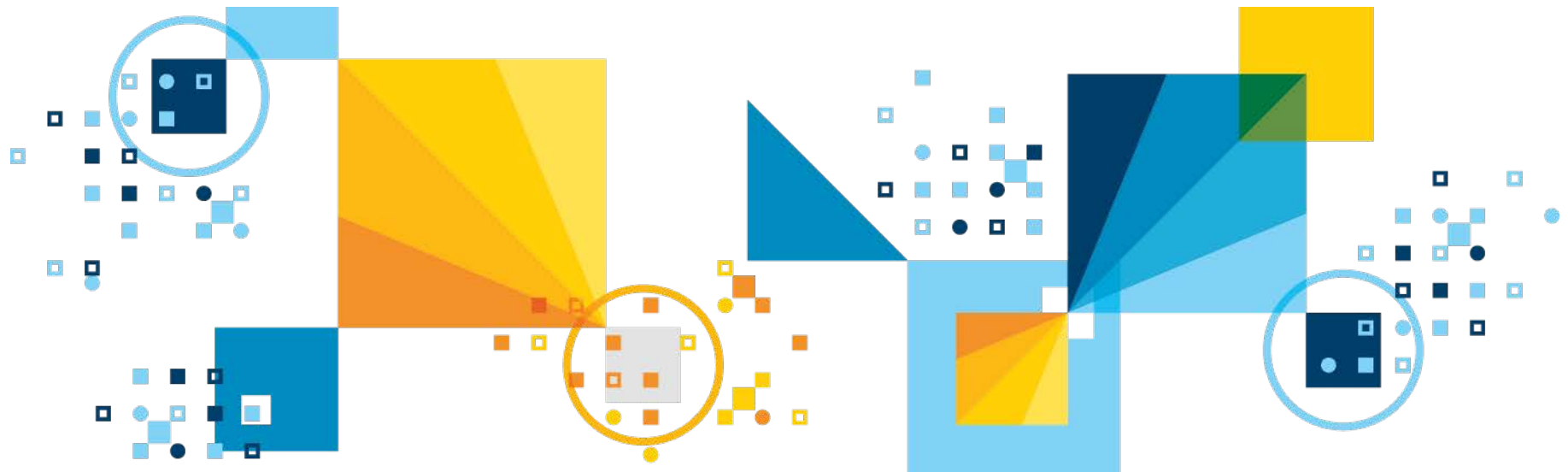


# Inform*ix* Cloud Pak for Data Cartridge

## - *Technical Presentation*



# Forward

- **This a presentation focused on the install, configuration, operation, storage creation and administration of Informix Cloud Pak for Data.**
- **All comments and/or statements here apply to this product under the IBM Cloud Pak for Data releases and not to any release of IBM Informix standalone.**
- **The presentation does not discuss how to install IBM Cloud Pak for Data or any other of its component services and how these operate.**

# Agenda

- **Informix and Containers**
- **Informix Cloud Pak for Data - Editions and Packaging**
- **Informix and Cloud Pak Use Cases**

# Terminologies

## ▪ Container

- A method for a developer to package up an app with all parts, libraries and dependencies and ship out as a single package
- Docker is the most common container and popular

## ▪ **Kubernetes is an open source platform for automating the deployment, scaling, and management of containerized applications and is the central component of IBM's Cloud Pak for Data:**

- Google, AWS and IBM Red Hat have own versions of Kubernetes
- Helm Charts are the vehicle by which Kubernetes does its packaging of containers

## ▪ Red Hat – Open Shift Platform

- OpenShift Container Platform (OCP)
- Enterprise version of Kubernetes

## Benefits of Containers (1)

- **Containers can be a logical packaging mechanism in which applications can be logically removed from the environment in which they actually run**
- **This allows container-based applications to be deployed easily and consistently, regardless of whether the target environment is a private data center, the public cloud, or even a developer's personal laptop**
- **Containerization provides a clean separation of IT organizational concerns, as developers focus on their application logic and dependencies, while IT operations teams can focus on deployment and management without bothering with application details such as specific software versions and configurations specific to the app**

## Benefits of Containers (2)

- **The separation of app from the environment it runs in leads to smaller sizes in a container**
- **Today containers can run pretty much anywhere, Linux, Windows, MacOS. They are portable and generally have low overhead**
- **IBM supports Docker as well as Kubernetes, leading to a high degree of portability as well**
- **Containers also support the isolation of CPU, memory, disk, and network at the O/S level from the application**
  - This gives developers a sandboxed view to development where can play, test and code in isolation
  - Or in production where one container can be used for the apps and another for the database:
    - And still other containers for failover in case one or both original containers develop an issue

