Architecture **Strategies** for Successful SaaS Products

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Who is this for?

Technology & Business Leaders
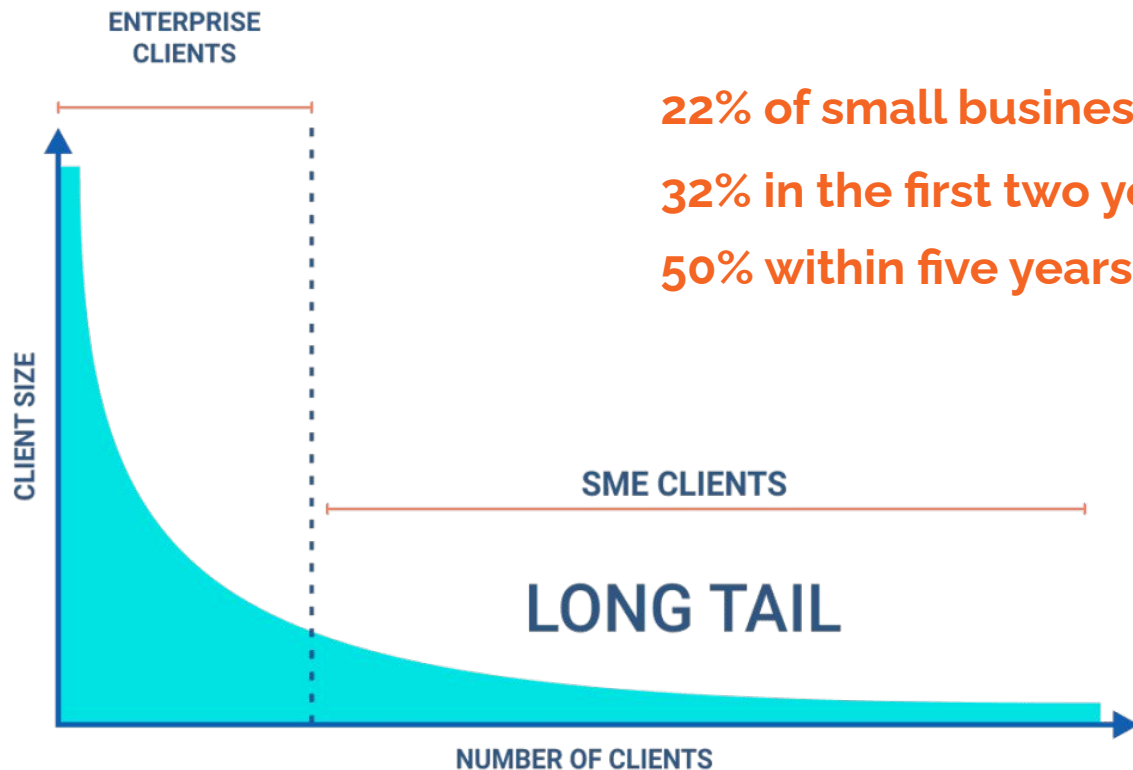
Curious minds that can absorb high level technical stuff

Architects

The Saas market value is predicted to grow in 2023 to $208.1 billions

That is **17.5%** over the growth of the market in 2022

Enterprise Clients Are Larger

ENTERPRISE
CLIENTS

CLIENT SIZE

SME CLIENTS

LONG TAIL

NUMBER OF CLIENTS

22% of small businesses fail in the first year

32% in the first two years

50% within five years

Enterprise Clients Have Low Churn

What is the main reason hindering successful enterprise adoption of SaaS?

SaaS sprawl

As you scale up and start dealing with enterprise customers, they add a **new stakeholder** to your mix: their IT departments

