fractal

A comprehensive guide to adopting Microsoft Fabric within your organization

Microsoft Solutions Partner

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Understanding Microsoft Fabric

Understanding Microsoft Fabric

In today's fast paced business world, staying ahead of the curve is not just a goal, it's a necessity.

For organizations looking to embrace innovation and transform their operations, adopting advanced platforms like **Microsoft Fabric** is a strategic imperative. However, adopting Fabric within your organization will take careful planning and a structured approach.

This eBook aims to provide organizations with a comprehensive guide on how to think about adopting Fabric, where to start, and how to overcome potential adoption blockers.

Understanding Microsoft Fabric

At its core, Microsoft Fabric addresses the complexities of modern data landscapes, making it a valuable asset for competitive businesses. Unified compute optimizes and scales resources across data workloads, achieving consistent performance and cost efficiency.

Powerful AI tools enable advanced analytics, predictive modeling, and task automation, driving innovation. Robust governance ensures data privacy, security, and compliance, maintaining trust and meeting regulatory requirements.

With support for multi-cloud operations, exemplified by Delta Lake integration, Fabric provides seamless data management across diverse environments. By adopting Microsoft Fabric, businesses can enhance their data strategy, improve efficiencies, and gain insights that drive growth and innovation.

Understanding Microsoft Fabric

Microsoft Fabric is an advanced, unified platform designed to streamline data integration, engineering, warehousing, and analytics within an organization.

It offers tools and services that allow businesses to seamlessly collect, manage, and analyze data from various sources. Leveraging the cloud, Fabric provides scalability, flexibility, and efficiency, essential in today's data-driven environment.

Integration with other Microsoft services, like Azure and Power BI, ensures a cohesive ecosystem that supports end-to-end data management, empowering businesses to make informed, data-driven decisions.

How to get started with Fabric

How to get started with Fabric

Let’s dive into the practical steps to bring Fabric to life within your organization.
The following four key steps can help you establish a solid foundation for a successful Fabric adoption journey.

Step 1
Assessment of current state

Step 2
Define strategic objectives

Step 3
Identify quick wins

Step 4
Pilot programs

How to get started with Fabric

Step 1
Assessment of current state

The first step in adopting Fabric is conducting a thorough assessment of the current state of your organization.

Current data landscape:

This would include looking at the existing on-premises systems, cloud vendors and partners and evaluating how MS Fabric could play a role in in modernizing and enhancing existing services.

Assess the capabilities of your on-premises databases and systems, such as SQL Server, alongside existing public cloud services and cloud-based data lake house platform for their data storage, management, and analytics capabilities.

Also, it's essential to assess the migration from legacy systems like Teradata and Netezza. These platforms, while once robust, may now pose limitations in terms of scalability, agility, and cost-effectiveness compared to modern solutions like Microsoft Fabric.

BI Applications review:

Analyze the usage and performance of your current BI applications, considering both on-premises and cloud-based solutions.

Assess the compatibility of existing BI tools like Tableau or QlikView with Microsoft Fabric and explore opportunities to leverage Fabric’s capabilities for improved analytics and reporting.

Identify any gaps or limitations in your current BI landscape that Microsoft Fabric can address to drive business value and insights.

How to get started with Fabric

Step 1
Assessment of current state

The first step in adopting Fabric is conducting a thorough assessment of the current state of your organization.

Assess ML environment:

Evaluate your current machine learning (ML) infrastructure, including both on-premises and cloud-based environments, to understand its strengths and limitations.

Assess the tools and frameworks in use, such as TensorFlow, PyTorch, or scikit-learn, and their integration with existing data systems.

Consider how Microsoft Fabric, with its Synapse Data Science capabilities, can enhance your ML environment by providing a comprehensive suite of tools for building, training, and deploying models.

Identify opportunities for optimizing ML workflows, including data preprocessing, model training, and deployment, to reduce complexity and improve efficiency.

Leveraging Fabric's advanced analytics capabilities can also help drive more accurate predictions and deeper insights from your ML models.

How to get started with Fabric

Step 2
Define strategic objectives

Clearly define your strategic objectives and align them with Fabric’s capabilities.

Decentralize data ownership with Data Mesh:

The primary goal of implementing a data mesh framework within Microsoft Fabric is to cultivate a culture of data-driven decision-making across the organization.

This strategic objective revolves around empowering individual business domains to take ownership of standardized data products, facilitated by Fabric's robust governance infrastructure.

