automate processes. With single sign-on (SSO) integration from SharePoint to Joget Workflow, organizations can easily extend the capability of SharePoint by allowing users to seamlessly access custom apps, visually design their own custom applications, or download ready made apps from the <u>Joget Marketplace</u>.

This article describes how SSO can be achieved using Active Directory Federation Services (https://msdn.microsoft.com/en-us/library/bb897402.aspx), which supports the Security Assertion Markup Language (SAML) standard.

# Configuring Joget Workflow SharePoint SSO

### i. Pre-requisites

Before configuring the SharePoint-Joget Workflow SSO integration, you will need to have installed and configured:

- SharePoint integrated with Active Directory Federation Services
- Joget Workflow

The appendices provide some resources on installing and configuring these pre-requisites.

ii. Configure SAML for Joget Workflow

Export AD FS Token Signing Certificate

1. In the Windows Server Manager, launch Tools > AD FD Management

Server Ma	anager • Dashboard			• (	Kanage Tools View Help     Active Directory Administrative Canter
Dashboard	WELCOME TO SERVER MANAGER		Active Directory Administrative Center Active Directory Domains and Trusts Active Directory Module for Windows PowerShell Active Directory States and Spacing		
I Local Server 플 AII Servers 웹 AD DS 과 AD FS 플 App Server 팩 File and Storage Services P To IIS	QUICK START groups I Server gr	nfigure this local server Add roles and features Add other servers to manage Greate a server group			Active Directory Stes and Services Active Directory User and Computers ADP 55 Management ADP 564 Component Services Computer Management Defragment and Optimize Drives Event Viewer Group Policy Management Internet Information Services (IIS) Manager GCSU Initiator CSU Initiator DORIC Data Sources (Id-bit) ORIC Data Sources (Id-bit) Performance Monitor Resource Monitor
	AD DS 1 Manageability Events Services Performance BPA results	AD FS 1 Manageability Events Services Performance BPA results	App Server 1     Manageability     Events     Services     Performance	•	Security Configuration Wizard Sprites Configuration System Information Task Scheduler Windows Frenall with Advanced Security Windows Revort Diagnostic Windows ReverShell Windows ReverShell (56) Windows ReverShell (56) Windows ReverShell (55) Windows ReverShell (55)
		E. Louis Courses			

2. In the AD FS Management console, select Service > Certificates in the left navigation pane.

3. Select the Token-signing certificate and click on the View Certificate link on the right pane.

D FS	Certificates					Actions
Service	Subject	Issuer	Effective Date	Expiration Date Status	Primary	Certificates
Certificates	Service communications					Add Token-Signing Certificate
Claim Descriptions	The CN+windows local, O+JINC	CN=windows.local, O=JIN	5/24/2016	5/24/2017		Add Token-Decrypting Certificate
Trust Relationships	Token-decrypting	CN=ADES Exception - wi	5/24/2016	5/24/2017	Primany	Set Service Communications Certif
Relving Party Trusts	Token-signing	creaters thorpation - w	012412010	0/20/2017	rinay	View
Attribute Stores	EII CN+ADFS Signing - windo	CN+ADFS Signing - windo	5/24/2016	5/24/2017	Primary	New Window from Here
Authentication Policies						G Refresh
						Help
						CN=ADFS Signing - windows.ld
						View Certificate
						Set as Primary
						Help

4. Click on the Details tab, and click on the Copy to File... button

Certificates	5			Actions
Select Cates Cates Decolupion Decolupion Security Provider Trusts perty Trusts Serves Lation Policies	Inver     Pr     P	Effective Date Expertion Date Statue SGA2016 5/24/2017 - SGA2016 5/24/2017 - SGA2016 5/24/2017 - SGA2016 5/24/2017 - 	Penay	Certificates Add Tolken-Dexypting Certificate St Brivic Communications Certific View New Window from Here Refresh Help CN-ADDS Signing - windowslo View Centificate Set a Pinnay Help

5. This starts the Certificate Export Wizard. On the Welcome to the Certificate Export Wizard page, click Next.

- 6. On the Export Private Key page, click No, do not export the private key, and then click Next.
- 7. On the Export File Format page, select Base-64 encoded X.509 (.CER), and then click Next.
- 8. On the File to Export page, type the name and location of the file that you want to export, and then click Next. For example, enter C:\ADFS.cer.
- 9. On the Completing the Certificate Export Wizard page, click Finish.

