SAP PRESS



SAP® Business Data Cloud

An Introduction

- Explore SAP Business Data Cloud's architecture for data, analytics, planning, and AI
- Build data products with SAP Datasphere, extend them with SAP Databricks, and analyze them with SAP Analytics Cloud
- Modernize your SAP BW system and lay the foundation for enterprise AI

Geetha Madhuri Bobbili

Rheinwerk Publishing

Contents

Preface 15

1 What Is SAP Business Data Cloud? 21

1.1 The Evolution of Enterprise Data: From Silos to Unified Data Fabrics 22
1.1.1 The Era of Data Silos 22
1.1.2 The Rise of Enterprise Data Warehouses 23
1.1.3 The Emergence of Data Lakes and Lakehouses 23
1.1.4 The Shift Toward Data Fabrics 24
1.1.5 The Emergence of Business Data Fabrics 24

1.2 Why Traditional Data Extraction Loses Business Context and Trust 25
1.2.1 Business Context in an SAP System 25
1.2.2 Traditional Extraction 26
1.2.3 Where Business Context Is Lost 27
1.2.4 From Lost Context to Lost Trust 28

1.3 Modern Enterprise Data Requirements and Architectural Challenges 29

1.4 SAP Business Data Cloud: Evolution of the Business Data Fabric 31

1.5 Core Value Pillars of SAP Business Data Cloud 34

1.6 Key Personas and Roles in SAP Business Data Cloud 37

1.7 Positioning SAP Business Data Cloud Within SAP's Data, Analytics, and AI Strategy 40

1.8 Summary 42

2 Architectural Overview and the Semantic Foundation 43

2.1 The Architectural Framework: Source-to-Business-Insight Data Flow 44
2.1.1 Core Architectural Principles 45
2.1.2 End-to-End Business Data Flow 46

2.2 Key Components of SAP Business Data Cloud Architecture 48
2.2.1 SAP Business Data Cloud Cockpit 49
2.2.2 Foundation Services and SAP HANA Cloud, Data Lake Files 49
2.2.3 SAP Datasphere HDLF Object Store 50
2.2.4 Data Products 52
2.2.5 SAP HANA Cloud 52
2.2.6 SAP Datasphere 54
2.2.7 SAP Databricks 55

2.2.8 SAP Snowflake 56
2.2.9 SAP Business Data Cloud Connect 58
2.2.10 Modernizing SAP BW and SAP BW/4HANA, Private Cloud Edition 59
2.2.11 SAP Master Data Governance 61
2.2.12 SAP Analytics Cloud 62
2.2.13 Intelligent Applications 63
2.2.14 AI Foundation 64

2.3 Foundation Services for Data Ingestion, Harmonization, and Data Products 66

2.4 End-to-End Banking Transformation Scenario with SAP Business Data Cloud 69
2.4.1 Establishing a Unified Enterprise Data Foundation 71
2.4.2 Harmonizing Business Semantics with SAP Datasphere 71
2.4.3 Modernizing Existing SAP BW Investments 72
2.4.4 Enabling Enterprise AI and Advanced Analytics 73
2.4.5 Delivering Enterprise Insights with SAP Analytics Cloud 74

2.5 Summary 75

3 Getting Started with Onboarding and System Formation 77

3.1 Onboarding Concepts 77
3.1.1 Administrative Foundation 78
3.1.2 SAP for Me as the Onboarding Entry Point 79
3.1.3 Digital Onboarding Resources 80
3.1.4 Onboarding Activities in SAP Business Data Cloud 80
3.1.5 Identity and Authentication Considerations 81
3.1.6 From Onboarding to System Formation 82

3.2 Provisioning 82
3.2.1 Licensing and Capacity Units 83
3.2.2 Provisioning the SAP Business Data Cloud Core 83
3.2.3 Provisioning SAP Datasphere 85
3.2.4 Provisioning SAP Analytics Cloud 86
3.2.5 Provisioning SAP Databricks 89
3.2.6 Provisioning Guidance and Constraints 91

3.3 System Formation and Tenant Wiring 92
3.3.1 Creating a Formation 92
3.3.2 System Participation and Cardinality Rules 94
3.3.3 Tenant Wiring (Including Components) 95
3.3.4 Key Constraints and Best Practices 95

3.4 Tenant Rewiring 96
3.4.1 What Tenant Rewiring Is and Is Not 96
3.4.2 Rewiring Process Overview 97
3.4.3 Capacity Units Allocation After Rewiring 98
3.4.4 Postrewiring Integration 99

3.5 SAP Business Data Cloud Cockpit as the Control Plane 99
3.5.1 Role of the Cockpit in the SAP Business Data Cloud Architecture 99
3.5.2 Catalog and Data Product Discovery 100
3.5.3 Governance and Access Control 101
3.5.4 System Landscape and Monitoring 102
3.5.5 Intelligent Applications and Content Activation 102
3.5.6 Federated Access and Data Integration 103
3.5.7 From Control Plane to Operational Platform 103

3.6 Activation of SAP-Managed Content 103

3.7 Summary 105

4 Understanding Data Products in SAP Business Data Cloud 107

4.1 Introduction to Data Products 108
4.1.1 From Traditional Data Integration to Data Products 108
4.1.2 Why Data Products Matter in Modern Enterprise Architectures 109
4.1.3 From Data as a Service to Data as a Product 110
4.1.4 Role of Data Products in SAP Business Data Cloud 111

4.2 Core Architecture of Data Products 112
4.2.1 Business-Centric and Domain-Oriented Design 113
4.2.2 Data Products as Governed Semantic Business Assets 114
4.2.3 Stable Interfaces and Governed Consumption 115
4.2.4 Input Ports, Output Ports, and Product Interfaces 116
4.2.5 Open Ecosystem Integration 117
4.2.6 Role of the Data Product Studio 118

4.3 Metadata and Semantic Foundations 119
4.3.1 Metadata, Business Semantics, and Context Preservation 119
4.3.2 Open Resource Discovery 120
4.3.3 Core Schema Notation Interoperability Specification 121

4.4 Types of Data Products 122
4.4.1 SAP-Managed Data Products 123
4.4.2 Customer-Managed Data Products 126
4.4.3 Primary Data Products 130
4.4.4 Derived Data Products 131

4.4.5 Interface Data Products 133
4.4.6 Data Packages and Bundled Business Content 134

4.5 Data Product Discovery, Ownership, and Consumption 136
4.5.1 Roles and Personas in the Data Product Ecosystem 137
4.5.2 Domain Ownership, Governance, and Lifecycle Management 138
4.5.3 Data Product Discovery in SAP Business Data Cloud 139
4.5.4 External Consumption Through Delta Sharing 141

4.6 Data Democratization and Marketplace-Driven Data Consumption 142

4.7 Data Products for Analytics and AI 145
4.7.1 Data Products as the Foundation for Analytics 146
4.7.2 AI-Ready Business Context and Semantic Enrichment 146
4.7.3 Future Direction of Data Products in SAP Business Data Cloud 148

4.8 Summary 149

5 Data and Semantic Modeling with SAP Datasphere 151

5.1 SAP Datasphere as the Foundation of a Business Data Fabric 152

5.2 Role of SAP Datasphere in SAP Business Data Cloud 153

5.3 Architectural Positioning 154

5.4 Architectural Building Blocks of SAP Datasphere 156
5.4.1 Space Management 157
5.4.2 Data Integration and Connectivity 160
5.4.3 Semantic Onboarding 163
5.4.4 Catalog and Marketplace 164
5.4.5 Repository Explorer 166
5.4.6 Security and Administration 168
5.4.7 Data Integration Monitor 170
5.4.8 SAP Datasphere Object Store and Apache Spark Runtime 172

5.5 Data Builder: Technical Data Modeling 174
5.5.1 Data Acquisition 175
5.5.2 Data Preparation 179
5.5.3 Data Modeling 180

5.6 Business Builder: Semantic Business Modeling 182
5.6.1 Business Entities 183
5.6.2 Fact Models 184
5.6.3 Consumption Models 184

5.6.4 Authorization Scenarios 184
5.6.5 Business Scenario: Workforce Cost and Utilization Analysis Using the Business Builder 185

5.7 Data Sharing Cockpit: Central Hub for Data Provider Management 186
5.7.1 Activating or Creating a Data Provider Profile 188
5.7.2 Creating a Customer-Managed Data Product 191
5.7.3 Business Scenario: External Economic Signals Customer-Managed Data Product 194

5.8 Business Scenario: Financial Performance Analysis Using Harmonized Data Products 198

5.9 Summary 200

6 Advanced Data Engineering and AI/ML with SAP Databricks 201

6.1 Role of SAP Databricks in SAP Business Data Cloud 201

6.2 Architectural Integration 203
6.2.1 Deployment Models 203
6.2.2 Architectural Building Blocks 204
6.2.3 Integration Flow 205

6.3 Zero-Copy Data Access and Bidirectional Data Sharing 206
6.3.1 Zero-Copy Data Access 206
6.3.2 Bidirectional Data Sharing 207
6.3.3 Role of Delta Sharing 208
6.3.4 Benefits of Zero-Copy and Bidirectional Architecture 209

6.4 SAP Business Data Cloud Connect and the Open Data Ecosystem 210
6.4.1 Extending SAP Business Data Cloud Beyond SAP 211
6.4.2 Integration Model and Architecture 212
6.4.3 Integration with External Data Platforms 213
6.4.4 Data Product–Driven Integration 219
6.4.5 Governance and Security in an Open Ecosystem 219
6.4.6 Key Capabilities 220
6.4.7 Benefits of an Open Data Ecosystem 220

6.5 Data Engineering and AI Capabilities 221
6.5.1 Working with SAP Databricks 222
6.5.2 End-to-End Data Engineering and AI Flow 222
6.5.3 Data Engineering Capabilities 224
6.5.4 Advanced Analytics and Machine Learning 224
6.5.5 Machine Learning Lifecycle Management 224

6.5.6 Real-Time and Streaming Capabilities 225
6.5.7 Generative AI and Advanced AI Scenarios 225
6.5.8 Integration with SAP Business Data Cloud 225
6.5.9 Execution Boundary Across the Architecture 225
6.6 Design Considerations and Best Practices 226
6.7 Business Scenario: Enriching an SAP Data Product with AI Insights 228
6.8 Summary 238

