Best practices for data collection - a critical foundation for obtaining valuable data insights

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IBM Data and AI

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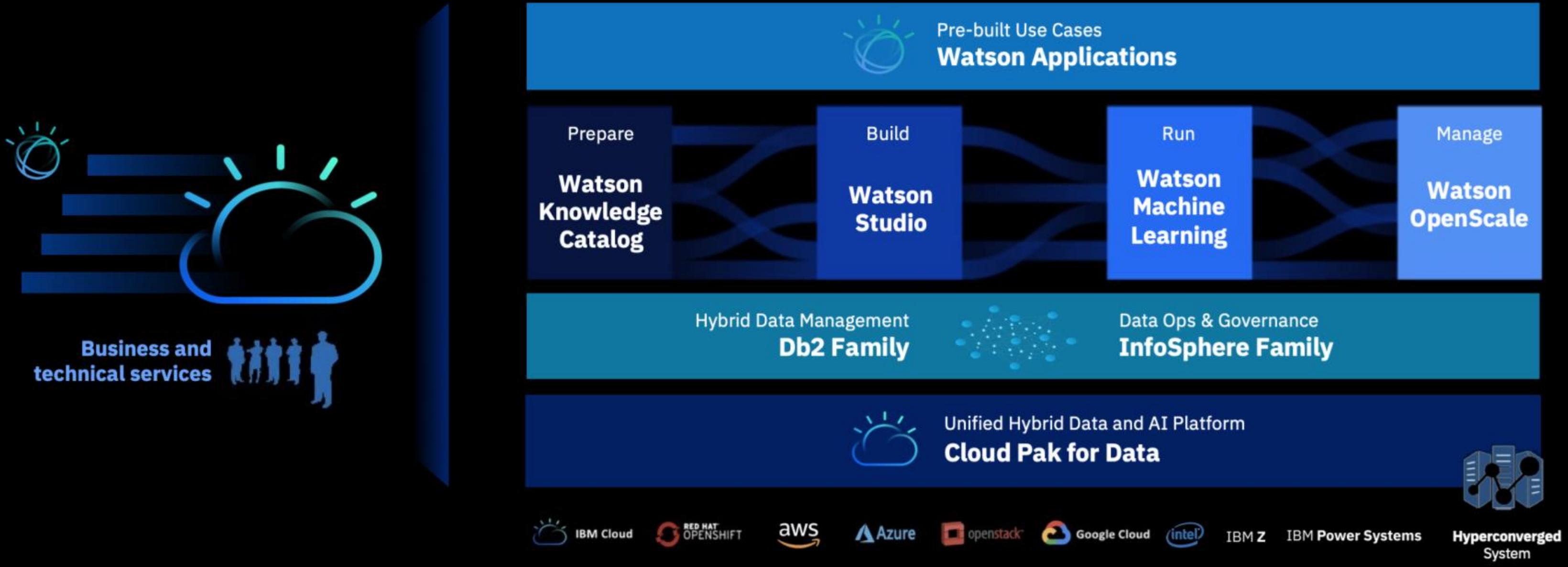
Metadata unlocks data by making it visible and understandable.

Watson™ Knowledge Catalog provides metadata management for the IBM Data and AI Portfolio



Business and technical services

Pre-built Use Cases
Watson Applications

Prepare
Watson Knowledge Catalog

Build
Watson Studio

Run
Watson Machine Learning

Manage
Watson OpenScale

Hybrid Data Management
Db2 Family

Data Ops & Governance
InfoSphere Family

Unified Hybrid Data and AI Platform
Cloud Pak for Data

Benefits of metadata management

Regulatory compliance

Metadata management conducted on a unified platform that provides stewardship, data lineage, and impact analysis services is the best assurance that an organization can validate and demonstrate that the data reported is true.

Productivity and discovery

Data is abundant. Much of it comes from existing systems and data stores for which no documentation exists, or the documentation does not reflect the changes and updates of those systems and data stores.

Mitigating risk

Metadata management provides the measure of trust that businesses need. Through data lineage and impact analysis, businesses can know the accuracy, completeness and currency of the data used in their planning or decision-making models.

