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Microsoft Service Manager Simplified

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Introduction

Exciting times are on hand for those who work in the IT field and especially in datacenters. Server virtualization along with private and public clouds are revolutionizing datacenters. Businesses will have new opportunities in where and how data is stored and used with their business applications. Remote workers will have access to new environments for their work and data analysis. There are three pillars in Microsoft's Cloud OS vision: Windows Azure, Microsoft System Center 2012 R2, and Windows Server 2012 R2.

System Center

Microsoft System Center 2012 R2 is a suite of integrated management products. These products can be used to automate processes; and configure, deploy, manage, and monitor on-premises and cloud-based environments.

System Center 2012 R2 is composed of eight separate products that can be used by themselves or some or all of them can be integrated into one environment. The components are: App Controller, Configuration Manager, Data Protection Manager, Endpoint Protection, Orchestrator, Operations Manager, Service Manager, and Virtual Machine Manager.

System Center 2012 Suite

App Controller — App Controller uses a web browser to manage applications, services, and virtual machines that are deployed in a public or private cloud environment as a self-service portal. While App Controller is a separate System Center product it first requires that the Virtual Machine Manager console be installed on the server.

Configuration Manager — Configuration Manager is used to increase efficiency and productivity through reducing the number of manual tasks and increased automation. Configuration Manager provides for change and configuration management, compliance and remediation control, device and software management, endpoint protection, patch management, and operating system deployment. Configuration Manager uses Active Directory Domain Services for a variety of purposes including device and user discovery and security. You can integrate Configuration Manager with Certificate Services, Exchange Server, and Exchange Online, Group Policy, Windows server Update Services, Windows Automated Installation Kit, and User State Migration Tool. You can also use SQL Server Reporting Services to have detailed reports on your Configuration Manager environment.

Data Protection Manager — Data Protection Manager is an enterprise backup solution that can be used to create backups and restore from local systems and from the cloud. You can create bare-metal, differential, full, and incremental backups to restore a system.

Endpoint Protection — Endpoint Protection is used with Configuration Manager and requires a separate license. Using Endpoint Protection you can create and configure antimalware and firewall policies on systems in your configuration manager hierarchy.

Orchestrator — Orchestrator is used to create automated tasks sequences and workflows in your cloud and datacenter environments. Orchestrator uses runbooks that you create to perform end-to-end automation and management operations. Using Orchestrator, you can connect disparate systems to perform complex tasks and processes.

Operations Manager — Operations Manager is used to provide real-time monitoring of applications, devices, operating systems, and services. Operations Manager uses Management Packs that extend the monitoring and reporting information for specific applications, devices, and services. Management packs come from Microsoft or third-party providers.

Service Manager — The whole reason for this article, Service Manager is used to give organizations a single, integrated platform to deliver IT as a Service (ITaaS). The ITaaS is a model whereby the IT department runs and acts as distinct business entity that provides a product (in this a service) to the other line of business entities within the organization.

Virtual Machine Manager — Using Virtual Machine Manager you can create, manage, monitor, and provision virtual machines and networks in your on-premise, cloud, and hybrid environments. Virtual Machine Manager can be integrated with Data Protection Manager, Operations Manager, Orchestrator, and Service Manager.

