Case: Hilma

Azure from the trenches

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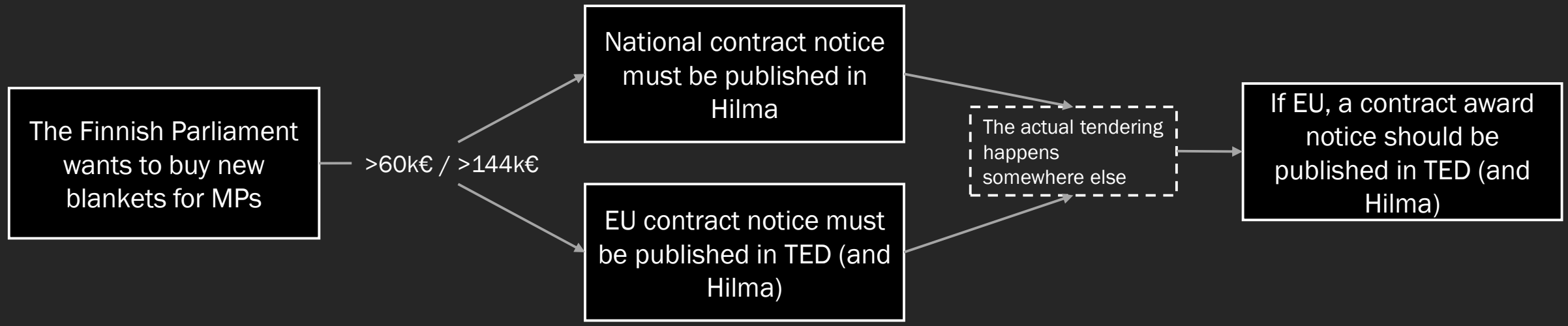
Things to be covered

- Background
- Architecture
- Azure DevOps
- Monthly costs dev/test/prod
- Observations from the trenches
- Q&A

Background 1/2

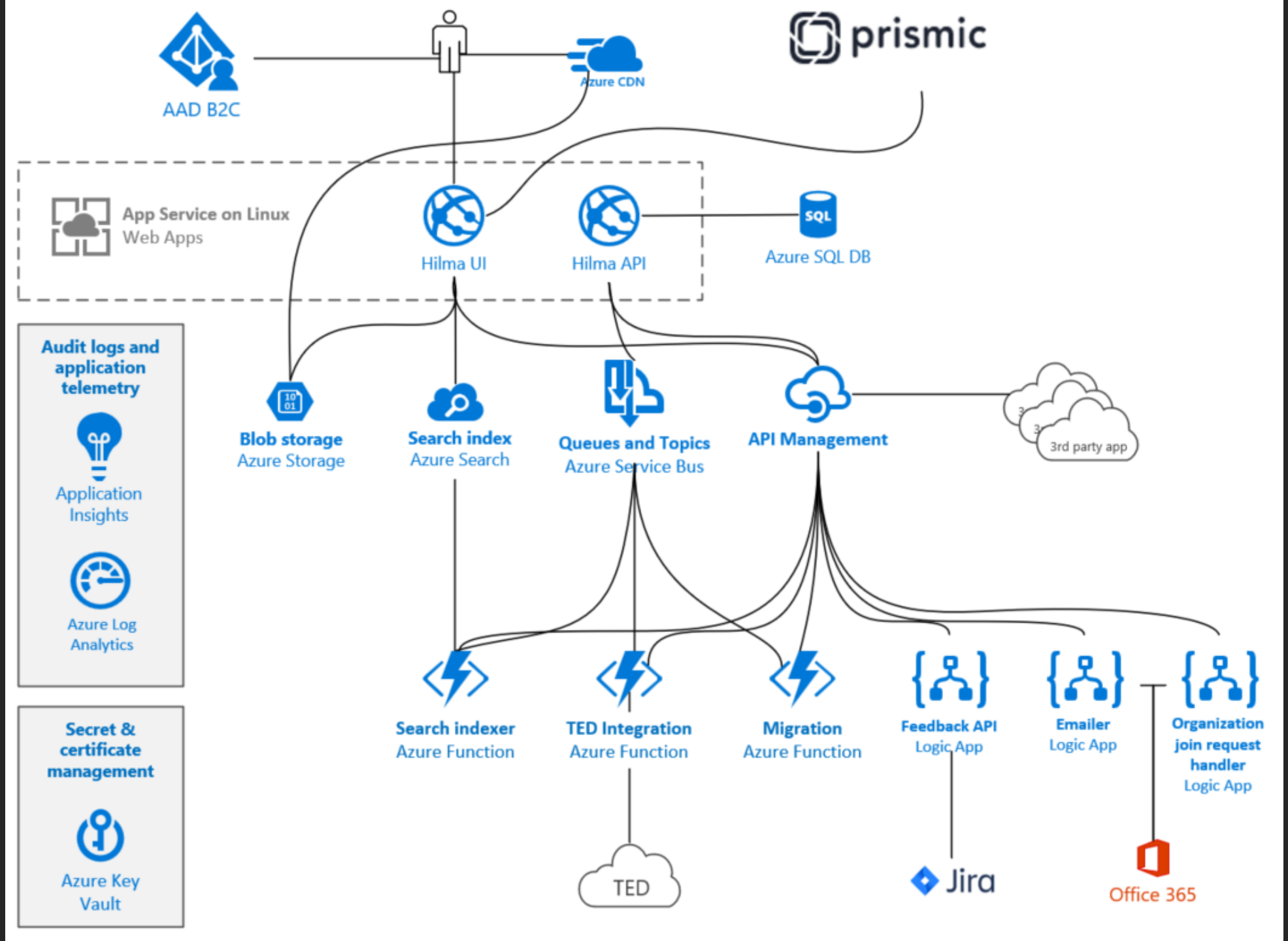
- Hilma = Hankintailmoitukset.fi
- TED = Tenders electronic daily (EU wide ”Hilma”)



