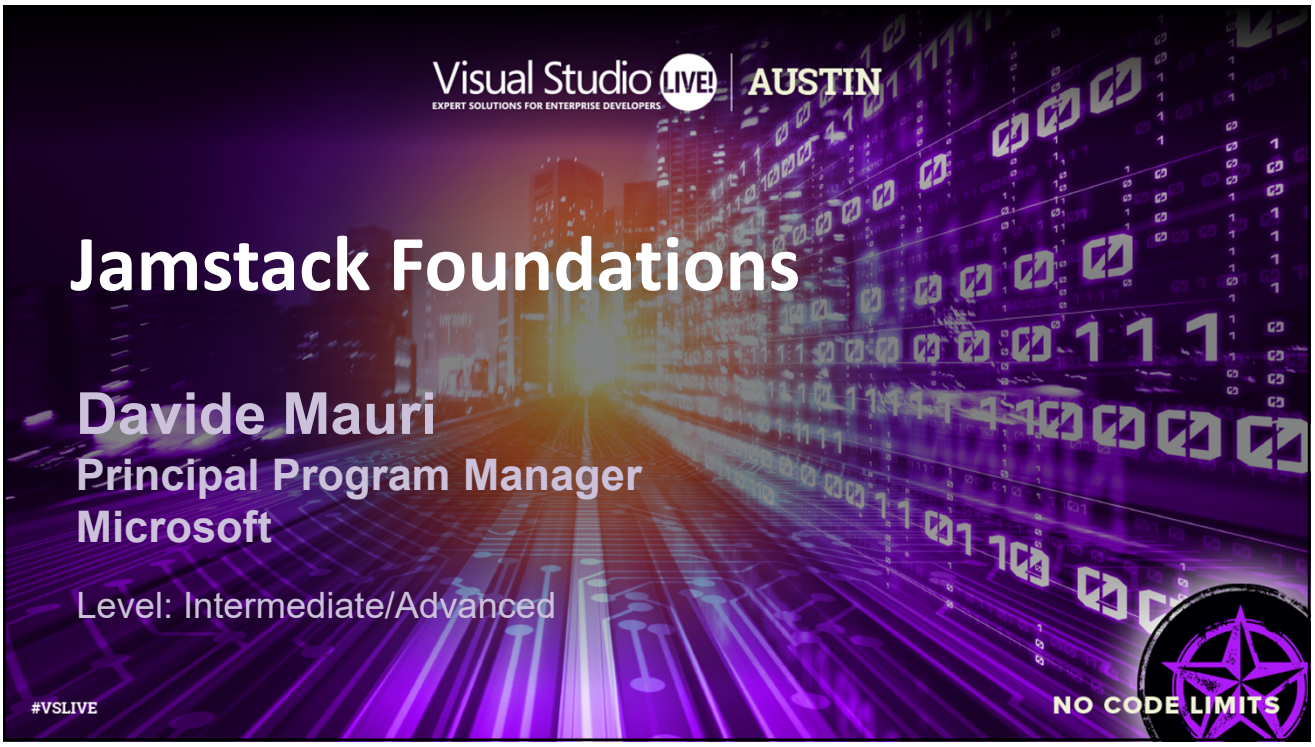

Davide Mauri

SQL Server / Azure Data MVP for 12 Years
Worked in consulting services for 20 years
Joined Azure SQL group on mid 2019
- Still a developer at heart!
- Now Azure SQL PM

Focus on Azure SQL & Developers
Very active in the Community, Conference Speaker
- Website: http://davidemauri.it/
- DevBlogs: https://devblogs.microsoft.com/azure-sql/
- Twitter: @mauridb

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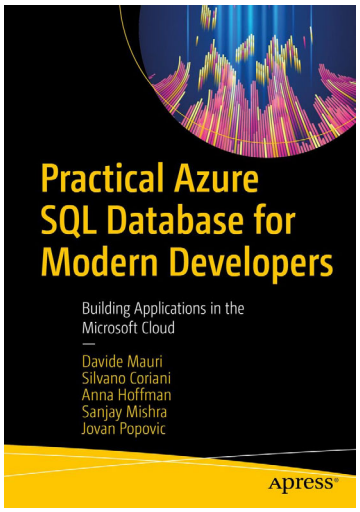
A book for the modern developer

A developer-focused book, to help you leverage all the relational and post-relational features that Azure SQL has, to easily create fast, scalable and secure applications

Lots of samples and discussions taking into account different languages:

- Python, .NET, Java
- …and more!



