

Create Seamless Integrations to Support Single Pane-of-glass Visibility

Manage Your Entire IT Infrastructure with One Service Model

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> A Unified View of Infrastructure and Operations

Achieving a unified view of your infrastructure and operations environment isn't easy. The multitude of integrations required for a single pane-of-glass visibility are complex, and not every data center team has the time or skills to develop methods to identify the right data and present it in a standardized manner to support a comprehensive dashboard for operations.

To assist IT teams in achieving this goal, Keyva developed the Seamless Data Pump[™], which automates the process of moving data from a source to a target. It's an automated ETL (extract, transform, load) solution that improves IT efficiency by relieving IT professionals from the burden of creating and managing complex integrations.

The Seamless Data Pump automatically populates, relates, synchronizes, maintains, and reports on high volumes of data from various enterprise management tools to populate an easyto-use service model that's customized to your environment.

Streamlined Deployments Through Integration and Standardization

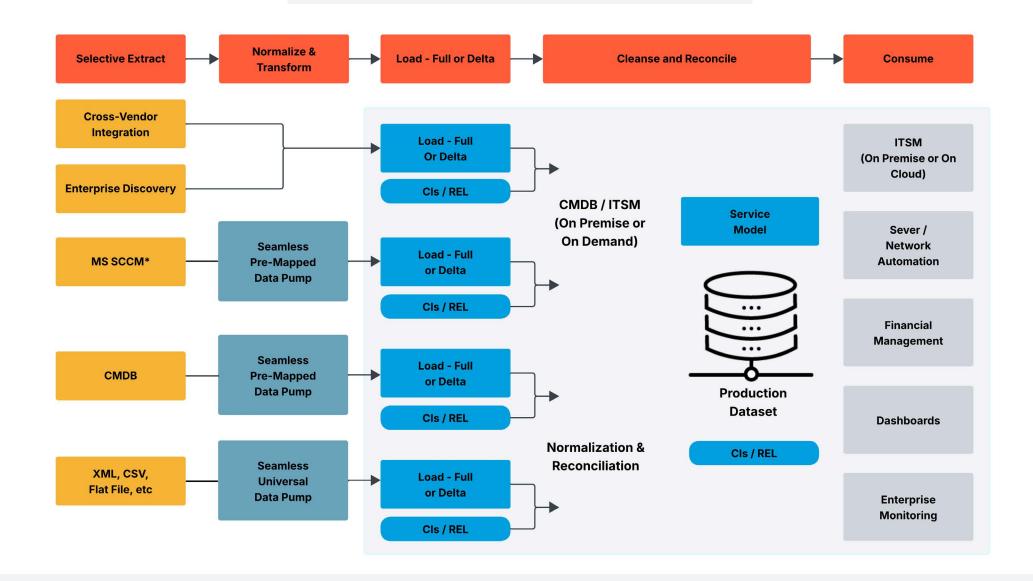
By using a shared service model across your IT environment, you can better support use cases for provisioning, maintenance, and compliance of your IT assets, as well as identify data center capacity that can be repurposed for other initiatives.

By identifying these common or shared services that multiple workloads can use, you can consolidate assets within your data center. So, instead of having a load balancer VM for hundreds of applications, you can consolidate them into a single, streamlined shared service with endpoints for each application. This consolidation of services frees up data center resources for other initiatives and aligns with cost optimization goals.

With these integrations, organizations can accurately deploy applications and services in a consistent and standardized manner, as well as alleviate manual effort associated with fetching, sanitizing, and consolidating data from multiple endpoints into a shared service such as a configuration management database (CMDB).

Seamless Data Pump Example Source Configuration

Integrate data from disparate repositories for a single, consolidated view of your environment to help make better, more informed business decisions.