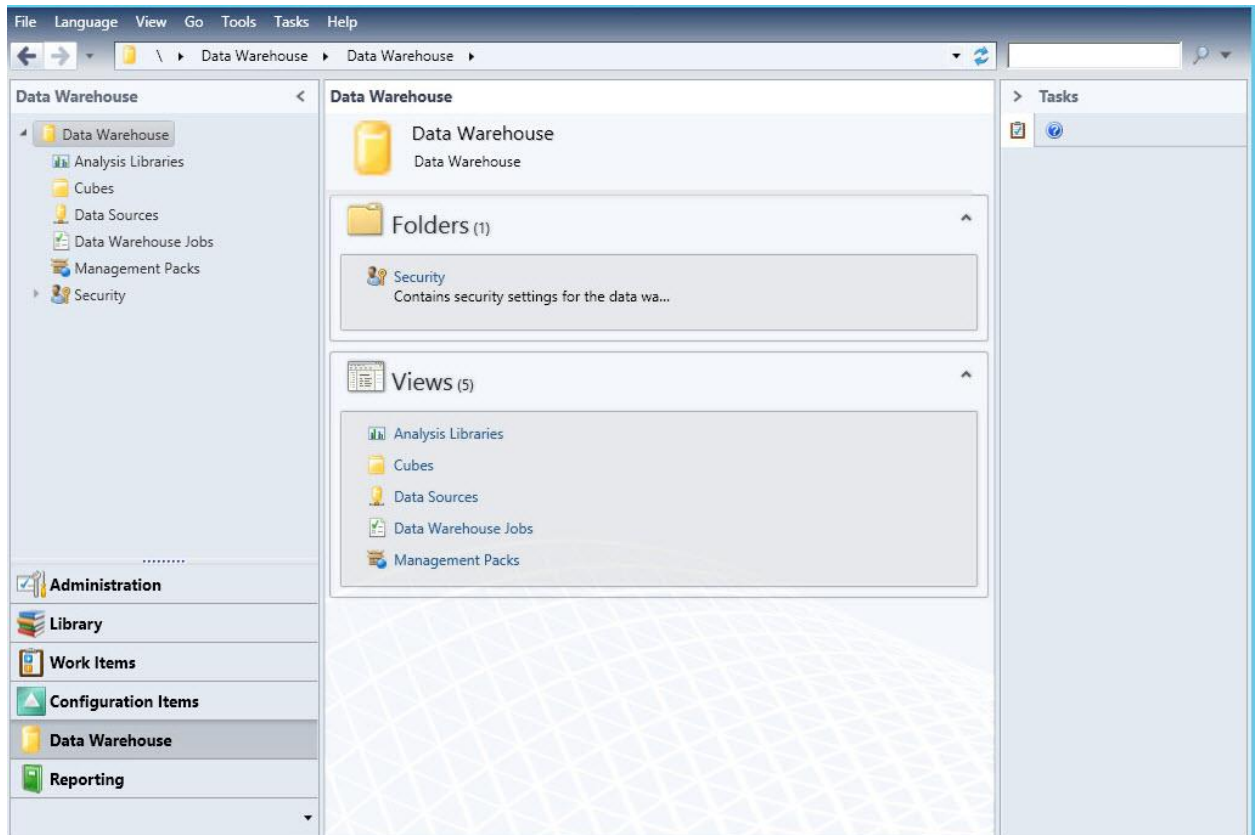
Service Manager

As mentioned earlier in this white paper, Microsoft's System Center Service Manager is designed to provide an organization with a single, integrated platform to support their IT Service Management (ITSM) and ITaaS environment. Through the use of automation, compliance, self-service portal, and standardization Service Manager can support the best practices found in the Information Technology Infrastructure Library (ITIL) and the Microsoft Operations Framework. Service Manager also has built-in processes for Incident and Problem management, Change and Configuration management as well as Asset Lifecycle Management.

Service Manager Components

There are six major components in a System Center 2012 Service Manager installation:

1. **Data Warehouse databases** — This server hosts the databases that house the data elements generated in Service Manager and for reporting.
2. **Data Warehouse management server** — The server that hosts and is used to manage the data warehouse.
3. **Self-Service Portal** — A web-based portal used to access information and create requests into Service Manager. While not recommended, you can deploy the Service Manager management server and the Self-Service Portal on the same computer.
4. **Service Manager Console** — The administrative interface used by administrators, help desk, and service desk to generate and manage changes, incidents, and other tasks. Installed automatically with a Service Manager Management server.
5. **Service Manager database** — This database contains the Service Manager configuration, Configuration Items (CI), work items. This is the Service Manager implementation of a Configuration Manager Database (CMDB).
6. **Service Manager Management Server**: The management server runs the Service Manager (runs the primary software pieces) and is used for managing work items (Activity Management, Change Management, Incident Management, Problem Management, and Service Request Fulfillment). As a note, you cannot deploy a Service Manager Management server and a Data Warehouse management server on the same computer.



