POINT OF VIEW 2024

slalom

Fabric Monitor

A scalable solution deployed in Microsoft Fabric that enable adoption tracking, content governance, and data discovery within the platform.

Analytics Development Process

Most organizations stop here



Identify Data Sources

Identify key data elements for each data domain, identify data sources and data attributes



Explore Data

Profile source data to determine data types, value sets, value ranges, and identify outliers



Define KPIs

Define data quality KPIs and a KPI reporting approach



Report Development

Develop data models and reports to answer key business question



Publish Reports

Publish, share, and refresh dashboards and their data sources



Control and Monitor

Establish processes and procedures for data asset and performance monitoring

This Solution





Asset Inventory and Performance Monitoring (Metadata Pipeline)



The Opportunity

- Monitoring is critical to successful governance and adoption, but most organizations build first and implement monitoring later
- Out of the box options either focus on performance or provide limited information about the adoption and usage within the tenant
- Fabric's unified SaaS platform and all-in-one approach to storage/compute/authentication makes solution deployment easy
- This solution provides:
 - Immediate tactical value and a fully customizable architecture for additional refinement
 - Complete overview of the Power BI/Fabric environment and assets
 - Ongoing monitoring and holistic data discovery

Best-in-Class System Oversight



Performance Monitoring

- CPU usage
- Bandwidth-heavy processes & items
- Performance over time



Inventory & User Activity Monitor

- User activity/usage data
- Catalog/inventory data
- Licensing, permissions, and access control



Enterprise Data Dictionary

- Comprehensive, searchable and always up-to-date Data Dictionary
- Data source connection info such as server, database, schema, and object



Tenant Settings Overview

- Status of all tenant settings (enabled/disabled), including specific AD groups
- Last update time to facilitate each security audits



Microsoft-built reports
+ Log Analytics Integration

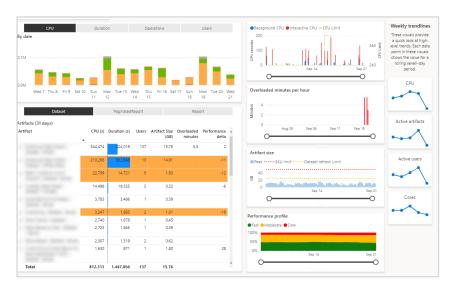
Slalom Power BI Monitoring Accelerator



Performance Monitoring Recommendation:

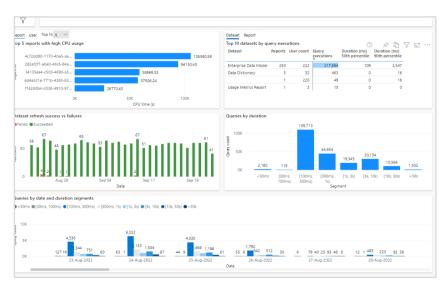
Capacity Metrics App

- Overall CPU usage and capacity health
- Identify bandwidth-Heavy Processes & Artifacts
- Template reports provided by Microsoft
- Data model can be shared, and custom dashboards developed
- 14 day rolling history
- Requires Power BI Premium Capacity



Log Analytics App

- Fine-grain telemetry data (specific queries run, timeouts, user requests, etc.)
- Template reports provided by Microsoft
- Customizable Data Model & Dashboards
- Historical data logging from deployment point onwards
- Requires Azure Log Analytics service (extra cost)
- Requires Power BI Premium Capacity





Inventory & Usage Monitoring Recommendation:

Slalom "Fabric Monitor" Accelerator

Features & Use Cases

- "What data sources are most commonly used in our reports?"
- "Are items being shared according to our organizational policies?"
- "Are users using the reports as much as we think they are?"
- "Are we paying for Pro licenses that are not being used?"
- "Who are our most influential power users who deserve organizational recognition and support?"
- "Are KPIs defined consistently across all data models?"

Available data

- Activity/Usage
- Capacities
- Apps
- Dashboards
- Dashboard tiles
- Dataflows
- Dataflow data source lineage

- Datasets
- Dataset dataflow lineage
- Dataset data source lineage
- Users
- Workspaces
- User access permissions
- Dataset schema

- Parsed data source details
- Datamarts
- Tenant settings
- User Profiles
- User licenses







The "out-of-the-box" tools are just the beginning...