DataOps Impact

Data Inventory Example

85%

Reduction in business glossary creation time

90%

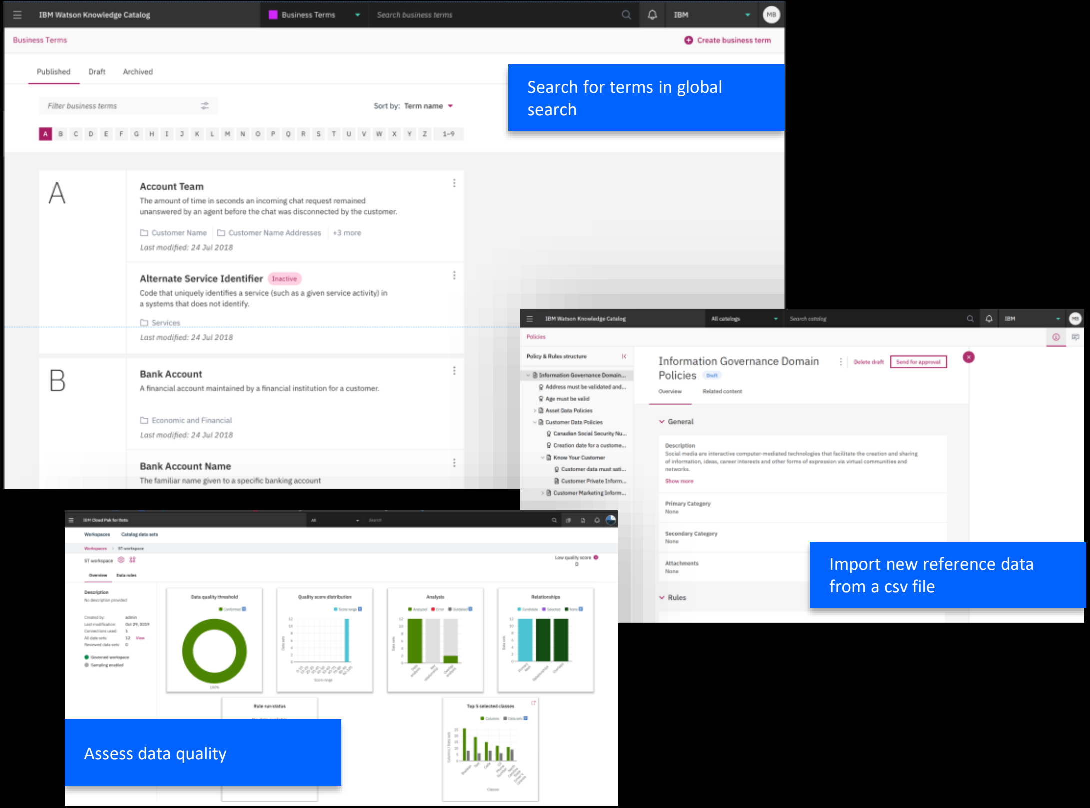
Reduction in time to discover metadata and assign terms

200,000

Number of technical assets across multiple clouds discovered in less than 5 mins

Watson™ Knowledge Catalog

Open and intelligent data catalog for data and AI model governance, quality, and collaboration.



A

Account Team
The amount of time in seconds an incoming chat request remained unanswered by an agent before the chat was disconnected by the customer.
Customer Name | Customer Name Addresses | +3 more
Last modified: 24 Jul 2018

Alternate Service Identifier Inactive
Code that uniquely identifies a service (such as a given service activity) in a systems that does not identify.
Services
Last modified: 24 Jul 2018

B

Bank Account
A financial account maintained by a financial institution for a customer.
Economic and Financial
Last modified: 24 Jul 2018

Bank Account Name
The familiar name given to a specific banking account

Information Governance Domain Policies Draft

General

Description
Social media are interactive computer-mediated technologies that facilitate the creation and sharing of information, ideas, career interests and other forms of expression via virtual communities and networks.
Show more

Primary Category
None

Secondary Category
None

Attachments
None

Rules

Description
No description provided

Created by: admin
Last modification: Oct 29, 2019
Connections used: 1
All data sets: 12 View
Reviewed data sets: 0

Governed workspace
Sampling enabled

Search for terms in global search

Import new reference data from a csv file

Assess data quality

WKC Use Cases

- Metadata Management
- Regulatory compliance
- Improve Data Quality
- Enterprise Data & AI Governance
- Data monetization and self-service
- Enterprise Data Cataloging
- Data lake consumption
- Reference Data Management
- DataOps Maturity