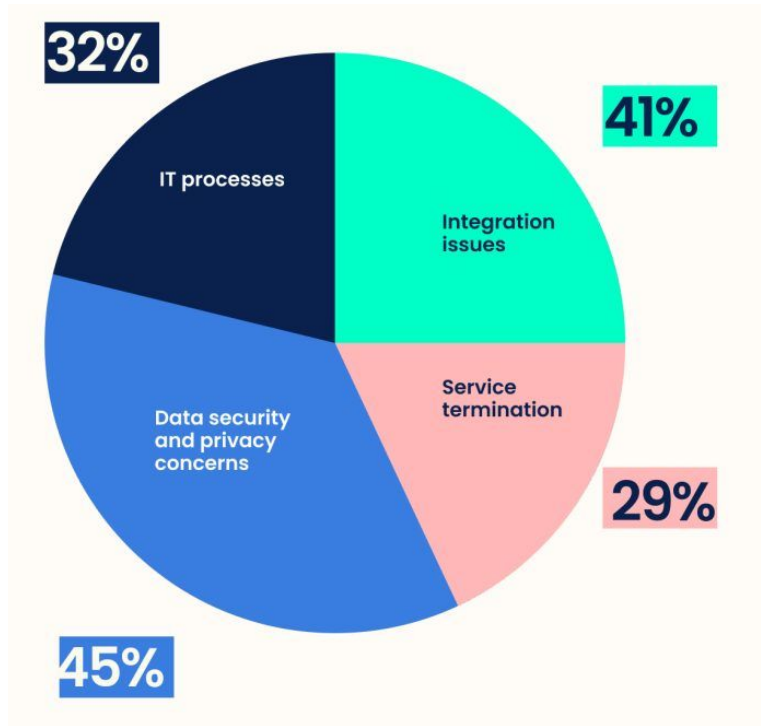# What are the important concerns?

1. Security
2. Inflexible customization
3. Limited integrations
4. Release management

32%
IT processes

41%
Integration issues

45%
Data security and privacy concerns

29%
Service termination

The most commonly cited SaaS challenges as revealed by Deloitte

51%

According to Gartner, the biggest challenge companies face with SaaS is finding vendors that can meet their specific needs

"Of course this website is safe. As an extra measure of security, they make you sign in with your Social Security number, mother's name, your bank account, home address, phone number and date of birth."

Security
Authentication

Limit access.