# Helm Charts – Defined (1)

- **Helm is a Kubernetes package and operations manager:**
  - The name “kubernetes” is derived from the Greek word for “pilot” or “helmsman”, making Helm its steering wheel
- **Using a packaging manager called “Charts”, Helm allows us to package Kubernetes releases into a convenient zip (.tgz) file**
- **A Helm chart can contain any number of Kubernetes objects, all of which are deployed as part of the chart. A Helm chart will usually contain at least a Deployment and a Service, but it can also contain an Ingress, Persistent Volume Claims, or any other Kubernetes object**
- **Helm charts are used in Kubernetes to deploy an application, or one component of a larger application**

## Helm Charts – Defined (2)

- View the list of official Helm Charts at Github [here](#)
- **These Charts can be installed as-is, or modified to suit your purpose:**
  - For example, you could modify a Chart to install specific plugins or to use a custom Docker image.



# Informix Containers



Available



## ibmcom/informix-developer-database ☆

By [ibmcom](#) • Updated 10 days ago

IBM Informix Developer Edition for Linux (64bit) - Free database software for developers.

Container

↓ Pulls 10K+



## ibmcom/informix-innovator-c ☆

By [ibmcom](#) • Updated a month ago

IBM Informix Innovator-C for Linux (64bit)

Container

↓ Pulls 100K+

## IBM Cloud Pak for Data

Available Now!



### Informix Enterprise Edition

IBM

Available 

High-performance database that integrates TimeSeries, Spatial, NoSQL and SQL data together.



Red Hat Marketplace

Informix RHO Certified Standalone Container Coming soon...

# The Platform

## 1. Services Ecosystem

With a click, access and deploy an ecosystem of 45+ analytics services and templates from IBM and third parties.

## 2. Data Virtualization

Quickly and easily query across multiple data sources without moving your data.

## 3. Platform Interface

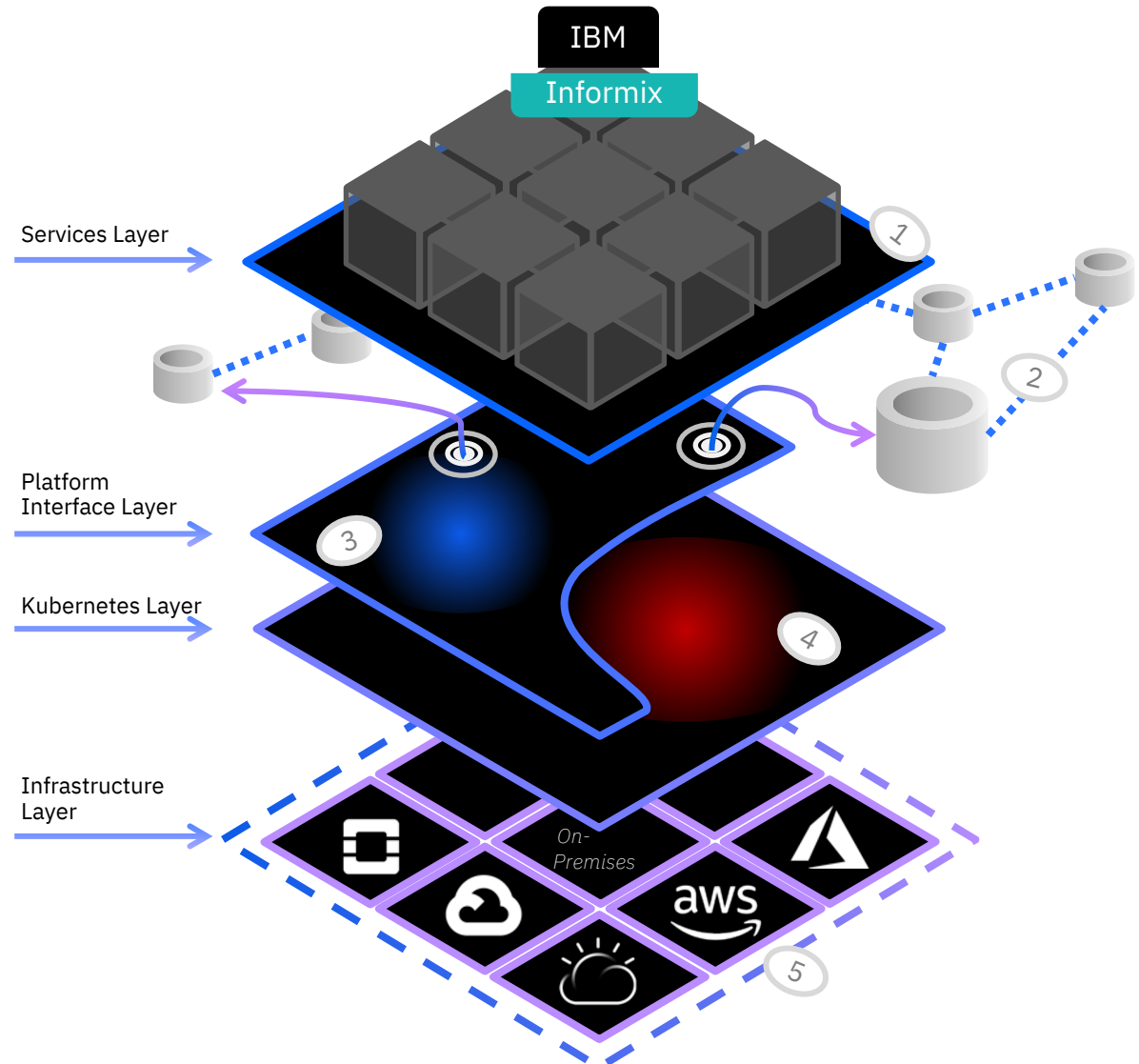
Speed time-to-value with a single user experience that integrates data management, data governance and analysis for greater efficiency and improved use of resources.