7 Modernizing SAP BW with SAP Business Data Cloud 239
7.1 The Evolution of SAP BW: From On-Premise to a Cloud-Native Architecture 240
7.2 Challenges of Legacy SAP BW Architectures 241
7.3 Role of Modernization in SAP Business Data Cloud 243
7.4 SAP Business Data Cloud Architecture for SAP BW Modernization 245
7.5 Transition Paths for SAP BW Modernization: Lift–Shift–Innovate Framework 247
7.5.1 Lift Phase 248
7.5.2 Shift Phase 252
7.5.3 Innovate Phase 261
7.6 Modernization Boundaries and Coexistence Models 263
7.6.1 Architectural Boundaries in SAP BW Modernization 264
7.6.2 Functional Separation of Responsibilities 264
7.6.3 Coexistence Models 265
7.6.4 Decision Criteria for Boundary Definition 265
7.7 Business Scenario: Transforming SAP BW into a Data Product–Driven Enterprise 266
7.8 Summary 270

8 Analytics and Planning with SAP Analytics Cloud 271
8.1 Role of SAP Analytics Cloud in the SAP Business Data Cloud Ecosystem 272
8.2 Architectural Building Blocks of SAP Analytics Cloud 273
8.3 Data Connectivity and Modeling 275
8.3.1 Data Connectivity (Live vs. Import) 276

8.3.2 Modeling Concepts: Model Types, Dimensions, Measures, and Hierarchies 279
8.3.3 Choosing Between Datasets and Models 282

8.4 Analytics and Story Design 284
8.4.1 The Optimized Story Experience and Unified Capabilities 285
8.4.2 Visualization Best Practices 286
8.4.3 Advanced Story Design and Scripting 287
8.4.4 Ad Hoc Analysis with Data Analyzer 288
8.4.5 Executive Presentations with SAP Digital Boardroom 289

8.5 Planning and Forecasting 290
8.5.1 Planning Process in SAP Analytics Cloud 290
8.5.2 Integrated Enterprise Planning with SAP Analytics Cloud 291
8.5.3 Collaborative Planning and Workflows 292
8.5.4 Multistep Calculations and Data Actions 293
8.5.5 Seamless Planning with SAP Datasphere 293
8.5.6 Business Scenario: Integrated Supply Chain Planning with SAP Business Data Cloud 296

8.6 Augmented Analytics and AI 298
8.6.1 Automated Discovery and Predictive Intelligence 298
8.6.2 AI-Assisted Analysis and Decision Support 299
8.6.3 Natural Language Interaction and Joule 300

8.7 Security, Governance, and Collaboration 301
8.7.1 Identity Management and Single Sign-On 302
8.7.2 User and Team Management 302
8.7.3 Role-Based Access Control 303
8.7.4 Data Access Control and Row-Level Security 303
8.7.5 Data Locking and Validation Rules 305
8.7.6 Auditing and Activity Logging 306
8.7.7 Collaboration 306

8.8 Design Best Practices for SAP Analytics Cloud 306
8.8.1 Model Design 307
8.8.2 Performance Optimization 307
8.8.3 Story and Dashboard Design 308
8.8.4 Planning Design Best Practices 308
8.8.5 Governance and Content Management 309
8.8.6 Integration with SAP Datasphere and Business Data Cloud 309

8.9 Business Scenario: From Data Product to Strategic Decision 310

8.10 Summary 313

9 Delivering Business Value with Intelligent Applications 315

9.1 Intelligent Applications in SAP Business Data Cloud 315

9.2 Business Value and Strategic Benefits of Intelligent Applications 318

9.3 Intelligent Application Architecture 320

9.4 Installing SAP-Managed Intelligent Applications 324

9.5 Extending and Customizing Intelligent Applications 331

9.6 Intelligent Applications Across Lines of Business 337

9.6.1 Finance Intelligence and Cloud ERP Intelligence 337

9.6.2 People Intelligence 338

9.6.3 Supply Chain Intelligence 339

9.6.4 Spend Intelligence 339

9.6.5 Revenue Intelligence 339

9.6.6 Cross-LoB Intelligence 340

9.6.7 Intelligent Applications and Operational Decision-Making 340

9.7 Business Scenario: Enhancing a Finance Intelligence Application 341

9.8 Summary 345

10 Adoption, Governance, and the Future of SAP Business Data Cloud 347

10.1 Adoption Patterns for SAP Business Data Cloud 348

10.2 Governance Principles in a Business Data Fabric 352

10.3 Operating Models for Data Product Ownership 355

10.4 Organizational Readiness and Role Evolution 358

10.5 Future Direction of SAP Business Data Cloud 362

10.6 Summary 364

The Author 365

Index 367

Chapter 3

Getting Started with Onboarding and System Formation

Adopting SAP Business Data Cloud begins with provisioning technical components. Before users can model data, activate SAP-managed content, or integrate external platforms, the organization must establish the administrative and technical foundation that allows the environment to operate as a connected system.

This foundation is created through a structured onboarding process. It starts with commercial and administrative access in SAP for Me, continues with identity and tenant setup, and progresses toward the formation of an integrated landscape in which the core SAP Business Data Cloud components can work together. These activities are not isolated setup tasks. They define how administrators access the platform, how users are authenticated, how solution components are provisioned, and how the overall environment is governed from the beginning.

For this reason, onboarding should be understood as the first operational phase of SAP Business Data Cloud adoption. It transforms the product subscription into a working landscape that can later support data products, intelligent applications, analytical scenarios, and cross-system data sharing.

In this chapter, in Section 3.1, we begin with the onboarding concepts that establish the administrative and technical foundation for SAP Business Data Cloud. Section 3.2 explains how the core components are provisioned through SAP for Me, while Section 3.3 describes how these provisioned tenants are connected through system formation and tenant wiring. Section 3.4 explains how existing standalone tenants are brought into the landscape through tenant rewiring. Section 3.5 then examines the SAP Business Data Cloud cockpit as the central control plane for managing the environment. Finally, in Section 3.6, we look at how SAP-managed content, including intelligent applications and data packages, is activated once the landscape is in place.

3.1 Onboarding Concepts

The onboarding journey for SAP Business Data Cloud is designed to guide organizations from contract start through implementation and into productive use. Rather than presenting setup as a single provisioning event, SAP structures onboarding as a phased process that helps customers establish access, prepare the implementation team, build solution

knowledge, and transition into live operations. This structured approach is important because SAP Business Data Cloud combines several tightly related services, and their value depends on correct coordination from the beginning. At a high level, the onboarding journey consists of four phases:

- Getting started with SAP
- Planning the implementation
- Enabling project teams
- Preparing for go-live

The first of these phases is the most relevant for initial platform setup. It focuses on creating the basic foundation required to access the solution and begin administrative preparation. For SAP Business Data Cloud, this includes obtaining the necessary SAP user identities, accessing SAP for Me, provisioning the required solution components, setting up identity services, performing the initial system login, and preparing for later activities such as intelligent application installation, data package activation, and system integration.

From an implementation perspective, onboarding in SAP Business Data Cloud can be understood as a progressive enablement sequence. The environment is first made accessible from an administrative standpoint, then technically provisioned, and finally integrated into a usable formation. This progression is important because the platform is not delivered as one monolithic tenant. Instead, it is composed of multiple cloud services that must be provisioned and then wired together into an operational landscape.

3.1.1 Administrative Foundation

The onboarding process begins with administrative access. After the SAP Business Data Cloud contract is finalized, the designated technical administrator, sometimes referred to as the IT contact, receives the initial communication from SAP. This person is typically granted the first S-user ID for the customer organization and is assigned the highest level of authorization for initial setup activities.

The S-user ID plays a central role in SAP onboarding. It is the identity required to access protected SAP resources such as SAP for Me, support services, product documentation, software-related assets, and learning content. In practical terms, it acts as the administrative credential that allows your organization to begin provisioning and managing its SAP landscape.

Although the S-user is the operational identity used for access to SAP systems and support resources, SAP Universal ID provides a broader identity framework for the individual user. It allows multiple SAP user identities to be linked under a single personal login, which simplifies access across SAP sites and preserves learning records, certifications, and other personal, SAP-related history. In a project context, this is especially useful for administrators and consultants who may work across multiple SAP systems or organizational assignments over time.

Together, the S-user ID and SAP Universal ID establish the personal access layer required to begin working with SAP Business Data Cloud.

3.1.2 SAP for Me as the Onboarding Entry Point

Once the required user identity is available, onboarding activities are primarily initiated through SAP for Me. SAP for Me serves as the main customer-facing administrative portal for SAP cloud products. For SAP Business Data Cloud, it is how you access your product package, review entitled solutions, manage provisioning activities, and later monitor solution resources and integrations.

Figure 3.1 shows the SAP for Me portal, where you can access your product portfolio and navigate to the SAP Business Data Cloud product package.

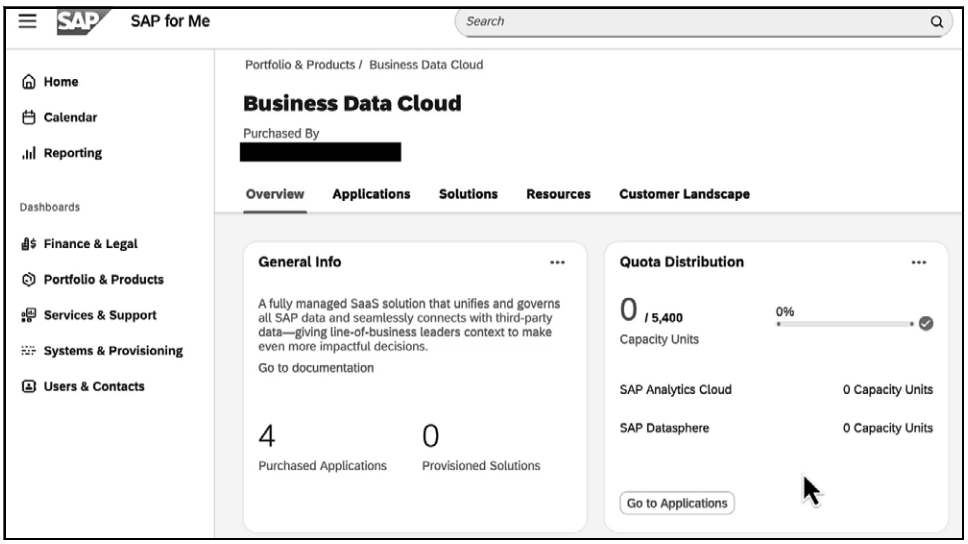


Figure 3.1: SAP for Me Portal: Portfolio & Products Overview

Within SAP for Me, you can access the SAP Business Data Cloud provisioning and integration dashboard. This dashboard acts as the operational entry point for the product package. It provides visibility into the applications included in the subscription, their provisioning status, quota allocation, and the resources associated with each provisioned component.