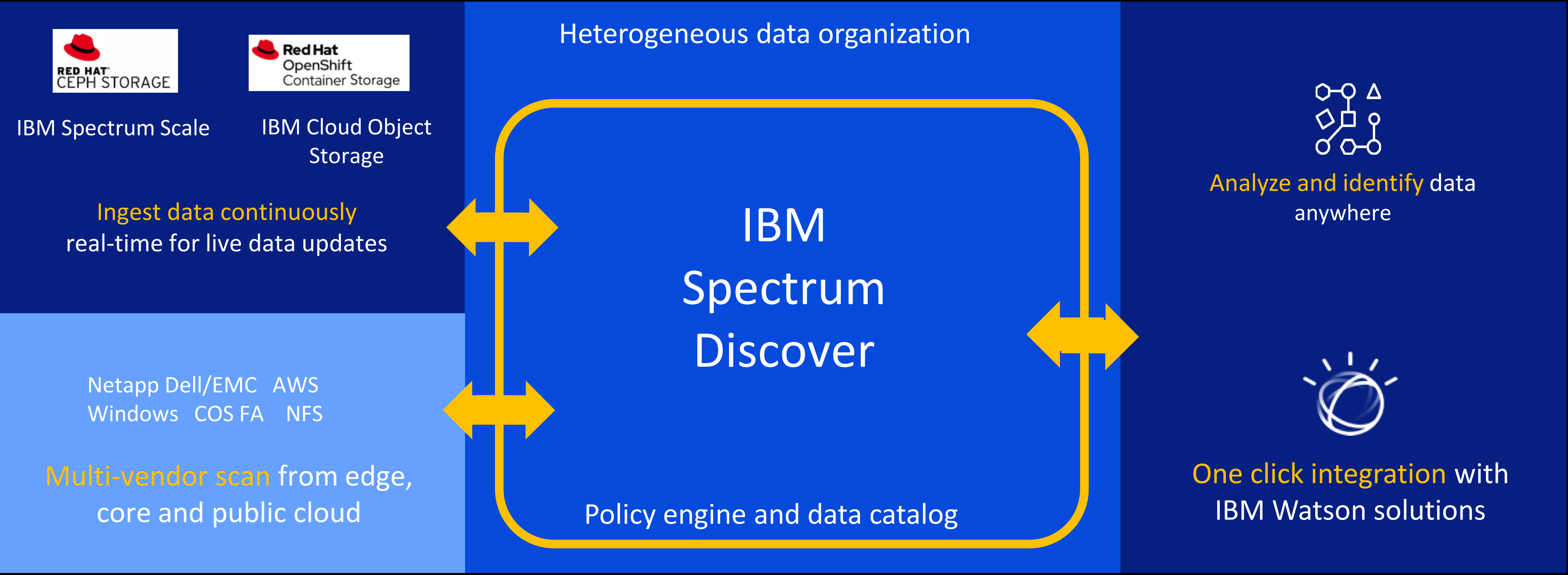
An unstructed data catalog and policy engine to organize the AI infrastructure and help solve the data and AI puzzle faster

AI Workflows	Data Curation	Data Analysis

IBM Spectrum Discover

IBM Spectrum Discover

Catalog your data and search billions of files/objects in 0.5 sec
Manage AI workflows, data security analysis and data governance



