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TECHNICAL WHITE PAPER

# Rubrik ServiceNow Integration

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## INTRODUCTION

Rubrik Cloud Data Management (CDM) is built on top of a rich suite of RESTful APIs, allowing easy integration with third-party products. Many Rubrik customers use ServiceNow (SNOW) for IT Service Management and or Operations, so connecting the two systems is a natural fit. Rubrik CDM delivers a single software platform for complete enterprise data management across data center to cloud. ServiceNow enables enterprise customers to define services, provide an intuitive service experience, deliver service, assure service availability, and analyze critical service metrics.

## AUDIENCE

The intended audience for this document includes IT management, ServiceNow professionals, Service Architecture and Service Delivery teams who wish to learn more about Rubrik integration with ServiceNow environment and the benefits this integration can provide for their organizations.

## OBJECTIVES

This whitepaper describes the Rubrik ServiceNow integration and how it can accelerate customers' ability to deliver Rubrik CDM data management functions through items presented in ServiceNow's Service Catalog and provide Rubrik CDM data visualizations within ServiceNow's reporting dashboards. ServiceNow has a rich feature set but for this whitepaper we will focus on the integration of ServiceNow with Rubrik CDM.

# RUBRIK DESIGN AND APPROACH

## THE LEGACY CHALLENGES

Legacy backup and recovery infrastructure – with its complex, multi-tiered architecture – cannot support forward-looking initiatives. It is time-consuming to manage, stubborn to scale, and expensive to maintain. On top of that, introducing a new cloud provider or application is a massive headache, if possible, at all. IT organizations need a solution that eliminates these legacy bottlenecks with an easy-to-use software built to run anywhere, freeing up time for more strategic projects.

## WHAT RUBRIK IS ABOUT

Rubrik delivers a single software platform for complete enterprise data management across data center to cloud. It has been designed from the ground-up to simplify and automate core backup and recovery capabilities while also enabling API-first automation, easy cloud mobility, and defense against cyber-attacks and data breaches. The Rubrik product family currently consists out of Rubrik Cloud Data Management (CDM), on premise and cloud data management. Rubrik Polaris which is Rubrik’s SaaS platform on which Rubrik provides cloud-based data monitoring and data management.

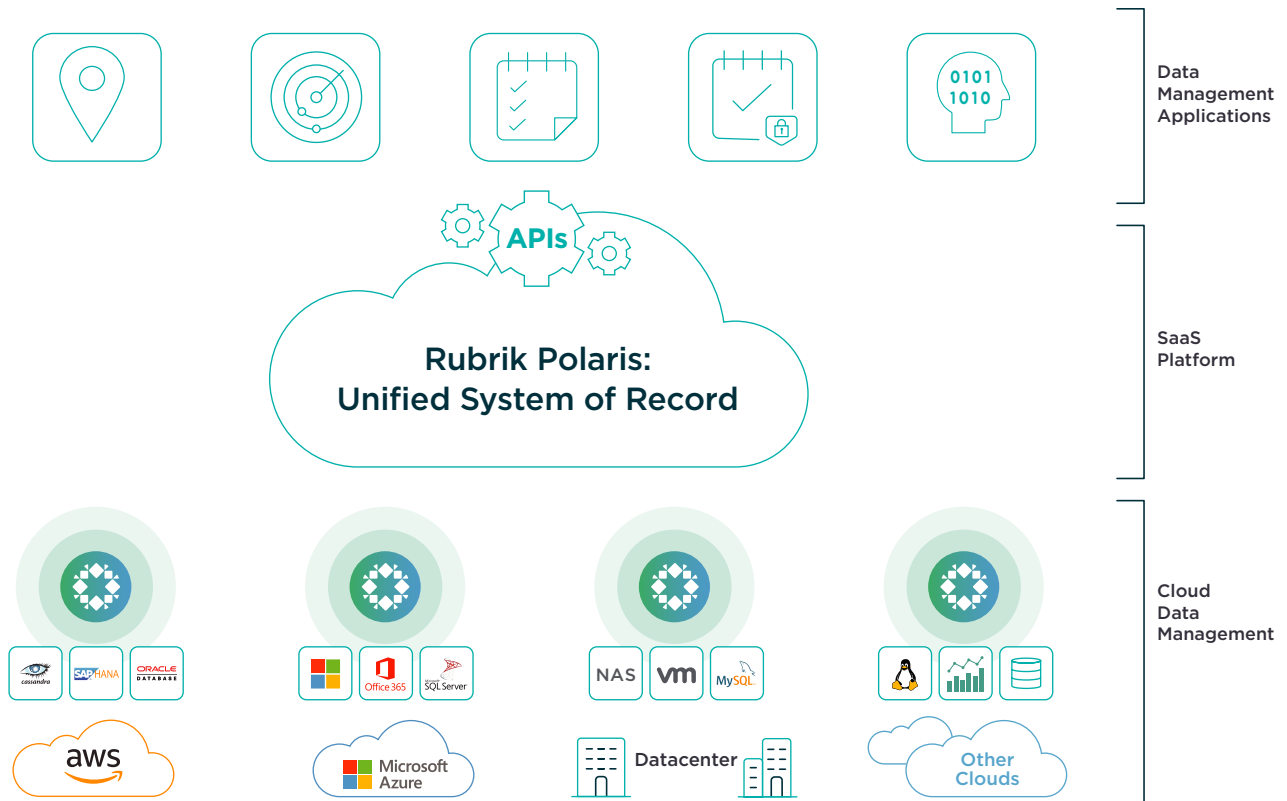


Figure 1 - Rubrik Polaris

## SERVICENOW (SNOW)

ServiceNow is an IT Service/Operations Management platform used by customers typically for ITSM type tasks (incidents, change and configuration management) but extends to self-service automation, security incident management and other tasks. ServiceNow software utilizes ITIL principles to manage complex IT environments.