Seamless Data Pump Compatibility

| BMC Helix | BMC Helix CMDB BMC Helix ITSM BMC Helix Discovery Remedy OnDemand Discovery (REST-enabled) |
|-----------------|--|
| CA Technologies | Computer Associates CMDB |
| Cisco | Cisco Prime Infrastructure |
| ІВМ | Tivoli Application Dependency Discovery Manager (TADDM) IBM BigFix Lightweight Directory Access Protocol (LDAP) - IP Addr Mgmt Hardware Management Console (HMC) |
| IP Address Mgmt | Active Directory |
| Microsoft | System Center Configuration Manager (SCCM) System Center Operations Manager (OpsMgr) |
| Micro Focus | Server Automation (SA) Business Service Automation Essentials (BSAE for SA/NA) Storage Essentials (SE) uCMBD |
| NetApp | NetApp SANscreen NetApp OSI |
| ServiceNow | ServiceNow CMDB |
| Universal | Don't see a vendor or solution listed as part of your environment? Use our Universal Data Pump to connect any source system with any target system for an easy-off-the-shelf-ETL-based integration solution. Flat file, CVS, XLS, XML, REST, EIE/AIE 3rd party datacase, ODBC/JDBC Foundation Data |
| VMware | VM Management (VMware ESX, vCenter Server) vCloud Director (vCD) |
| | |



> Key Benefits of the Seamless Data Pump

Most organizations today are stretched thin with operations and infrastructure teams working on multiple initiatives. Our data pump solutions automate common NOC and SOC tasks, eliminating the need for operations and infrastructure teams to build complex integrations or have extensive API knowledge. This enables them to focus on core business outcomes.

Single Pane-of-glass Visibility

A primary benefit of the Seamless Data Pump is its ability to help organizations develop a unified view of assets across the enterprise, enabling a single pane of glass for all your assets. For example, if you want to see your network-based security alongside your workload-based security — and see the configuration item (CI) relationships between those assets in the CMDB — the data pump helps facilitate that.

Improved Operational Efficiency

The Seamless Data Pump is designed for fast data export and import operations, which enables organizations to save time when moving large amounts of data with complex transformations. It also eliminates duplication of data as part of the transformation layer. In addition, the ability to easily customize and implement data mapping best practices gives organizations a head start for their data migration initiatives.

Enhanced Data Integrity and Decision Making

Inaccurate or inconsistent data can lead to conflicting information and misguided decisions. By automating data transfers and transformations, data integrity and accuracy are preserved throughout the process, which supports sound decision making.

Doesn't Require Developer Expertise

Building a data pump in-house can be a big lift, requiring a deep understanding of the nuances of APIs on the source and target systems along with best practices for each vendor being integrated — not to mention the time it takes to develop the solution and maintain it over time. The Seamless Data Pump is largely plug-andplay, so organizations don't need specialized skills to implement and maintain it. Organizations save money by not having to build and maintain their own solution, and because our data pump solutions are developed using vendor best practices, organizations can be confident in the results.

Pre-mapped Tables and Fields

Perhaps the biggest challenge in developing a data pump is mapping the tables and fields from the source to the target based on the respective vendor's best practices. Data inconsistencies can occur due to variations in data formats, standards, and definitions across sources and targets. Data mapping is essential for data transformations because it defines how source system data fields are mapped and transformed to corresponding target system fields, ensuring accurate and consistent data transfer and transformation. The Seamless Data Pump overcomes this challenge by shipping premapped, which saves considerable time and money. Customers also have the ability to easily customize these mappings for their specific environments.

Global Coverage and Support

Keyva provides full support worldwide for the Seamless Data Pump, including ongoing maintenance. As vendors of your source and target solutions change or upgrade their products, Keyva provides new releases to ensure ongoing operability.

Our online portal enables customers to submit support tickets and request product enhancements. Customers who are experiencing issues with or need help with the data pump solution can reach out to us for a quick resolution by phone or email.

Global Customer Base

The Seamless Data Pump has been on the market for nearly 20 years and is being used by hundreds of customers worldwide to enhance data center efficiency.

Vendor Certified

Many of our data pump products are certified by vendors such as VMware and ServiceNow so you can use our solutions with confidence.

Quick Start Services

Keyva places a big premium on training and knowledge transfer. We support the Seamless Data Pump with initial mentoring and training to show customers how to customize the solution for their environment. Our Quick Start services help customers leverage our expertise to add bespoke features for their organization.