## 4. Red Hat **OPENS SHIFT**®

Leverage the leading hybrid cloud, enterprise container platform for an innovative and fast deployment strategy

## 5. Any Cloud

Avoid lock-in and leverage all cloud infrastructures with our multi-cloud approach.



# Informix for IBM Cloud Pak for Data

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Version 3.0.1 (latest) ▾

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IBM Cloud Pak for Data &gt; Services and integrations &gt; Services outside the catalog &gt;



## Informix on Cloud Pak for Data

Version 3.0.0

Premium

IBM



## Description

The Informix service provides an Informix database on IBM Cloud Pak for Data, so you can use the rich features of an on-premises Informix deployment without the cost, complexity, and risk of managing your own infrastructure. Informix provides a high-performance engine that integrates TimeSeries, Spatial, NoSQL, and SQL data together with easy access via MQTT, REST, and MongoDB APIs.

Integrating an Informix database into Cloud Pak for Data can be useful in the following situations:

- You need an operational database that supports a rapidly changing data model.
- You want lightweight, low-latency analytics integrated into your operational database.
- You need to store large amounts of data from Internet of Things devices or sensors.
- You need to store and serve many different types of content.

## Quick links

### Install

Install the service

### Administer

Configure and maintain the service

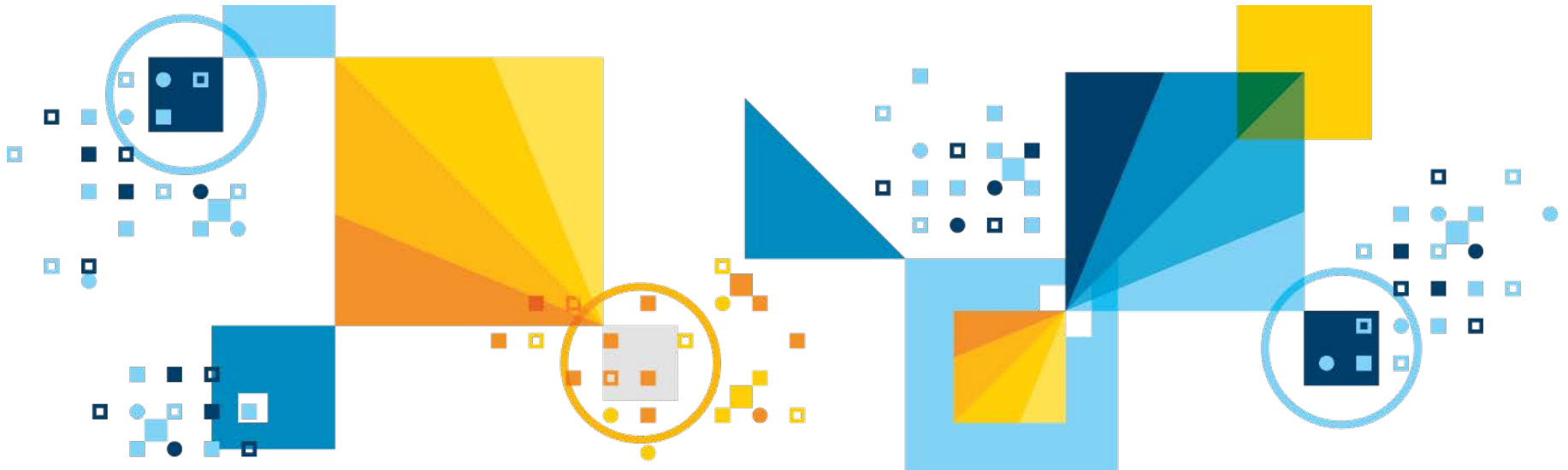
### Get started

Start using the service

# Informix on Cloud Pak for Data

- **First and Current Release is 3.01:**
  - Next Release 3.50 due late Q4 2020
  
- **Licensing:**
  - VPC only
  
- **Comes in two 14.10 editions:**
  - Informix Workgroup for Cloud Pak for Data
    - Containerized version is not available yet
  - Informix Enterprise for Cloud Pak for Data
  