From a governance perspective, this is an important concept. SAP for Me is not the runtime environment for SAP Business Data Cloud, nor is it used for modeling or analytics. Instead, it functions as the commercial and administrative access layer through which you provision and govern your landscape at a subscription and tenant level.

Access to these capabilities depends on the authorizations assigned to the S-user. Users with edit authorizations can perform provisioning and integration tasks, while users with read authorizations can inspect the landscape without making changes. This separation

reinforces the controlled nature of the onboarding process and ensures that only designated administrators can create or modify the underlying system landscape.

3.1.3 Digital Onboarding Resources

SAP supports the onboarding process through a broader digital experience that complements the technical setup steps. This experience is typically anchored in three resource types.

The first is the welcome communication sent to the designated technical administrator at contract start. This message provides the initial guidance required to begin working with SAP and points the administrator to the appropriate setup resources.

The second is the Onboarding Resource Center, which provides ungated enablement content intended to help you understand the next actions in your onboarding journey. For SAP Business Data Cloud projects, this content is useful because onboarding often spans multiple SAP services and administrative domains.

The third is the set of onboarding webcasts provided by SAP. These sessions, offered either live or on demand, help project teams understand both setup steps and implementation expectations. In practice, they serve as an additional enablement channel for teams that are new to the solution or that need orientation before beginning deeper implementation work.

These resources do not replace product documentation. Instead, they reduce the friction of initial onboarding by helping you understand the sequence of actions and the purpose of each stage.

3.1.4 Onboarding Activities in SAP Business Data Cloud

From an administrator's point of view, onboarding in SAP Business Data Cloud typically includes the following activities:

1. **Provisioning**
   Initializing the SAP Business Data Cloud core and components (like SAP Datasphere and SAP Analytics Cloud) via the SAP for Me dashboard.
2. **Identity setup**
   Connecting or creating a bundled SAP Cloud Identity Services tenant, within which the Identity Authentication service handles single sign-on (SSO) and user authentication.
3. **System formation**
   Grouping the provisioned tenants into a formation within the SAP Business Data Cloud cockpit to enable cross-service communication.
4. **Initial access and security**
   Performing the first login to the SAP Business Data Cloud cockpit and establishing the user and role framework for the project team.

5. **Connectivity and integration**
   - Linking on-premise landscapes (like SAP BW/4HANA) via the cloud connector or the data provisioning agent.
   - Configuring outbound sharing to external systems or other SAP environments.
6. **Content activation**
   - Installing intelligent applications.
   - Activating data packages to populate the environment with SAP-managed data products.
   - Importing additional industry-specific content via the SAP Datasphere content network.
7. **Lifecycle management**
   Managing the ongoing health of the system, including updating, deactivating, or uninstalling apps and data packages as business needs change.

Although these activities are often presented in a checklist, they are better understood as a layered onboarding model: Administrative access enables provisioning; provisioning enables tenant creation; and tenant creation enables identity setup and login. Once the cockpit environment is accessible, SAP-managed content can be activated and integrated into broader data and analytics scenarios.

This layered view is especially important for SAP Business Data Cloud because later capabilities depend on earlier onboarding decisions. For example, intelligent applications and data packages can only be activated after the necessary system components are provisioned and accessible. Similarly, cross-system integration through system formation depends on the availability of the underlying tenants.

3.1.5 Identity and Authentication Considerations

Identity setup is a key part of onboarding because SAP Business Data Cloud depends on secure and consistent access across its cloud components. You can provision and configure a bundled SAP Cloud Identity Services tenant to provide centralized authentication for SAP Business Data Cloud and, where relevant, other SAP products using the same identity service tenant.

This setup supports SSO and also can be federated with a corporate identity provider. Architecturally, this is significant because it introduces a common authentication framework across the landscape instead of treating each solution component as an isolated login domain.

During setup, the administrator must define how users from the identity provider are mapped to users in SAP Business Data Cloud. This mapping can be based on user ID, email address, or a custom authentication mapping field. The choice is important because authentication success depends on an exact match between the subject name identifier provided by the identity provider and the corresponding user attribute maintained in SAP Business Data Cloud.

The platform can also support dynamic user creation, allowing new users to be created automatically at first login with default role assignments. Although this can accelerate initial onboarding, it also requires careful governance because access creation becomes partly identity-driven rather than entirely administrator-driven.

In other words, identity configuration in SAP Business Data Cloud is not just a login convenience. It is part of the governance model that determines how users enter the landscape and how access is consistently managed across provisioned services.

3.1.6 From Onboarding to System Formation

A useful way to think about onboarding in SAP Business Data Cloud is to distinguish between three stages:

- *Administrative onboarding*, in which access, authorizations, and subscriptions are prepared
- *Technical provisioning*, in which the required tenants and services are created
- *System formation*, in which the provisioned services are connected into an integrated landscape

This distinction helps clarify why onboarding cannot be reduced to a single setup action. Provisioning a tenant alone does not yet create an operational SAP Business Data Cloud environment. The environment becomes meaningful only when the relevant services are connected in a way that supports shared administration, coordinated access, and cross-component operation.

For this reason, onboarding serves as the bridge between commercial entitlement and technical usability. It ensures that your organization moves from having access to SAP Business Data Cloud as a purchased product to using it as a connected business data platform.

The next section explains this transition in more concrete terms by focusing on provisioning: how the SAP Business Data Cloud core and its component services are created, assigned capacity, and prepared for later integration.

3.2 Provisioning

Provisioning in SAP Business Data Cloud is the process through which the subscribed solution components are instantiated as usable tenants. These components are not delivered as a single preassembled system. Instead, administrators provision the SAP Business Data Cloud core and then provision additional services such as SAP Datasphere, SAP Analytics Cloud, and SAP Databricks as separate tenants. Once created, these tenants are organized and later connected through system formation.

All provisioning activities are initiated through SAP for Me, which serves as the administrative entry point for the SAP Business Data Cloud product package. From the provisioning and integration dashboard, administrators can activate the core environment, allocate capacity, provision individual components, and monitor the resulting landscape.

Note

The onboarding and provisioning steps described in this chapter are based on the current SAP Business Data Cloud experience at the time of writing. As SAP Business Data Cloud is an evolving cloud service, user interfaces, workflows, and specific configuration steps may change over time.

You're encouraged to refer to the latest SAP Help Portal pages and official SAP documentation at *https://help.sap.com/docs/business-data-cloud/onboarding-guide-business-data-cloud/onboarding?locale=en-US* for the most up-to-date instructions when performing onboarding and provisioning activities.

3.2.1 Licensing and Capacity Units

SAP Business Data Cloud uses a capacity-based model in which capacity units are assigned at the product-package level and then distributed across solution components during provisioning. Initially, these capacity units are available in the quota distribution view but are not yet assigned to individual services. As tenants are provisioned, the administrator allocates the required quota based on the expected workload and usage pattern.

This is one of the key differences from traditional landscape sizing: Capacity is not treated as a fixed infrastructure reservation for the entire environment. Instead, it is distributed across the components that are actually provisioned. For example, SAP Datasphere requires capacity allocation based on the intended data processing and modeling workload, while the SAP Analytics Cloud quota is influenced by the selected user mix. SAP Databricks differs further because billing is based on actual usage rather than the stated quota.

Note

For up-to-date licensing details and capacity unit estimation, refer to the official SAP documentation and the SAP Business Data Cloud capacity unit estimator.

3.2.2 Provisioning the SAP Business Data Cloud Core

The SAP Business Data Cloud core must be provisioned first, as it acts as the central entry point for managing the environment. Until the core is successfully provisioned, all other solution components remain unavailable in the provisioning interface.

Although conceptually referred to as the foundation of the environment, the provisioning interface in SAP for Me exposes this component as the SAP Business Data Cloud core, which must be explicitly enabled before proceeding with additional setup steps. To provision the SAP Business Data Cloud core, perform the following steps:

1. Sign in to **SAP for Me** using an S-user with cloud administrator or super administrator privileges.
2. As shown in Figure 3.1, navigate to **Portfolio & Products** and open the SAP Business Data Cloud product package.

3. Click **Go to Applications** to access the provisioning and integration dashboard.
4. As shown in Figure 3.2, in the **Applications** tab, locate the **SAP Business Data Cloud Core** message and select **Enable now**.

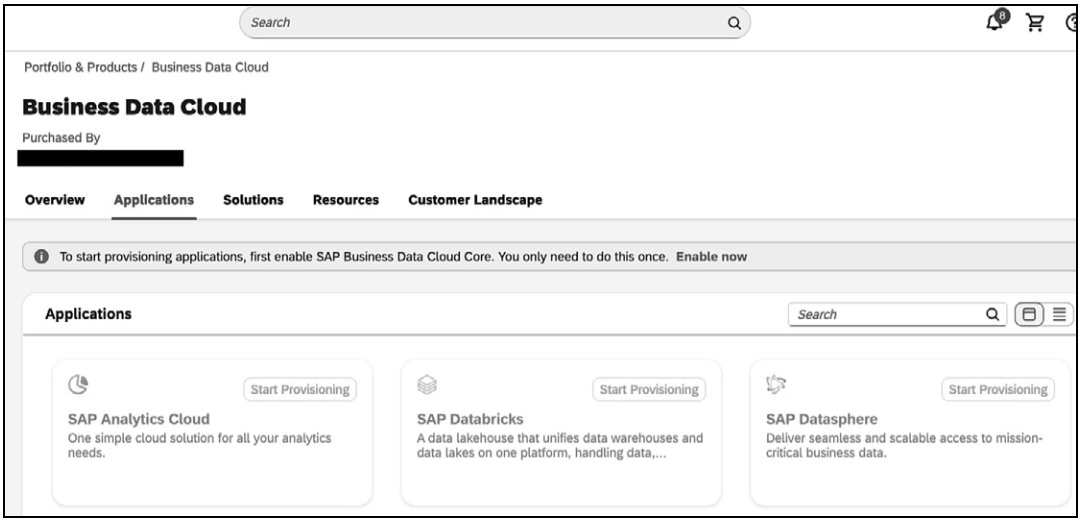


Figure 3.2: Enabling SAP Business Data Cloud Core

5. Enter the required details, including the **Solution Name** and **Resource Group**. Create a resource group if one doesn't already exist.
6. In the configuration step, specify the region, data center, and system owner details.
7. Review the configuration and submit the provisioning request.
8. Navigate to the **Resources** tab to monitor the provisioning status. Wait until the status changes from **Processing** to **Ready**.
9. Once it's ready, access the cockpit using the tenant URL available in the resource details.

