

Kelverion Automation

Self Service Software Provision Solution

Deployment Guide

Version 2.0

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1. Overview

Requesting the installation of new software and the fulfilment of that request in an Enterprise setting is a time consuming, labour intensive and slow process.

It typically involves the User raising a call into a helpdesk to log the software request, the request is then processed and allocated to an IT resource who can identify the correct Groups to apply to the Users machine and then it's necessary to wait for the software deployment technology to push out the software when it's next deployment cycle starts, this alone typically takes 24hrs.

As a result of this time consuming process many IT Departments choose to pre-load machines with many software titles just in case a User may potentially need them. This means that Enterprises deploy and license software that the bulk of the users may not ever actually use but it's been paid for none the less.

The ideal solution is for Users to be able to easily request the installation and removal of new software and for that request to be delivered swiftly in a fully automated way with minimal, if any IT input and in a fraction of the time taken today thus improving User perception.

Also this allows the IT Departments to pre-load machines with just the minimum software package and then the end User can simply add only the software they actually need to do their job, slashing the Enterprises Software Licensing budget.

The Kelverion Self Service Software Provision Solution enables System Center 2012 users to achieve this panacea, a User can simply request the Installation or Uninstallation of a Software Title to their machine via a Self Service Portal and this request will be automatically fulfilled via Orchestrator. The solution uses either System Center Service Manager or the Kelverion Automation Portal to handle the requests.

This Orchestrator driven solution delivers a number of fully automated functions using System Center Service Manager;

- Create and delete entries in your Software Catalogue of available Software Titles via a Self Service Portal.
- Users can Request to Install or Uninstall any of the Software Titles listed in the Software Catalogue
- Automatically assign the Software Request to the necessary People or Group so that an Installation or Uninstallation can be approved
- Automatically Install or Uninstall the software once the request is approved.

Or by using the Kelverion Automation Portal the following functions are available;

- Users can request Install or Uninstall any of the Software Titles listed in the software catalogue to themselves as an 'Application' install

- Users can request Install or Uninstall any of the Software Titles listed in the software catalogue to a device as a 'Package' install
- Users can request an application to be rented out for a period of time.
- Users can request an extension to the end date of their rented application.

The Kelverion Self Service Software Provision Solution leverages the Persistent Data Store design philosophy and the Kelverion Orchestrator Integration Packs to provide a scalable and robust solution.

This solution is available as a self-installation package for customers proficient with System Center.

For customers who are less familiar with System Center 2012 / 2016, Kelverion or our partners can provide as a complete installation and configuration solution where we work with you to customise the solution for your environment.

This document provides the guidance on how to setup and configure these Runbooks in your environment. It is aimed at an experienced System Center 2012 / 2016 users. Users should also reference Microsoft supplied documentation for the System Center tools and Kelverion Integration Pack User Guides.

2. Pre-Installation Information

2.1. Kelverion Self Service Software Provisioning Solution Package Contents

The Self Service Software Provisioning Solution Package contains the following elements:

- SQL Code
 - Kelverion Persistent Data Store creation script
 - SsSwProv_v2_PDS_LIVE.sql
- Runbooks
 - Self Service Software Provision Solution Runbook Set
- XML Config
 - Self Service Software Provision - Data Manipulation Config.xml
- SCSM
 - Kelverion_Self_Service_Software_Provision.xml
 - Kelverion_Self_Service_Software_Provision_Type_Definition.xml
- Automation Portal Data
 - Self Service Software Provision v2.0.export
- Kelverion Self Service Software Provision Deployment Guide

2.2. Integration Packs Required

The solution requires the following Integration Packs:

Microsoft

- System Center 2016 Service Manager Integration Pack
- System Center 2016 Configuration Manager Integration Pack
- Active Directory Integration Pack

Kelverion

- SQL Server Integration Pack
- Runbook Management Integration Pack
- Data Manipulation Integration Pack
- Email Integration Pack

Before importing any Runbooks please insure these Integration Packs are installed in Orchestrator. If you do not already have Kelverion Integration Packs they can be downloaded for evaluation from our website.