Quick Operational ROI

The Seamless Data Pump is easy to install, use, and customize. No development is involved and out-of-the-box sample workflows — which help you see how to connect to third-party products and are customizable for your environment — are designed to accelerate your time to value. Coupled with our Quick Start services, organizations can see positive ROI quickly.







> The Keyva Suite of Products

The Data Pump

The Seamless Data Pump is an ETL solution that consolidates data from multiple, disparate sources, transforms it, and loads it into a central repository, enabling businesses to access reliable, consistent data for analysis to improve decision-making. Common ETL sources include databases, flat files, Excel files, outputs from monitoring products, APIs, and cloud data warehouses. Common targets include data warehouses, data lakes, and relational databases.

ETL offers several benefits, including improved data quality, enhanced data accessibility, and better decision-making through consolidated data views, ultimately leading to more efficient operations and better business outcomes.

Event Integrations

Event integrations connect systems and applications through events, where an action in one system triggers a response in another, enabling real-time data sharing and asynchronous communication. By reacting to events in real-time, businesses can gain valuable insights and make faster decisions. Event integrations enable automations such as incident remediation, service ticket enrichment, provisioning, and risk mitigation — all of which are triggered by specific events or conditions. Event integrations offer significant business value by replacing error-prone, time-consuming manual processes with fast, accurate automations.

Event integrations help automate the process of populating a unified observability dashboard with current, accurate data so that IT teams can get a holistic view of IT assets and correlate events across the environment. Without this level of single pane-of-glass observability, IT teams will continue to manually correlate events using multiple, disparate portals.

IT observability is important because it provides deep insights into the performance and behavior of complex systems, enabling proactive monitoring, troubleshooting, and optimization, ultimately improving business outcomes.

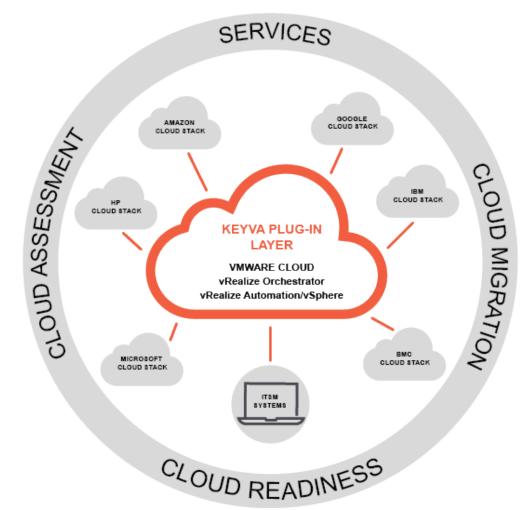
Plug-ins

Plug-ins enable IT teams to extend the functionality of an application without modifying its core code. They provide prebuilt solutions for complex features, saving businesses time and money by eliminating the need for custom coding.

In general, plug-ins enable IT teams to add new tools, improve performance, enhance security, and integrate with third-party services to facilitate cross-platform automations. They can simplify the integration of an application with external services, such as connecting VMware orchestration with ServiceNow to create automations that leverage both platforms.

Software plug-ins offer significant business value by enabling time and cost savings while enhancing software functionality. Plugins can be easily updated and maintained, reducing the overall workload for software developers and IT staff.

Plug-ins simplify integration and reduce the time needed to manage your physical and virtual resources. They also save time and frustration by eliminating siloed and disparate communications when using multivendor orchestration solutions. They enable organizations to create VMware automations, which require hooks into non-VMware products. Using Keyva's multivendor orchestration plug-ins, you can efficiently and effectively automate services across your organizational silos, adding value to your existing BMC, IBM, OpenText, Google, Amazon, or Microsoft Cloud Stack investments.