We recognize there are monitoring options available.

Our goal is to create a best-in-class technology solution that **supplements these options** to move your data organization towards better **BI governance** and **visibility**.



Admin Portal



Feature Usage and Adoption Report



A monitoring solution built for data professionals

We understand that the responsibility to monitor and govern a Fabric/Power BI environment often falls to those with data skills.

Familiar Tools

- Integration layer written in **Python**
- Data is parsed and committed to relational tables, rather than unstructured flat files
- Output data queryable in regular
 SQL
- Sample reports built in **Power BI**

Powerful Capabilities

- Fabric-native solution that takes advantage of services you already own
- Full git integration between Fabric and Azure DevOps, allowing for better source control and deployment workflows



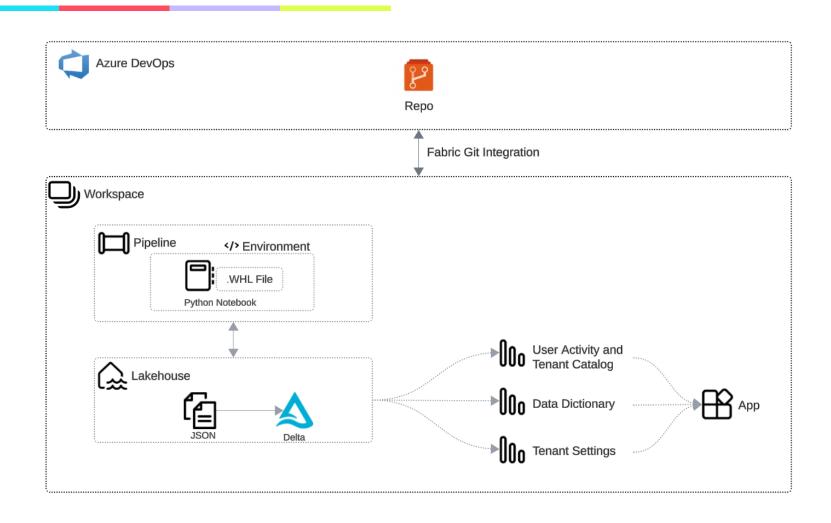


Solution Features and Requirements

| | PERFORMANCE MO | NITORING APPS | INVENTORY MONITORING ACCELERATOR | | NOTES |
|--|------------------|---------------|----------------------------------|-----------------------|---|
| | CAPACITY METRICS | LOG ANALYTICS | | | |
| Features | | | | | |
| Overall CPU usage and capacity health | ✓ | | | | |
| Identify resource-heavy processes & artifacts | ✓ | | | | |
| Fine-grain telemetry data (queries, timeouts, user requests, etc.) | | ✓ | | | |
| Allows for historic data (> 30 days) to be retained | | ✓ | ✓ | | |
| Viewership/adoption metrics | | | ✓ | | |
| Comprehensive item inventory and overview of data estate | | | ✓ | | |
| Comprehensive data dictionary, including measure's DAX definitions | | | ✓ | , | Queryable across the entire tenant |
| Security, permissions, and licensing details | | | ✓ | , | Critical for effective governance |
| Tenant settings overview | | | ✓ | | Typically only available to tenant admins |
| System Requirements | | | | | |
| PBI premium capacity | ✓ | ✓ | ✓ | | |
| | | | Fabric Architecture | Azure Architecture | |
| Azure DevOps | | | ✓ | ✓ | Slalom Power BI Inventory Monitoring Accelerator can be implemented |
| Microsoft Fabric | | | ✓ | | using either Fabric architecture or Azure-based architecture based on best fit for client environment |
| Azure Log Analytics Workspace | | ✓ | | ✓ | |
| Azure PaaS Services: Functions, SQL DB, VNet, Container Registry | | | | ✓ | |