Data Warehouse

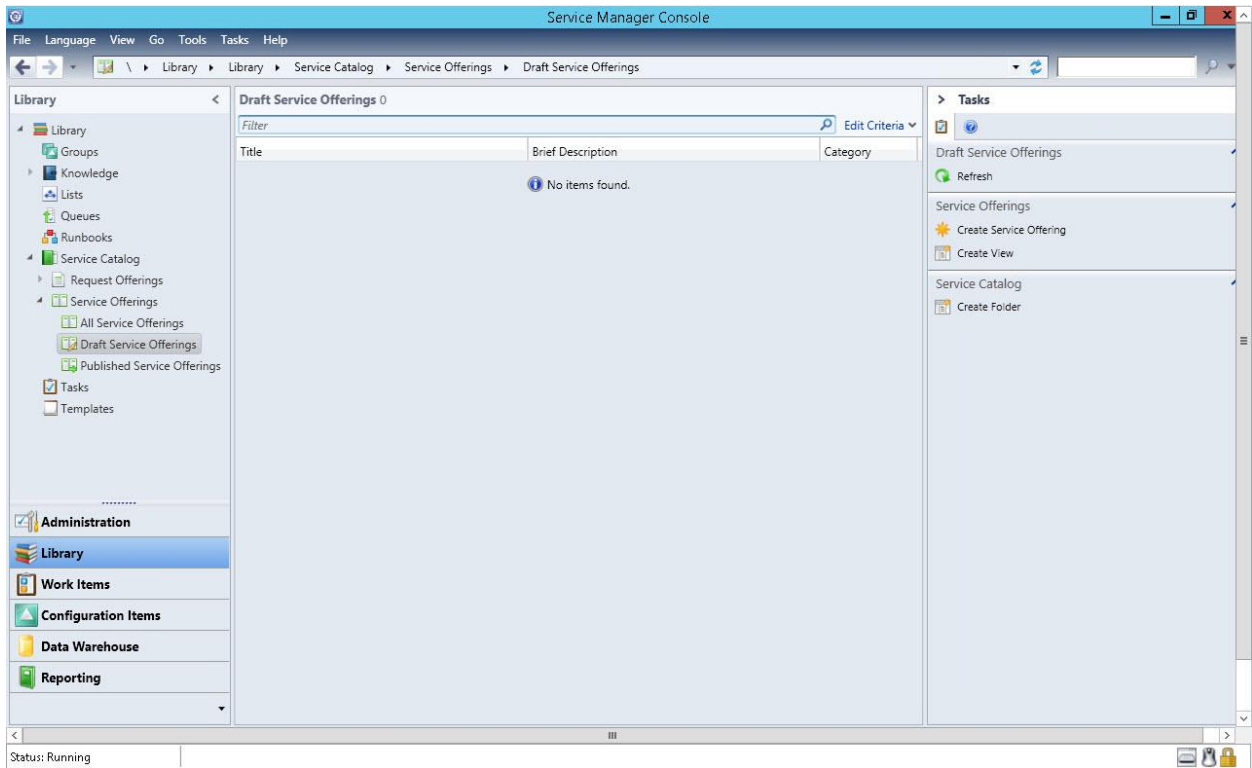
Service Manager Console

The Service Manager console is comprised of four main areas: Details Pane, Navigation Pane, Tasks Pane, and Workspaces.

The Navigation Pane is where the active workspaces pane is displayed and is your primary navigation area. Some actions that you perform in the navigation pane will be displayed a new node in the Tasks Pane.

The Task Pane is where you perform actions based on the node selected in the Navigation Pane (besides right-clicking some items listed in the Navigation Pane). The Tasks Pane also contains the Details Pane.