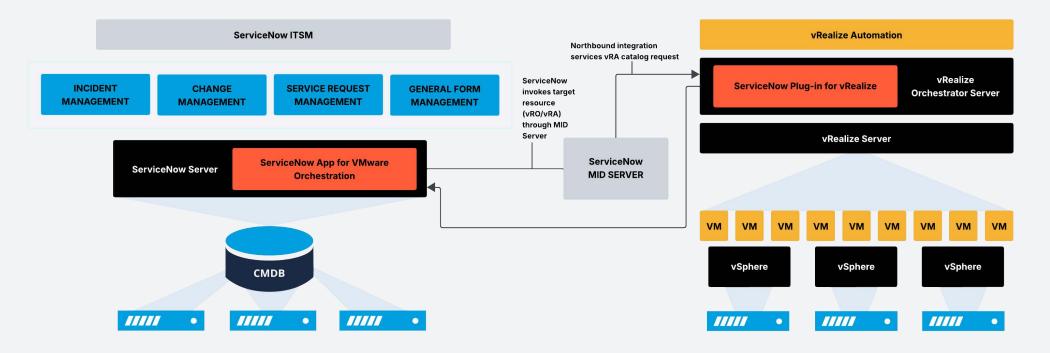
ServiceNow Apps

The process of service design includes automating tasks throughout the asset lifecycle. This can be tedious, especially when dealing with multiple machines in a heterogeneous environment. Enterprise integration management tools offered by Keyva can enable users to easily overcome service management and automation hurdles by bridging the gap between disparate systems within your IT environment.

Keyva has developed several scoped applications for integration with ServiceNow. A scoped application in ServiceNow is a custom application isolated within a defined boundary, ensuring security and preventing conflicts with other apps by operating in its own namespace and having specific permissions and access controls. ServiceNow certifies third-party apps by evaluating them for security, performance, platform stability, user experience, installation process, and adherence to ServiceNow best practices — ensuring minimal risk for customers and accurate store listings.

ServiceNow certifies all products in the ServiceNow Store, so ITSM and CMDB teams can be confident that these apps are trustworthy. (See <u>the Appendix</u> for a list of ServiceNow certified apps from Keyva)

By combining the power of Keyva's ServiceNow Apps with third-party services, customers can achieve a single system of record for more efficient service automation. End-to-end automation creates a service that is accessible through the ServiceNow portal.



> Real-World Applications

From supporting CMDB accuracy to automating common data center tasks, the integrations offered by Keyva have several applications for improving efficiency.

Maintain CMDB Accuracy

One of the biggest challenges data center professionals face is ensuring their configuration management database (CMDB) is current and accurate. Because the CMDB is intended to be the single source of truth for managing and tracking changes to an organization's IT environment, inaccurate or outdated data undermines the CMDB's credibility and can lead to poor decisionmaking and operational inefficiencies.

A primary use case for the Seamless Data Pump and the ServiceNow Apps is to support CMDB accuracy so that it is truly the single source of truth for IT assets across your organization. The data pump automates the flow of asset data into the CMDB, ensuring real-time accuracy and consistency. CMDBs and configuration management systems (CMS) have the potential to help companies build service models, track asset management, and perform compliant change and incident processes. However, many companies encounter deployment issues and foundational hurdles in trying to effectively load and normalize data from multiple management data repositories into their CMDB.

Automate Day 2 Operational Processes

Engineers can spend significant time repeatedly performing the same processes around incident management, such as restarting a system, resetting a password, or setting up a new user. Keyva integrations help automate common NOC and SOC processes like these through the closed-loop incident process (CLIP), which is a proactive, predictive approach to incident management.

CLIP involves automating responses to alert and support requests by integrating with your ticketing system to verify remediation actions and ensure complete problem resolution. This frees up significant time for your Level 1 teams and reduces the possibility of errors.

Password and SSL Certificate Rotation

Automating the rotation of passwords and SSL certificates can significantly enhance security and operational efficiency by reducing human error, preventing outages, and streamlining management, leading to a more secure and resilient infrastructure.

Provision VMs and Other Resources

Automating the provisioning of VMs and other resources enables organizations to scale resources and manage complex environments more effectively, improve efficiency, reduce errors, and enhance security.

Patch Management

Automated patch management can enhance security by rapidly addressing vulnerabilities, streamline IT operations, improve compliance and reporting, and reduce risk of human error.