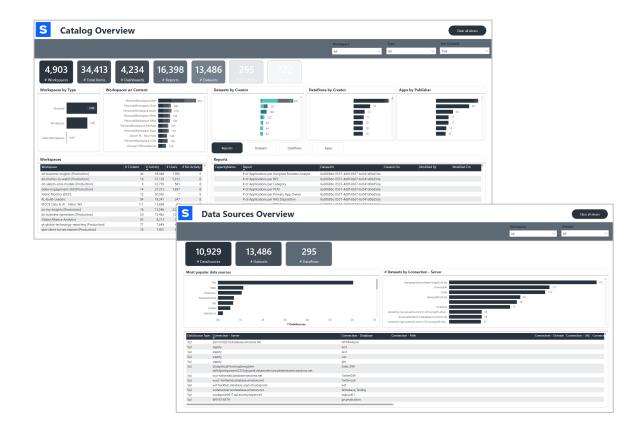


Fabric-based Solution Architecture





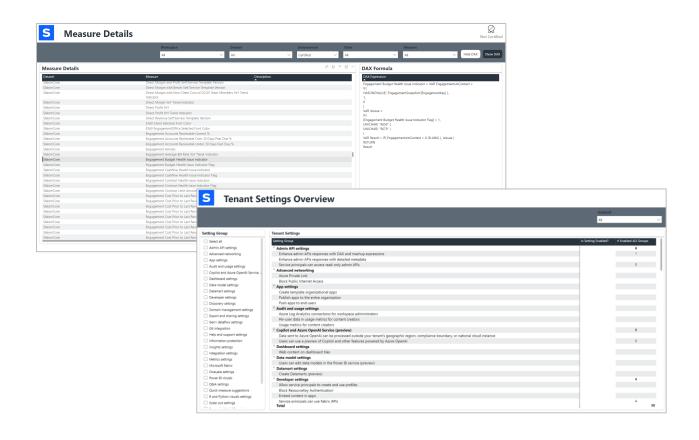
Self-Service Data Discovery Dashboards



Catalog & Data Sources Overview

- Provide an org-wide-accessible report for analysts to browse through to aid in the discovery of existing reports and datasets for re-use.
- Dynamic links allow users to easily request access to new reports & workspaces they don't currently have access to.
- Allow users to sort by usage metrics including page views, unique viewers, recency - an experience not available in the native app explorer.
- Allow users to quickly and easily surface datasets and reports that are "sponsored" or "certified" to promote trust in specific reports.

Self-Service Data Discovery Dashboards



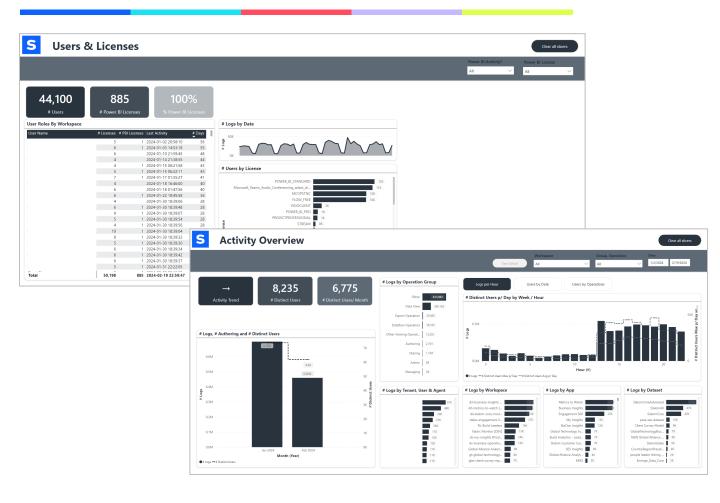
Data Dictionary

- Comprehensive list of all calculated columns and **measures** used across the organization
- Encourage developers to **standardize calculations**
- Accelerate development by facilitating re-use, as opposed to re-build

Tenant Settings

- Surface tenant settings to developers to aid in debugging feature issues
- Skip blind troubleshooting, and proceed to requesting the appropriate permissions from administrators

Enterprise-level Monitoring Dashboards



Users & Licenses

- Review assigned licenses to optimize spend
- Inspect last usage date to intelligently retire unused licenses

Activity Overview

- Monitors overall **Power BI usage**
- Enable admins to identify popular datasets and reports for future certification
- Identify high-usage workspaces
- Make strides towards **enterprise governance** by identifying ad-hoc data sources

Getting Started

Use Case Workshop

2 Hour use case identification workshop with Business and Data leaders

Monitoring Application Deployment

Engagement to stand up Fabric Monitoring capability

Enterprise Governance Journey

Additional engagement of customized length to mature BI governance principles utilizing the monitoring application



What data is being used across our organization and how? Is it cataloged?