ServiceNow includes the Now platform which can add automation and deliver cross-departmental and cross-enterprise workflows. This optimizes business processes for resiliency and mitigate risk, all in one scalable cloud platform. The One platform can leverage from a rich ecosystem of innovation, not only from ServiceNow itself, but also from partners like Rubrik.

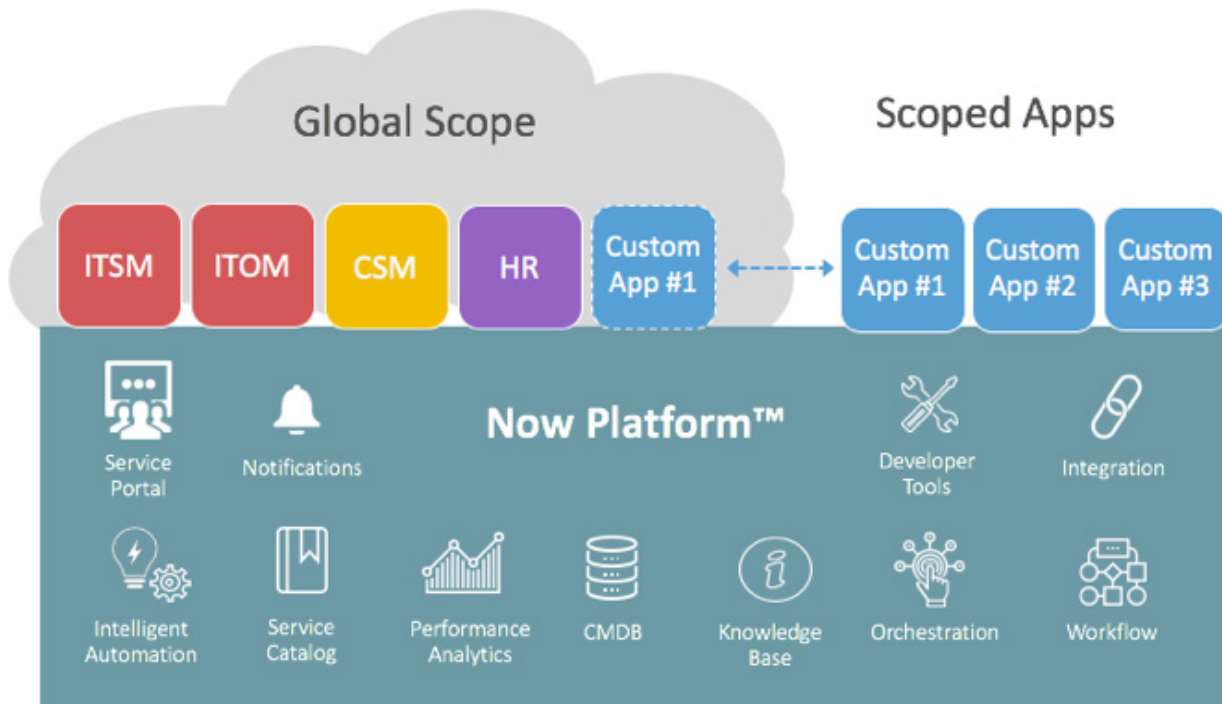


Figure 2 - The ServiceNow Now platform

The NOW platform opens up ServiceNow for 3rd party integrations in addition to the default applications that come with the product. (ITSM, ITOM, ...) A custom 3rd party application can be run under the global scope so it can share resources with built in applications (tables, permissions, roles, etc.) or it can be under its own scope where permissions can be set on a more granular level.

There are two types of available application scopes: private application scope (commonly referred to as scoped apps) and global scope. Each ServiceNow application has an application scope that determines which of its resources are available to other parts of the system. Application scoping ensures that one application does not impact another application. You can specify what parts of the application other applications can access by setting application access settings.

## RUBRIK SERVICENOW INTEGRATION

ServiceNow provides service-orientation for common IT tasks, activities, and processes. It is commonly deployed as a Software as a Service (SaaS) instance in the ServiceNow cloud or runs on premise in the customers datacenter.

Rubrik provides Restful API services which can be used by ServiceNow to query the Rubrik cluster. This can be used for reporting, configuration and self-service actions against items that are protected by Rubrik clusters running in the cloud or on premise.