By ensuring the availability of high-quality, easily discoverable data, while empowering domain teams to make swift decisions, the organization harnesses the true power of its data resources.

This approach fosters enhanced business agility and ensures that data access is democratized, benefiting all stakeholders within the organization.

Unifying enterprise personas and workflows:

Microsoft Fabric enables collaboration among different roles such as data scientists, SQL analysts, and dashboard experts on a single platform.

This unification streamlines workflows, promotes cross-functional teamwork, and enhances productivity by allowing diverse skill sets to work together seamlessly.

How to get started with Fabric

Step 2
Define strategic objectives

Clearly define your strategic objectives and align them with Fabric’s capabilities.

Migrating your data estate to Microsoft Fabric:

Leveraging Microsoft Fabric's cloud-based architecture, businesses can migrate their existing data estates to a unified platform, fostering data governance, streamlining access, and enabling seamless analytics.

Regardless of your data's original format, whether it's structured databases or semi-structured formats like JSON or XML, Fabric accommodates diverse formats with Fabric's data lake or data warehouse structures to ensure smooth integration and optimal efficiency.

This process ensures that your data can be effectively utilized within Fabric's scalable architecture, empowering advanced analytics leveraging AI and machine learning.

It is crucial to assess the maturity and features of Microsoft Fabric to ensure they align with your business requirements and goals, maximizing the benefits of this transition.

How to get started with Fabric

Step 2
Define strategic objectives

Clearly define your strategic objectives and align them with Fabric’s capabilities.

Simplifying current cloud-based data platforms:

When comparing with cloud-based data Lakehouse platform, organizations often face limitations such as complex setup, integration challenges, and steep learning curves.

Microsoft Fabric addresses these issues with seamless integration, intuitive interfaces, and comprehensive documentation.

Fabric's unified management simplifies administrative tasks, while its scalability and performance optimization capabilities ensure efficient operations and enhanced insights.

Unlocking real-time action with Data Activator:

Data Activator's strategic objective is to transform data insights into actionable triggers.

By enabling real-time alerts based on pre-defined conditions, Data Activator empowers businesses to proactively manage performance and respond to critical events.

This fosters a data-driven culture where insights translate into immediate actions, ultimately accelerating decision-making and optimizing business outcomes.

How to get started with Fabric

Step 3
Identify quick wins

Spot opportunities for easy wins or quick successes where Fabric can provide immediate value.

Unlocking Power BI efficiency:

The combination of flexible capacity options, automatic optimization, unified data platform, and pay-as-you-go pricing can result in lower Power BI costs and better performance for organizations upgrading to Microsoft Fabric.

Leverage Shortcuts and OneLake Integration:

Utilize Fabric's shortcut feature to seamlessly access and share data stored in OneLake across different workspaces and experiences.

Enable direct query mode to Power BI, leveraging OneLake as a unified storage system, to streamline data access and enhance reporting capabilities.

Migrate Spark Pool to Fabric:

Explore the possibility of migrating existing Spark pools to Fabric's data engineering environment.

By leveraging Fabric's integrated Spark platform and data engineering capabilities, organizations can enhance scalability, performance, and resource management for large-scale data processing tasks.

How to get started with Fabric

Step 3
Identify quick wins

Spot opportunities for easy wins or quick successes where Fabric can provide immediate value.

Migrate Synapse data warehouse and dedicated SQL to Fabric:

Migrating your Synapse data warehouse and dedicated SQL to Microsoft Fabric involves moving these resources to Fabric's Data Warehouse and Lakehouse.

The Data Warehouse handles structured data for complex queries, while the Lakehouse supports both structured and unstructured data for advanced analytics.

This migration streamlines operations, improves data access speeds, and lays the groundwork for advanced data initiatives within a unified platform.

Migrate existing Python/SQL code to Synapse Notebook:

Transition existing notebooks and data processing workflows to Synapse Notebooks within the Fabric environment. Synapse Notebooks offer a unified environment for data exploration, visualization, and collaboration, enabling seamless integration with other Fabric components and services.

Analyze the logic of your Azure Functions and stored procedures. Then, re-implement that functionality within the Fabric environment. This might involve using Synapse Notebooks for Python code, and data flows for data manipulation tasks previously handled by stored procedures.

How to get started with Fabric

Step 4
Pilot Programs

Consider starting with pilot programs in specific departments or business units. These smaller-scale initiatives allow for testing Fabric’s capabilities in a controlled environment before scaling up to the entire organization.