RED HAT CEPH STORAGE

Red Hat OpenShift Container Storage

IBM Spectrum Scale

IBM Cloud Object Storage

Ingest data continuously
real-time for live data updates

Netapp Dell/EMC AWS
Windows COS FA NFS

Multi-vendor scan from edge, core and public cloud

Heterogeneous data organization

IBM Spectrum Discover

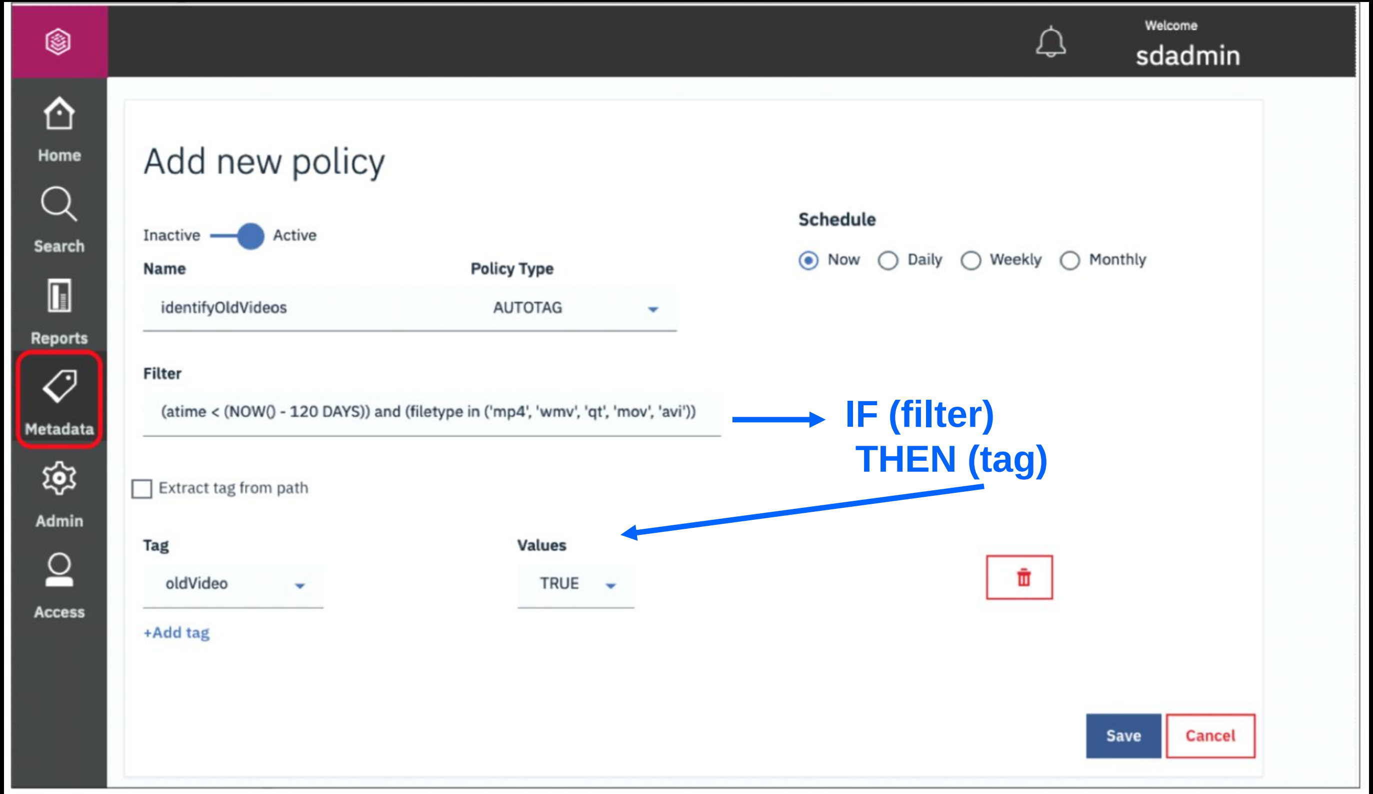
Policy engine and data catalog

Analyze and identify data anywhere

One click integration with IBM Watson solutions

Easily create a policy to “tag” items based on a filter

Data Mapping



Add new policy

Inactive ● Active

Name: identifyOldVideos

Policy Type: AUTOTAG

Schedule: ● Now ○ Daily ○ Weekly ○ Monthly

Filter: (atime < (NOW() - 120 DAYS)) and (filetype in ('mp4', 'wmv', 'qt', 'mov', 'avi'))