### ServiceNow – Rubrik High Level Architecture

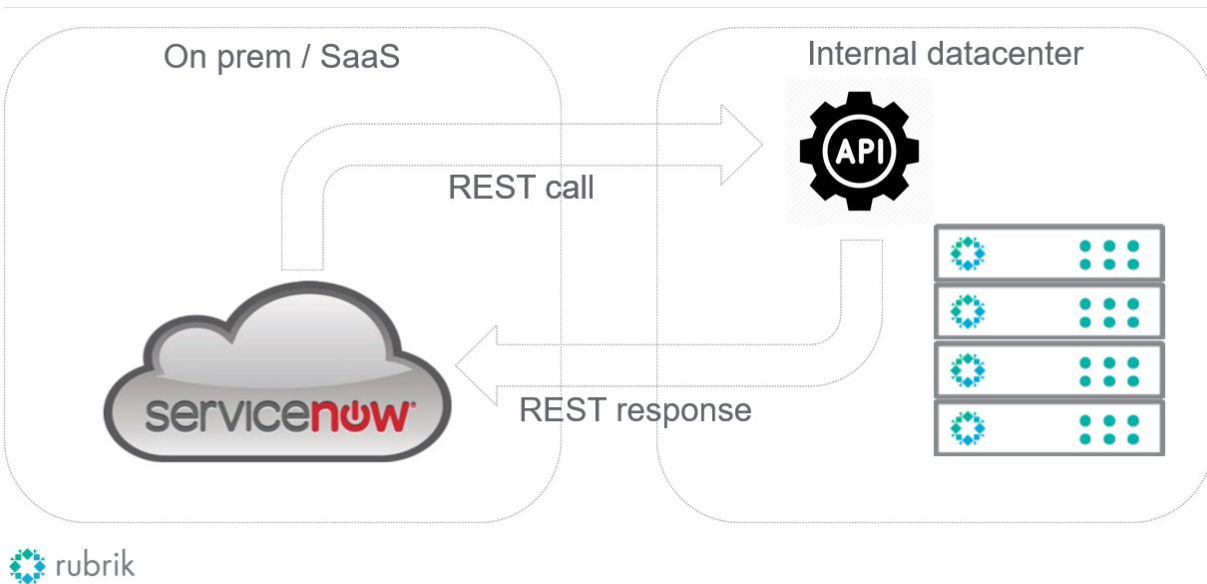


Figure 3 - ServiceNow Rubrik High Level

The Rubrik ServiceNow integration delivers data protection, search, analytics, compliance, and test/dev on-demand to hybrid cloud enterprises using ServiceNow. It can automate VM provisioning, instantly recover files, and unlock fast, actionable insights across a multi-cloud environment. This white paper aims at providing an overview of the possibilities of this integration.

## SOLUTIONS OVERVIEW

The Rubrik ServiceNow integration provides connectivity to one or more Rubrik CDM clusters to pull operational data from the Rubrik software into the ServiceNow instance and provides an interface for users to request Rubrik services via ServiceNow catalog items. The integration can also provide up-to-date data from the Rubrik cluster to display a single-pane-of-glass interface from ServiceNow into the Rubrik data management environment.

Figure 4 depicts an example deployment of the Rubrik integration with ServiceNow.