Data Mesh exploration:

Conduct a pilot program to explore Fabric's Data Mesh capabilities, decentralizing data ownership and enabling domain-specific data access and analysis. Evaluate the feasibility of empowering business units to independently manage and derive insights from their data while ensuring governance and compliance.

Fabric’s data mesh architecture supports organizing data into domains and enabling federated governance, empowering each business unit/department to define its own rules and restrictions according to its specific business needs.

Kusto query for real-time capabilities:

Initiate a pilot project to leverage Kusto query for real-time data processing and analytics. Evaluate its performance in handling large-scale, real-time data streams and its integration with other Fabric components. Assess the benefits of real-time data insights for operational efficiency and decision-making processes within your organization.

Data Activator pilot:

Launch a pilot program to explore Fabric's Data Activator feature, a no-code experience for automatically triggering actions based on changing data patterns or conditions. Assess the ability to monitor Power BI reports and event streams, detect thresholds or patterns, and automatically initiate actions such as email notifications, Teams alerts, or Power Automate workflows.

Overcoming Fabric adoption blockers

Resistance to change

Resistance to change is a pervasive blocker in any technology adoption process. To address this, organizations must invest in change management strategies. Communicate the benefits of Fabric transparently, involve employees in the decision-making process, and provide comprehensive training to ease the transition.

Here's how organizations can address these concerns when transitioning to Microsoft Fabric:

Overcoming Fabric adoption blockers

Organizational structure:

Traditional IT-centric data architectures often struggle to accommodate evolving business needs and agile methodologies. Microsoft Fabric's unification with a Software as a Service (SaaS) foundation offers a flexible approach that aligns with diverse organizational structures.

By centralizing data storage with OneLake and integrating AI capabilities seamlessly, Fabric enables organizations to adapt their data architectures to changing business requirements without disrupting existing operations.

Legacy systems:

Legacy systems pose challenges in terms of scalability, maintenance, and integration with modern analytics platforms. Microsoft Fabric provides solutions for data integration, analytics, and AI, leveraging cloud-native technologies and scalable infrastructure.

With components like Synapse Data Engineering and Synapse Data Warehouse, Fabric enables organizations to modernize their data infrastructure and unlock actionable insights from their existing data assets.

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Siloed Business Operations:

Siloed business operations hinder collaboration and data sharing across departments. Microsoft Fabric addresses these issues by:

- **Centralized data storage and governance**: Fabric's unified platform centralizes data, enabling seamless collaboration and insights across departments.
- **Integration of tools:** Integrates Power BI, Data Factory, and real-time intelligence for cross-functional alignment and real-time decision-making.
- **Eliminating data duplication:** Virtualizes data lake storage in ADLSg2, Amazon S3, and soon Google Storage to prevent data duplication and streamline data sharing.

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Concerns about reliability and adoption:

Organizations may hesitate to adopt new technologies like Microsoft Fabric due to concerns about reliability and maturity. However, Fabric's foundation on a Software as a Service (SaaS) model and integration with industry-leading Azure services provide a robust and proven platform for analytics and data management and the familiar Spark engine.

By leveraging Fabric's comprehensive suite of services, organizations can accelerate their digital transformation journey with confidence. For existing Azure Data Factory (ADF) users, Fabric offers a smooth transition. It can potentially mount existing ADF pipelines, minimizing disruption while you explore Fabric's broader capabilities.

Early-stage nature of Fabric platform:

While Microsoft Fabric may still be evolving, its roadmap and ongoing development efforts demonstrate a commitment to innovation and customer success.

Fabric's integration with Azure services and industry-specific solutions, coupled with its unified data lake storage (OneLake), empower organizations to structure their data estates according to the principles of a data mesh architecture. By staying informed about Fabric's updates and best practices, organizations can navigate the evolving landscape of analytics and data management with agility and resilience.

Data security concerns

Addressing data security concerns in Microsoft Fabric is critical to ensuring the protection of sensitive information and maintaining compliance with regulatory standards.

Here's how organizations can mitigate specific challenges related to data governance, data ingestion, sharing, and security.

Overcoming Fabric adoption blockers

Layered approach in Microsoft Fabric to secure your data:

- **Workspaces:** Fabric assigns roles (Owner, Contributor, Reader) to users within a workspace. These roles govern their access to all items (reports, dataflows, etc.) within that workspace.
- **Items:** Beyond workspace roles, individual items (reports, data flows) can have specific permissions assigned. This allows granular control over who can view, edit, or manage specific data assets.
- **SQL integration:** For data stored in Azure Synapse Analytics, Fabric integrates with existing SQL permissions. This enables you to manage access to specific tables or columns directly within the SQL environment.