Provisioning follows a strict sequence. Until the SAP Business Data Cloud core reaches the **Ready** status, all other application tiles, including **SAP Datasphere**, **SAP Analytics Cloud**, and **SAP Databricks**, remain disabled.

During provisioning, the cockpit is assigned to a resource group, which acts as a logical container for organizing solution components. However, the provisioning progress is tracked separately in the **Resources** tab, which displays the runtime status of the tenant.

Provisioning actions are restricted to users with appropriate authorizations. Users without the required permissions, such as those lacking edit access to cloud data, will not be able to initiate provisioning.

After provisioning is complete, the cockpit enables access to the remaining solution components. These components must then be provisioned individually and later connected through a formation to create an integrated SAP Business Data Cloud landscape.

3.2.3 Provisioning SAP Datasphere

SAP Datasphere is typically provisioned first among the component services because it provides the governed data layer used for modeling, integration, and data product consumption within SAP Business Data Cloud. The provisioning procedure is as follows:

1. As shown in Figure 3.3, in the SAP Business Data Cloud **Applications** tab, choose **Start Provisioning** on the **SAP Datasphere** tile.

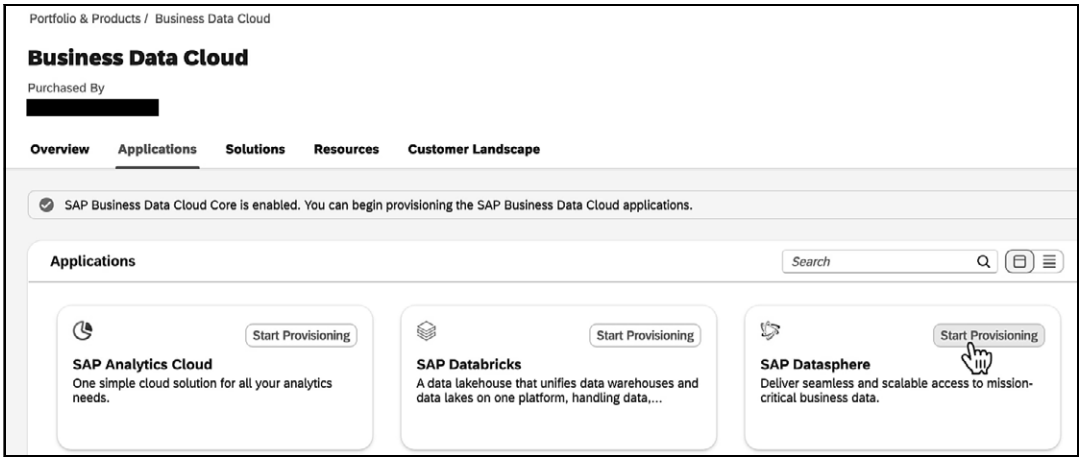


Figure 3.3: Start Provisioning SAP Datasphere

2. As shown in Figure 3.4, enter the required details, including **Solution Display Name**, **Technical Name**, **Resource Group**, and **Business Type**.



Figure 3.4: SAP Datasphere Provisioning: General Information Tab

3. As shown in Figure 3.5, in the **Assign Quota** step, allocate the required **Quota Amount** (in capacity units) from the available SAP Business Data Cloud core capacity units.

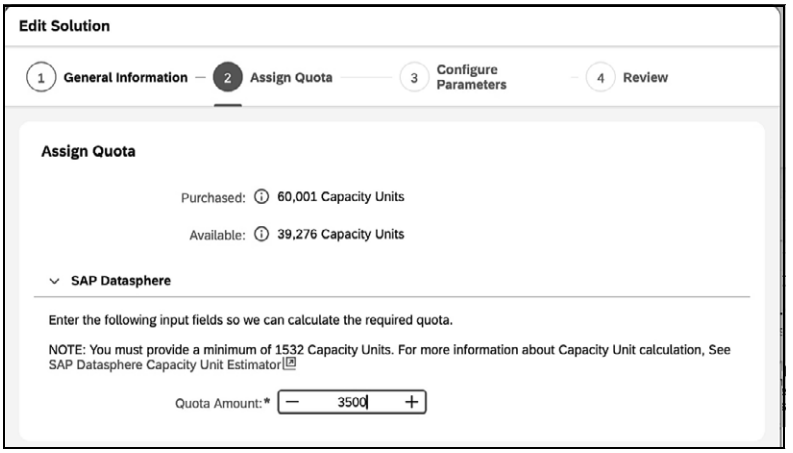


Figure 3.5: SAP Datasphere Provisioning: Assign Quota Tab

4. In the **Configure Parameters** tab, enter the required configuration parameters, including the system owner information.

> **Note**
>
> Select the same region and data center used for the SAP Business Data Cloud core.

5. Review the entries and submit the provisioning request.
6. Wait until the tenant status changes to **Ready** in the **Resources** tab. Once the status is **Ready**, the SAP Datasphere tenant URL becomes available, which can be used to access the tenant.

A baseline SAP Datasphere tenant can be provisioned with a minimum of 1,532 capacity units, but an allocation of 4,150.05 capacity units is required to activate the SAP Datasphere HDLF object store introduced in Chapter 2, Section 2.2.3. This higher threshold is the functional minimum for customers who intend to use core SAP Business Data Cloud features, such as the object store, custom data product creation, or integration with SAP Databricks.

The selected business type (**Production** or **Test/Development**) is fixed at the time of provisioning and cannot be changed later. Changing the environment type requires deprovisioning and reprovisioning the tenant.

SAP Datasphere must follow the shared region, hyperscaler, resource group, and identity rules, and each tenant can belong to only one formation (Section 3.2.6).

3.2.4 Provisioning SAP Analytics Cloud

SAP Analytics Cloud is provisioned as the analytics and planning layer within SAP Business Data Cloud, supporting reporting, dashboarding, and planning scenarios on top of governed data products. The provisioning procedure is as follows:

1. As shown in Figure 3.6, in the SAP Business Data Cloud **Applications** tab, choose **Start Provisioning** on the **SAP Analytics Cloud** tile.

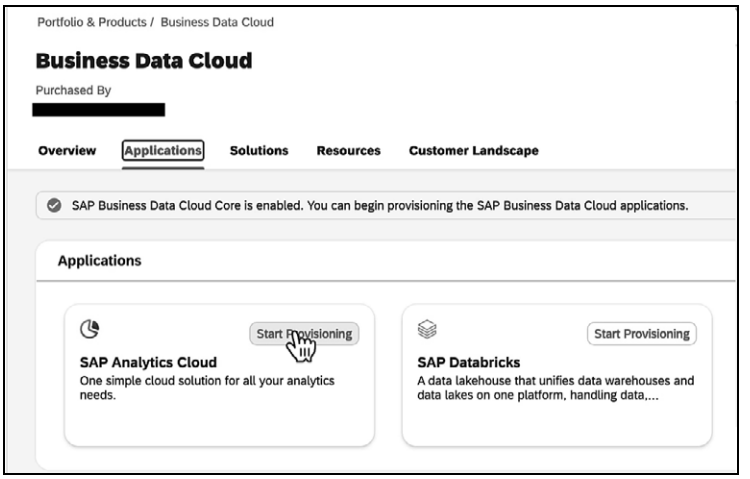


Figure 3.6: Start Provisioning: SAP Analytics Cloud

2. As shown in Figure 3.7, enter the required details, including **Solution Display Name**, **Technical Name**, **Resource Group**, and **Business Type**.

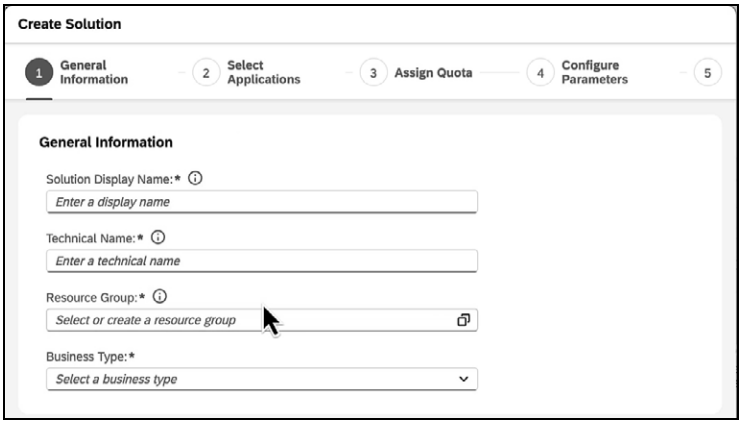


Figure 3.7: SAP Analytics Cloud Provisioning: General Information Tab

3. As shown in Figure 3.8, in the **Assign Quota** step, allocate the required **Quota Amount** (in capacity units) from the available SAP Business Data Cloud quota.
4. Specify the required user-based quota by selecting the number and type of users (e.g., business intelligence, planning standard, or planning professional). Each license type contributes differently to overall capacity unit consumption.
5. In the **Configure Parameters** tab, enter the required configuration parameters, including the system owner information and region details. Ensure that the region, hyperscaler, and resource group match those used for the SAP Business Data Cloud core.

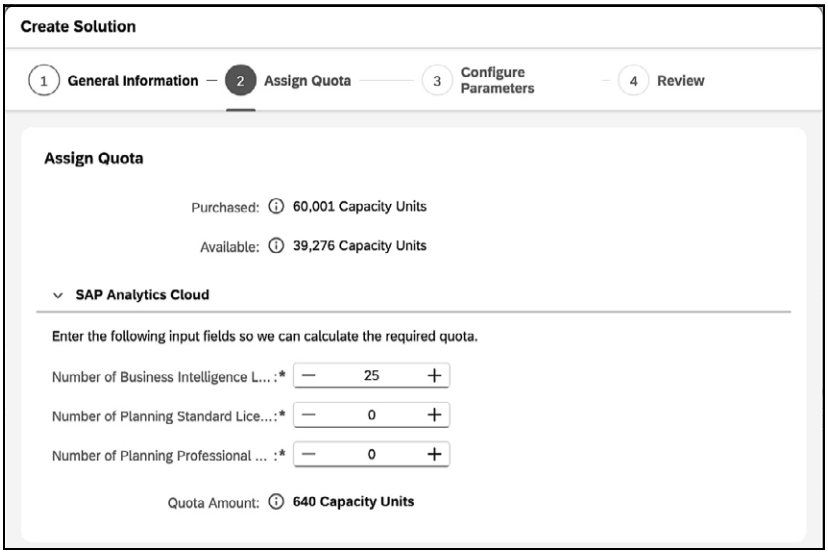


Figure 3.8: SAP Analytics Cloud Provisioning: Assign Quota Tab

6. Review the configuration and submit the provisioning request.
7. Monitor the status in the **Resources** tab until it changes to **Ready**. Once the status is **Ready**, the SAP Analytics Cloud tenant URL becomes available, which can be used to access the tenant.