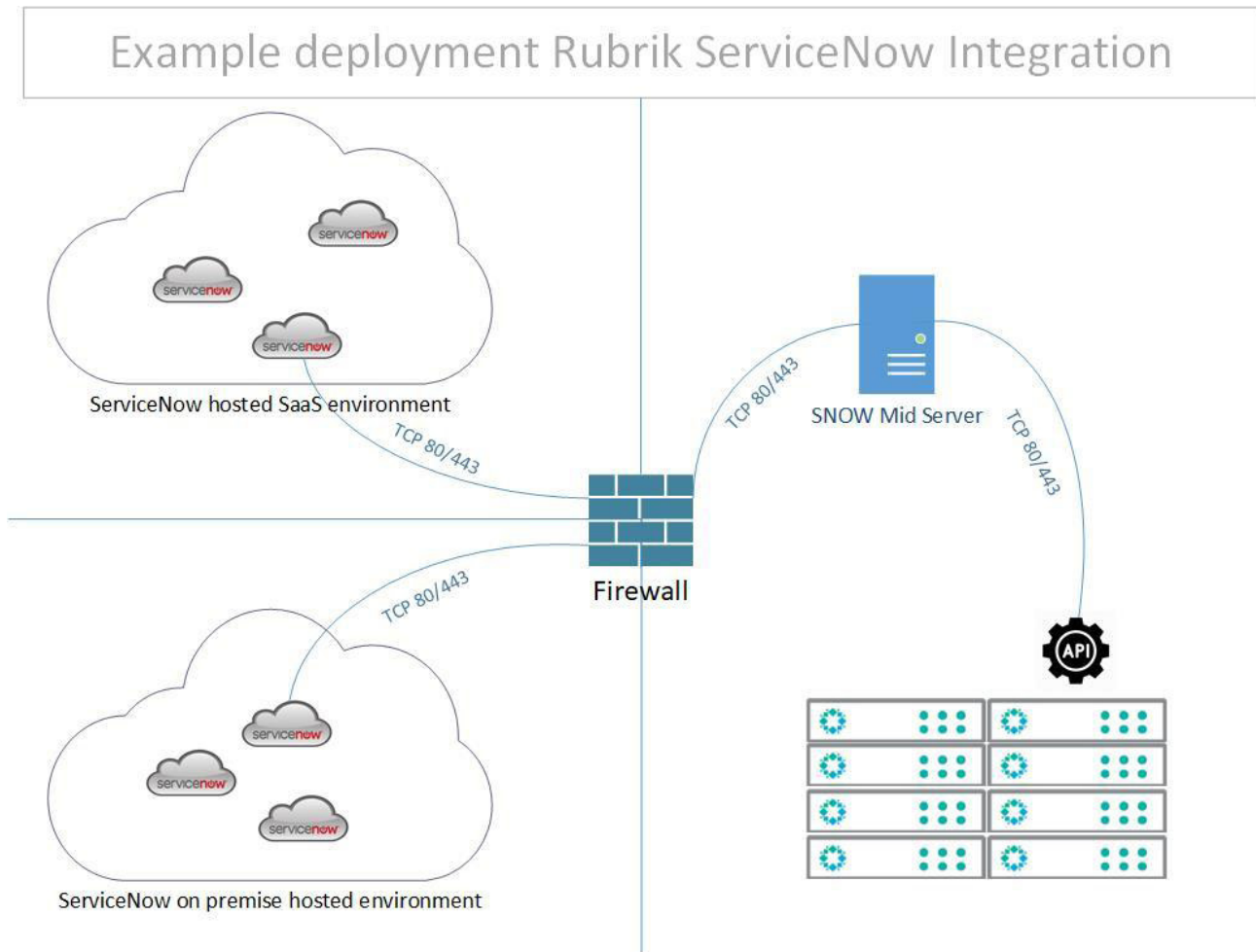


Figure 4 - Rubrik and ServiceNow integration high level overview

The ServiceNow Software As A Service (SaaS) instance connects to a MID server in the on prem datacenter through TCP port 443. The MID server relays the traffic to the Rubrik clusters REST API again on TCP port 443.

The ServiceNow MID server handles all traffic and authentication between the ServiceNow instance and the Rubrik cluster and back. This ServiceNow MID server can be installed on either Windows or Linux and is available as a downloadable executable from the ServiceNow instance.

## DETAILS

ServiceNow workflows make applications more powerful by automating application processes. Workflows contain scripts that provide an interface with the ServiceNow workflow engine.

Figure 5 shows the Rubrik ServiceNow Initial configuration workflow

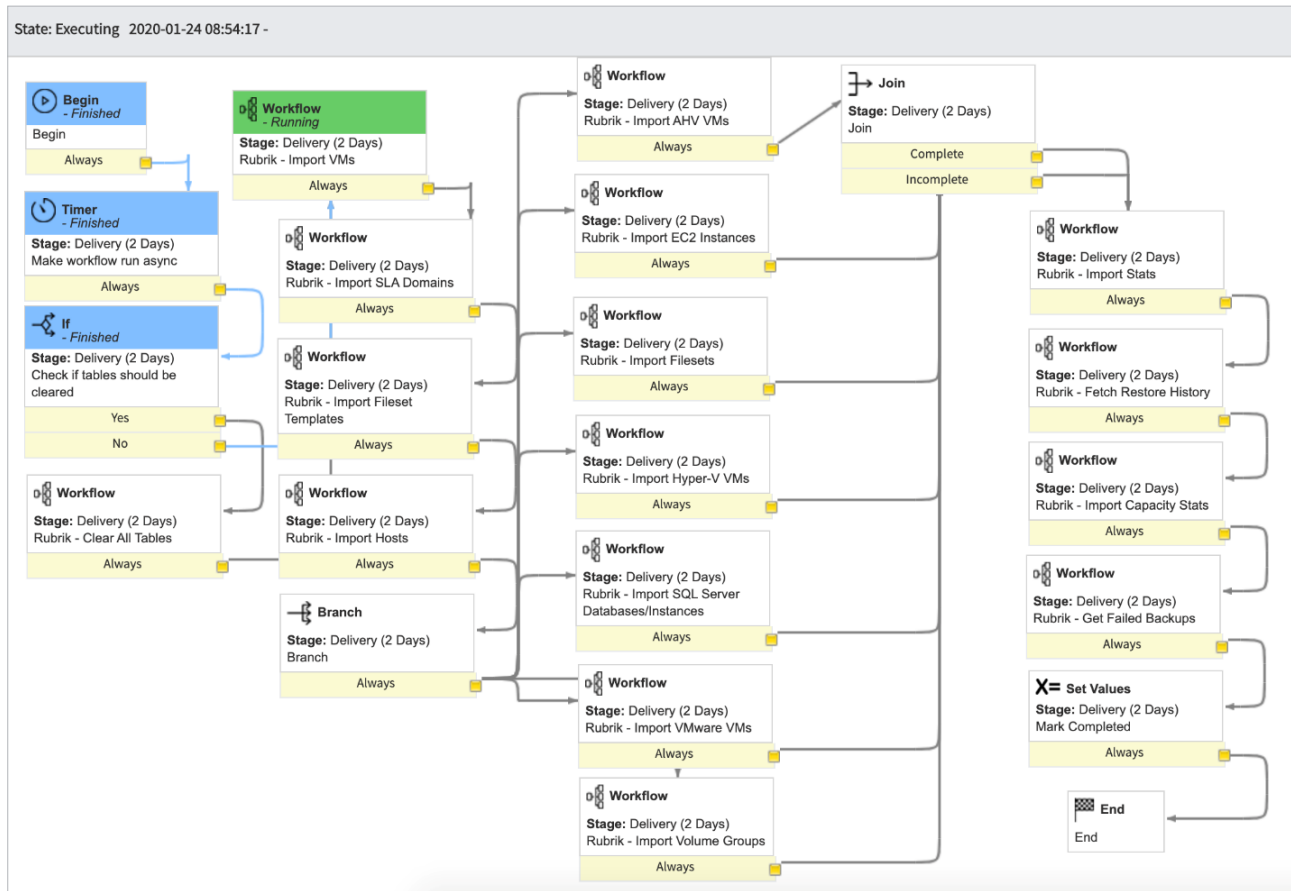


Figure 5 - Example Rubrik ServiceNOW workflow

The Rubrik ServiceNow integration uses workflows that contain JavaScript. These workflows talk to the Rubrik REST API and retrieve and post information from and to the Rubrik software. Workflows can be run on demand (for example when ordering a self-service item in the service catalog) or they can be scheduled to retrieve information (for example the information displayed in the Rubrik default dashboards).