#### Configure SAML Directory Manager for Joget Workflow

- 1. Download the SAML Directory Manager from the Joget Marketplace
- 2. In Joget Workflow, login as an administrator
- 3. In Settings > Manage Plugins, click on Upload Plugin. Select the downloaded JAR file and click on the Upload button to upload the downloaded JAR file
- 4. In Settings > Directory Manager, choose the SAML Directory Manager and click on Select.

Ø <sup>e</sup> <sub>0</sub> System Settings       General Settings       Directory Manager	DirectoryManager Implementation Current Plugin Class Name Current Plugin Name	org joget plugin.samt.SamtDirectoryManager SAML Directory Manager Ramove Rugin Configure Rugin
Manage Plugins Manage Messages	Select Plugin	SAML Directory Manager - 10.0

5. Open the contents of the exported AD FS certificate in a text editor and copy the contents.

6. In the Plugin Configuration page, paste the contents into the IDP Certificate field (copy-paste without the BEGIN and END lines)

AML 2.0 Settings		
AML 2.0 Settings > General > Default Director	ry Password Policy > Notification > External Directory Manager > External (Google Directory Manager)	
ntity ID	https://mysite.cloud.joget.com/jw/web/json/plugin/org.joget.plugin.saml.SamlDirectoryManager/service	
CS URL	https://mysite.cloud.joget.com/jw/web/json/plugin/org.joget.plugin.saml.SamlDirectoryManager/service	
OP Certificate *	MIICT[CCAb6gAwiBAgIQMuxxp8fx0rdOW+fanmfP+jANBgkqhkiG9w0BAQsFADAn MSUwiwTVQQDExx8RE2TIFNp2Z8pbmcg12B3aW5Kba2tumxv72FaMB4XDTE2MDUy NDEXtAtkNik0K2TIFNp2Z8pbmcg12B3aW5Kba2tumxv72FaMB4XDTE2MDUy ICQqd2u2Q3acy5ab2Nih0bCCA5iw0DY1X62TimvCMAQEBQAM2AggEPADCcAQcGgEB AL[W15Hei]NIC4_ZX1HrxYij6Nih0aCcA2LWF2By6cgNdwp+_Akj80v167VOVpx4GomxuboHby0F mtho1*UW010HpA0Cs4224LWF2By6cgNdwp+_Akj80v167VOVpx4GomxuboHby0F MVH01HPM01K54224LWF2By6cgNdwp+_Akj80v167VOVpx4GomxuboHby0F MVH01HPM01K54224LWF2By6cgNdwp+_Akj80v167VOVpx4GomxuboHby0F MVH01HF4K0Em862Cen2QCp+0HX0GBge1dtuyd2gMabH8K115+V12awAVThSV e5xXxbEVHcK54FP345CAAEAATM8Bjcknik69W8Ag6FAACACAEAAXThSV e5xXxbEVHcK54FP345CAAEAATM8Bjcknik69W8Ag6FAACACAEAAXThSV 9EBERKjsubg2T0FBu6inE3xyHcF0DUGe+eHm2v0[fu5iKRM8Au+ 9BERKjsubg2T0FBu6inE3xyHcF0DUGe+eHm2v0[fu5iKRM8Au+ 9BERKjsubg2T0FBu6inE3xyHcF0DUGe+eHm2v0[fu5iKRM8Au+ 9BERKjsubg2T0FBu6inE3xyHcF0DUGe+eHm2v0[fu5iKRM8Au+ 9BERKjsubg2T0FBu6inE3xyHcF0DUGe+eHm2v0[fu5iKRM8Au+ 9BERKjsubg2T0FBu6inE3xyHcF0DVK63FC02F0DVKc3E5F9+0MS4La7mf50 2m6ZxF185gBu6inLc2EAFF26DCAAF2XF5Hs1UF85F0DVKc3E5F9+0MS4aF4 2m6ZxF185gBu6inLc2EAFF26DCAF2X72xHbjLFwcQHW0LK2WKk8ZfmYT10L0KDpdHxjj 2m6ZxF185gBu6inLc2EAFF26DCAF3V2XF5Hs1UF85F0DVKc3E5F9+0MS4aF465 2Z2GGWmdRx1459cJ0q1YZrNPPVJ3JaV+cagdHw1gTaW5V1zQJxviBPLqEepJFJSn 85575	4
ser Provisioning Enabled	0	
< Prev Next >		Submit

