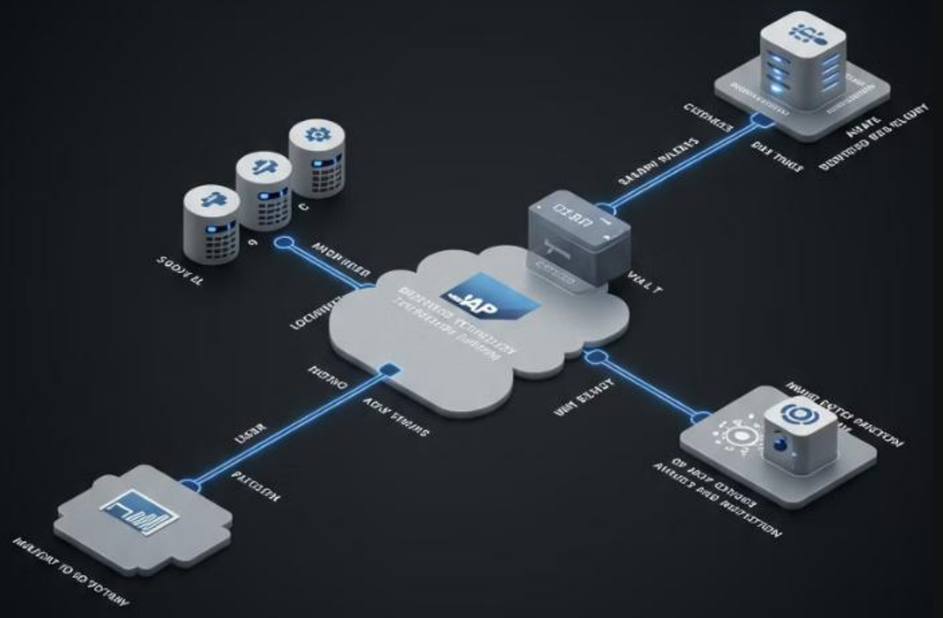


Cloud-Ready Extensions in SAP Business Technology Platform (BTP)

por Mayko Silva

Extension Strategy Benefits

1. **Reduced Total Cost of Ownership**

   basically, it's cheaper to maintain and upgrade.

2. **Business Agility**

   we can add new stuff faster.

3. **Innovation**

   we get to use all the cool new tech without messing up the core.

4. **Sustainability**

   it's built to last and grow with our business.

Now, sap's whole idea here is to keep the core system, you know, squeaky clean, while still letting us build all the custom stuff we need. That's what this extension strategy is all about. And it gives us some pretty sweet benefits:

So, how do we actually do this? Well, there are a few main patterns we use when building extensions on btp.

Side-by-Side Extensions

First up, we've got side-by-side extensions. Think of these as apps that live completely outside the core sap system. They talk to sap through apis or events, but they're totally separate. This is great for complex stuff that doesn't really fit inside the core or when you need to connect to other systems.

In-App Extensions

In-App Extension Model

Then there are in-app extensions. These are built right inside the sap system using the tools sap gives us. They're tightly integrated and usually pretty simple, like adding a field or tweaking some business logic.

Development Environment

In-app extensions provide direct integration with core functionality while maintaining the clean core approach.

Process Extensions

1

Process Extensions

Mix of both approaches

2

Combined Components

In-app and side-by-side

3

Business Process Focus

Changes how processes work

And finally, we've got process extensions. These are kind of a mix of both. They change how business processes work and might involve both in-app and side-by-side components.