The data that is extracted from the Rubrik REST API by the ServiceNow workflow engine is stored by the Rubrik ServiceNow integration and after being utilized is either purged immediately or stored for an amount of time.



Cluster Name	Event Status	Event Time	Event ID	Event Type	Object Name	Object Type
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 07:15:39	2020-04-14:14:1::1586873739022-68f16c8...	Backup	AdventureWorks2016	SQL Server Database
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 06:38:19	2020-04-14:13:3::1586871499616-9e468378...	Backup	master	SQL Server Database
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 07:00:13	2020-04-14:14:0::1586872813453-96945ad7...	Backup	AdventureWorks2016	SQL Server Database
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 06:31:40	2020-04-14:13:3::1586871100335-7d06a85b...	Backup	model	SQL Server Database
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 06:38:20	2020-04-14:13:3::1586871500868-7b20c383...	Backup	msdb	SQL Server Database
shrd1-rbk01.rubrikdemo.com	Failed	2020-04-14 06:47:15	2020-04-14:13:4::1586872035507-ee179cbd...	Backup	model	SQL Server Database

Figure 6 - Example Rubrik data in SNOW

## REPORTING VIA SERVICENOW

ServiceNow widgets can be created to visualize data over time with the Rubrik tables as data source. Figure 7 shows an example dashboard with Rubrik data. The dashboard contains two widgets which display failed and successful snapshots on the left and SLA membership per protected object on the right.

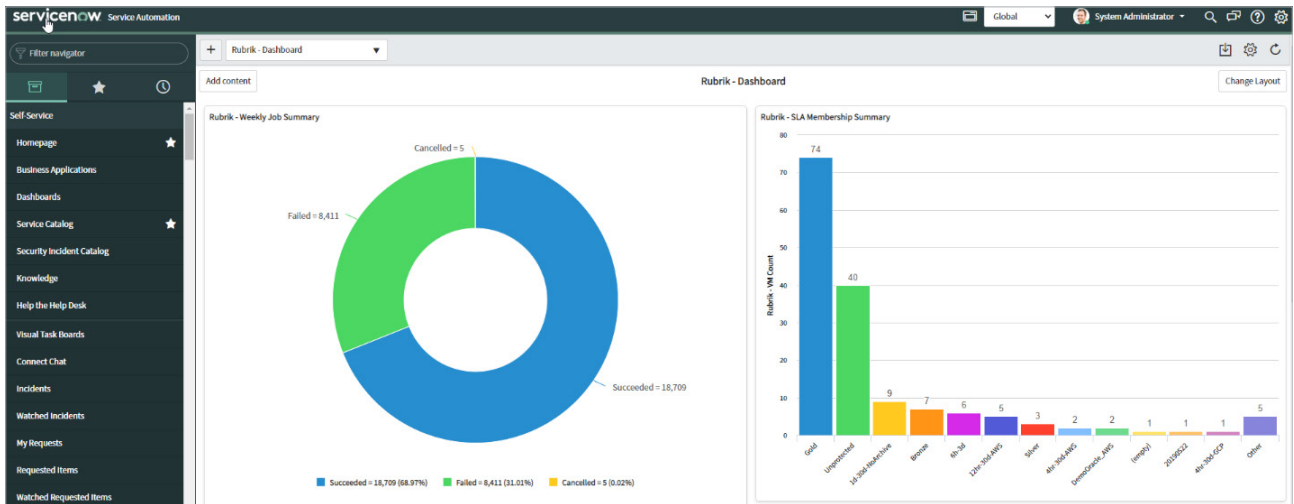


Figure 7 - Example dashboard with Rubrik data

After a default Rubrik ServiceNow integration several dashboards and widgets are created as an example. In below example the Rubrik clusters input/output operations per second (IOPS) are being read and displayed over the past 6 hours and current throughput on the Rubrik cluster as shown in Figure 8.