- 7. Copy the value of the ACS URL (to be used in AD FS configuration later).
- 8. With User Provisioning Enabled checked, a user will be created on first login if the username does not already exist. To integrate with Active Directory directly to retrieve users and groups, configure the External Directory Manager to LDAP Directory Manager LDAP Directory Manager.
- 9. Click on Submit to save the settings.

iii. Configure Relying Party Trust between AD FS and Joget Workflow

#### Add Relying Party Trust

- 1. In the Windows Server Manager, launch Tools > AD FD Management
- 2. In the AD FS Management console, click on Trust Relationships > Relying Party Trusts in the left navigation pane.

3. In the right page, click on Add Relying Party Trust



- 6. Type a relying party name (e.g. Joget Workflow) and then click Next.
- 7. Make sure Active Directory Federation Services (AD FS) 2.0 Profile is selected, and then click Next.
- 8. Do not use an encryption certificate. Click Next.
- 9. Click to select the Enable support for the SAML 2.0 WebSSO protocol check box.
- 10. In the Relying party SAML 2.0 SSO service URL field, type the URL copied from the Joget SAML Directory Manager earlier, e.g. https://mysite.cloud.joget.com/jw/web/json/plugin/org.joget.plugin.saml. SamlDirectoryManager/service
- 11. Paste the URL into the relying party trust identifier, and then click  $\ensuremath{\text{Add}}$  . Click  $\ensuremath{\text{Next}}$
- 12. Select Permit all users to access this relying party. Click Next.
- 13. On the Ready to Add Trust page, there is no action required, click Next.
- 14. On the Finish page, click **Close**. This opens the Rules Editor Management console.

Edit Claim Rules

1. On the Issuance Transform Rules tab, click Add Rule.

<b>\$</b>	Add Transform Claim Rule Wizard
Select Rule Templat	e
Steps Choose Rule Type	Select the template for the claim rule that you want to create from the following list. The description provides details about each claim rule template.
<ul> <li>Configure Claim Rule</li> </ul>	Claim rule template: Send LDAP Attributes as Claims Claim rule template description: Using the Send LDAP Attribute as Claims rule template you can select attributes from an LDAP attribute store such as Active Directory to send as claims to the relying party. Multiple attributes may be sent as multiple claims from a single rule using this rule type. For example, you can use this rule template to create a rule that will extract attribute values for authenticated users from the displayName and telephoneNumber Active Directory attributes and then send those values as two different outgoing claims. This rule may also be used to send all of the user's group memberships. If you want to only send individual group memberships, use the Send Group Membership as a Claim rule template.
	< Previous Next > Cancel

2. On the Select Rule Template page, select Send LDAP Attributes as Claims. Click Next.

3. On the Configure Rule page, type the name of the claim rule in the Claim rule name field e.g. User Attributes.

**4.** From the Attribute Store drop-down list, select Active Directory.

5. In the Mapping of LDAP attributes to outgoing claim types section, key in the following mappings:

LDAP Attribute	Outgoing Claim Type
SAM-Account-Name	Name ID
E-Mail-Addresses	email
Given-Name	User.FirstName
Surname	User.LastName

<b>9</b> 0				
		Add Transform Claim F	lule	Wizard
Configure Rule				
Steps Choose Rule Type	You ca which to issued f	n configure this rule to send the value: o extract LDAP attributes. Specify how from the rule.	s of Ll v the a	DAP attributes as claims. Select an attribute store from attributes will map to the outgoing claim types that will be
Configure Claim Rule	Claim ru	le name:		
	LDAP A	Attributes		
	Rule te	mplate: Send LDAP Attributes as Clain	ıs	
	Attribute	e store.		
	Active	Directory		
	Manoin	a of LDAP attributes to autoping claim	hmor	
	Mappin	I DAP Attribute (Select or type to	types	5.
		add more)		Outgoing Claim Type (Select or type to add more)
		SAM-Account-Name	~	Name ID V
		E-Mail-Addresses	~	email V
		Given-Name	~	User First Name V
		Sumame	Ť	User.Lastiname V
				Previous Finish Cancel
				< Previous Finish Cancel
lick <b>Finish</b> , and then click <b>OK</b> t this point, the SSO should be c	operational. Tes	it the login by accessing the the AD FS	login	Previous Finish Cancel           opage e.g. https://windows.local/adfs/ls/idpinitiatedsignon.asc
lick <b>Finish</b> , and then click <b>OK</b> t this point, the SSO should be c	operational. Tes	it the login by accessing the the AD FS	login	Previous Finish Cancel           page e.g. https://windows.local/adfs/ls/idpinitiatedsignon.asp           windows.local