□ Extract tag from path

Tag: oldVideo

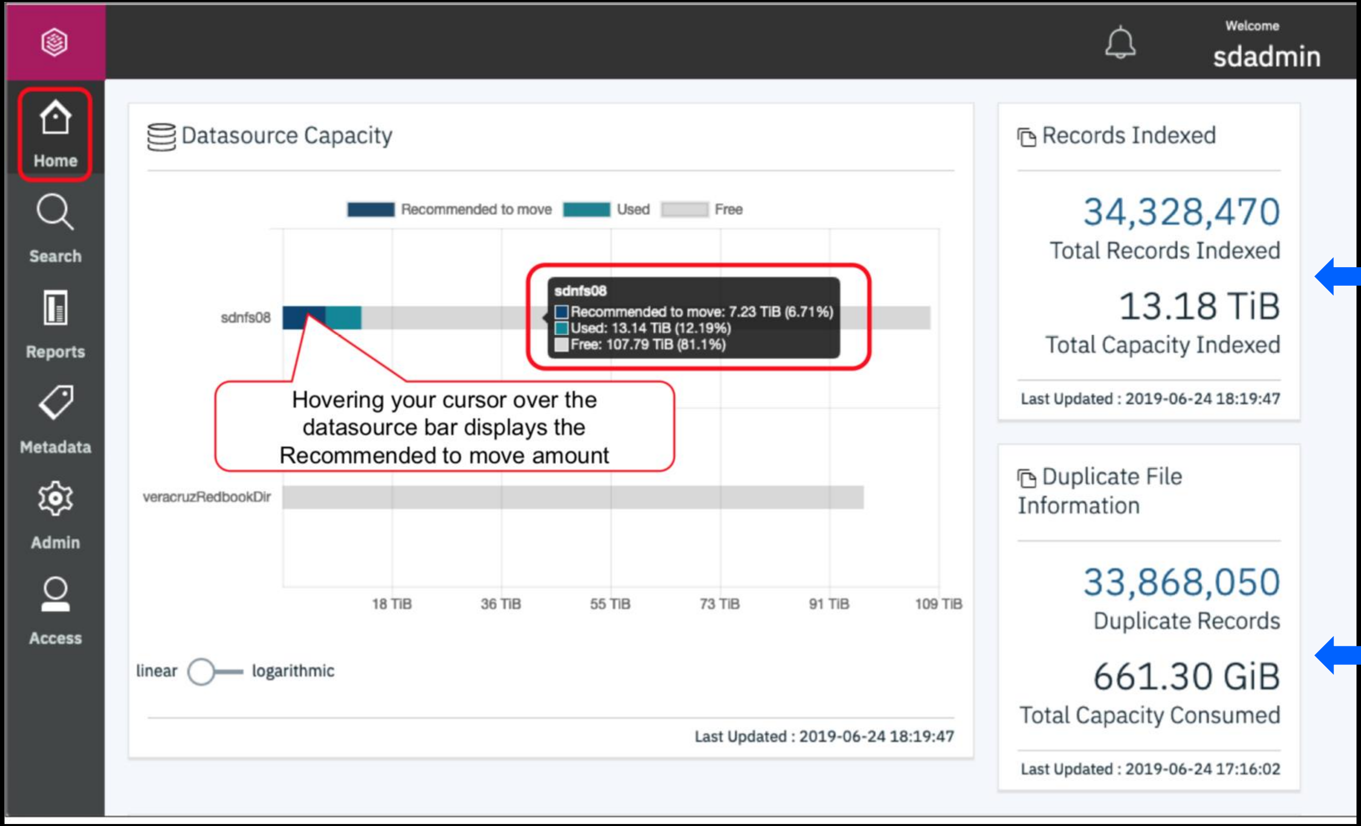
Values: TRUE

+Add tag

IF (filter)
THEN (tag)

Discover in one screen
duplicate records and data for archive

Data Visualization



Welcome sdadmin

Datasource Capacity

sdnfs08
- Recommended to move: 7.23 TiB (6.71%)
- Used: 13.14 TiB (12.19%)
- Free: 107.79 TiB (81.1%)

Hovering your cursor over the datasource bar displays the Recommended to move amount