OneLake Security (preview):

Table/Folder level security: OneLake Security, a new feature under development, offers fine-grained access control within OneLake itself. This allows you to define permissions for specific folders or tables within a data lake, going beyond workspace and item levels. This provides additional flexibility for securing sensitive data within OneLake.

Best practices for successful Fabric adoption

Best practices for successful Fabric adoption

Here, we explore some best practices that will ensure your organization maximizes the value it gets from Fabric.

1. Executive leadership support

2. Build a Center of Excellence

3. Continuous training and upskilling

4. User feedback and iterative improvement

5. Scalability planning

Best practices for successful Fabric adoption

1. Executive leadership support

Get solid support from executive leadership. Leadership buy-in is crucial for overcoming resistance, securing resources, and ensuring the commitment necessary for a successful Fabric adoption journey. The leadership team should:

- **Understand the ROI on adopting MS Fabric**
    - Executive leadership plays a pivotal role in understanding the value proposition of adopting Microsoft Fabric. This involves comprehending the potential return on investment (ROI) that Fabric offers in terms of cost savings, increased efficiency, accelerated time-to-insight, and improved decision-making.
    - Executives need to grasp how Fabric's unified platform can streamline data analytics workflows, enhance productivity, and empower organizations to derive actionable insights from their data assets.
- **Give freedom to the implementation teams on carrying out POCs**
    - Executive leadership can foster a culture of innovation and experimentation by giving implementation teams the autonomy to conduct Proof of Concepts (POCs) with Fabric.
    - By providing freedom and support to implementation teams, executives enable them to explore new ideas, test hypotheses, and prototype solutions in a controlled environment.

Best practices for successful Fabric adoption

2. Build a Center of Excellence

Establish a Fabric Center of Excellence (CoE) within your organization. This dedicated team will champion Fabric initiatives, provide guidance, and drive best practices across different departments, ensuring consistency and efficiency. Some of the roles and responsibilities would include:

- Collaboration with the MS product team for best practices, features, and be warned about various pitfalls.
- Giving accurate cost estimates.
- Prepare guidelines for data governance.
- Mentor implementation teams.

3. Continuous training and upskilling

The technology landscape is ever evolving, and continuous training is essential. Invest in ongoing training programs to keep your team abreast of the latest Fabric updates, features, and best practices.

- Exploring Fabric's integrated analytics experiences for data engineering, data science, data warehouse, real-time analytics, and Power BI.
- Enhancing collaboration and efficiency through shared experiences.
- Understanding the foundational aspects of OneLake as a unified storage system.
- Leveraging shortcuts for seamless data sharing and collaboration.

Best practices for successful Fabric adoption

4. User feedback and iterative improvement

Encourage a culture of continuous improvement by actively seeking user feedback.

- Identify challenges faced by business users and mitigating them by reaching out to MS team.
- Gathering ways of working experience from developers and coming up ways to better it.
- Reporting bugs and issues to the MS team.

5. Scalability planning

Implementations leveraging MS Fabric offer seamless scalability in alignment with organizational requirements. Below outlines how an organization can strategically plan for scaling such implementations.

- On successful POC completion, develop a comprehensive plan for integrating Fabric into existing workloads.
- Strategize onboarding more data and users with minimal downtime.
- Promote the benefits of Fabric within the organization and encourage adoption by other project teams.

Why Fractal?

Why Fractal?

Adopting Fabric is not just about implementing a new technology; it's about transforming the way your organization operates. A common misconception is that adoption relates primarily to usage or the number of users.

There's no question that usage statistics are an important factor. However, usage isn't the only factor. Adoption isn't just about using the technology regularly; it's about using it effectively.

By strategically approaching adoption, addressing blockers, and embracing best practices, organizations can unlock the full potential of Fabric.

Whether it's streamlining processes, enhancing collaboration, or gaining actionable insights from unified data, Fabric can be a game-changer.

Fractal offers a multi-step approach to implementing Fabric for enterprises. It empowers businesses by enhancing their data and AI capabilities, fostering seamless integration, and facilitating a more efficient and insightful operational landscape.

Contact us to speak to one of our experts and get started on your Fabric adoption journey with Fractal.

Additional resources:

Visit Fabric webpage

Download Fabric flyer

Case study: End-to-end data engineering solution with Fabric

Learn more about Microsoft Fabric

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