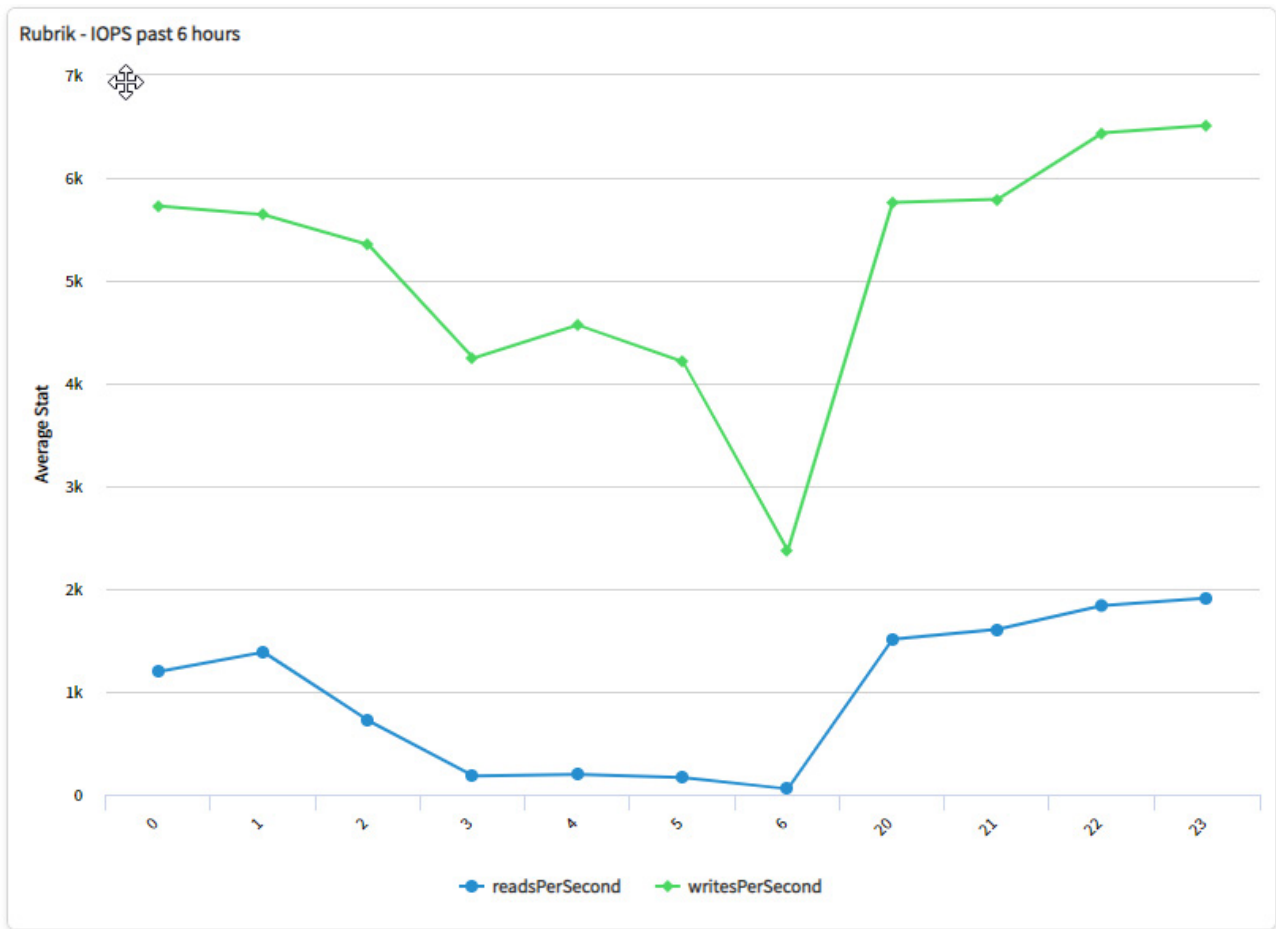


Figure 8 - Rubrik IOPS past 6 hours

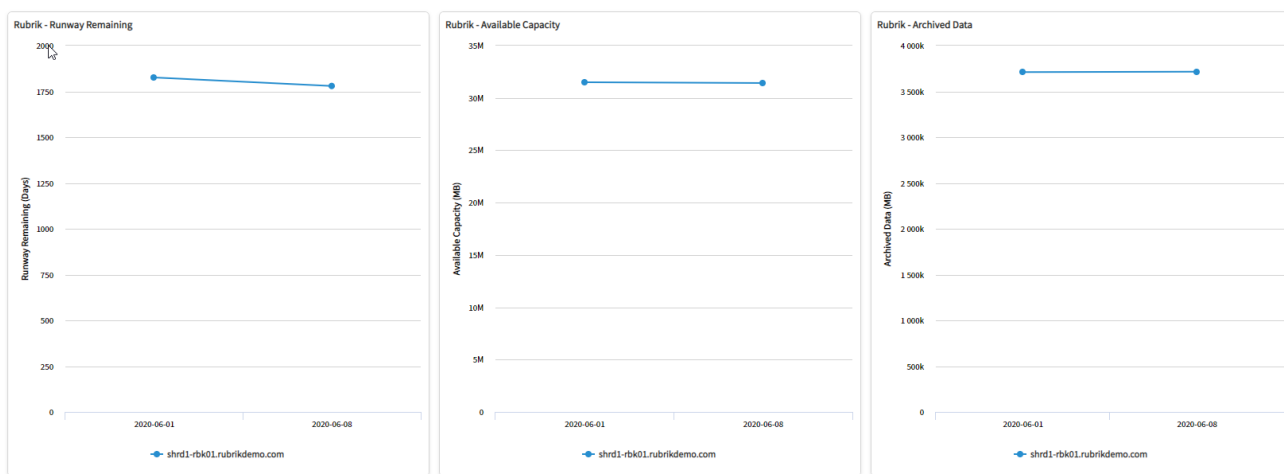


Figure 9 - Rubrik capacity stats report

Any API endpoint that returns JSON data can be posted to and the result can be stored in a ServiceNow glide record. Reporting on Rubrik data is therefore easy to customize and to enhance by using a scoped application and extra tables containing custom data.