Last Updated : 2019-06-24 18:19:47

Records Indexed

34,328,470
Total Records Indexed

13.18 TiB
Total Capacity Indexed

Last Updated : 2019-06-24 18:19:47

Duplicate File Information

33,868,050
Duplicate Records

661.30 GiB
Total Capacity Consumed

Last Updated : 2019-06-24 17:16:02

Summary of capacity

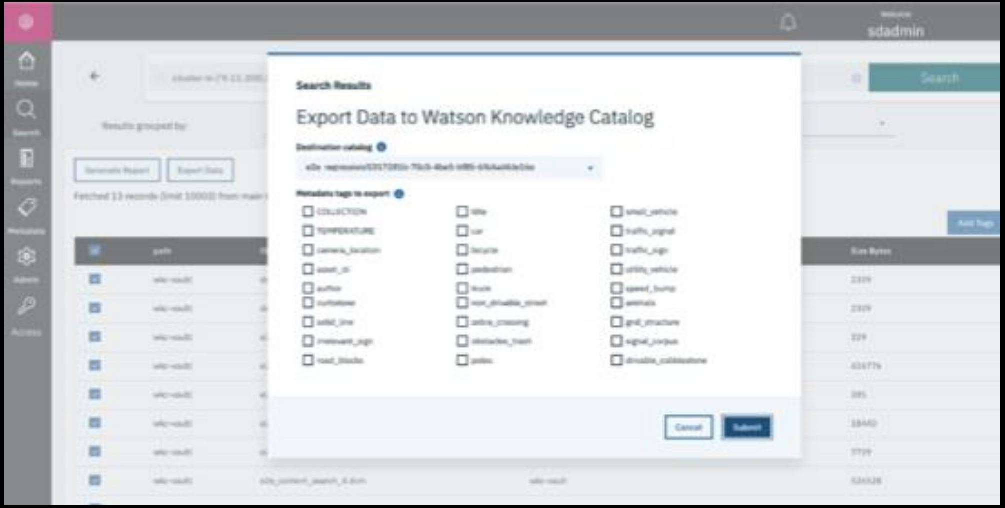
Summary of duplicate records

A simple one click export to IBM Watson Knowledge Catalog

- Automatically register assets with Watson Knowledge Catalog

- Leverage assets in IBM Cloud Pak for Data

- Import custom tags and create new and expanded insights from data



Search Results

Export Data to Watson Knowledge Catalog

Destination catalog

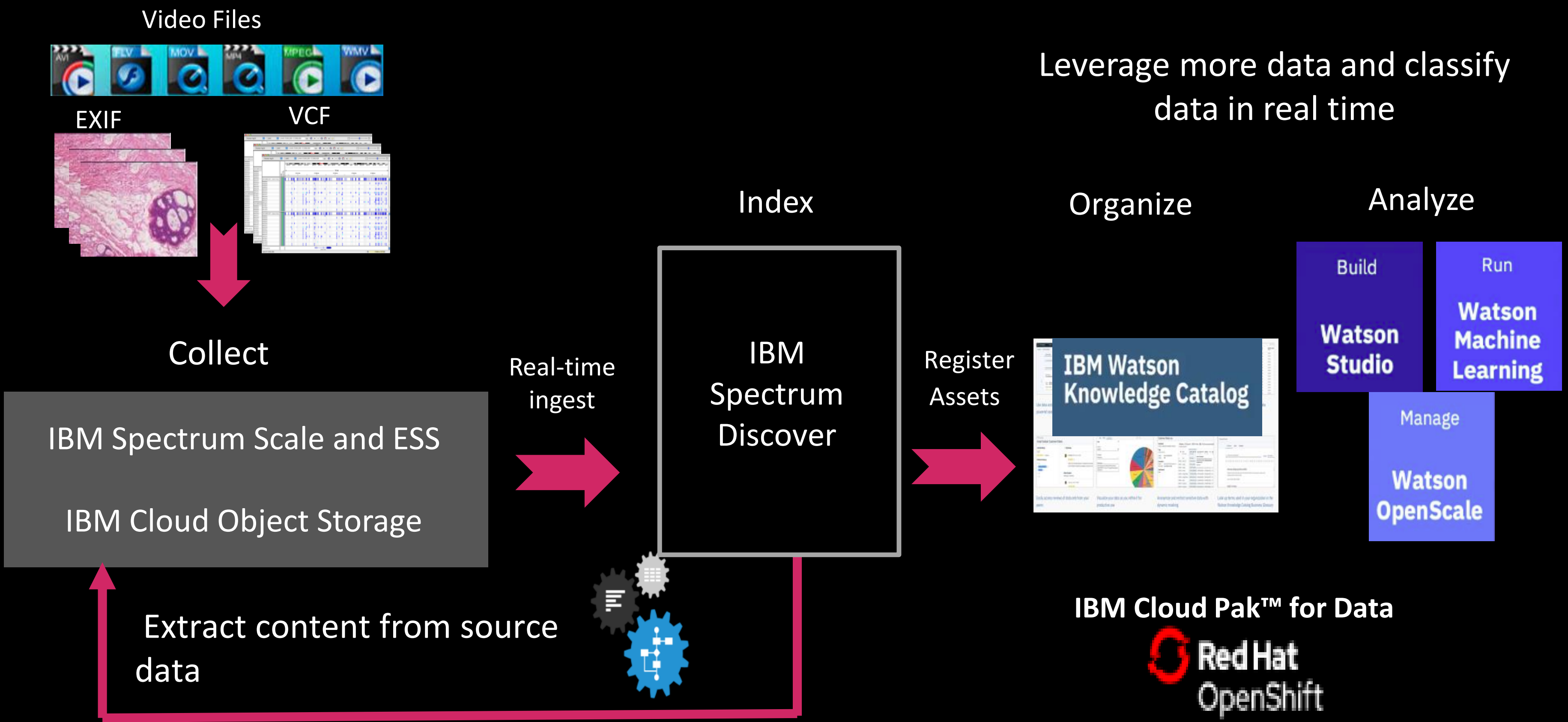
[illegible]