Authentication:
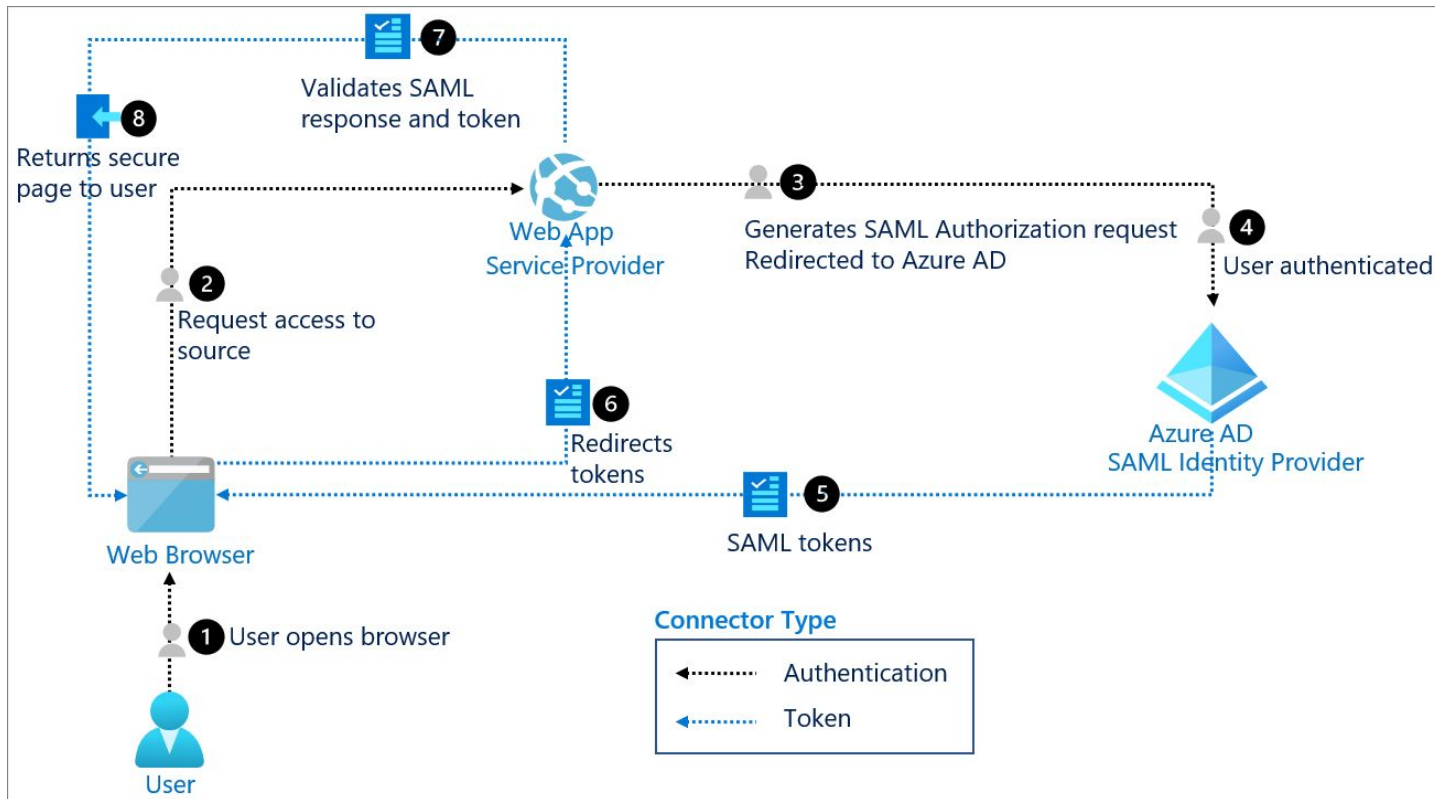
SSO is NOT Social Login

SSO offers

Greater security

Compliance

Saves time

Lowers IT cost

Authentication - SSO

Authentication: MFA Using Email

👍 Accessibility

👍 Familiarity

👍 Low cost

👎 Delivery may be delayed/filtered as spam

👎 Email accounts are vulnerable to hacking or phishing attacks

Multi-Factor Authentication For Email

Authentication: MFA Using SMS

👍 Widespread availability

👍 Ease of use

👎 SIM swapping vulnerability

👎 Reliance on network connectivity

👎 Lack of encryption

Authentication: MFA Using Authenticator