SAP Analytics Cloud provisioning is driven by user-based configuration. For a production environment, one of the following minimum configurations must be selected:

- Scenario 1: Minimum of 25 business intelligence users
- Scenario 2: Minimum of one planning professional user and 10 planning standard users

Any combination of license types is allowed, so long as the minimum requirements are met. For test or QA environments, the minimum configuration is 20 users of any license type.

For example, a production configuration with 25 business intelligence users typically corresponds to approximately 640 capacity units per month, while planning-based configurations may require higher capacity as planning licenses consume more capacity units than business intelligence licenses. Refer to the SAP Business Data Cloud capacity unit estimator for accurate sizing.

The selected business type (**Production** or **Test/Development**) is fixed at the time of provisioning and cannot be changed later without reprovisioning the tenant. SAP Analytics Cloud tenants provisioned within SAP Business Data Cloud are typically associated with identifiers or suffixes that distinguish them from standalone SAP Analytics Cloud tenants. The selected user mix directly influences capacity unit consumption as different license types have varying capacity requirements. Careful selection of user types is therefore important for both cost optimization and workload planning.

Like the other components, SAP Analytics Cloud follows the shared region, hyperscaler, resource group, and identity rules, and each tenant can belong to only one formation (Section 3.2.6).

3.2.5 Provisioning SAP Databricks

SAP Databricks extends SAP Business Data Cloud with advanced data engineering and machine learning capabilities, enabling large-scale data processing and AI-driven workloads within the overall data platform. The provisioning steps are as follows:

1. As shown in Figure 3.9, in the SAP Business Data Cloud **Applications** tab, choose **Start Provisioning** on the **SAP Databricks** tile.

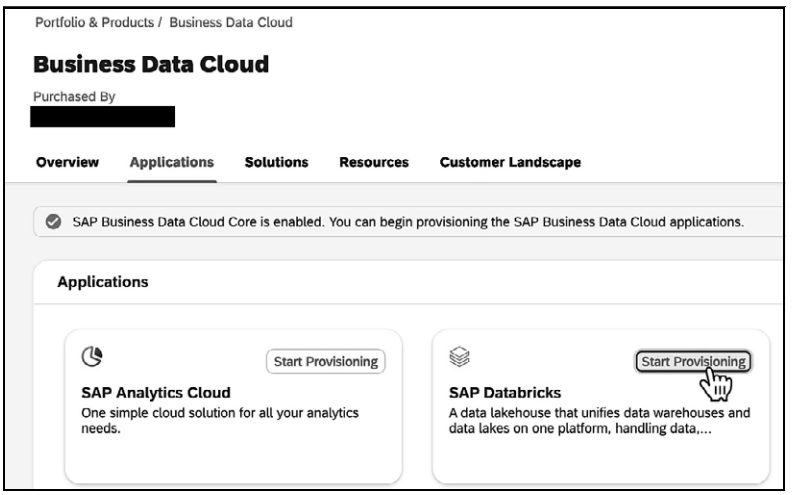


Figure 3.9: Start Provisioning: SAP Databricks

2. As shown in Figure 3.10, enter the required details, including **Solution Display Name**, **Technical Name**, **Resource Group**, and **Business Type**.

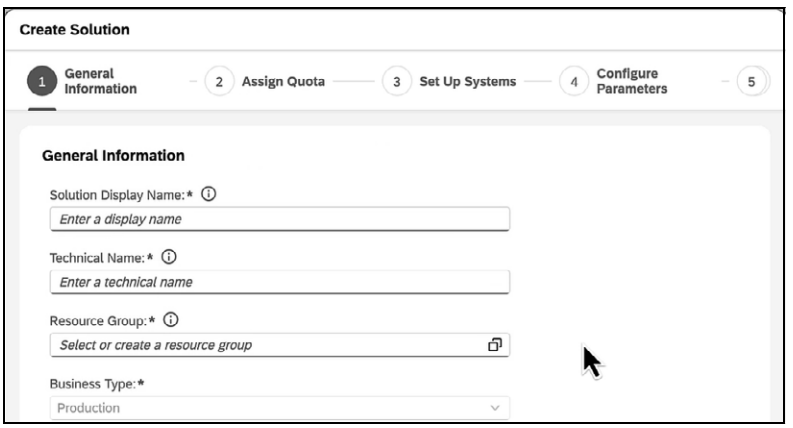


Figure 3.10: SAP Databricks Provisioning: General Information Tab

3. As shown in Figure 3.11, provide a **Quota Amount** for the setup step. Although billing is not based on this value, a minimal allocation of capacity units is typically required to activate the service tile.

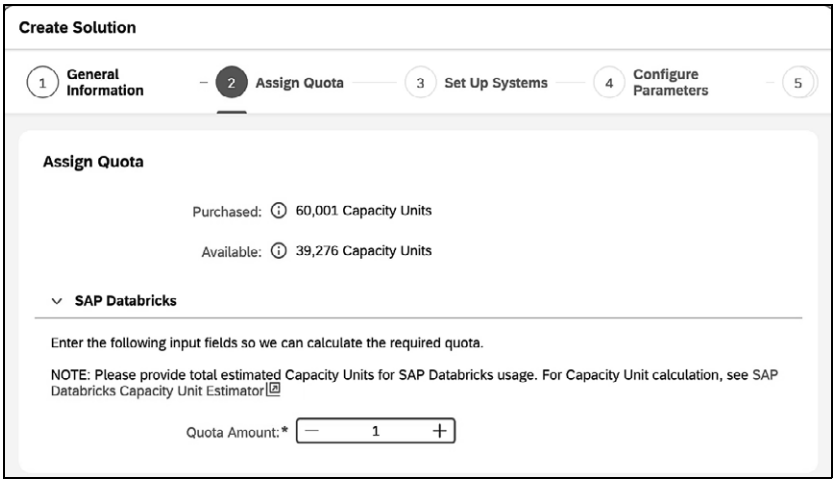


Figure 3.11: SAP Databricks Provisioning: Assign Quota Tab

4. As shown in Figure 3.12, select the **SAP Cloud Identity Services System**. It is mandatory to use the same SAP Cloud Identity Services system associated with the SAP Business Data Cloud core to ensure seamless authentication.

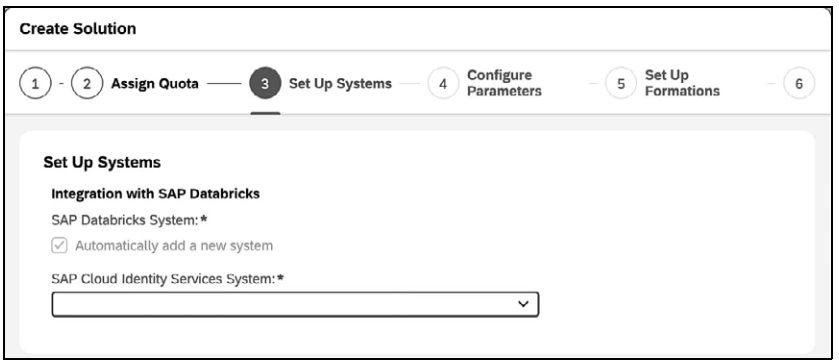


Figure 3.12: SAP Databricks Provisioning: Set Up Systems Tab

5. In the **Configure Parameters** tab, enter the required details, including the system owner information and region. Ensure that the region matches the SAP Business Data Cloud core environment to support integration and avoid unnecessary data transfer.
6. Review the suggested **Formation Name** in the **Set Up Formations** tab, submit the provisioning request, and monitor the status in the **Resources** tab.
7. Open the activation link and complete the SAP Databricks account activation. The activation link is typically sent to the system owner's email. If the email is not received, the

activation URL can be retrieved from the **Resources** tab in SAP for Me by navigating to the tenant details once the provisioning status progresses beyond the initial processing phase.

8. After activation, verify that the tenant status changes to **Ready** and then access the workspace URL.

Although you enter a quota value during provisioning, SAP Databricks billing is strictly consumption-based. The entered quota serves as a monitoring threshold rather than a fixed capacity reservation, and the actual monthly cost reflects real-time usage.

Integration of SAP Databricks within a formation requires that the associated SAP Datasphere tenant has the object store enabled. This is because data sharing between SAP Datasphere and SAP Databricks relies on delta sharing, which depends on the underlying object store layer.

SAP Databricks also follows the shared region, hyperscaler, resource group, and identity rules, and each tenant can belong to only one formation.

3.2.6 Provisioning Guidance and Constraints

A few provisioning rules are important across all SAP Business Data Cloud components and must be considered carefully during the initial setup.

First, all components, including the SAP Business Data Cloud cockpit, SAP Datasphere, SAP Analytics Cloud, and SAP Databricks, must be provisioned in a consistent region, hyperscaler, and resource group. This ensures that the components can be discovered and connected during the system formation process. If components are provisioned in different resource groups, they may not be visible to each other when creating a formation.

Second, all components must be associated with the same SAP Cloud Identity Services tenant. This is a prerequisite for enabling SSO and ensuring a seamless authentication experience across the integrated landscape. Using different identity providers for different components breaks the unified access model that SAP Business Data Cloud is designed to provide.

Third, the business type (production or test/development) and tenant identity are immutable once provisioning is completed. If a tenant is incorrectly configured, such as being provisioned with the wrong business type, it cannot be modified. In such cases, the tenant must be deprovisioned, which typically requires raising a request with SAP support. Only after deletion are the associated capacity units returned to the available quota for reuse.

Fourth, tenants are created independently and do not become part of an operational SAP Business Data Cloud landscape until they are connected through a formation. Provisioning alone does not establish integration between components.