Metadata tags to export

□ COLLECTION
□ TEMPERATURE
□ camera_location
□ asset_id
□ author
□ curbstone
□ solid_line
□ irrelevant_sign
□ road_blocks
□ title
□ car
□ bicycle
□ pedestrian
□ truck
□ non_drivable_street
□ zebra_crossing
□ obstacles_trash
□ poles
□ small_vehicle
□ traffic_signal
□ traffic_sign
□ utility_vehicle
□ speed_bump
□ animals
□ grid_structure
□ signal_corpus
□ drivable_cobblestone

Cancel Submit

Smarter data with integrated IBM solutions



Video Files

EXIF

VCF

Collect

IBM Spectrum Scale and ESS

IBM Cloud Object Storage

Real-time ingest

Index

IBM Spectrum Discover

Extract content from source data

Register Assets

Leverage more data and classify data in real time

Organize

IBM Watson Knowledge Catalog

Analyze

Build

Watson Studio

Run

Watson Machine Learning

Manage

Watson OpenScale

IBM Cloud Pak™ for Data

Red Hat OpenShift

Learn more

Watson Knowledge Catalog at
ibm.com/watson-knowledge/catalog

IBM Spectrum Discover at
https://www.ibm.com/products/spectrum-discover

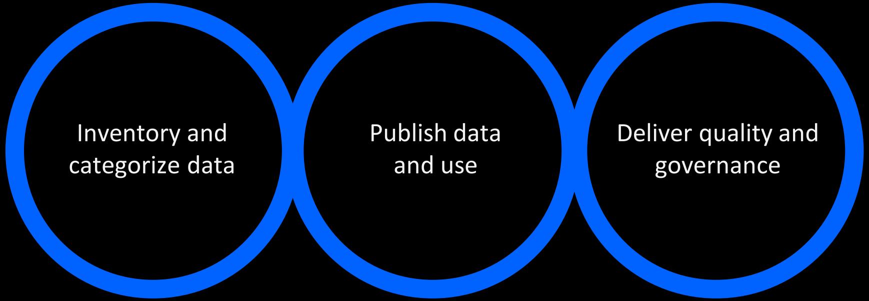
Introducing DataOps

> "DataOps is a collaborative data management practice focused on improving the communication, integration and automation of data flows between data managers and data consumers across an organization."