2.3. Kelverion Automation Portal

This version of the solution is designed to be triggered from the Kelverion Automation Portal. The Portal needs to be deployed before the Service and Offerings can be installed. Please see separate documentation for instructions on how to deploy the Kelverion Automation Portal.

2.4. Persistent Data Store

The Persistent Data Store (PDS) is a SQL Server database that is used by this Solution to allow all of the actions that the Runbooks take to be carried out in a robust way. The use of the database at each “step” allows us to design the Runbooks such that each Runbook is simple and can be considered a discrete unit. In programming terms it allows the Runbooks to be modular.

In your environment there may be a number of constraints that control the creation of a new database. For example the location of the log and data files, the recovery options that should be used, and the collation of the server. These requirements are typically specified by the DBA responsible for your database server. These options do not affect the Runbooks so please use the appropriate options for your environment.

Location

Typically the PDS is created on the same database instance as is used for the Orchestrator database. There is no specific requirement that this must be the case. In environments where there is very high load you may find that creating the PDS on a different database instance advantageous.

Database version

The Runbooks provided, have been tested against SQL 2016 with the latest patches and updates applied. You may need to modify the SQL Script to get it to operate in your environment or to install it on older versions of SQL Server.

Collation

The Runbooks have all been developed on systems using **Case Insensitive** collations, the specific collation setting used for your environment must be case insensitive other than that though the setting can be chosen as appropriate for your environment.

Sizing

The minimum recommended size of the PDS is 1GB.

The amount of space required will depend on the two following factors:

- Number of requests processed
- Housekeeping frequency

3. PDS Creation

Each Kolverion Automation Solution uses a set of common tables within the PDS Database and a set of tables specific to itself.

As part of each solution package you are provided with a SQL script which will generate the PDS database tables required for the solution. When the SQL scripts

are executed they check for the existence of each table they required in the PDS database. If this is a new installation they will create both the Common Tables and their Solution Specific database tables. If you are already using a Kelverion Automation Solution then the script will detect that some of the tables this solution requires already exist and the script skips these table creation steps and creates only the tables which do not exist in your installation.

3.1. PDS Creation Steps

1. Create a New Database on your SQL Server called PDS_Live or connect to your existing PDS_LIVE database
2. Then execute the SQL Script provided within the PDS_Live database you created.
3. Once the PDS_Live database is created you must ensure the Orchestrator Runbook Server Service Account has as a minimum Read and Write Access permissions to the PDS_Live database.

3.2. Additional PDS Tables

Once the PDS has been set up then there are some tables that require populating if you are using the Automation Portal for requests.

3.2.1. SsSwProvisioning.KAP_Devices

This table stores the device names and FQDN for all devices that you wish to target with the solution.

Example Data:

DeviceName	FQDN
TEST-SRV2012R2	TEST-SRV2012R2.kuklab.kelverion.local

3.2.2. SsSwProvisioning.KAP_Software

This table stores all the applications and packages that you wish to deploy using the solution. There are more fields than currently used by the solution to allow it to be expanded per customer environment. The fields shown below in the example data are required for the solution to function.

Example Data:

softwareTitle	softwareVersion	softwareVendor	InstallType	SoftwareCategory	SCCMInstallCollection	SCCMUninstallCollection	SCCMInstallADGroup
Reader XI	11.0.10	Adobe	Package	NULL	Adobe Reader XI - Device Install	Adobe Reader XI - Device Uninstall	PCK_Adobe Reader XI_Install
Reader XI	11.0.10	Adobe	Application	NULL	NULL	NULL	APP_Adobe Reader XI
Firefox ESR	52.4	Mozilla	Package	NULL	Firefox ESR - Device Install	Firefox ESR - Device Uninstall	PCK_Firefox ESR_Install
Firefox ESR	52.4	Mozilla	Application	NULL	NULL	NULL	APP_Firefox ESR
VLC	2.2.6	VideoLAN	Package	NULL	VLC Player - Device Install	VLC Player - Device Uninstall	PCK_VLC Player_Install
VLC	2.2.6	VideoLAN	Application	NULL	NULL	NULL	APP_VLC Player
Visio	2010	Microsoft	Application	Rental	NULL	NULL	APP_MS Visio 2010

The InstallType defines if you are deploying a SCCM Application or Package.