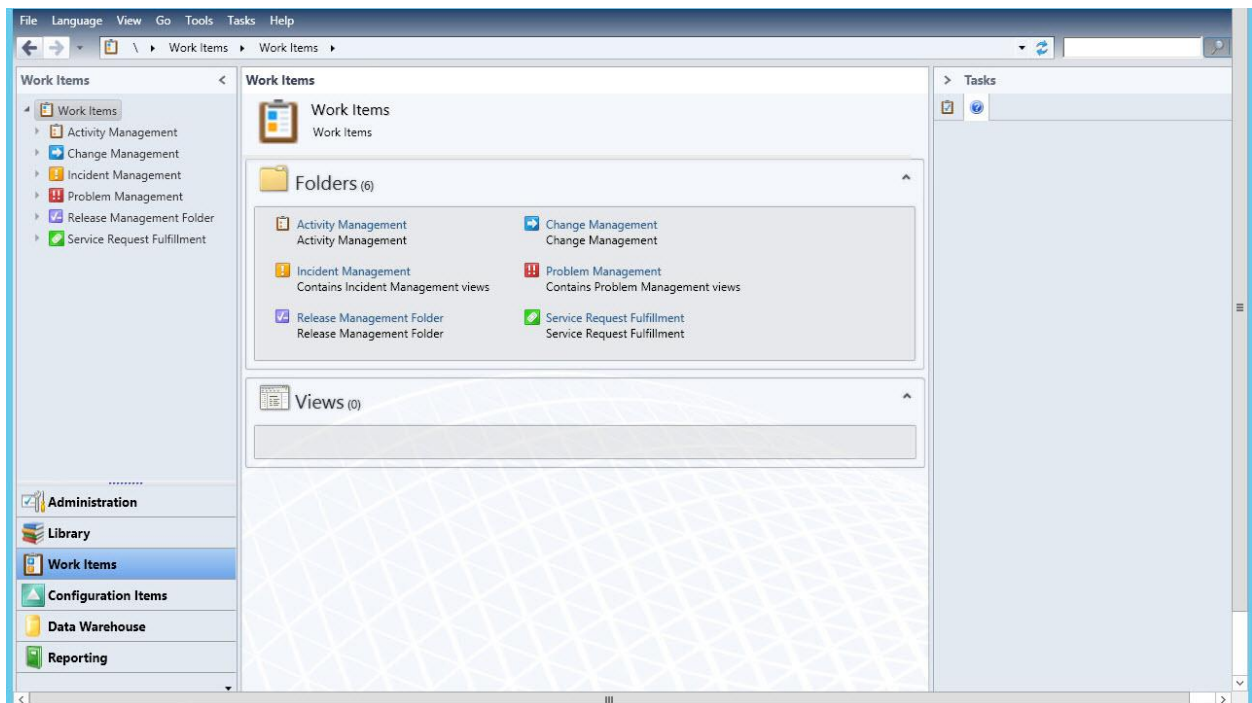
The Workspaces Pane is located in the Navigation Pane and has the active node and sub-nodes displayed.