— Gartner

DataOps Methodology Begins with Automating Metadata Management Best Practices

Business objectives



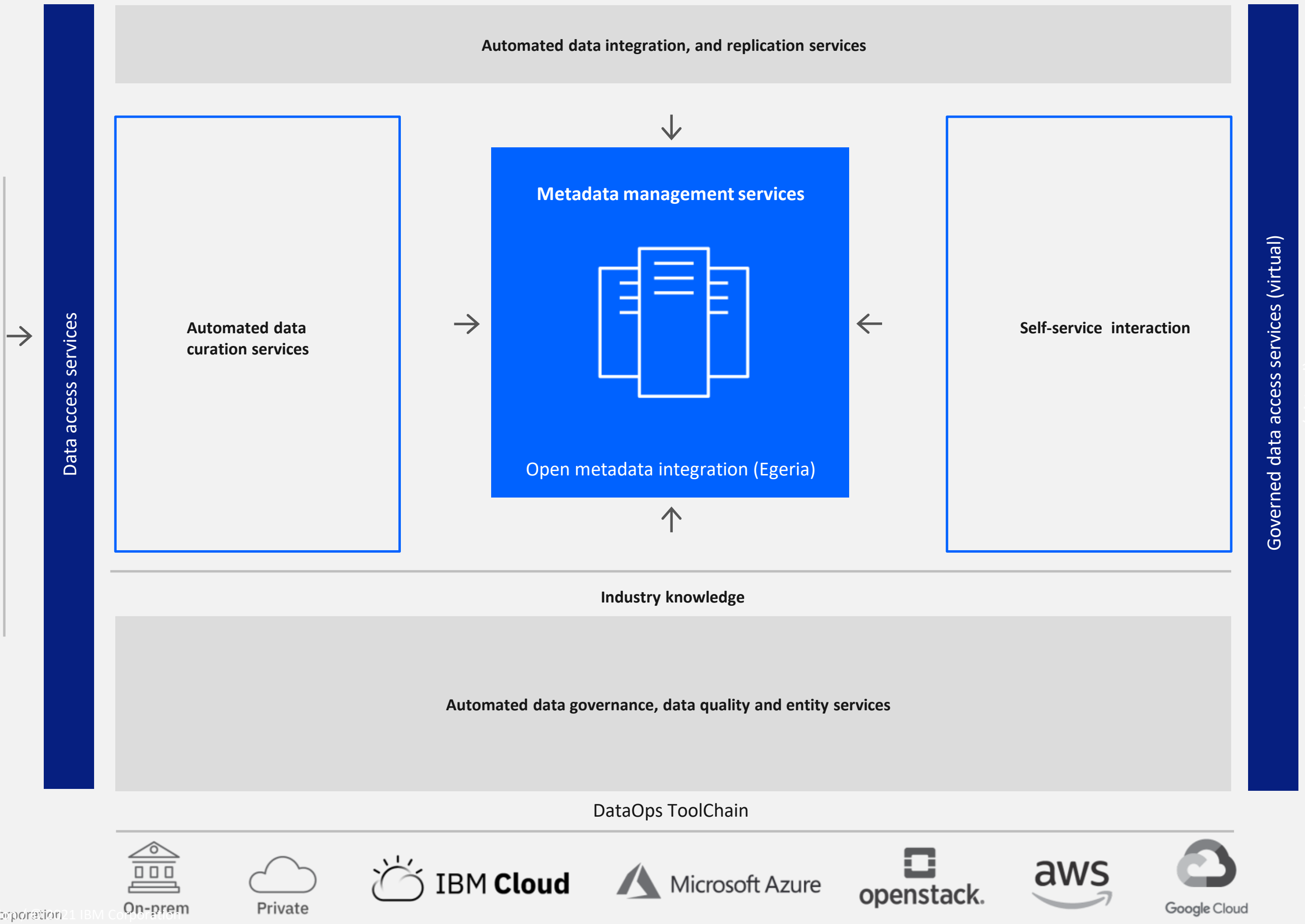
DataOps Methodology

- Align data pipelines with business objective and success criteria.
- Automatically measures accuracy and speed of data capture, quality and use.
- Automates data and metadata ingestion and classification.
- Automatically assesses data quality issues and alerts when anomalies are detected.
- Automatically initiates remediation via workflow.
- Automatically ensures authorized use of published data assets by enforcing data privacy and governance policies.

DataOps capabilities

Data Sources

- Systems of record
- IoT
- Systems of insights
- Cloud
- Hadoop
- Social media
- Unstructured
- Other external
- Logs



Data access services
Automated data integration, and replication services
Automated data curation services
Metadata management services
Open metadata integration (Egeria)
Self-service interaction
Governed data access services (virtual)
Industry knowledge
Automated data governance, data quality and entity services
DataOps ToolChain
On-prem
Private
IBM Cloud
Microsoft Azure
openstack.
aws
Google Cloud

Users

- Chief data officer
- Governance officers
- Data quality analyst
- Data steward
- Data scientist
- Business users
- Data engineer
- Application developer
- Application tester

Thank you

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