ABAP Environment on BTP

Cloud-Native

ABAP in the cloud environment

Familiar Skills

Use existing ABAP knowledge

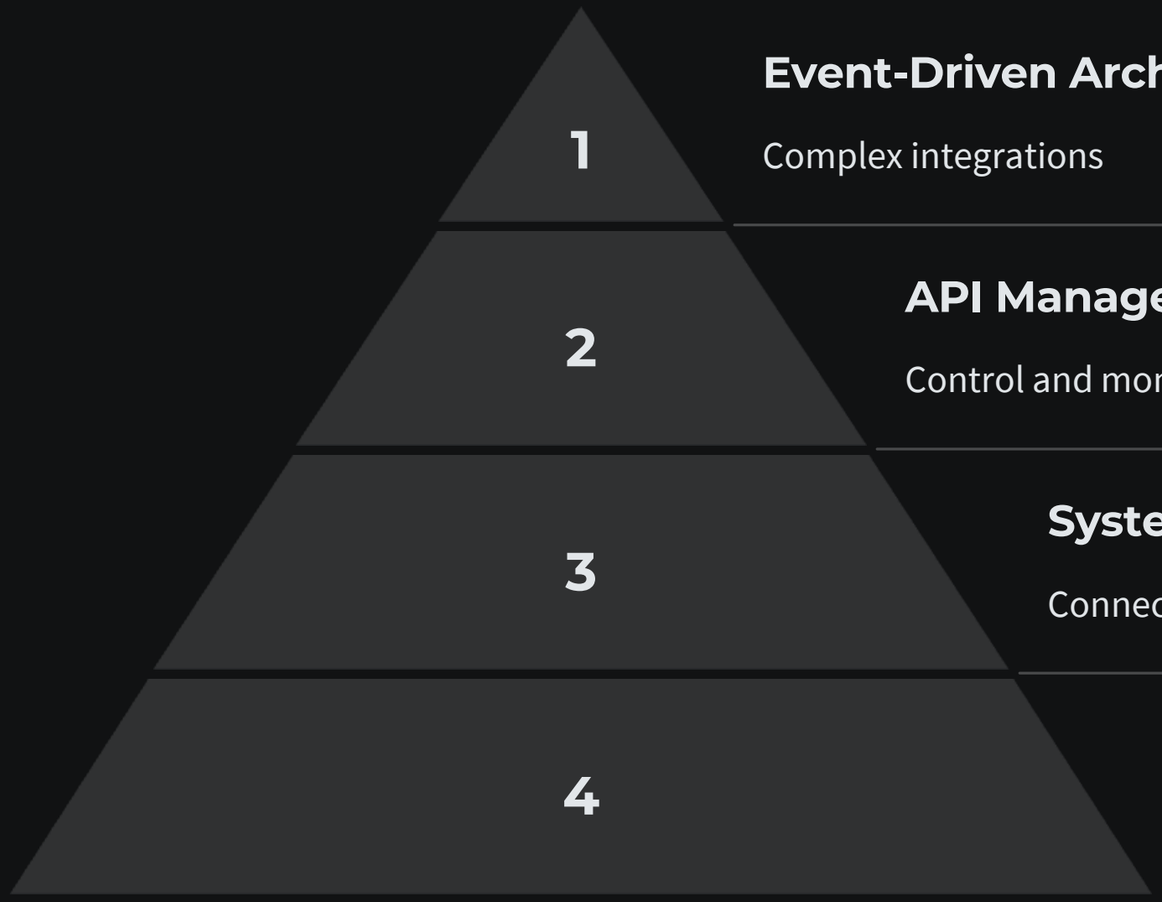
Core Protection

Separate from core system

Okay, so let's dive into some of the specific technologies we use.

One of the big ones is the abap environment on btp. It's like having abap in the cloud. You can use your existing abap skills to build cloud-native apps that connect to sap s/4hana. And because it's all separate, you don't have to worry about messing up the core system.

SAP Integration Suite



Event-Driven Architectures

Complex integrations

API Management

Control and monitor APIs

System Connections

Connect diverse systems

Integration Platform

Powerful foundation

Another key tool is the sap integration suite. This is a really powerful platform for connecting systems and managing apis. It lets you build all sorts of integrations, from simple point-to-point connections to complex event-driven architectures.

SAP Build Process Automation

Low-Code/No-Code

Business users can build automations without deep technical knowledge

Process Automation

Streamline workflow and approval processes across departments

Use Cases

Custom approvals or vendor onboarding workflows that extend core functionality

And then there's sap build process automation. This is a low-code/no-code solution that lets business users automate processes. It's great for things like custom approvals or vendor onboarding.

Choosing the Right Tools

Assess Requirements

Understand your specific needs

Consider Use Case

Match tools to specific scenarios

Evaluate Cloud Foundry

For traditional web applications

Now, you might be wondering, "which of these tools should i use?" Well, it depends on what you're trying to do. If you're building a traditional web app, cloud foundry runtime might be a good choice.