3.3 System Formation and Tenant Wiring

Provisioning creates the individual runtime components of SAP Business Data Cloud, but these components remain independent until they are explicitly connected. System formation is the step that enables this connection and allows the landscape to operate as an integrated environment.

A *formation* is a logical grouping of tenants within SAP Business Data Cloud that enables them to function as a unified system. It establishes the relationships between the SAP Business Data Cloud cockpit, SAP Datasphere, SAP Analytics Cloud, SAP Databricks, and SAP Cloud Identity Services, allowing them to share authentication, metadata, and data access. From an architectural perspective, a formation acts as the integration layer that enables

- SSO across systems;
- controlled data sharing between components;
- automatic registration of systems in the catalog; and
- coordinated execution of data, analytics, and processing workloads.

Without a formation, each system operates independently and cannot participate in integrated SAP Business Data Cloud scenarios such as intelligent applications or data product consumption.

3.3.1 Creating a Formation

A formation is created in SAP for Me, which acts as the administrative control layer for SAP Business Data Cloud.

Prerequisite

Before creating a formation, ensure that all provisioned systems are synchronized:

- Navigate to **Customer Landscape** and select **Systems**.
- Choose **Synchronize Systems**.

Note that there can be a delay, typically between two and four hours, between system provisioning completion and system visibility in the landscape.

To create a formation, perform the following steps:

1. Sign in to SAP for Me and navigate to **Portfolio & Products**. Open the SAP Business Data Cloud product package.
2. As shown in Figure 3.13, navigate to the **Customer Landscape** tab and open the **Formations** section. Choose **Create Formation**.

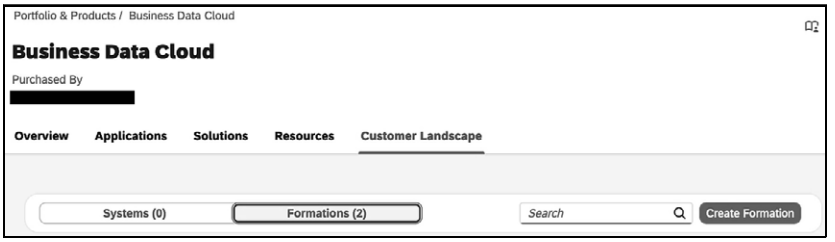


Figure 3.13: Create Formation

3. As shown in Figure 3.14, enter the required details:
   - **Formation Name**
     Provide a descriptive name for the landscape.
   - **Formation Type**
     Select **Integration with SAP Business Data Cloud**.



Figure 3.14: Create Formation: General Information Tab

4. As shown in Figure 3.15, in the **Include Systems** step, select the following:
   - **SAP Business Data Cloud** (mandatory central cockpit tenant required for this formation type)
   - At least one SAP business application (e.g., SAP S/4HANA or SAP SuccessFactors)

   See Section 3.3.2 for the participation rules.

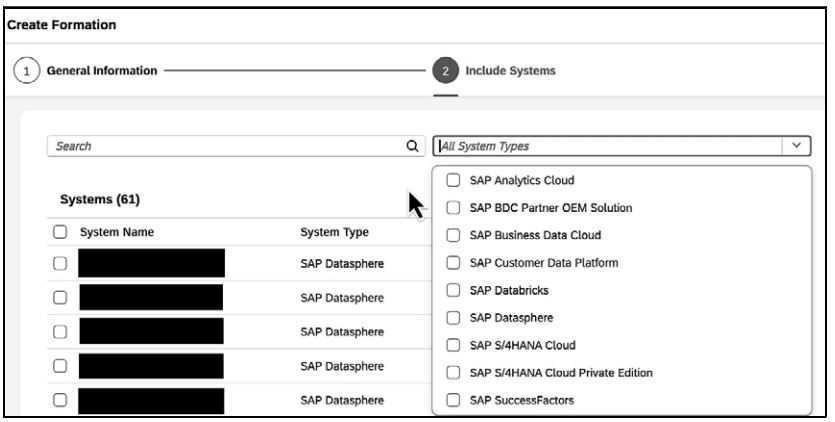


Figure 3.15: Create Formation: Include Systems Tab

5. Review the configuration and create the formation.
6. Monitor the status until it changes from **Processing** to **Ready**.

Some important considerations are as follows:

- A formation must include the SAP Business Data Cloud cockpit and at least one data provider system.
- Additional SAP Business Data Cloud components cannot be added until the formation reaches **Ready** status.
- The user who provisions the cockpit is typically assigned as the initial formation administrator and is responsible for granting access to additional users.

3.3.2 System Participation and Cardinality Rules

SAP Business Data Cloud follows defined participation rules for system inclusion in formations. These rules ensure metadata consistency, prevent conflicts, and maintain a stable system landscape. The participation model differs across components depending on their role within the architecture, as follows:

- **SAP Business Data Cloud cockpit**
  Must be included in every formation. A single cockpit instance can support multiple formations.
- **SAP Datasphere**
  One instance per formation and one formation per instance (1:1 relationship).
- **SAP Analytics Cloud**
  One instance per formation and one formation per instance (1:1 relationship).
- **SAP Databricks**
  Can be included as part of a formation. A managed SAP Databricks tenant provisioned within SAP Business Data Cloud is typically associated with a single formation.
- **SAP S/4HANA and other business systems**
  Can participate in multiple formations and act as data providers across different scenarios.

The participation rules are designed to balance flexibility with control. Core data and analytics components such as SAP Datasphere and SAP Analytics Cloud are restricted to a single formation to maintain metadata integrity.

SAP Analytics Cloud is tightly coupled with SAP Datasphere for SAP Business Data Cloud–integrated capabilities. A single SAP Analytics Cloud tenant is aligned with one SAP Datasphere tenant, and therefore with a single formation, for scenarios involving data products, planning integration, and SAP-delivered content. Although SAP Analytics Cloud can still maintain standard live data connections to external systems, advanced SAP Business Data Cloud features operate only within the assigned formation.

SAP Databricks requires additional consideration. When provisioned as part of SAP Business Data Cloud, the managed tenant is typically bound to a single formation. However, external data engineering environments or upstream data sources can still support broader reuse across multiple analytical contexts, depending on the integration approach.

All systems in a formation must also meet the shared region, hyperscaler, resource group, and identity requirements described earlier.

In addition, integration scenarios involving SAP Databricks require that delta sharing is enabled and that the SAP Datasphere object store is active within the formation.

3.3.3 Tenant Wiring (Including Components)

After the formation is created, the next step is to include the remaining provisioned components. This process is referred to as *tenant wiring*. To include components in the formation, perform the following steps:

1. Navigate to the **Customer Landscape** and select the **Formations** view.
2. Select the required formation.
3. Choose **Include Systems**.
4. Select the required components:
   - **SAP Datasphere**
   - **SAP Analytics Cloud**
   - Optional components such as **SAP Databricks**
5. Review and confirm the selections.
6. Monitor the formation status until it returns to **Ready**.

Some important considerations are as follows:

- The component tenants must meet the shared region, hyperscaler, resource group, and identity requirements.
- SAP business systems, such as SAP S/4HANA or SAP SuccessFactors, can reside in different regions.
- Once systems are included in a formation, they are automatically connected and registered in the SAP Business Data Cloud catalog as source systems.
- If systems are not visible during inclusion, system synchronization or additional authorization may be required.

3.3.4 Key Constraints and Best Practices

The following constraints apply when working with formations:

- Each SAP Datasphere and SAP Analytics Cloud tenant can belong to only one formation.
- Core components must be provisioned in the same region, hyperscaler, and resource group.

- All components must use the same SAP Cloud Identity Services tenant.
- Formation creation and modification must be performed by users with appropriate administrative roles.

Formations can also be modified or deleted as part of lifecycle management. Systems can be excluded from a formation, or entire formations can be removed when no longer required. These actions impact system integration and should be performed with appropriate governance controls.

Provisioning creates individual system components, but a formation establishes the relationships between them. This step enables SAP Business Data Cloud to function as an integrated platform rather than a collection of independent services.

In addition to provisioning new tenants, organizations often need to bring existing standalone systems into the SAP Business Data Cloud landscape. This is achieved through tenant rewiring, which is explained in the next section.

3.4 Tenant Rewiring

Tenant rewiring is the process of bringing an existing standalone tenant, such as SAP Datasphere or SAP Analytics Cloud, under the SAP Business Data Cloud model. This transition enables the tenant to be managed as part of a broader SAP Business Data Cloud landscape through SAP for Me.

Importantly, rewiring does not change the underlying system. The tenant continues to operate on the same hyperscaler and data center, retains its existing URL, and preserves all data, models, and configurations.

3.4.1 What Tenant Rewiring Is and Is Not

Tenant rewiring enables organizations to reuse their existing investments while adopting SAP Business Data Cloud capabilities. Because the existing tenant is reused rather than recreated, rewiring does not require data migration, URL changes, or additional migration charges. Tenant rewiring is the following:

- A transition from a standalone subscription model to an SAP Business Data Cloud commercial model
- An alignment of tenant lifecycle management with SAP for Me
- An enabler for participation in an SAP Business Data Cloud formation

Tenant rewiring is not:

- A data migration or system relocation
- A change in hyperscaler or data center
- A modification of the tenant URL or runtime environment
- A process that requires downtime

Tenant rewiring allows organizations to transition into SAP Business Data Cloud while preserving their existing landscape. It enables organizations to reuse existing SAP Datasphere or SAP Analytics Cloud tenants; preserve data models, configurations, and integrations; gain access to SAP Business Data Cloud capabilities such as data products and intelligent applications; and align tenant lifecycle management with a unified governance model.

Before initiating tenant rewiring, certain conditions must be met:

- **Commercial alignment**
  A valid SAP Business Data Cloud subscription must exist.
- **Organization ownership**
  The tenant must be associated with the same customer ID as the SAP Business Data Cloud subscription.
- **Infrastructure compatibility**
  - The tenant must run on a supported multicloud environment (Cloud Foundry on AWS, Azure, or Google Cloud).
  - Tenants running on legacy environments such as Neo are not eligible for rewiring and must be migrated instead.
- **Region and data center alignment**
  - Rewiring is only supported when the existing standalone tenant and the SAP Business Data Cloud cockpit reside in the same supported hyperscaler and data center combination.
  - SAP Business Data Cloud is rolled out across data centers in a controlled manner, and rewiring is supported only in data centers where the service is available.
  - As a best practice, organizations should evaluate data center availability before initiating rewiring and may choose to defer rewiring until the desired region is supported.
- **Identity alignment**
  The tenant must be associated with the same SAP Cloud Identity Services tenant as the SAP Business Data Cloud cockpit to enable seamless authentication and formation integration.
- **Solution-specific constraints**
  - For SAP Analytics Cloud, only the SAP Analytics Cloud for planning, standard edition, public system option is supported for rewiring.
  - SAP Analytics Cloud, enterprise edition, dedicated system option tenants are not eligible for rewiring.