Service Manager Console

Components and Purpose

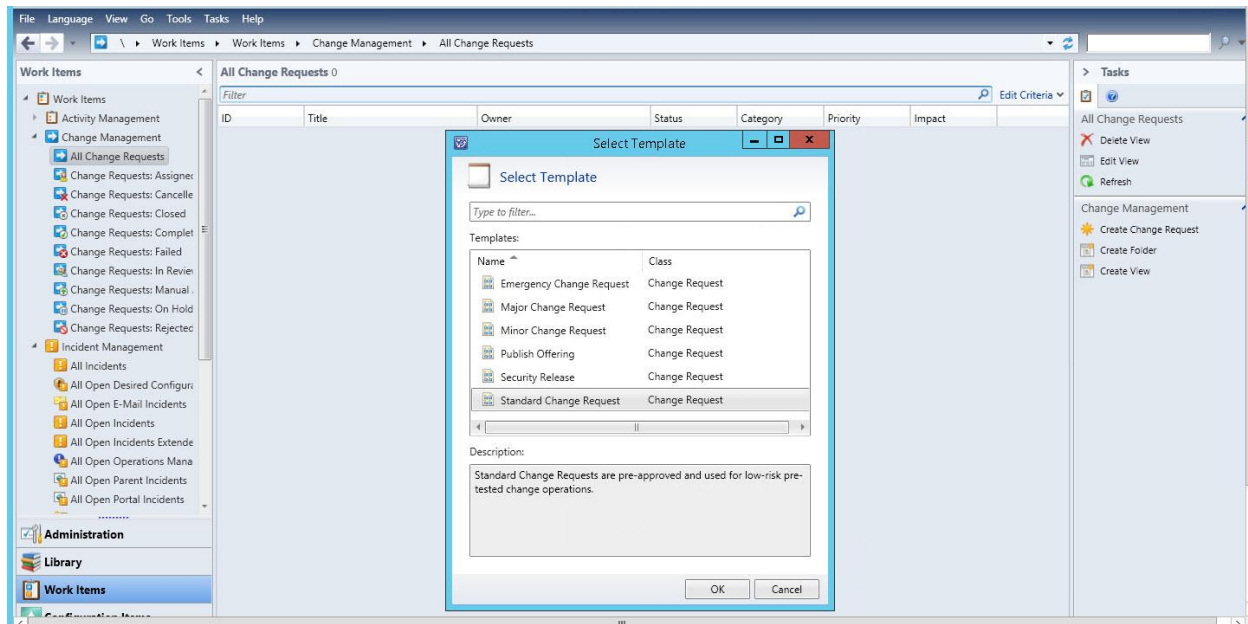
Some of the key features of Service Manager include support for Change Management, Incident Management, Problem Management, Release Management, Self-Service Portal, Service Level Management, and Service Request Fulfillment.



List of Work Items in Components

Change Management

The Change Management features in System Center 2012 –Service Manager help you manage change by providing repeatable, predictable, and measured processes to implement any modifications. Change Management and Release Management are used together to protect your production environment from unnecessary and potentially harmful changes. All changes must be approved and once approved, Release Management (which only works with approved changes) groups the changes together, schedules them, and develops them. A change request might involve adding a Feature to Server 2012 R2 or making a modification to a Group Policy.



Work Items Change Management Template

Incident Management

Service Manager Incident Management is used to restore normal operations in a cost-effective and timely manner. When an incident occurs you are looking to quickly resolve the problem, not necessarily find the cause of the incident. An incident is any unplanned disruption or degradation of service—which could be a program that is not functioning properly, user or network issues, or anything else adversely affecting the network. You can create incident templates which can prepopulate some of the fields in the incident, such as the name of the support analyst who will handle the incident. By using templates you can preconfigure incident settings such as: priority calculations that are based on impact and urgency, target resolution time, prefixes that are used for incident numbers (by default, Incident Manager uses IR as a prefix), and length of time a closed incident remains in the Service Manager database.

Incidents can be ranked on a chart based on the urgency and its impact. The fields in this chart are ranked on a scale from 1 to 9. A priority of 1 is the highest priority. It is based on a combination of impact and urgency. Impact and urgency settings are defined as High, Medium, or Low, and they are configured when the incident is created. The following table shows how to define the incident priority for each possible combination of impact and urgency.

		Impact		
		Low	Medium	High
Urgency	Low	9	8	7
	Medium	6	5	4
	High	3	2	1

Priority calculation table

Incident Template

Problem Management

An Incident is an occurrence that affected a particular service—a Problem is a one or more specific Incidents. For example, multiple Incidents can be created for a service that fails to perform properly. You could restart the service and the Incident is corrected. You would then create a Problem record, which could be used to investigate the cause of the service failure.

Problem Record Form

Problem records created in Service Manager will include much of the same criteria as is found in Incidents. When researching the cause of a problem, the records created earlier can be used to determine the root cause of the Problem. A Problem record may include one or more related Incidents.