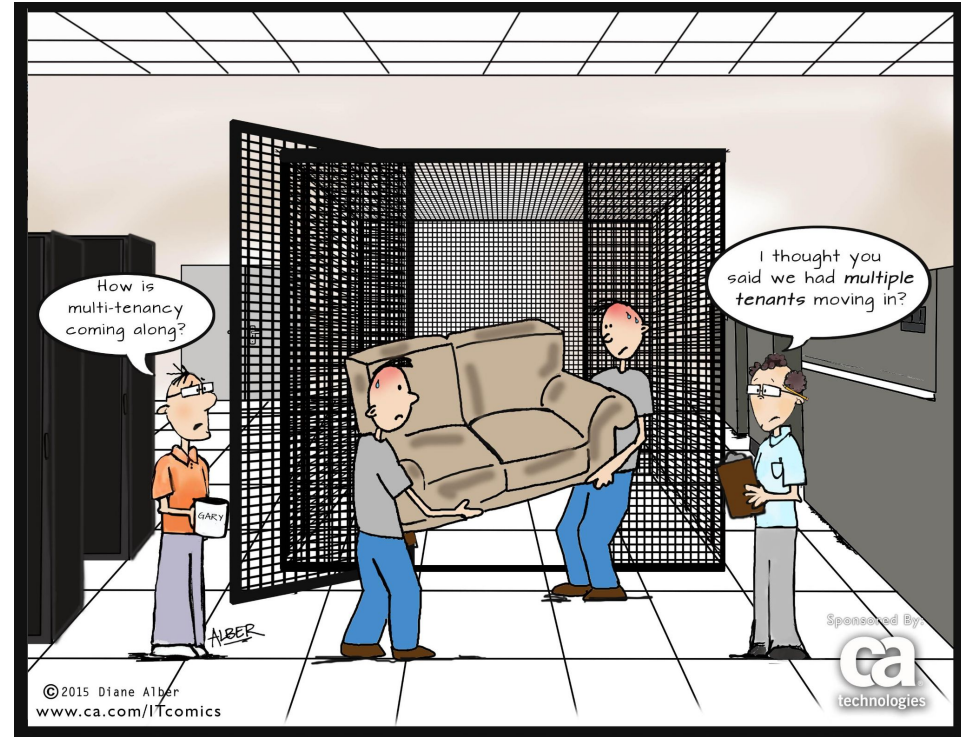👍 Enhanced Security

👍 Offline functionality

👍 Multi-account support
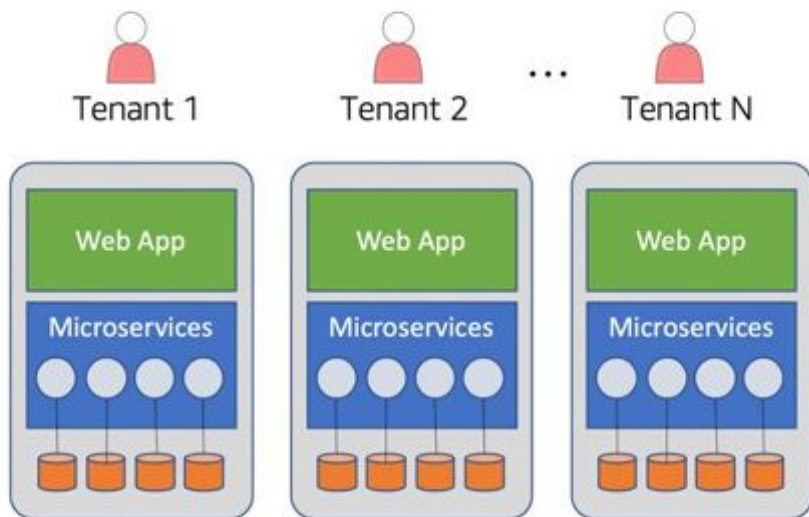
👎 Device dependency

👎 Learning curve

Security

Tenant Isolation

Create boundaries between resources to limit any exposure to cross-tenant access

Silo Isolation

Separate isolated clusters, where each tenant owns storage and infrastructure resources

👍 Support challenging compliance needs

👍 No noisy neighbor concerns

👍 Tenant cost tracking

👍 Limit blast radius

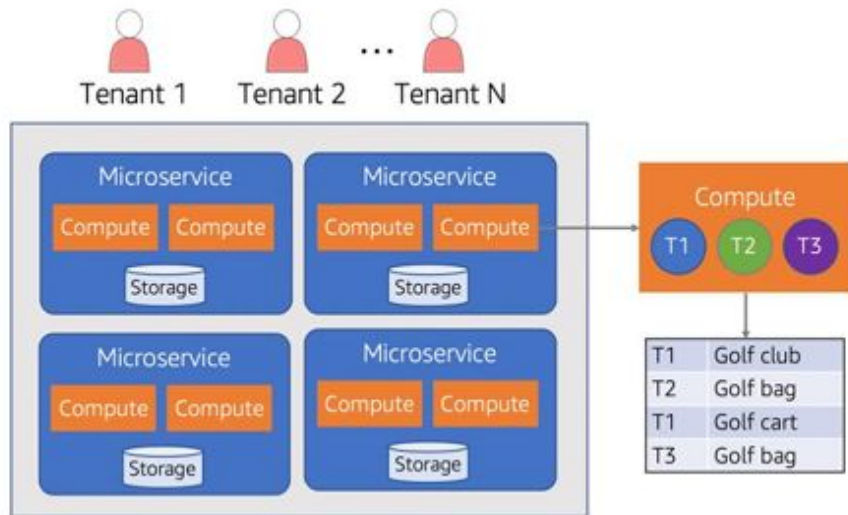👎 Scalability (# of silos to support)