3.4.2 Rewiring Process Overview

The rewiring process depends on how the original tenant was provisioned and managed. SAP provides two primary rewiring approaches based on the existing consumption model.

For SAP-managed subscription-based systems, rewiring is initiated as part of a commercial transition. Once the subscription is updated to SAP Business Data Cloud in coordination

with the SAP account team, the rewiring process is automatically triggered by SAP. No direct action is required on your organization's part. After completion, the tenant becomes available within SAP Business Data Cloud and can be accessed through SAP for Me.

For customer-managed systems provisioned through SAP BTP, rewiring is initiated through administrative actions that associate the existing tenant with the SAP Business Data Cloud environment. This typically involves aligning the relevant SAP BTP subaccount with the SAP Business Data Cloud resource group so that the tenant can be recognized within the landscape.

In both scenarios, the rewiring process updates the tenant's metadata and commercial association without modifying the underlying system. All existing data, configurations, and catalog content remain unchanged and operational.

However, rewiring is subject to plan eligibility constraints:

- For SAP Datasphere, only supported paid plans such as the standard plan are eligible.
- For SAP Analytics Cloud, only test and production tenants are supported.
- Free-tier plans are not eligible for rewiring and must be upgraded before the process can be initiated.

Once the process is completed, the tenant becomes visible in SAP Business Data Cloud and can be included in a formation for integrated operation.

3.4.3 Capacity Units Allocation After Rewiring

SAP Business Data Cloud uses capacity units as the primary consumption and allocation metric, similar to SAP Datasphere. When a tenant is rewired, its existing consumption model is aligned with the SAP Business Data Cloud capacity framework.

For SAP Datasphere systems, the capacity units consumed prior to rewiring are carried forward and reflected in the SAP Business Data Cloud consumption view in SAP for Me. For example, if a tenant was consuming 1,532 capacity units before rewiring, the same consumption is reflected after the transition.

However, the allocation behavior differs depending on how the system was originally provisioned. For SAP-managed systems, the total contracted capacity is assigned to the SAP Business Data Cloud resource, regardless of how much was actively used before rewiring. For customer-managed systems, only the capacity units configured within the original tenant are carried forward, while the remaining contracted capacity remains available for use across other SAP Business Data Cloud components.

For example, imagine you have a contract for 15,000 capacity units but only 2,000 units configured within SAP Datasphere. After rewiring, only 2,000 units are assigned to the tenant, while the remaining 13,000 units can be allocated to other SAP Business Data Cloud services.

This distinction is important because it enables flexible redistribution of capacity across services based on evolving workload requirements.

For SAP Analytics Cloud systems, the existing user-based licensing configuration is carried forward into SAP Business Data Cloud. The corresponding capacity unit consumption is calculated based on the user types and reflected in the SAP Business Data Cloud consumption view.

3.4.4 Postrewiring Integration

After rewiring is complete, the tenant must be included in a formation to participate in the integrated SAP Business Data Cloud landscape. At this stage, the tenant becomes visible in the SAP Business Data Cloud cockpit; it can be connected to other components such as SAP Datasphere, SAP Analytics Cloud, or SAP Databricks; and SAP Business Data Cloud–specific capabilities become available.

Without inclusion in a formation, the rewired tenant remains operational but does not participate in the integrated environment.

Once tenants are provisioned, optionally rewired, and connected through formations, the focus shifts to operating the environment. This is handled through the SAP Business Data Cloud cockpit, which acts as the central control plane.

3.5 SAP Business Data Cloud Cockpit as the Control Plane

Once the SAP Business Data Cloud landscape is provisioned and connected through formations, the SAP Business Data Cloud cockpit becomes the primary interface for operating the environment.

At this stage, the platform transitions from setup to usage. The cockpit provides a unified layer through which users can access systems, discover data products, activate SAP-managed content, and monitor the overall landscape.

The cockpit does not execute data processing. Execution remains within services such as SAP Datasphere, SAP Analytics Cloud, and SAP Databricks. Instead, the cockpit coordinates these components and exposes them through a consistent interface. In this sense, it acts as the control plane of SAP Business Data Cloud.

3.5.1 Role of the Cockpit in the SAP Business Data Cloud Architecture

The cockpit serves as the operational entry point into the integrated landscape created through system formation. The cockpit provides visibility into connected systems within a formation, enables access to the catalog of available data products, supports the activation and lifecycle management of SAP-managed content, and provides a centralized view of system-level configuration and governance.

The cockpit serves different roles depending on the user persona. For administrators, the cockpit is used to validate system setup, manage access, and monitor the environment. For business users, it acts as a starting point for discovering and consuming data products and intelligent applications.

It is important to distinguish the cockpit from SAP for Me. SAP for Me is used for provisioning and administrative setup, while the cockpit is used to operate the active environment.

Figure 3.16 shows the SAP Business Data Cloud cockpit, which provides a unified navigation layer for accessing applications, discovering data products, monitoring systems, and managing the overall environment.

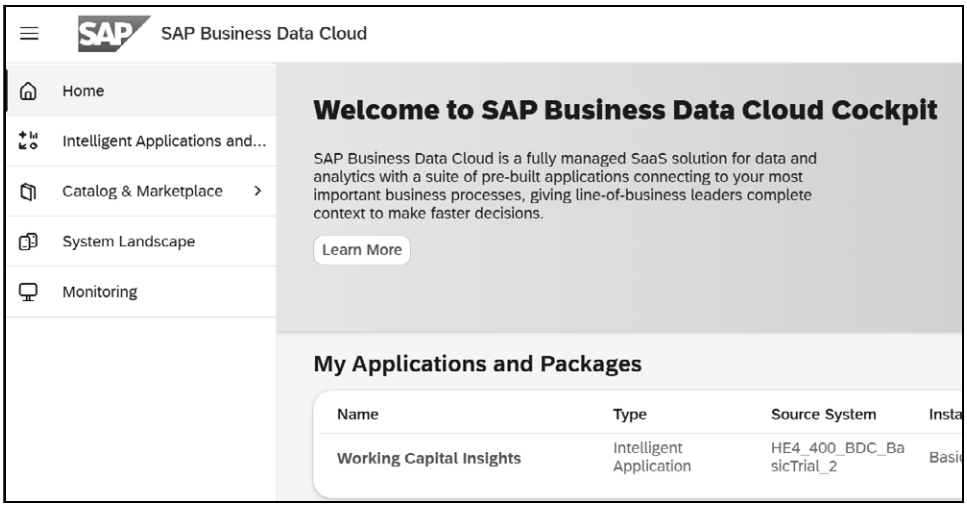


Figure 3.16: SAP Business Data Cloud Cockpit User Interface

3.5.2 Catalog and Data Product Discovery

One of the key capabilities enabled through the cockpit is access to the **Catalog & Marketplace** area, which provides a unified view of available data assets across the formation. The catalog is the central capability for discovering data products across the landscape.

When systems are connected through a formation, they are registered in the catalog. However, metadata is only extracted and made visible when an authorized user is configured for each system, such as SAP Datasphere or SAP Analytics Cloud. This user mapping enables the cockpit to access metadata from the underlying system. Without this configuration, the catalog may remain empty even if the formation is active.

The catalog includes both SAP-managed and customer-managed data products. SAP-managed data products are delivered through data packages and intelligent applications. Customer-managed data products are created within SAP Datasphere and published to the catalog. This allows organizations to combine SAP-delivered content with internally developed assets in a single discovery layer. Each data product includes metadata such as the following:

- Business context and description
- Source system
- Structural and technical information
- Relationships with other data assets

This metadata is enriched through a semantic layer that preserves relationships between business entities, enabling users to search and explore data using business terminology rather than technical object names.

It is also important to understand that the catalog view depends on the entry point. When accessed from the SAP Business Data Cloud cockpit, users see a centralized view across formations. When accessed directly from SAP Datasphere, the view is limited to the specific formation context.

Access to data products is governed by permissions in the underlying systems, typically enforced through SAP Datasphere spaces and data access controls. Figure 3.17 shows the **Catalog & Marketplace** area of the SAP Business Data Cloud cockpit, where you can discover and explore available data products across the connected landscape.

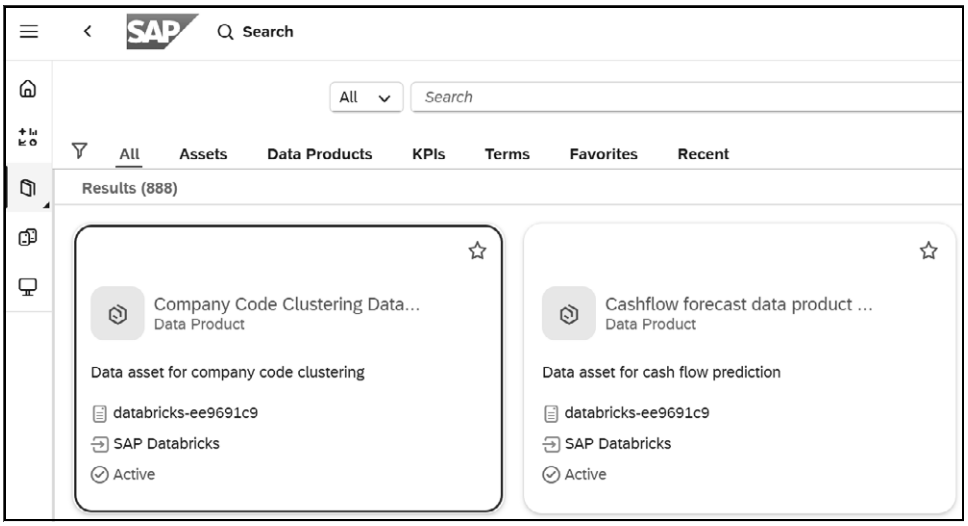


Figure 3.17: SAP Business Data Cloud Cockpit: Catalog & Marketplace

3.5.3 Governance and Access Control

The cockpit provides a consolidated view of governance across the SAP Business Data Cloud landscape. While detailed modeling and security configurations are handled within individual components such as SAP Datasphere and SAP Analytics Cloud, the cockpit provides visibility across these systems.