Kyma Runtime

Microservices

Build modular applications

Kubernetes-Based

Container orchestration

Scalable Architecture

Grow with your needs

Event-Driven

React to business events

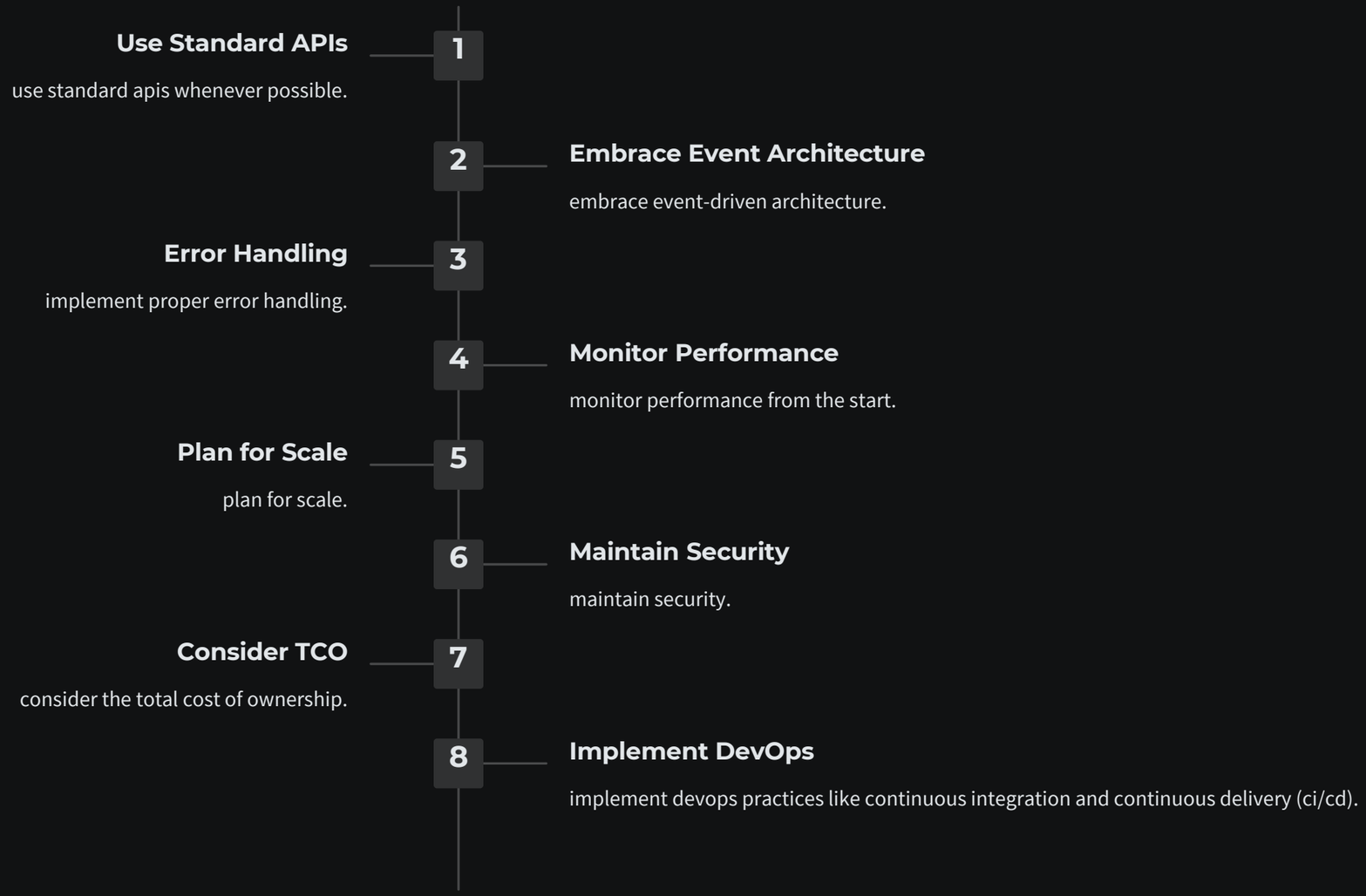
If you're building microservices or an event-driven architecture, kyma runtime might be a better fit.

Implementation Process

1. **Analyze Requirements**
   figure out what you need to extend and why.
2. **Evaluate Standard Options**
   see if you can do it with configuration or key user tools.
3. **Select Extension Pattern**
   decide whether to build an in-app, side-by-side, or process extension.
4. **Choose Implementation Technology**
   pick the right btp service.
5. **Design the Extension**
   make sure it doesn't depend too much on the core system.
6. **Implement Integration Points**
   use stable apis and events.
7. **Consider Lifecycle Management**
   plan for testing, deployment, and maintenance.
8. **Think About DevOps**
   from the start.
9. **Document Everything**
   so you don't forget what you did!

So, how do we actually implement these extensions? Well, here's a basic process:

Best Practices



And of course, there are some best practices to keep in mind:

You see, devops isn't just a buzzword - it's a way of working that helps us build and deploy extensions faster and more reliably. By automating our build, test, and deployment processes, we can reduce errors, improve quality, and get new features out to users more quickly.

DevOps for BTP Extensions

Git for Version Control

to track changes to our code and collaborate with other developers.

Jenkins/GitHub Actions

for continuous integration: to automatically build and test our code whenever we make a change.

Transport Management Service

to move our extensions from development to test to production.

So, what does devops look like in practice for btp extensions? Well, it might involve using tools like:

The key is to automate as much as possible and to get feedback early and often. This helps us catch problems before they become big issues and ensures that our extensions are always in a working state.

Summary: Clean Core with BTP Extensions

So, to sum it all up, sap btp gives us a ton of tools for building extensions that play nice with the clean core. By picking the right pattern and technology, considering devops from the start, we can keep our core systems clean while still delivering all the custom functionality our businesses need.