👎 Cost

👎 Agility

👎 Decentralized management/monitoring

Pool Isolation

Multiple users share the same infrastructure

👍 Cost

👍 Agility

👍 Simplified management/monitoring

👎 Noisy neighbor

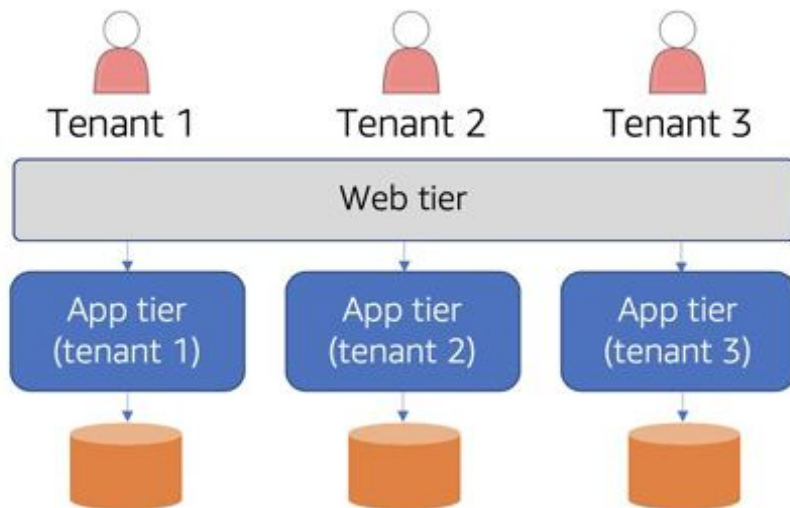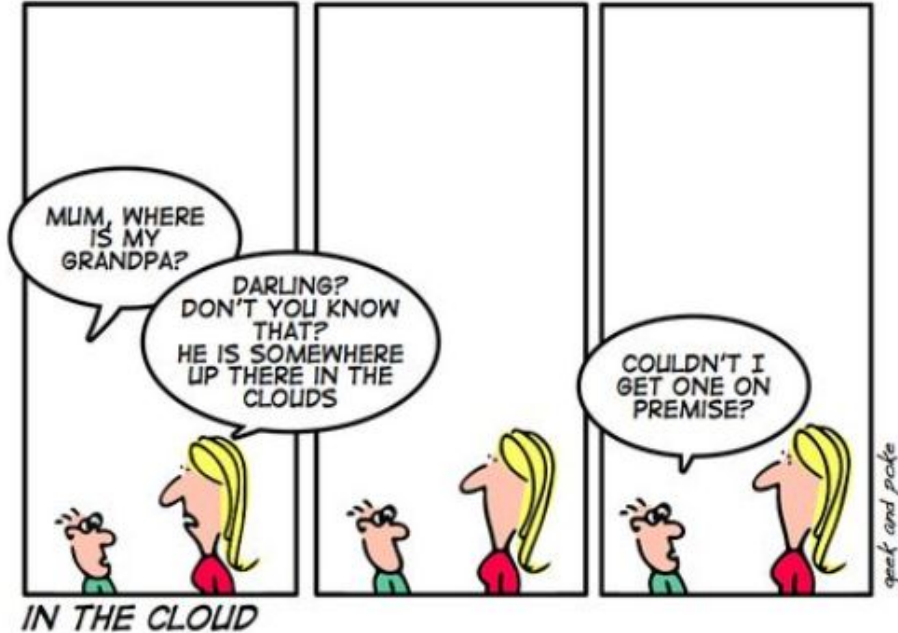👎 Tenant cost tracking

👎 Blast radius

Bridge Model

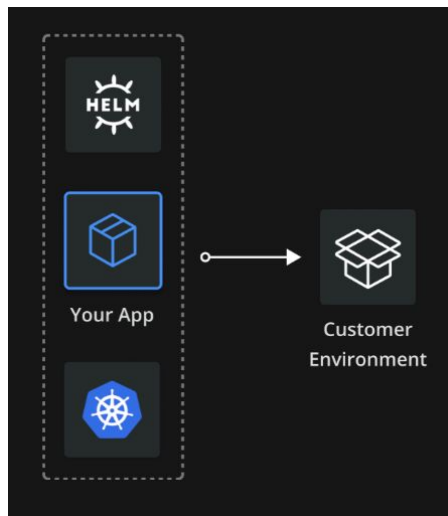A hybrid of silo and pool tenant isolation with isolated and shared infrastructures

