GLOSSARY OF SAP S/4HANA BTP WITH CLOUD APPLICATION PROGRAMMING (CAP)

A Quick Reference Guide to SAP Terminologies

Concept/Term	Definition
SAP S/4HANA BTP	SAP Business Technology Platform (BTP) integrated with SAP S/4HANA to enable application development, deployment, and integration.
Cloud Application Programming (CAP)	A programming model and framework for building cloud-native applications on SAP BTP, simplifying the development process.
Cloud-Native Applications	Apps designed to run in cloud environments, leveraging cloud services for scalability, flexibility, and rapid deployment.
CAP Model	A conceptual model in CAP that defines the structure of applications, including data models, services, and logic.
SAP Cloud SDK	A set of development tools to build applications on SAP BTP, ensuring smooth integration with SAP systems.

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SAP S/4HANA BTP with CAP
Key Concepts

Concept/Term	Definition
OData Services	A standard protocol for building APIs that enables easy access to data in CAP applications, using RESTful methods.
Node.js	A JavaScript runtime used for developing backend services in CAP applications, enabling non-blocking, event-driven programming.
SAP Fiori	A design system that provides a consistent, responsive user interface for SAP applications, integrated into CAP applications.
SAP HANA Cloud	SAP's cloud database solution, offering real-time data processing capabilities, used as a back-end for CAP applications.
Data Models	The structure and organization of data in CAP, typically defined using Core Data Services (CDS) for easy data management.

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SAP S/4HANA BTP with CAP
Key Concepts

Concept/Term	Definition
Core Data Services (CDS)	A data modeling framework for defining semantically rich data models, integrated into CAP for streamlined data management.
Entity	A representation of a data structure within CAP that corresponds to a database table or object, used to define and manage data.
Service Layer	The part of CAP where business logic and APIs are exposed, connecting the front-end and back-end of cloud applications.
CAP Service Binding	The process of connecting CAP applications to external services, enabling seamless data exchange and integration.
BTP Business Services	Pre-configured services in SAP BTP used for common business operations like authentication and integration, integrated into CAP apps.

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Concept/Term	Definition
SAP Business Application Studio	A cloud-based integrated development environment (IDE) for creating and deploying CAP applications with rich support for SAP development.
SAP Fiori Elements	A set of UI components that follow SAP Fiori design principles, used to create user interfaces for CAP applications.
XSUAA (SAP Cloud Platform XSUAA)	A service for handling user authentication in SAP BTP, integrated with CAP applications for secure access control.
Authentication	The process of verifying user identity before granting access to CAP applications, typically using credentials or tokens.
Authorization	The process of managing user permissions and access rights within CAP applications, ensuring data security and compliance.

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Concept/Term	Definition
Cloud Foundry	A platform-as-a-service (PaaS) for deploying cloud applications, providing the runtime environment for CAP-based apps.
Microservices	Small, modular services within CAP that perform specific tasks, designed for flexibility and scalability in cloud applications.
RESTful API	A lightweight, stateless API style used in CAP for data exchange between systems using HTTP methods like GET, POST, PUT, and DELETE.
SAP Graph	A tool for querying graph data structures, useful in CAP for managing complex relationships between different data entities.
SAP GraphQL	A query language and runtime used to fetch data efficiently from SAP systems in CAP applications, allowing flexible data retrieval.

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Concept/Term	Definition
SAP API Management	A suite of tools to design, publish, and manage APIs securely, ensuring seamless API integration for CAP applications.
Data Persistence	The process of storing and retrieving data within CAP applications, ensuring that data remains available between app sessions.
Service Broker	A tool in SAP BTP that manages the lifecycle of services, including provisioning, binding, and managing external service connections for CAP.
Application Configuration	The setup and adjustment of parameters and settings that define how CAP applications behave in different environments.
CI/CD (Continuous Integration/Continuous Deployment)	Practices used in SAP BTP to automate testing, building, and deploying CAP applications, ensuring faster updates and quality control.

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SAP S/4HANA BTP with CAP
Key Concepts

Concept/Term	Definition
SAP Cloud Connector	A tool that securely connects on-premise systems to cloud applications, enabling integration between SAP S/4HANA and CAP applications.
SAP HANA Cloud Database	SAP's cloud-based in-memory database platform used to store and process data for CAP applications, offering real-time data processing.
API Gateway	A management tool that acts as an entry point for external clients accessing CAP services, offering security and routing features.
Event-Driven Architecture	A design pattern where services react to events or triggers in CAP applications, enabling more flexible and responsive systems.
Service-Oriented Architecture (SOA)	A software design paradigm that structures applications as a set of interoperable services, commonly used in CAP for building modular applications.

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Concept/Term	Definition
Data Federation	The process of integrating data from multiple sources into a unified view, without physically moving the data, used in CAP for real-time access.
Multi-Cloud Integration	Connecting CAP applications to services and data from multiple cloud providers, enabling cross-cloud interoperability.
SAP Data Intelligence	A toolset in SAP BTP used to manage, integrate, and transform data from various sources, aiding in data preparation for CAP applications.
Deployment Pipeline	A set of automated steps used to build, test, and deploy CAP applications, ensuring smooth and consistent delivery to production environments.
Continuous Monitoring	The process of continuously observing the health, performance, and security of CAP applications to ensure they function optimally.

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SAP S/4HANA BTP with CAP
Key Concepts

Concept/Term	Definition
Microservice Architecture	A design pattern that breaks down applications into smaller, independent services, providing flexibility and scalability, implemented in CAP-based applications.
API Security	The practice of ensuring that APIs in CAP applications are protected through measures like encryption, authentication, and access control.
Data Exposure	The process of making data available to external systems or users, typically via APIs or services, in CAP applications for seamless data sharing.
Multi-Tenant Architecture	A model where a single instance of a CAP application serves multiple clients (tenants), isolating their data for security and operational efficiency.
SAP Integration Advisor	A tool provided by SAP that helps accelerate the integration of CAP applications with SAP S/4HANA and third-party services by offering pre-built integration templates.

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Concept/Term	Definition
SAP Workflow Management	A service in SAP BTP that helps automate and orchestrate business processes, enabling CAP applications to define and manage workflows.
Cloud-Native Apps	Applications built and designed specifically for cloud environments, leveraging cloud services for scalability, flexibility, and rapid development.
App Analytics	The process of collecting and analyzing data on how users interact with CAP applications to gain insights and improve functionality and performance.
Data Synchronization	The process of ensuring that data is consistent and up-to-date across all integrated systems, enabling real-time data access for CAP applications.
Containerization	The use of containers to package and deploy CAP applications, providing a consistent environment across development, testing, and production.

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