Administrators can view connected systems, monitor data product usage, and validate integration across components. Governance capabilities such as glossary definitions,

tagging, and KPI structures are surfaced through the cockpit. Business glossary definitions are typically authored within SAP Datasphere and exposed in the cockpit as a synchronized view. The cockpit acts as an aggregation layer rather than the primary authoring environment for glossary content.

3.5.4 System Landscape and Monitoring

The **System Landscape** view provides visibility into the structure and connectivity of the SAP Business Data Cloud environment. It displays all formations and the systems included within them. This information is synchronized from SAP for Me and reflects the current provisioned landscape.

Users with roles such as administrator and viewer can view systems within formations, navigate directly to tenant URLs, and validate system connectivity. All core components of a formation, including the cockpit, SAP Datasphere, and SAP Analytics Cloud, must reside in the same region, hyperscaler, and data center. Cross-region formations are not supported.

Monitoring capabilities in the **System Landscape** view are focused on connectivity validation. Administrators can use it to test connectivity between source systems and the formation. This is particularly relevant when operations such as data package activation or intelligent application installation fail.

For private or on-premise systems, such as SAP S/4HANA Cloud Private Edition, connectivity depends on the cloud connector. Without this configuration, connectivity tests will fail even if the system appears to be correctly configured. If a system doesn't appear in the system landscape, administrators must verify that it has been correctly assigned to a formation of type **Integration with SAP Business Data Cloud** in SAP for Me.

In case of failures, the cockpit provides diagnostic details that should be included when raising support requests with SAP.

3.5.5 Intelligent Applications and Content Activation

The cockpit is the primary interface for activating SAP-managed content, including data packages and intelligent applications. Data packages provide predefined data products, while intelligent applications deliver complete business scenarios built on these data products.

Installing an intelligent application triggers automated provisioning across multiple components, including the creation of a dedicated SAP Datasphere space, the deployment of data models and replication flows, and the installation of analytical content in SAP Analytics Cloud. These operations are executed automatically based on predefined templates.

The cockpit validates system compatibility before installation. If a connected system does not meet the required version level, installation is blocked. The cockpit also manages the lifecycle of installed content. When updates are available, intelligent applications support

side-by-side versioning. A new version can be deployed while the existing version remains active, allowing controlled validation before switching.

3.5.6 Federated Access and Data Integration

The cockpit also enables federated data access across SAP Business Data Cloud components. Integration between SAP Datasphere and SAP Databricks is managed through the formation layer, which establishes a trust relationship using OpenID Connect (OIDC). Data exchange between these systems is enabled through delta sharing, allowing data to be accessed without physical duplication. This zero-copy architecture ensures that data remains in its original location while still being available for analytics and data engineering scenarios.

3.5.7 From Control Plane to Operational Platform

As the platform moves into active use, the cockpit becomes the central interface for day-to-day operations. Through the cockpit, users access connected systems, discover and consume data products, activate and manage content, and monitor system connectivity. It bridges the gap between technical setup and business usage, enabling the platform to function as a cohesive system rather than a collection of independent services.

With the operational environment in place and accessible through the cockpit, the next step is to activate SAP-managed content, enabling data products and analytical scenarios within the landscape.

3.6 Activation of SAP-Managed Content

Once the SAP Business Data Cloud landscape is provisioned and connected through formations, the next step is to activate SAP-managed content. This enables data products and analytical scenarios to become available for use within the landscape. SAP-managed content is delivered through data packages and intelligent applications. These components are provided by SAP and are managed centrally, including their lifecycle and updates.

Data packages contain sets of related data products that are extracted from source systems and exposed for consumption. A *data product* is a self-contained dataset made available through APIs and modeling layers.

Intelligent applications build on these data products and deliver complete analytical scenarios. They include SAP Datasphere content for data preparation and modeling, as well as SAP Analytics Cloud stories for data consumption.

Data products used by intelligent applications are delivered through data packages. As a result, activating the relevant data package is required to make these data products available.

Prerequisites for Activation

A data package or intelligent application is available in the cockpit only if the following conditions are met:

- The global account has the required commercial entitlement.
- At least one relevant source system exists in a formation of type **Integration with SAP Business Data Cloud**.
- The source system is connected and operational.
- Users have the required role (e.g., SAP Business Data Cloud administrator).
- The source system meets minimum version requirements.

If a system doesn't meet the required version, certain data products or applications cannot be activated or installed.

Intelligent applications and data packages are activated through the SAP Business Data Cloud cockpit. The following steps outline how to install intelligent applications and activate the corresponding data packages:

1. Open the SAP Business Data Cloud cockpit.
2. As shown in Figure 3.18, navigate to **Intelligent Applications and Data Packages**.

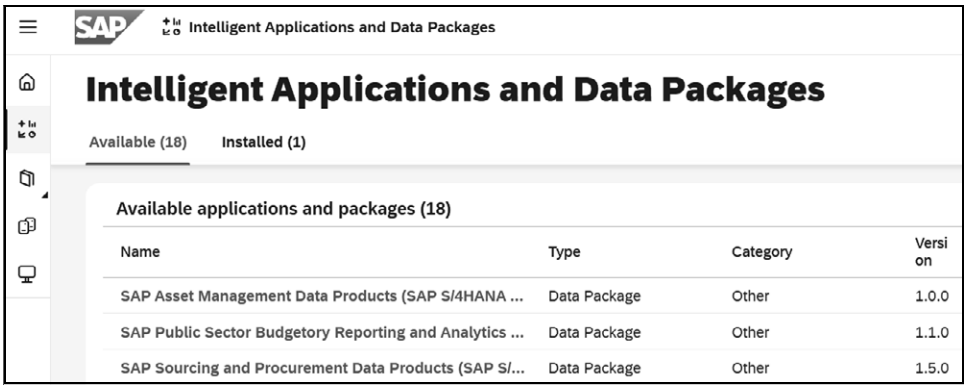


Figure 3.18: Intelligent Applications and Data Packages

3. Open the **Available** tab.
4. Select the required data package or intelligent application and click **Activate** in the top-right corner of the page.
5. Select the source system and click **Activate**.

During activation, a connection test is executed between the source system and the formation, data products are activated in the catalog, and metadata becomes available for consumption. If the connection test fails, activation does not proceed. If some data products do not meet minimum system version requirements, they are not activated, while the remaining data products continue to activate.

After activation, SAP Datasphere administrators must authorize spaces to consume the data products, and modelers can install data products into their spaces.

After installation, additional configuration is required to make the applications usable. Administrators should

- assign users to SAP Datasphere roles,
- monitor replication flows,
- configure row-level security,
- execute delivered task chains, and
- grant users access to SAP Analytics Cloud stories.

Without these steps, the application may be installed but not usable by end users.

3.7 Summary

This chapter explained how to set up SAP Business Data Cloud and prepare it for use as an integrated data platform.

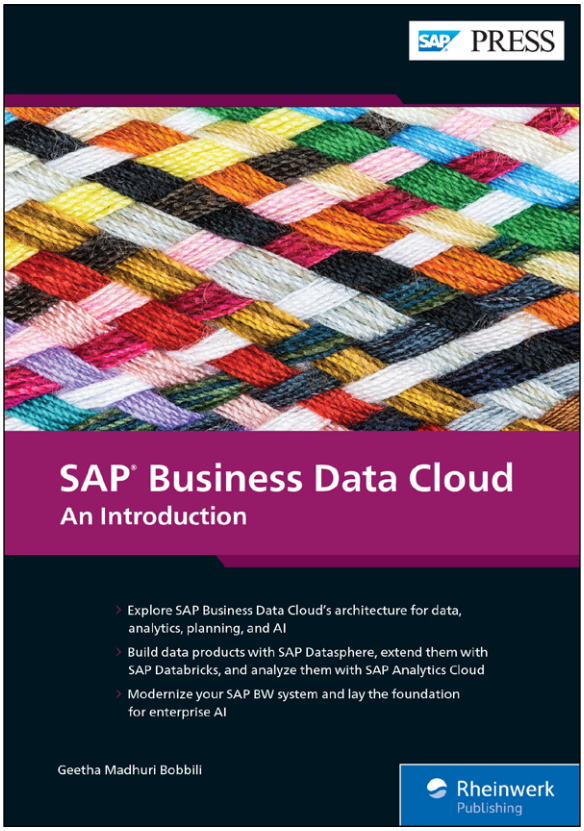
It began with onboarding, in which administrative access, identity setup, and SAP for Me establish the foundation for managing the landscape. It then described provisioning, in which core components such as SAP Datasphere, SAP Analytics Cloud, and SAP Databricks are created as independent tenants with aligned capacity and configuration.

The chapter introduced system formation as the step that connects these tenants into a single environment, enabling shared access, data exchange, and coordinated operation. It also covered tenant rewiring, which allows existing systems to be brought into the landscape without migration.

Finally, we discussed the role of the SAP Business Data Cloud cockpit and the activation of SAP-managed content. These steps enable data products and analytical scenarios to become available for business use.

Overall, SAP Business Data Cloud operates as a coordinated architecture in which onboarding, provisioning, formation, and activation work together to deliver a governed and scalable data platform.

Chapter 4 turns from setting up the platform to the assets it delivers. It examines data products as the reusable, governed building blocks of SAP Business Data Cloud, covering their architecture and interfaces, the metadata and semantic foundations behind them, the product types available, and how they are discovered, governed, and consumed across analytics and AI workloads.



Geetha Bobbili

SAP Business Data Cloud

An Introduction

- Get to know SAP Business Data Cloud, the new data fabric solution
- Use its components for semantic modeling, data engineering, and analytics
- Modernize SAP BW and see how to use intelligent applications

www.sap-press.com/6334

We hope you have enjoyed this reading sample. You may recommend or pass it on to others, but only in its entirety, including all pages. This reading sample and all its parts are protected by copyright law. All usage and exploitation rights are reserved by the author and the publisher.

The Author

Geetha Madhuri Bobbili is an associate director of SAP data and analytics at Deloitte India and a three-time SAP PRESS author. She has more than 12 years of experience leading large-scale analytics transformations for global enterprises across a variety of industries.

ISBN 978-1-4932-2867-6 • 375 pages • 10/2026

E-book: $74.99 • **Print book:** $79.95 • **Bundle:** $89.99

Rheinwerk Publishing