Security

On-premise Installation

Provide an option

Third party deployment tools

Containerize SaaS app using K8s

Define app with YAML manifests, K8s operators, and/or Helm

Upload to a public/private registry

Deploy

Handling DB migration/update

1. Run automatically as part of your service startup
2. Use Init containers (will run to completion before the regular containers in your pod start)
3. Use Helm hooks. Used to decide when resources are created during the deployment. Leverage that to run the migration job before any resource is created/updated
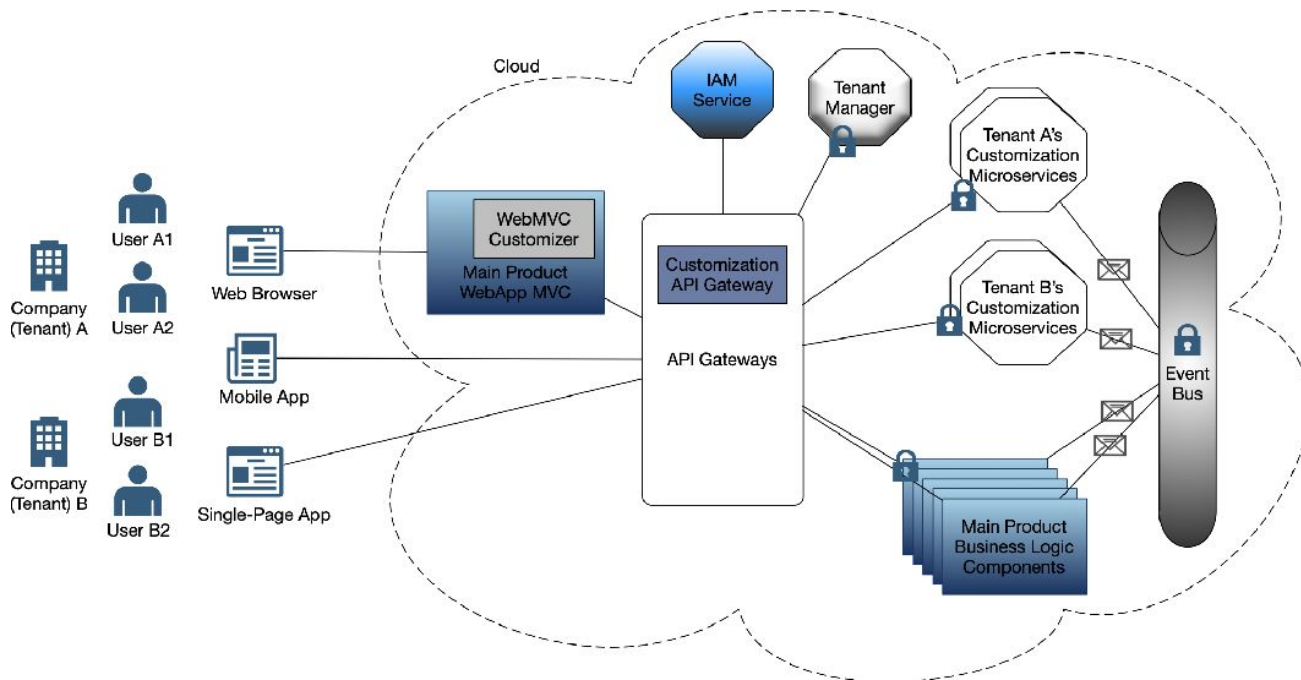
Customization