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Introduction

What is Jamstack?

Jamstack is an architecture designed to make the web faster, more secure, and easier to scale. It builds on many of the tools and workflows which developers love, and which bring maximum productivity.

The core principles of pre-rendering, and decoupling, enable sites and applications to be delivered with greater confidence and resilience than ever before.

Explore more of the benefits of Jamstack.

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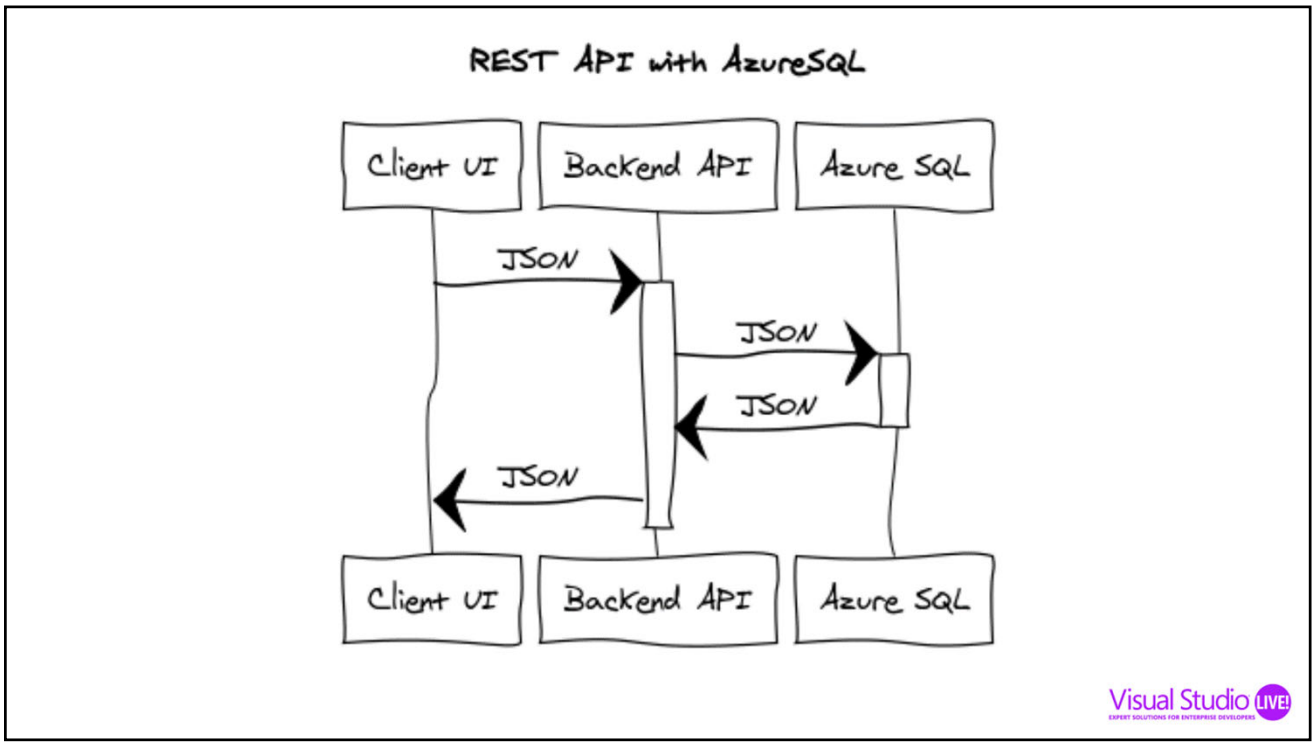
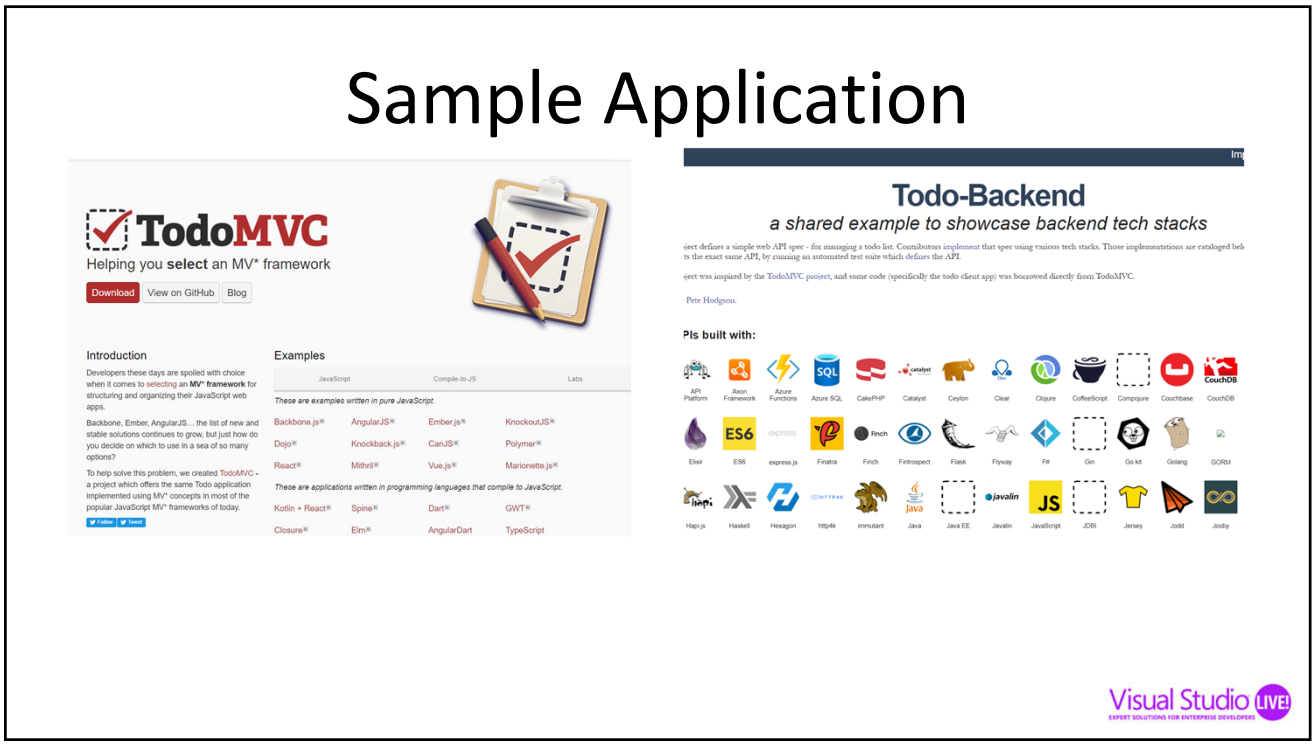