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Select the appropriate site e.g. Joget Workflow and click on Sign in.

9. Login to SharePoint using your AD account



JOGET WORKFLOW CLOUD EDITION Mobile 🖷 Home 🕰 Inbox 📤 Profile (Test) 🖙 Logout 🧿 App Center Qa 1111 HR Expenses Claim App CRM: Sales Force Automation Employee Services Portal Internal Service Request App Jasper App Section Wizard and Tabs Mobile Push Test App Purchase Requisition App Section as wizard sample Simple Quotation © Joget Workflow Enterprise - Joget Inc. All Rights Reserved. Version: 5.0.2 - build 2674 License: Joget Workflow Enterprise v5.0 Licensed To: Free Licensed Users: 3

iv. Add Link in SharePoint site

1. In SharePoint,	click on <b>I</b>	Edit Links in the left menu		test@windows.local + 💆	?
BROWSE PAGE				SYNC / EDIT	
BIOWE MAZE Home Documents Rocord Test List 1 Subities Biog Team Joget Workflow Site Contents Drag and drop link (*) link	× × × × × × × × × × × × × × × × × × ×	Home Bog Team Home Get started with your site ex for the apply of the apply Ad lets, largete, ad lets, largete, bocuments Occuments	MOVE THIS Add a link Y Text to display Loger Workforw Addres Mtps://windows.local/adfs/s/idpintiatediagnon.aspx?/oginto@P=https: Try link Ox Creat	G snc ≠ torr each the steC	
Seve Cano	28	✓ ☐ Name Hodfied Hodfied by There are no documents in this view.	OK Canot		

2. Click on 🔂 link, and key in the text to display (e.g. Joget Workflow) and the direct SSO link e.g. assuming the AD FS server is https://windows.local and the Joget Workflow server is https://wiste.cloud.joget.com, the link will be https://windows.local/adfs/ls/idpinitiatedsignon.aspx?logintoRP=https://wiste.cloud.joget.com/jw/web/jsor/plugin/org.joget.plugin.saml.SamlDirectoryManager/service



# Appendix: Resources for Installing Pre-requisites

### Install SharePoint Foundation 2013

- 1. Download SharePoint Foundation 2013: https://www.microsoft.com/en-us/download/details.aspx?id=35488
- 2. Install SharePoint 2013 on a single server with a built-in database: https://technet.microsoft.com/en-us/library/cc263202.aspx
- 3. Fix SharePoint installation issues on Windows 2012 R2:
  - a. http://www.someshinyobject.com/posts/server-2012-r2-and-sharepoint-2013-the-tool-was-unable-to-install-application-server-role-web
  - b. https://www.axian.com/2014/06/11/sharepoint-2013-configuration-wizard-issues-when-installing-local-development-instance/
  - c. http://sandbox2010.kwizcom.com/sites/demo-data-view-plus/admin-corner-blog/Lists/Posts/Post.aspx?ID=4

#### Install Active Directory Federation Services (AD FS)

1. Install the AD FS software on Windows Server 2012 R2: https://msdn.microsoft.com/en-us/library/azure/dn528857.aspx

#### Configure SharePoint to use AD FS

1. Configure SAML-based claims authentication with AD FS in SharePoint 2013: https://technet.microsoft.com/en-us/library/hh305235.aspx

# Install Joget Workflow

- 1. Options for installing Joget Workflow:
  - a. Install On-Premise: Installation Guide
  - b. Install on Docker: Joget Workflow on Docker
  - c. Install on Joget Workflow on OpenShiftd. Sign up for Joget Workflow On-Demand: https://cloud.joget.com