Build an Azure Storage Account Manager with SAFE

Brett Rowberry

I didn't write this myself

- F# Software Foundation mentoring program

- Orlando (Daniel) Anderegg

Not an F# or Fable Expert

- C# at work for ~ 3 years

- F# is a hobby

Don't know how to...

- use paket as dotnet global tool

- debug when building with FAKE

Why a Storage Account Manager?

Self-service data acquisition

Why Not Use Azure Portal?

Need to enforce business rules

Why Azure?

I use it at work

https://github.com/brettrowberry/FableConf2019-AzureStorageAccountManager

Azure Account

- Create an Azure account

  - Free Azure service for 30 days with $200 of credit

  - Credits with Visual Studio license

Azure Subscription

Need one

Azure Active Directory

Need one

App Registration

- App Registration

  - New registration

Client Secret

- App Registration

  - Certificates & secrets

  - New client secret

App Information

- App Registration > Overview

  - Directory (tenant) ID

  - Application (client) ID

  - Client secret

App Role

- Subscriptions

  - Access control (IAM)

  - Add role

    - Contributor

Prerequisites

https://safe-stack.github.io/docs/quickstart/

SAFE Template

- https://safe-stack.github.io/docs/template-overview/

  - Server: giraffe

  - Layout: fulma-basic

  - Communication: remoting

  - Pattern: default

  - Deploy: none

  - JS Deps: yarn

```
dotnet new SAFE
--server giraffe
--layout fulma-basic
--communication remoting
--pattern default
--deploy none
--js-deps yarn
```

paket

https://fsprojects.github.io/Paket/getting-started.html

paket

- Copy Azure SDK dependencies into

  - server packet.references

  - paket.dependencies

Tidy

`paket simplify`

Shared.fs

```
type FableStorageAccount
```

Storage.fs

- Make server-side Storage.fs

GUIDs

- https://docs.microsoft.com/en-us/dotnet/api/system.guid.tostring?view=netcore-2.2

- "N" means no '-'

- Should do a PR on GitHub

Azure Resource Groups

- Associated with a region

- Europe West ≠ US South Central

Azure Resource Group

Azure Storage SDK creates for us!

Things Left Undone

- Azure Deployment

- Authentication in client

- Get SAS tokens for storage account

- Change storage account keys

- Manage secrets properly

- Loading spinner