Microservices

AQOVIA

Microservices is a software development technique that structures an application as a collection of loosely coupled services. It moves away from the traditional Monolithic architecture, which are expensive to change and difficult to scale, and brings together a number of smaller services to create simple and adaptive software solutions.

01 Accelerated turnaround

02 Improve fault isolation & resolution

03 Enable on-demand flexibility & scalability

04 Make change less expensive

05 Unleash innovation

Freedom of technology:
You can choose technology that is best suited for a particular functionality.

Easy to change:
Separate services can be developed quickly.

Easier to scale:
Traditional Monoliths approach require having to scale the whole application. Microservice approach means each individual service can be scaled separately.

Less downtime:
When an application fails, other applications around it are unaffected.

Evolution of architecture

A microservices approach enables an almost plug and play integration of discrete services internally and externally to an organisation.

1990's and earlier

2000's

Now

Pre-SOA (monolithic)
Tight coupling

Traditional SOA
Looser coupling

Microservices
Decoupled

"Companies such as Netflix, Gilt, Paypal, and Conde Nast are known for their ability to scale high-volume websites, yet even they have recently performed major surgery on their systems. Their older, more monolithic architectures would not allow them to add new or change old functionality rapidly enough. So they're now adopting a more modular and loosely coupled approach based on microservices architecture." (PWC)

Traditional Approach

A traditional application (Web app or larger service) usually has most of its functionality within a single process (usually internally layered, though).
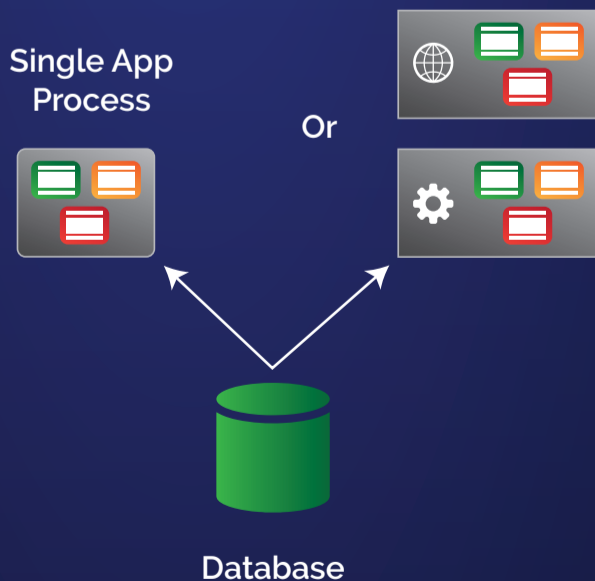
App 1

And scales by cloning the whole app on multiple servers/VMs/containers.

• Single app process or 3Tier approach.
• Several modules
• Layered modules

Single App Process
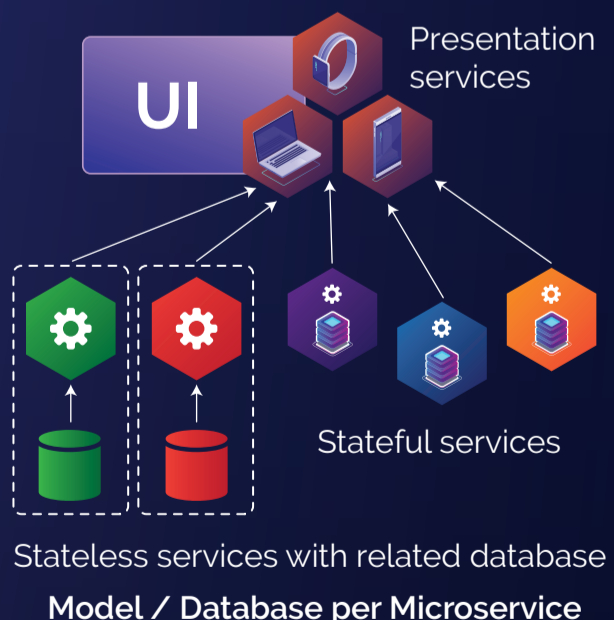
Or

3 Tier Approach

Database

Microservices Approach

A microservice approach segregates functionality into small autonomous services.

And scales out by deploying independently and replicating these services across servers/VMs/containers.

App 1   App 2

UI   Presentation services

Stateful services

Stateless services with related database
Model / Database per Microservice

A cultural shift and adoption of microservices is not simple or easily achieved. Aqovia have been practicing and implementing microservices for more than 5 years and partner with our clients to achieve a clear and transparent communications framework, leverage automation and implement tools to help teams achieve rapid productivity gains.

Aqovia's experts will conduct a review of your existing technology applications and infrastructure and recommend the best approach to develop, test and deploy microservices based applications.

Aqovia deploy software solutions using an agile framework, ensuring high product quality, greater customer satisfaction and a faster ROI.

For further information please contact us at **DevOps@aqovia.com**

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