## WORKFLOWS – SERVICE DESK CATALOG ITEMS

The standard Rubrik CDM ServiceNow integration package comes with several prepackaged Service Catalog items that interact between ServiceNow and Rubrik. After installing the Rubrik CDM integration several self-service items will become available in the ServiceNow Service Portal.

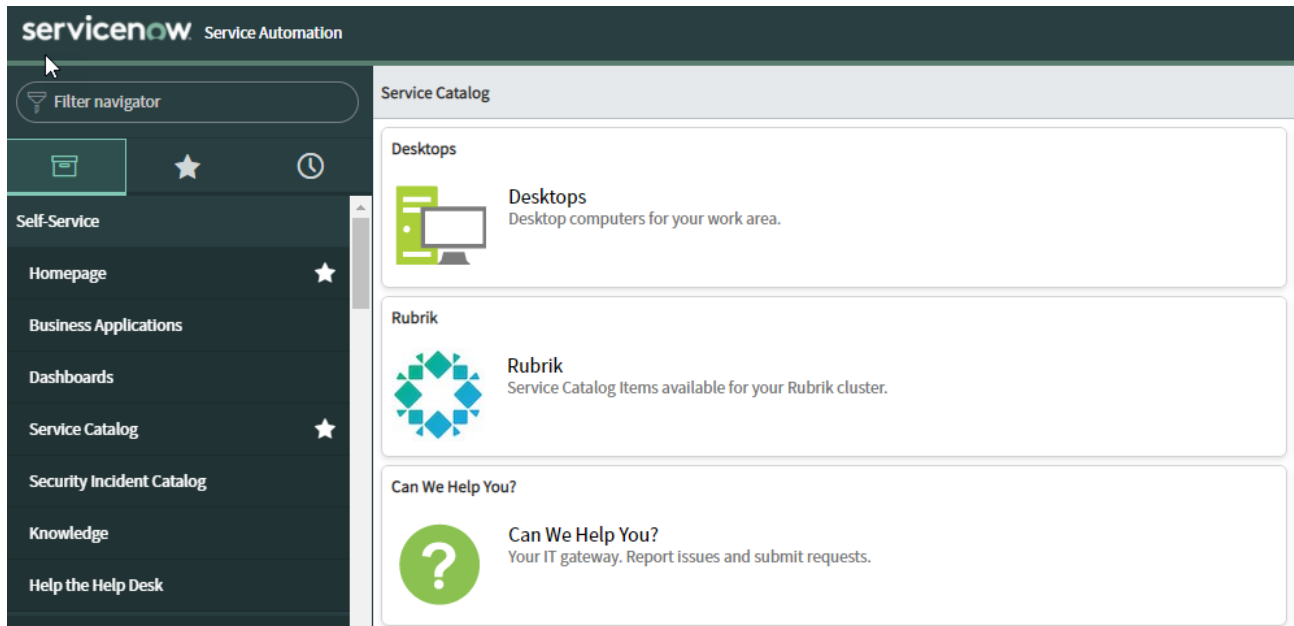


Figure 10 - Rubrik Service catalog in ServiceNow Service Portal

These self-service items require no extra configuration and allow a service desk to perform common administrative tasks, such as protecting and recovering items from ServiceNow without the need to access the Rubrik cluster. Authorization of these catalog items actions can be done through ServiceNow so the service to the customer can be done straight from the service desk software and be fully integrated with ITSM best practice.