In addition, the Seamless Data Pump helps automate these common data center tasks:

- CI/CD Orchestration
- Batch Automation
- Configuration Management

> How the Seamless Data Pump Supports Modern Operations

Modern Operations is built around three core principles: it's developer-friendly, driven by code, and automated end-to-end. It also includes key pillars such as observability, pipelines and automation, platforms and systems, and security. The Seamless Data Pump supports modern operations by providing fresh data to support observability and automation and bring higher levels of efficiency to your network and security operations.

While there's no single product that comprises a complete solution for unified observability, these integration offerings from Keyva enable clients to move toward achieving their vision of unification.



> How Keyva Can Help

Keyva's integration offerings can help customers reduce the timeto-value of IT operations and DevOps projects while enabling IT service management (ITSM) and ITIL processes. Keyva can help provide the tools and resources to maintain the CMDB with current and accurate data, which saves time and money, and helps organizations make informed decisions.

Quick Start Services

Keyva's Quick Start Services help you quickly stand up and deliver Seamless Data Pump in a streamlined and customized way. Quick Start is a defined services offering, which includes a pre-defined delivery baseline tailored to your specific needs. Quick Start Services are available globally through our US-based support team.

These services are designed to rapidly operationalize the Seamless Data Pump through value-generating use cases. To demonstrate value, we measure current and desired-state metrics and provide those as a readout upon completion of your project. Transfer of information and train-the-trainer work-streams ensure your team is ready to carry the torch forward with the Seamless Data Pump.

With Quick Start you can expect:

- Rapid deployment and quick time-to-value, usually within 1-2 meetings with your team
- · Rapid use case development, delivery, and adoption
- Engineering and architectural assistance for complex production roll-outs
- Enablement of new features and capabilities





> Why Keyva

Keyva is dedicated to helping its clients navigate automation and service management complexities with tailored solutions that incorporate industry best practices and cutting-edge technologies. Our expertise spans from tool consolidation and systems integration to agile practices and knowledge transfer, ensuring that our clients are well-positioned to achieve their business goals. Keyva is here to support you every step of the way.

Contact us to learn more about how we can help you design, implement, and optimize your automation strategy to help you create a future-ready enterprise.

> info@keyvatech.com (866) 974-5175

Let us help you get started down the right path.

> Appendix: ServiceNow Apps for the Seamless Data Pump

ServiceNow-Certified Apps

These Keyva apps are certified by ServiceNow and are available through the ServiceNow store.

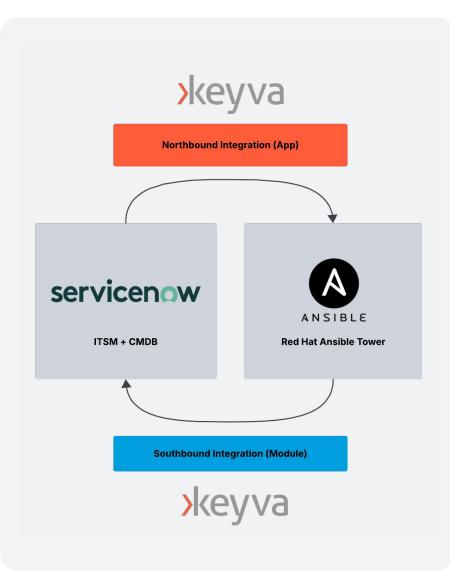
Keyva Service Integration Hub for Red Hat Ansible Automation Platform enables ServiceNow teams to fulfill IT automation requests via Ansible.

Keyva Service Integration Hub for Red Hat OpenShift triggers RedHat OpenShift build jobs from ServiceNow Catalog requests, change requests, incident requests, and more. The app enables ServiceNow teams to fulfill IT automation requests via OpenShift.

ServiceNow® App for VMware® Orchestration improves flexibility and optimizes service automation with bi-directional integration between SaaS applications and the VMware vRealize[™] environment.

BMC Atrium Data Pump synchronizes Cls, Cl attributes, and relationships between the ServiceNow CMDB and the BMC Atrium[™] CMDB systems.

VMware vRealize[™] Orchestrator[™] simplifies integration and reduces the time needed to manage your physical and virtual servers throughout their lifecycles, enabling accelerated provisioning and configuration.