Do we have the appropriate roles & processes set up to properly govern our data?



How do we instill a sense of trust in our data across the enterprise?



Let's connect

Patrick Lafferty

Senior Delivery Principal, Cloud Enablement

patrick.lafferty@slalom.com (973) 270-4956

Jordan Hoolachan

Consultant, Microsoft Data & Al

jordan.hoolachan@slalom.com

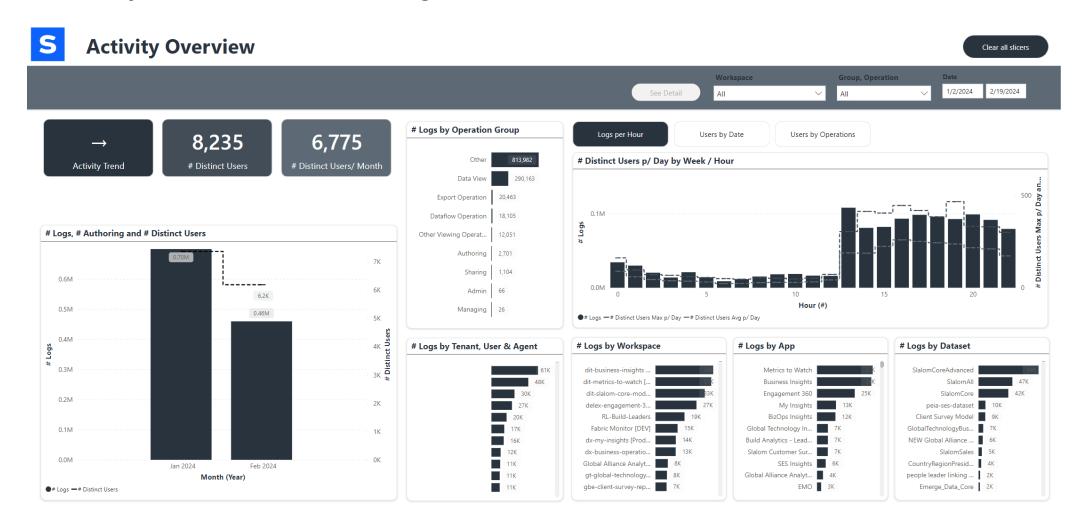
salom

Native Monitoring in Fabric Multiple experiences with different focuses

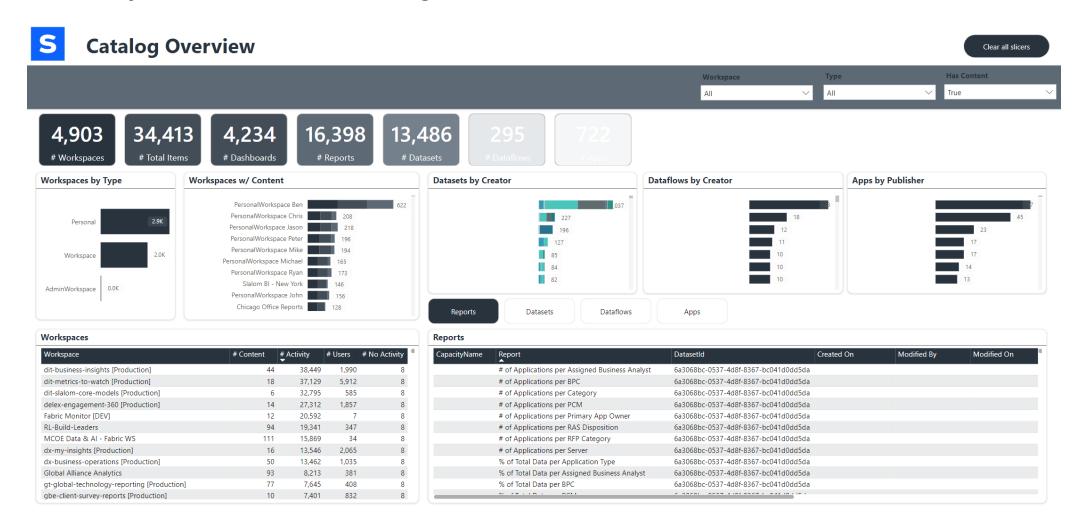
| Feature | Focus | Additional Cost | History | Details |
|-----------------------------------|-----------------------------|--------------------|----------|---|
| Admin Portal | Basic usage and inventory | | N/A | Minimal level of insightOnly available to admins |
| Monitoring Hub | Operational data | | 30 days | |
| Fabric Capacity Metrics App | Performance/capacity health | | 14 days | |
| Log Analytics Integration | Performance data | Yes | 30 days* | Best-in-class telemetry data Fine-grain event logging Customizable data model |
| Purview Hub | Security/Endorsement | | N/A | |
| Feature Usage and Adoption Report | Usage (Limited) | | 30 days | Very limited information as of February 2024 |