- **Product features are the same for Informix onprem as they are in Informix Cloud Pak for Data by Edition**

# IBM Cloud Paks and Containers



# Cloud Paks – Enterprise-ready cloud software

*A faster, more secure way to move your core business applications to any cloud through enterprise-ready containerized software solutions*

## IBM containerized software

Packaged with Open Source components, pre-integrated with the common operational services, and secure by design



## Container platform and operational services

Logging, monitoring, security, identity access management



## Complete yet simple

*Application, data and AI services, fully modular and easy to consume*

## IBM certified

*Full software stack support, and ongoing security, compliance and version compatibility*

## Run anywhere

*On-premises, on private and public clouds, and in pre-integrated systems*

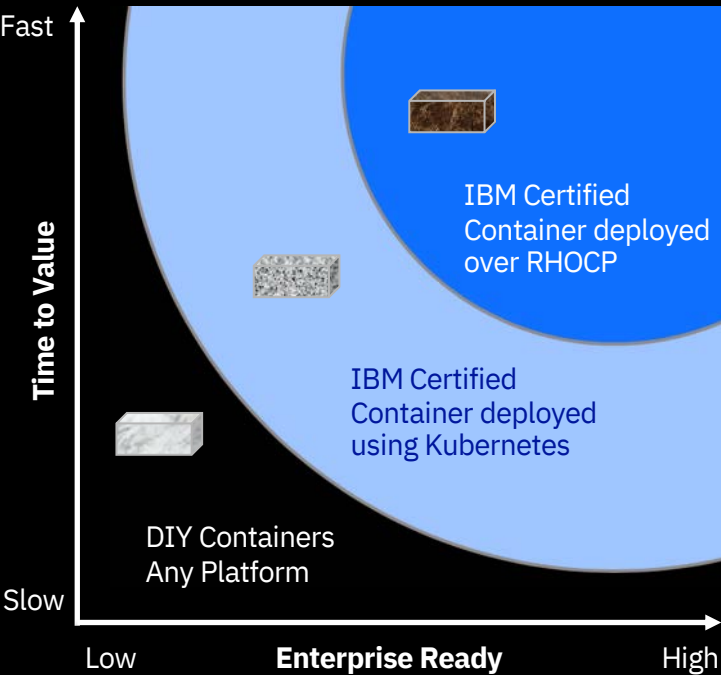












# Cloud Paks is the recommended deployment model to modernize traditional IBM software estate

*Deploying Cloud Paks brings a distinct set of advantages as compared to deploying standalone containers*

	<b>IBM Cloud Paks</b> Complete solutions certified for enterprise use cases
<b>Runs anywhere</b>	Yes
<b>Vulnerability scanned</b>	Yes
<b>Red Hat container certification</b>	Yes
<b>Complete solution w/ container platform</b>	Yes
<b>IBM certified/orchestrated for production</b> (Built for Kubernetes by experts; certified against 250+ criteria)	Yes
<b>Multicloud validation</b>	Yes
<b>Integrated deployment experience</b>	Yes
<b>Full stack support by IBM</b> (Base OS, software, container platform, application runtimes)	Yes
<b>License metering integration</b>	Yes
<b>Scalable and resilient</b>	Yes * ver. 3.5
<b>Encrypted secrets / limited privileges</b>	Yes * ver. 3.5
<b>Management and operations (including logging, monitoring and simplified and automated day2 operations)</b>	Yes * ver. 3.5
<b>Lifecycle Management</b>	Yes * ver. 3.5