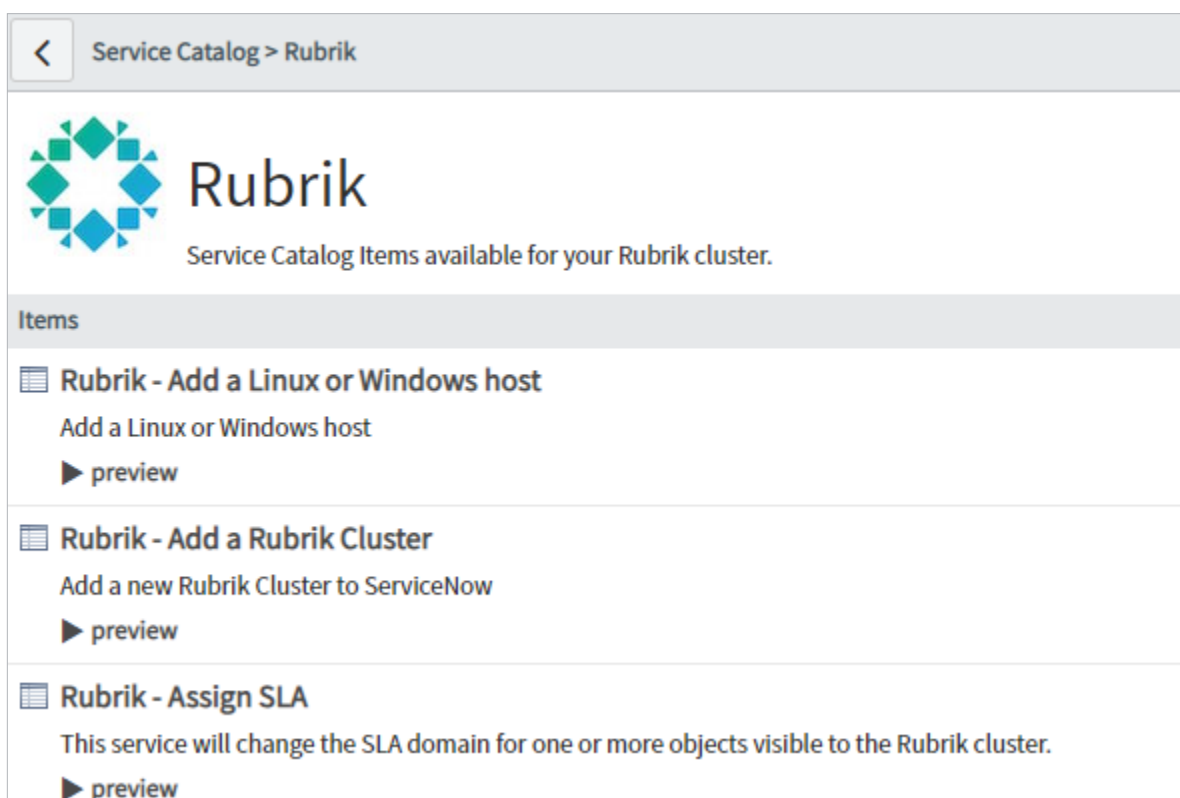


Figure 11 - Rubrik ServiceNow Service Catalog

## RUBRIK SERVICENOW SERVICE CATALOGUE OFFERING

### ADD A LINUX OR WINDOWS HOST

This catalog item will add a Linux or Windows host that has the Rubrik Backup Service installed (RBS) and assign a file set template to this host.

### ADD A RUBRIK CLUSTER

This catalog item will add a Rubrik cluster to the ServiceNow instance. This will typically be the first action after installing the Rubrik integration. Multiple clusters can be added and managed from ServiceNow.

### RUBRIK ASSIGN SLA

This catalog item will display, add or change a Rubrik Configuration Items (CI) assignment to a Rubrik backup SLA.

### RUBRIK - CREATE VM AND ASSIGN SLA

This catalog item will create a new VM on VMware vSphere and automatically protect the newly created VM with a default SLA policy of choice.

### RUBRIK - DELETE A RUBRIK CLUSTER

This catalog item will remove a Rubrik cluster from the SERVICENOW configuration. No more actions will be available on the cluster and no more data will be pulled in.

### RUBRIK - EXPORT AN EC2 SNAPSHOT

This catalog item will create a new Amazon EC2 instance from an existing snapshot.

#### **RUBRIK - INITIAL CONFIGURATION WORKFLOW**

This catalog item will repopulate all the ServiceNow tables basically deleting all existing data and renewing the configuration data. This is often run after adding a new Rubrik cluster or when an environment has stale data.

#### **RUBRIK - LIVE MOUNT SQL SERVER DATABASE**

This catalog item will Live Mount a SQL server database to a selected instance.

#### **RUBRIK - RECONFIGURE AN EXISTING RUBRIK CLUSTER**

This catalog item will modify configuration settings and credentials used to connect to an existing Rubrik cluster. This would be used if the DNS name of the Rubrik cluster has changed or the username and password used to connect to the Rubrik cluster has changed.

#### **RUBRIK - RECOVER A FILE / FOLDER**

This catalog item will restore files and folders from a VM or file set backup and restore it to either the original location or download it the file. Also, different credentials can be used to restore the file or folder. Either all snapshots (backups) of a given file are displayed or the versions as the file changed over time are displayed.

#### **RUBRIK - REQUEST A LIVE MOUNT**

This catalog item will request a live mount a VM to an ESXi server. The results of the query can be filtered by date and the option exists to remove Virtual Network devices before live mounting the VM.

#### **RUBRIK - RESTORE A VMWARE VIRTUAL MACHINE**

This catalog item will restore a VMware virtual machine with Rubrik Instant Recovery. The resulting action will overwrite the existing virtual machine and replace it with backup copy.

#### **RUBRIK - RESTORE AN EC2 INSTANCE**

This catalog item will restore an EC2 instance from a snapshot. This will shut down the current instance and re-attach the disks from the selected snapshot.

#### **RUBRIK - TAKE AN EC2 INSTANCE SNAPSHOT**

This catalog item will take an instant snapshot (On – Demand snapshot) from an AWS EC2 instance. There is a choice of keeping the snapshot forever or attaching it to an existing SLA and inherit the retention settings from that SLA.

#### **RUBRIK – TAKE ON-DEMAND SNAPSHOT**

This catalog item will take an instant snapshot (On – Demand snapshot) from a Rubrik CI (VM, Database, File set). There is a choice of keeping the snapshot forever or attaching it to an existing SLA and inherit the retention settings from that SLA.

## CONCLUSION

Rubrik's integration with ServiceNow offers a free and easy to consume solution to manage your protected data and perform actions on this data by making them available through catalog items. Reporting is made easy by custom tables that are updated at regular intervals. The Rubrik CDM integration is easy to install from the ServiceNow store and is a great addition to an existing service desk, making protection and recovery tasks available through the familiar ServiceNow interface. Time to market for restoring files and folders becomes easy and fast, adding immediate value at no extra cost.

## VERSION HISTORY

Version	Date	Summary of Changes
1.0	June 2021	Initial Release

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