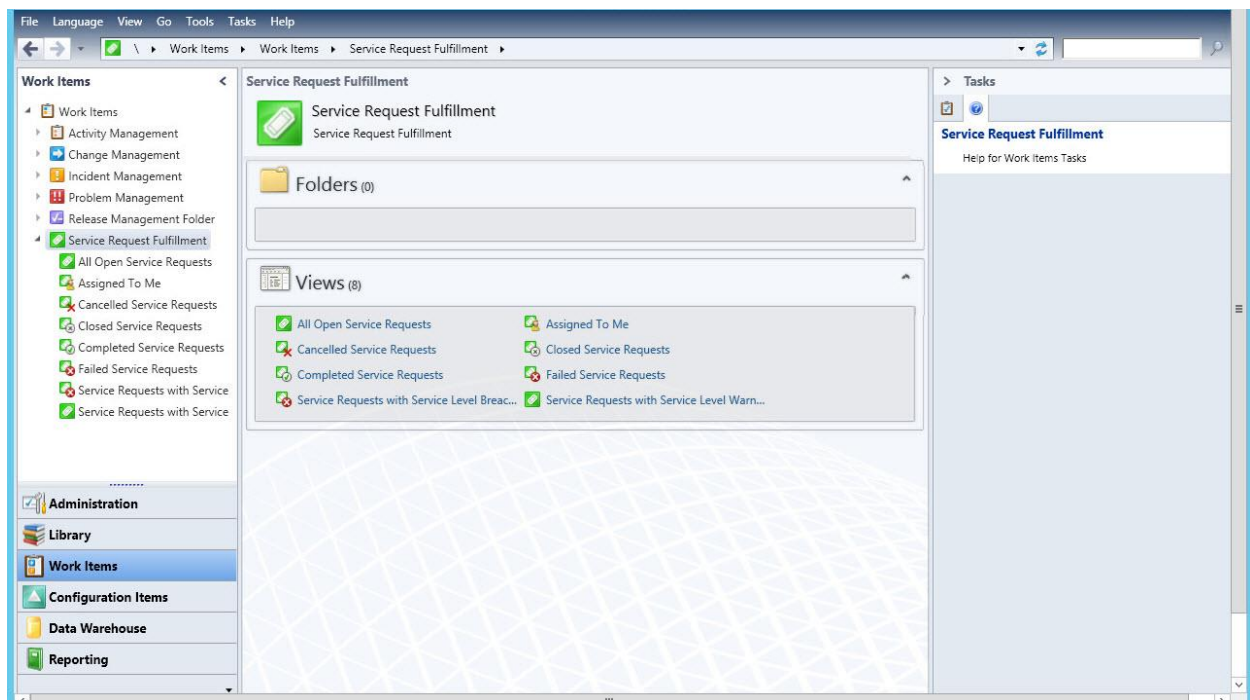
Release Management

As discussed earlier, Change Management and Release Management are used together to protect your production environment from unnecessary and potentially harmful changes. Release Management only works with approved changes. Approved changes are grouped by Release Management to processes, schedule and develop them. Part of Release Management is to ensure that changes are tested and deemed safe to deploy.

Additionally, Release Management is used to evaluate and package various releases together to help minimize infrastructure downtime. The package of releases is tested together to verify that no technical or resource conflicts exist that could affect infrastructure availability. Multiple changes are bundled together and planned for deployment together during the next scheduled release or maintenance window. The function of Release Management using release records is to consolidate multiple changes and deploy them in the safest and most efficient method possible.

Service Request Management

A Service Request in Service Manager provides the ability for organizations to publish preauthorized services to end users. This could be the ability for an end user to submit a request to install additional software on a client computer via the Self-Service Portal, for example. Service Request Management in Service Manager uses the service catalog that is made up of request offerings and service offerings that can be published and made available to end users. Service Requests can also be tracked with Service Level Management to help ensure SLAs are met when delivering services to the business.