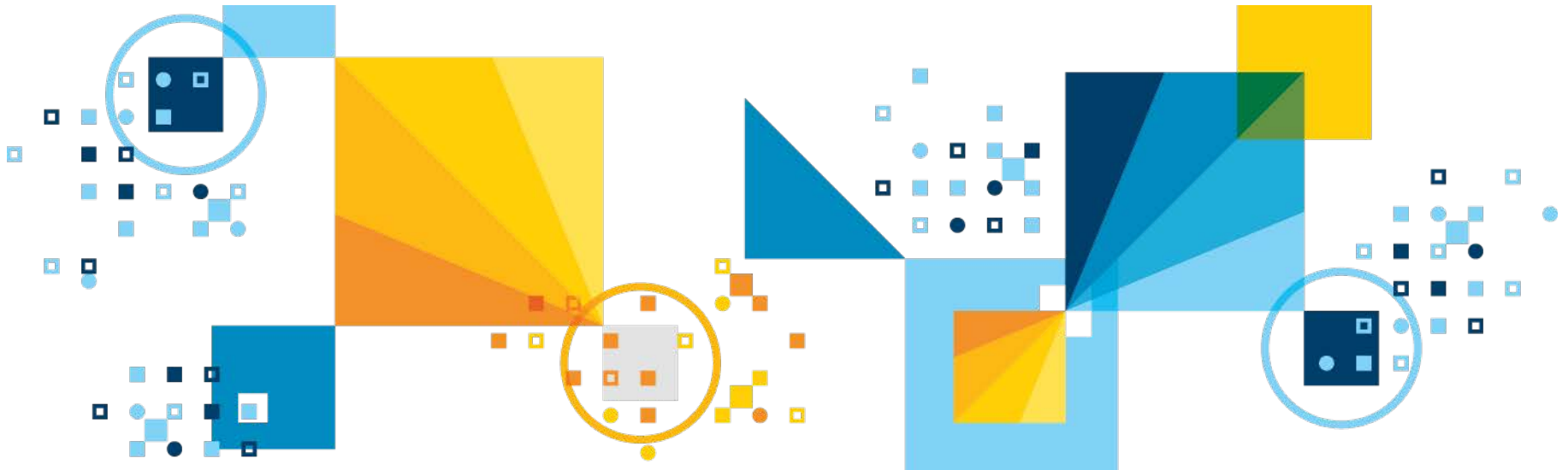
# Certified Container on RHOCP delivers **highest** value



	Informix on Docker	Informix  Coming soon!	Informix Cert. Cont. Over RHOS Integrated CPD
What's in the Box			
IBM Software (Core Product) and Basic Documentation			
Pre-built Containers with Helm Orchestration, K8s and Supported Upgrades			
Advanced documentation, Platform Services (logging, monitoring, authentication) and Openshift capabilities with fast tracked security updates			



# Inform*ix* & Cloud Pak Use Cases



# Use Cases (1)

## ▪ Dev/test environments

- Package up all or some, application portability, with or without the O/S layer:
  - Source Code
  - Libraries, binaries
  - Operating System
  - Database and test data
  - Send out to developers and testers all over the organization
    - Careful on licensing.....

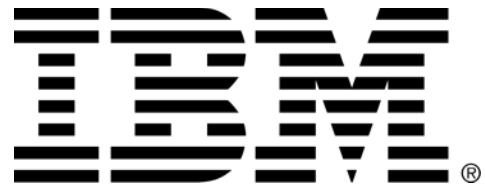
## ▪ Self healing, auto detects when services are down and restores them

- Using groups of containers or pods and using persistent data storage.
- A component may go down such as the wire listener within a pod and the pod brings it back up.
- Multiple containers work together, or pods, to failover when necessary according to the architecture employed so that there could be in one scenario 4 pods working in concert and the system as a whole stays up, a backup pod for each pod used or to use a term lightly, backup for the application pod and one for the database pod.

## Use Cases (2)

- **Distribute a complete fully tested application and related components inside a container(s) to remote retail stores in a 2000+ store chain from a remote location for production purposes with persistent data storage**
  
- **Ease of use data option across data source/application stacks thru Cloud Pak for Data Services**
  - Interoperability through common connectivity
  - Data exchange and virtualization
    - Disparate databases and sources
  - Artificial intelligence to find hidden data patterns and trends
  - Data governance of hundreds of thousands of files and database objects
    - The “Where is my data?” question answered

# DEMO



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