The solution allows SCCM Applications to be rented out. To do so the

SoftwareCategory has to be set to 'Rental'. All entries require a corresponding SCCMInstallADGroup.

3.2.3. SsSwProvisioning.KAP_Users

This table contains the details of the users that can request the applications. UserName field relies on the SAM Account name of the user in AD.

Example Data:

UserName	LineManager	CostCode
swhite	Greg Charman	001122
rcatley	Greg Charman	001122

4. Automation Portal Service Offering Data Load

The Kerverion Automation Portal should have been installed as part of the pre-requisites, if not then do this before proceeding. The steps described in this section will install the required Service, Offerings and associated configuration into the Automation Portal to present the user with a front end to the VM Provisioning Solution.

The Automation Portal export file for this solution will create all of the required components within the Automation Portal. You will need to update the query configurations to ensure that they point to the SQL Instance and PDS database that you have created and configured in section 3.

Follow the instructions in the Automation Portal Users Guide (P35-P36) to import the file “*Self Service Software Provision v2.0.export*” which is included in the solution zip file.

Once the Automation Portal configuration has been imported, you **must** update the queries to use the SQL Server instance, and database that is used in your environment, page 39 of the Automation Portal Users guide explains how to edit a query configuration.

5. Solution Configuration

5.1. System Center Orchestrator Configuration

To use the Solution you have to do a series of simple configuration steps to make the Runbooks operate in your environment. These configuration settings are made from the Orchestrator Options menu for each of the products listed below.

- Kerverion SQL Server IP
- Kerverion Data Manipulation IP
- Kerverion Runbook Management IP
- Kerverion Email IP

5.1.1. Variables

All variables for the solution are in the Self Service Software Provision v2.0 variables folder. In the folder are some sub folders with variables for the solution:

Folder	Variables	Description
Root	AD Service Account	AD service account that has rights to add users \ devices to AD groups
	AD Service Account Password	Password for the above AD service account
	Domain Controller	The domain controller to perform the AD group changes to
	Self Service Software Provision v2.0 Runbooks root path	This should not be modified, if the solution is installed under the root folder of the runbook designer
Automation Portal	Self Service Software Provision Action Runbooks Path	This should not be modified
	Self Service Software Provision Deployment Tool Path	This should not be modified
Service Manager	Self Service Software Provision v2.0 Action Runbooks Path	This should not be modified
	Self Service Software Provision v2.0 Process SR Runbooks Path	This should not be modified
	Self Service Software Provision v2.0 Target Service Desk Path	This should not be modified

6. Installing Temporary License of Kelverion Integration Packs

To run the solution you will need a full or evaluation licence key for Kelverion Integration Packs.

The licence files need to be copied into a folder called C:\Program Files (x86)\Kelverion Automation\Licenses. If this folder does not already exist on your system please first create the folder C:\Program Files (x86)\Kelverion Automation\Licenses and then copy the attached files into it.

The license key is regularly updated as it includes a specific license end date after which the product will no longer work. If you have a license or date format error on trying to run this product please contact info@kelverion.com detailing date of download and error details.

To purchase a license please contact your Kelverion representative, reseller or email info@kelverion.com

7. Upgrade Warning

The runbooks provided in this Self Service Software Provisioning Solution are provided for installation in a clean Orchestrator environment. If you have deployed any previous versions of this Automation Solution then installing this version will overwrite any changes you have made to the currently deployed Runbooks.

You can either delete you existing Runbook deployment and then install this new Automation Solution set or manually upgrade your existing deployment.

8. Notes

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