REST API with AzureSQL
Client UI
Backend API
Azure SQL
JSON
JSON
JSON
JSON
Client UI
Backend API
Azure SQL
Visual Studio LIVE!


Sample Application
TodoMVC
Helping you select an MV* framework
Download
View on GitHub
Blog
Introduction
Examples
Todo-Backend
a shared example to showcase backend tech stacks
Pete Hodgson.
Pls built with:
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Why Azure SQL Database?

We want to be ready for anything, so we need flexibility AND security, performance, data consistency:

- Multi-model support (JSON / Graph / GeoSpatial)
- In-Memory Lock Free Tables
- Ledger Tables
- Row-Store and Column-Store on the same table
- Encryption (Column/Database/Transparent/Full)
- Row Level Security
- Replicas / High-Availability

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Install Azure Functions Core Tools

Make sure you have Node installed

```
npm i -g azure-functions-core-tools
```

https://docs.microsoft.com/en-us/azure/azure-functions/functions-run-local

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Install Azure Static Web App CLI

Install Azure Static Web Apps CLI

```
npm install -g @azure/static-web-apps-cli
```

https://docs.microsoft.com/en-us/azure/static-web-apps/local-development

Sample Vue Client

```
curl https://raw.githubusercontent.com/vuejs/vuejs.org/master/src/v2/examples/vue-20-todomvc/index.html -o index.html
```

https://vuejs.org/v2/examples/todomvc.html

This sample uses local storage to save to-do items

Next steps

1. Create an Azure Function to implement the TodoMVC API Specs
   http://www.todobackend.com/
2. Update the Vue Client to use the REST API instead of local storage
3. Deploy the full-stack solution to Azure Static Web Apps
4. Change the API to save data into an Azure SQL DB
5. Update CI/CD pipeline to also deploy and update the DB
6. Add Authentication support
7. Celebrate!