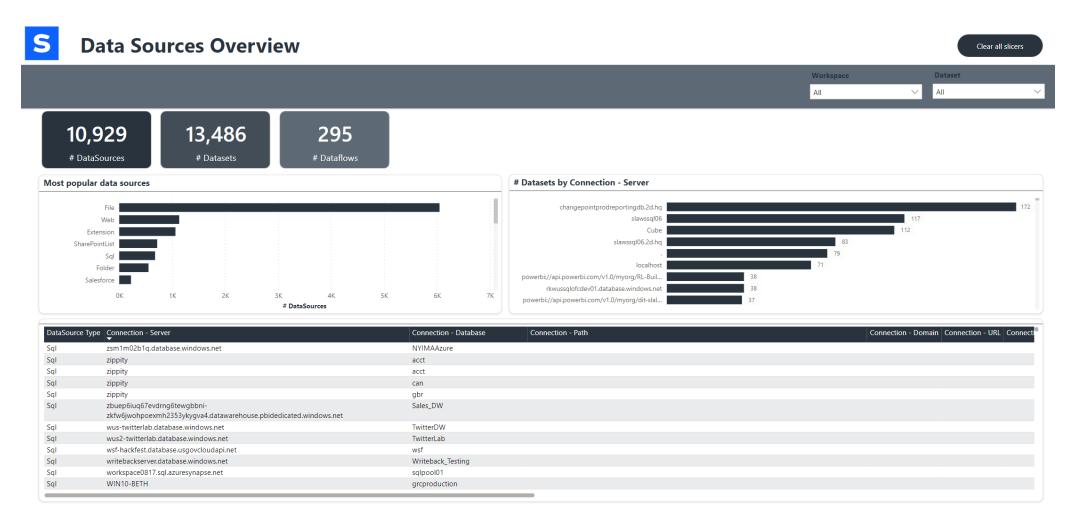
Activity Overview



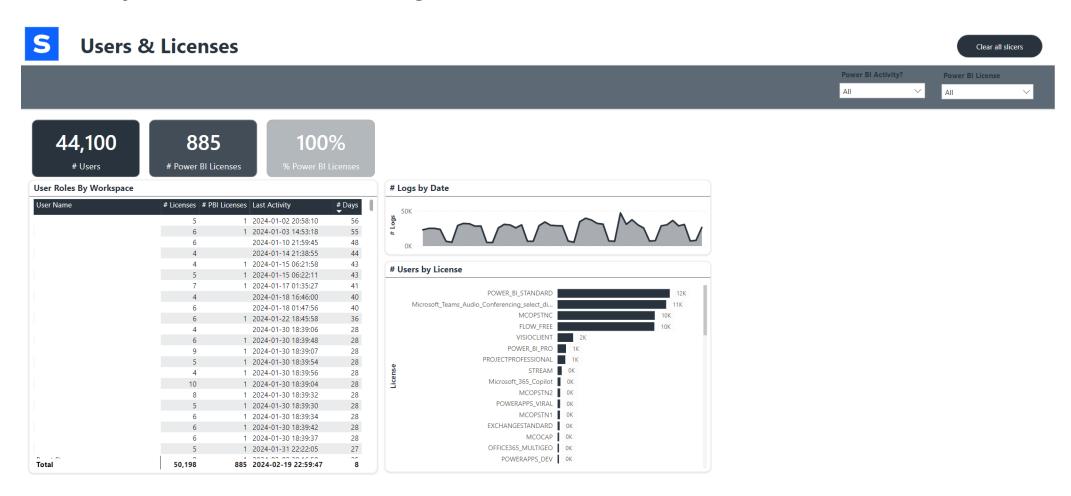
Catalog Overview



Data Sources Overview



Users & Licenses

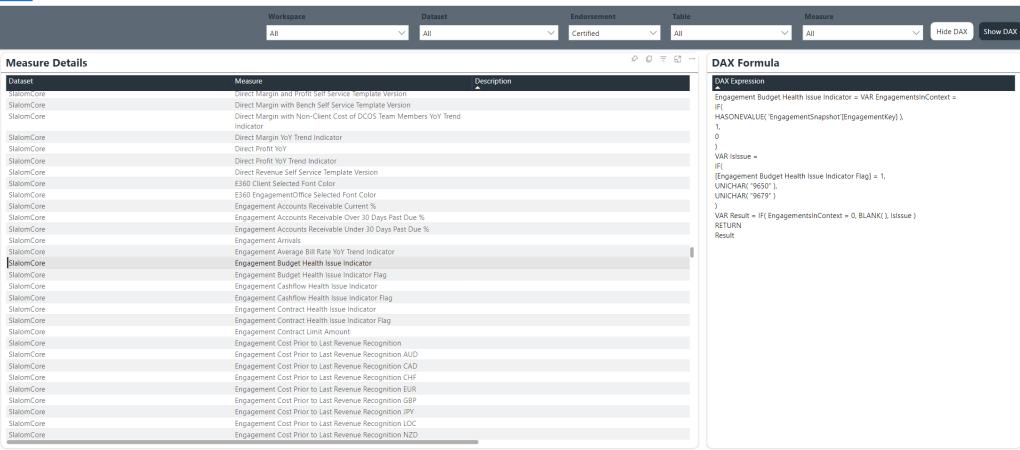