Allow

Front-end customization with UI Extenders

The majority of use-cases of extending a SaaS product by end-users are UI related — adding new components or pages.
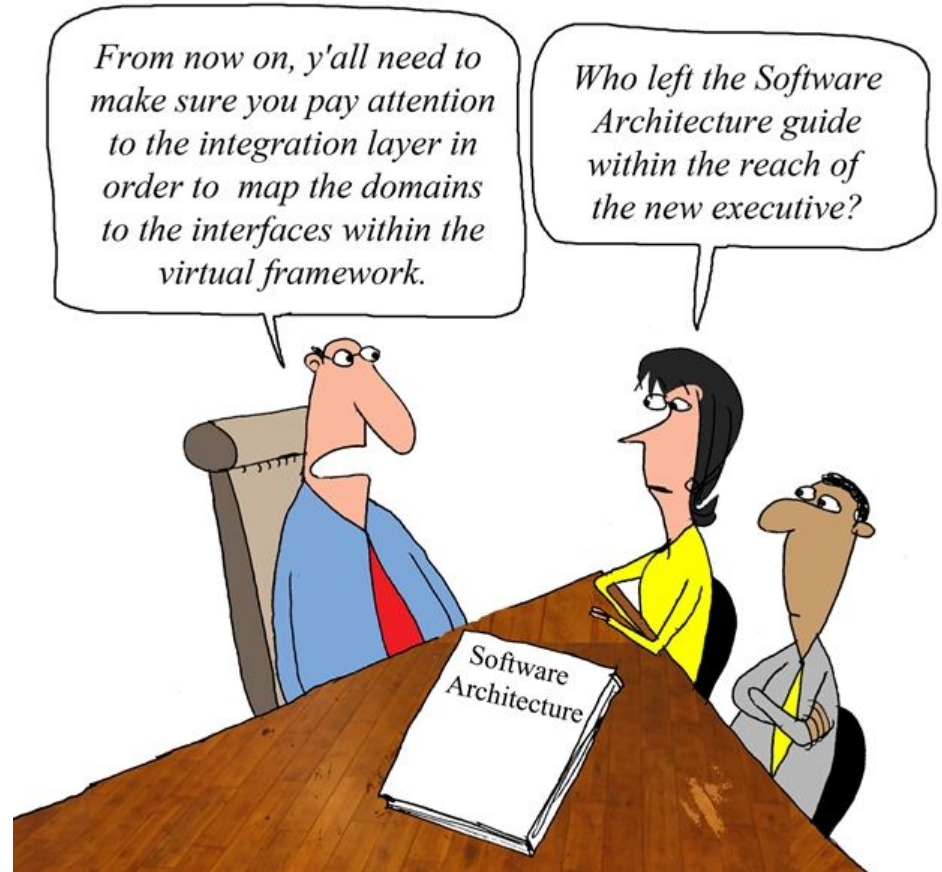
A typical UI extension will entail:
> HTML, CSS, JavaScript, Images / fonts

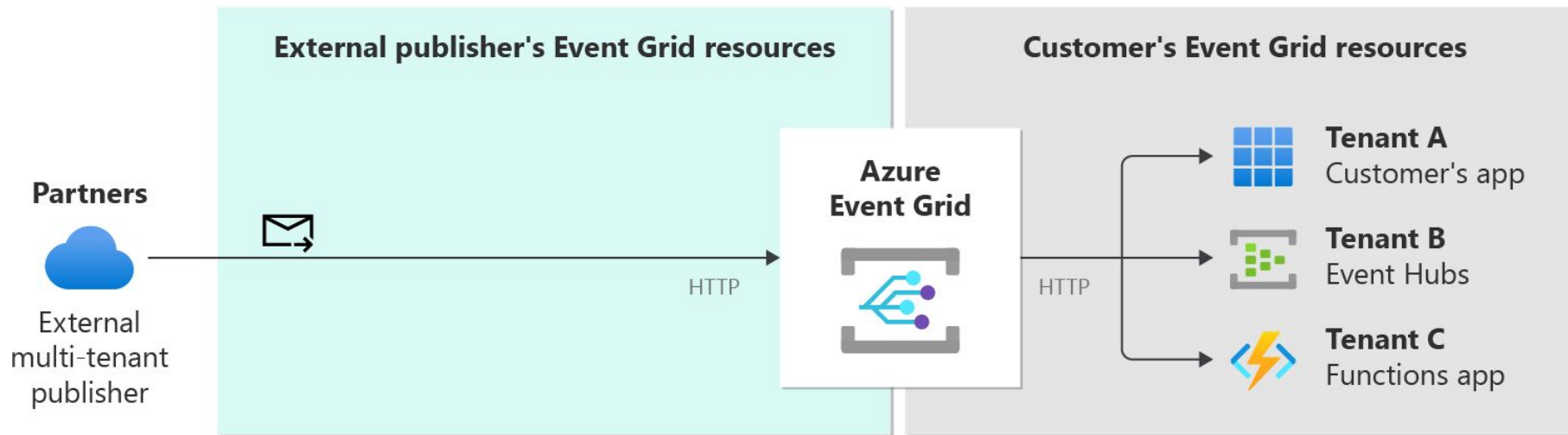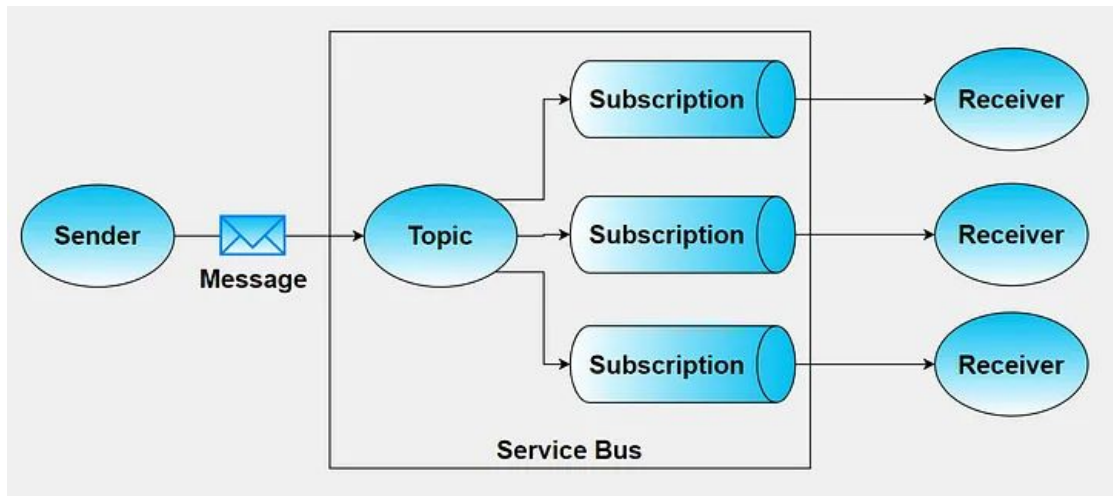# Service customization with APIs

