



SAP BTP CAPM Training Program

Master Cloud-Native Development with SAP's Powerful CAP Framework



Module 1: Kickoff – Understanding SAP BTP and CAP

- What is SAP BTP? Why it matters in the cloud era
- Understand CAP (Cloud Application Programming Model) – the development model SAP uses internally!
- Key Building Blocks: CDS, Services, JavaScript/Java Runtime
- Real-life Scenarios: Where CAP is used in the industry



Module 2: Developer Setup – Your Playground

- Set up SAP Business Application Studio or VS Code (your dev cockpit)
- Install CAP CLI, Node.js, and connect to SAP HANA Cloud
- Create and run your first CAP project in under 10 minutes



Module 3: Core Data Services (CDS) – Model Your World

- Learn CDS like a pro: entities, keys, compositions, associations
- Use annotations to generate Fiori apps with zero frontend code
- Deploy models to SAP HANA with a single command



Module 4: Build APIs with CAP Service Layer

- Auto-generate OData services — and customize them
- Handle CRUD events with custom JavaScript logic
- Learn how to manage deep inserts, validations, transactions



Module 5: Fiori Elements Magic – UI Without Frontend Code

- What are Fiori Elements? Why CAP developers love them
- Auto-generate UI using annotations

- Customize list reports, object pages, and actions

Module 6: Side-by-Side Extension – Real S/4HANA Scenarios

- What is Side-by-Side Extension? Why clients demand it
- Connect with S/4HANA APIs using SAP API Hub
- Understand Virtual Data Models and Data Replication
- Build your own Side-by-Side Extension and deploy it

Module 7: Secure Your App – Auth, Roles, RBAC

- Implement XSUAA-based authentication
- Add role-based access using `@requires` and `srv/roles.cds`
- Test security locally and in BTP environment

Module 8: Integration with BTP Services

- Consume external APIs with destinations
- Store secrets using `default-env.json` and `.env`
- Event-driven integration with SAP Event Mesh

Module 9: Cloud Deployment & DevOps for CAP

- Master `mta.yaml`: Define apps, services, routers, and destinations
- Build & deploy with `mbt` and `cf deploy`
- Use `xs-app.json`, `approuter`, and HTML5 repo manager
- CI/CD pipelines and debugging in Cloud Foundry

Module 10: Advanced Topics

- Custom Actions & Functions
- Lifecycle hooks & user context
- Performance tuning and multi-service architecture
- Modular CAP projects

Module 11: Real-World Projects

- End-to-End Project: CAP + HANA + Fiori + Security + Cloud Foundry

- Consume external REST APIs (e.g., Ariba, SuccessFactors)
- Build a dashboard or approval workflow with full-stack features
- Hands-on use of Postman for testing, debugging CAP APIs

Module 12: Wrap-Up, Tips & Q&A

- Recap all topics
- Discuss career pathways: Fiori, BTP, Extension Suite, Integration Suite
- Interview and certification questions
- Feedback and closing notes

Why This Training is Special

- ✓ Hands-on from Day 1
- ✓ Covers **latest real-world scenarios** (Side-by-Side, XSUAA, mta.yaml)
- ✓ Learn **deployment to Cloud Foundry** (not just theory)
- ✓ Build **production-ready, full-stack apps**
- ✓ Designed for working professionals with 0 to mid CAP experience
- ✓ Best practices from real SAP projects