HP uCMDB Data Pump accelerates and simplifies the integration of Cl and relationship data between HP Universal CMDB systems and ServiceNow CMDB.

BMC Truesight Integration enables multiple systems and application monitoring tools that generate high volumes of event data to integrate events into a single proactive operations platform. Our integration enables ServiceNow to view, manage, and model events raised by BMC ProactiveNet Performance Management allowing the customer to use one console for enterprise-wide incident and service impact management.

BMC Atrium Data Pump accelerates and simplifies the integration of CI and relationship data between BMC Atrium CMDB and ServiceNow CMDB.

Additional ServiceNow Apps

Keyva also offers additional ServiceNow apps, which are available directly from Keyva. These apps help customers connect ServiceNow to external resources in order to bring data into ServiceNow or create incident and change tickets.

ServiceNow[™] App for Kong Enterprise Automation enables users to initiate Kong API abstraction calls from ServiceNow Catalog Items. With this integration, you can:

- Trigger Kong Enterprise API Gateway calls from ServiceNow
 Catalog requests, change requests, incident requests, and more
- Accelerate the adoption of Kong Enterprise as the API abstraction platform of choice

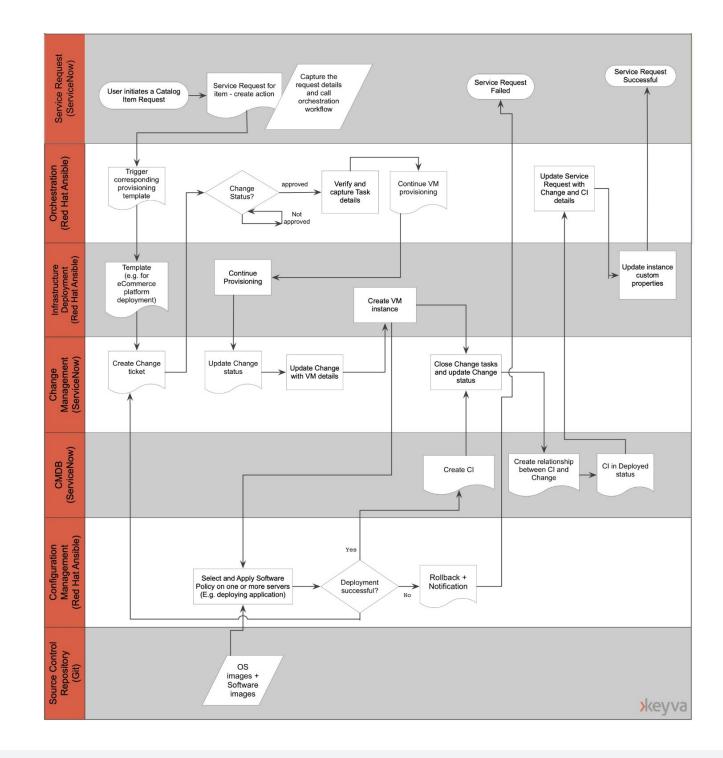
- Enable ServiceNow teams to fulfill IT automation requests via Kong
- Easily map field values in a ServiceNow record and pass them as arguments to Kong API calls
- Leverage best practices integration methodology to integrate disparate domain tools
- Get fully supported integration built using best practices in specific domains

ServiceNow™ App for IBM Cloud Object Storage enables users to initiate IBM Cloud Object Storage actions for manager or objects from ServiceNow™ Catalog items. With this integration, you can:

- Trigger IBM Cloud Object Storage actions from ServiceNow
 Catalog requests, change requests, incident requests, and more
- Accelerate adoption of ICOS as the storage management platform
- Enable ServiceNow teams to fulfill IT storage requests via ICOS
- Easily map field values in a ServiceNow record and pass them as arguments to the ICOS action
- Leverage best practices integration methodology to integrate disparate domain tools

> Appendix: Provisioning Automation Use Case

Deployment of Infrastructure or an App using ServiceNow and Red Hat Ansible



> Appendix: Closed Loop Operations Automation Use Case

Closed-Loop-Incident-Process