Measures w/ DAX

Enterprise Data Dictionary





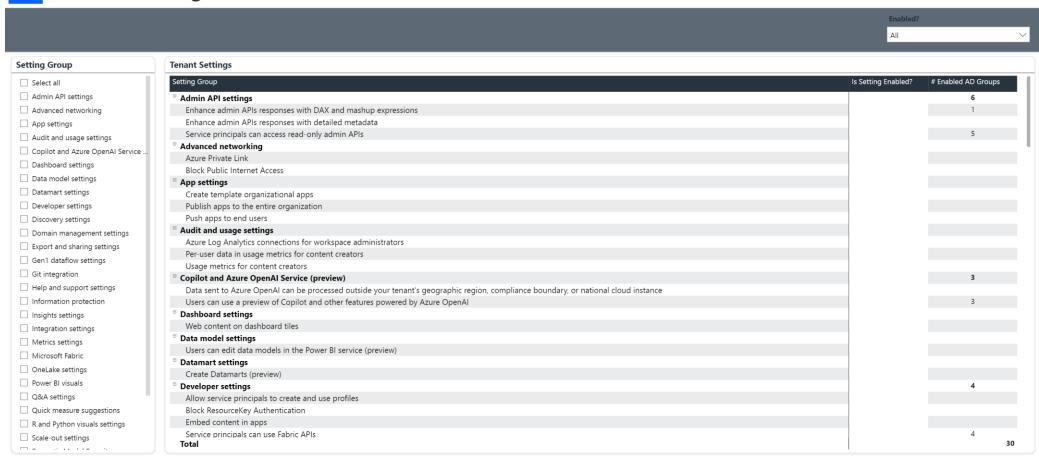


Tenant Settings Overview

Tenant Settings

S

Tenant Settings Overview





Available Data Elements

Lakehouse Structure