Integration

Enable

Event Based

Message Based using Service Bus

Consume messages at own rate

Messages not lost in case of exceptions

Sequential delivery

Duplicate detection

SB Explorer to observe/investigate

Embedded iPaaS

iPaaS (integration Platform As A Service) - a set of tools that enables software companies to build reusable, configurable, native integrations and deliver them to their customers as features of their application

- iPaaS supplies the infrastructure

- SaaS provider sets different types of connections & parameters (APIs/prebuilt connectors)

- iPaaS allows viewing/configuring/managing the connections

Release Management

Empathize

Release Strategies

Develop and share a roadmap

Be calendar driven

Have "preview releases" in a non-prod environment

Run a regular "release readiness meeting," where every item of the release is discussed with customers

Implement feature toggles for major features

How do you make this worthwhile?

Free
The quickest and easiest way to try Slack

$0 USD/mo

GET STARTED

✓ Access to the most recent 90 days of message history

✓ 10 integrations with other apps like Google Drive, Office 365 and many more

✓ 1:1 audio and video conversations with screen sharing

Pro
More power for small teams who want better collaboration

$7.25 USD/mo*

GET STARTED

All the benefits of Free, and:

✓ The full context of your organization's message history at your fingertips

✓ Timely info and actions in one place with unlimited integrations

✓ Audio and video conversations with screen sharing with up to 50 people

✓ Secure collaboration with outside organizations or guests from within Slack

Business+
Scale your business, increase productivity, and keep your teams connected

$12.50 USD/mo*

GET STARTED

All the goodness of Pro, and:

✓ Advanced identity management through SAML-based SSO and real-time Active Directory sync with OneLogin, Okta and Ping Identity

✓ Compliance requirements met with data exports for all messages

✓ Around-the-clock teamwork and assistance with 99.99% guaranteed uptime and 24/7 support with a four-hour response time

Enterprise Grid
Slack for the most demanding enterprises —all the flexibility to meet your regulatory requirements and all the power to match your growth

CONTACT SALES

All the greatness of Business+, and:

✓ Peace of mind with enterprise-grade security and compliance, such as HIPAA support and the Enterprise Key Management add-on

✓ Large scale collaboration and alignment with support for up to 500,000 users

✓ Streamlined administration with centralized controls and customizable policies

Questions

Thank You