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Sample Repository

- Fork the repo:
  - https://github.com/Azure-Samples/azure-sql-db-fullstack-serverless-kickstart
- Then

```
git clone https://github.com/.../...kickstart
```

- Three branches:
  - v1.0: Very basic kickstart project, no database connectivity
  - v2.0: Full project, with database connectivity and CI/CD pipeline
  - v3.0: End-To-End with also Authentication support!

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DEMO

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More ideas

- GraphQL/REST support via third party tools
  - Prisma
  - Directus
  - Hasura

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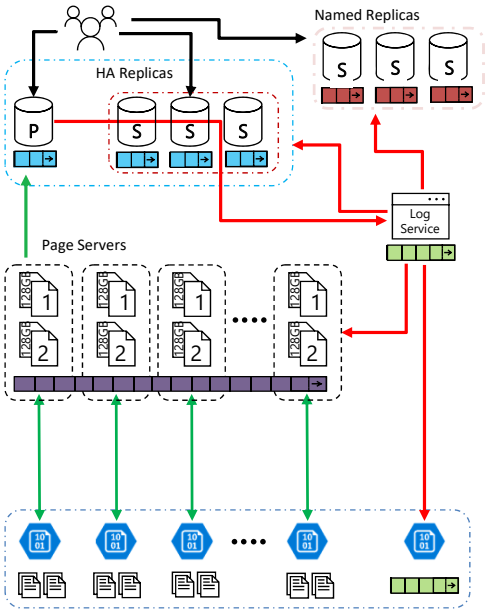
Why Azure SQL DB Hyperscale?

- Separation of compute & Storage.
- Compute with Non-covering SSD cache
- Externalized log service.
- Paired page servers , fully covering SSD
- Redundant data and log in Azure Storage
- 0 to 4 secondary HA replicas
- Higher SLA with HA replica
- 0-30 Named replicas for read scale.
- Backup/Restore via snapshots



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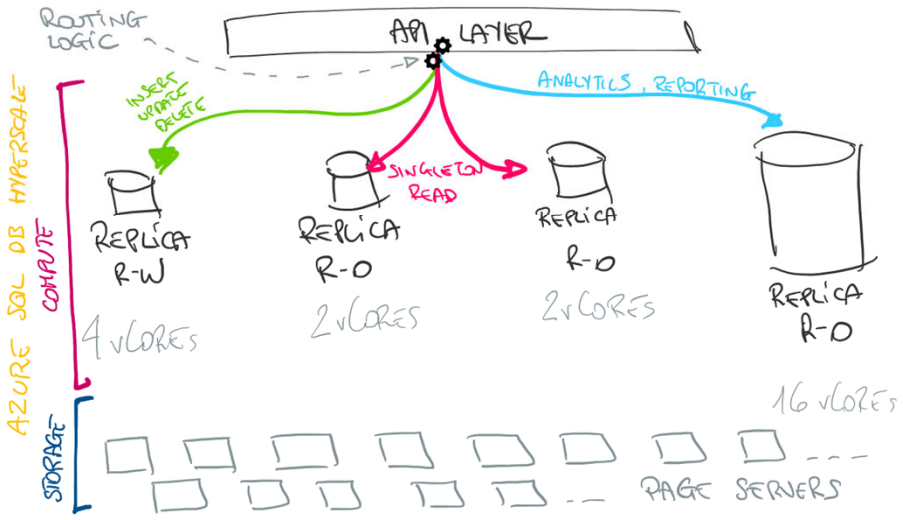
Tag-Based Routing



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Additional Resources

- https://github.com/yorek/azure-sql-db-fullstack-serverless-kickstart
- https://github.com/azure-samples/azure-sql-db-dynamic-schema/
- https://github.com/Azure-Samples/azure-sql-db-named-replica-oltp-scaleout
- https://github.com/yorek/awesome-azure-sql
- https://docs.microsoft.com/en-us/samples/browse/?products=azure-sql-database

Thanks!