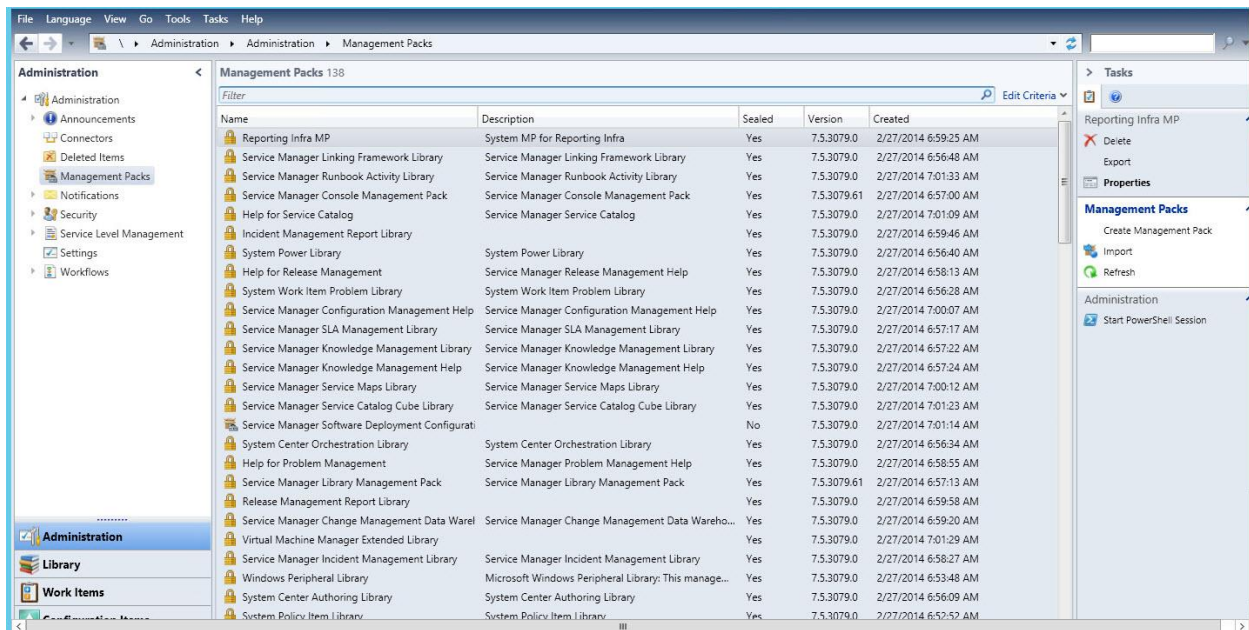


Service Request

Management Packs

Service Manager uses management packs to extend its capabilities, and to export and import data between Service Manager Implementations. You can extend and customize the capabilities of Service Manager by creating your own management packs or by modifying existing management packs. Management packs contain such information as classes, forms, knowledge, reports, views, and workflows that are used to implement specific service-management processes.

Included with Service Manager are a number of predefined management packs that are sealed (cannot be modified) for enabling core functionality for the product, such as incident-management and change-management capabilities. An unsealed management pack can be modified. A number of unsealed management packs are included with Service Manager, which can be used to enable certain optional features of the product, such as some preconfigured views and reports. You can also create your own management packs.



Workflows

You can configure a sequence of actions, activities, or other tasks in Service Manager using Workflows. In Service Manager 2012, you would integrate System Center Orchestrator to create runbooks. You can use System Center Orchestrator to automate the creation, monitoring, and deployment of resources in your environment with workflows. Orchestrator 2012 and later includes an Integration Pack used for common Service Manager actions and activities, such as editing an incident or problem. This approach to Service Manager workflows automation requires less management overhead, provides better error handling, and requires less knowledge of Windows PowerShell scripting.

Service Manager is a very powerful tool in the System Center suite. At first, Service Manager can be intimidating due its interface. Understanding what actions are performed in which node is the first step. After you create your first Incident and Problem with a built-in management pack you will start your initial journey in Service Manager. Once you incorporate other System Center products with Service Manager you will have truly started mastering not only Service Manager, but also System Center.

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About the Author

Randy Muller is an independent trainer and consultant specializing in Amazon Web Services, Azure, Microsoft Private Cloud, Office 365, System Center, and Unified Communications. Randy was an officer in the United States Army stationed twice in Germany where he began his IT career in the mid-80s. Since then he has been an IT consultant, an author, and a technical trainer.