Background 2/2

- Old Hilma was built in 2007 with PHP
- Project started 1/2019
- Team size 5-7
- C#, .NET Core, Vue.js, TypeScript
- MVP go live 1/2020
- The project will continue in 2020

Architecture


AAD B2C
Azure CDN
prismic
App Service on Linux
Web Apps
Hilma UI
Hilma API
SQL
Azure SQL DB
Audit logs and application telemetry
Application Insights
Azure Log Analytics
Secret & certificate management
Azure Key Vault
Blob storage
Azure Storage
Search index
Azure Search
Queues and Topics
Azure Service Bus
API Management
3rd party app
Search indexer
Azure Function
TED Integration
Azure Function
Migration
Azure Function
TED
Feedback API
Logic App
Jira
Emailer
Logic App
Organization join request handler
Logic App
Office 365

Choosing between App Service and AKS

- To **AKS** or not to AKS?
- With cloud native PaaS/Serverless services you get married with the platform
  - **(Functions), Logic Apps, Search, API Management, Azure SQL DBs**
- **App Service on Linux** and **Web Apps for Containers**(?)

Azure DevOps

Multi-stage yaml pipelines

- Extract step templates to separate .yml file
- Reference variable groups in Library
- Use **`condition`** for continuous delivery

azure-pipelines.yml

```yaml
stages:
### BUiLD ###
- stage: Build
  jobs:
  - job: Build
    pool:
      vmImage: 'Ubuntu 18.04'
    steps:
    - template: azure-pipelines.build-steps.yml      You, 2 months ago • Added build and deploy steps to

### DEV DEPLOY ###
- stage: Development
  condition: succeeded('Build')
  dependsOn:
  - Build
  variables:
  - group: hilma key vault vars dev
  - group: hilma vars all
  - group: hilma vars dev
  jobs:
  - deployment: hilma_dev_deploy
    displayName: Deploy to development enviroment
    pool:
      vmImage: 'windows-latest'
    environment: 'hns-hilma-dev'
    strategy:
      runOnce:
        deploy:
          steps:
          - template: ./azure-pipelines.deploy-steps.yml

### TEST DEPLOY ###
- stage: Test
  condition: and(succeeded('Build'), eq(variables['Build.SourceBranch'], 'refs/heads/develop'))
  dependsOn:
  - Build
  variables:
  - group: hilma key vault vars test
  - group: hilma vars all
  - group: hilma vars test
```

#0.3.0-alpha.54 Merged PR 823: Added option to create a DefenceContractAward based on F15 if Procure...

on Hilma-CI

Cancel

Summary | Tests | Releases | Environments

Triggered by Henri Hietala

Hilma develop c98da36

ke at 16.28

Duration:	Tests:	Changes:	Work items:	Artifacts:
5d 18h 10m	-	50 commits	-	1 published

1 approval needs your review before this run can continue to Development

Review

Stages | Jobs

Build

1 job completed 5m 53s

100% tests passed

1 artifact

Development

Waiting

0/1 checks passed

Test

1 job completed 7m 32s

Production

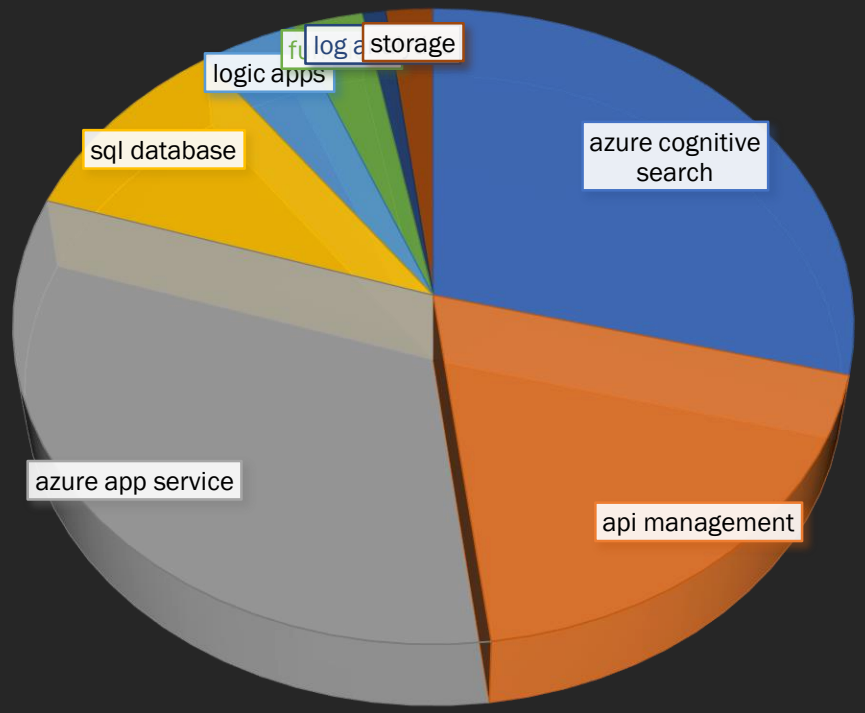
Skipped

Infrastructure as Code

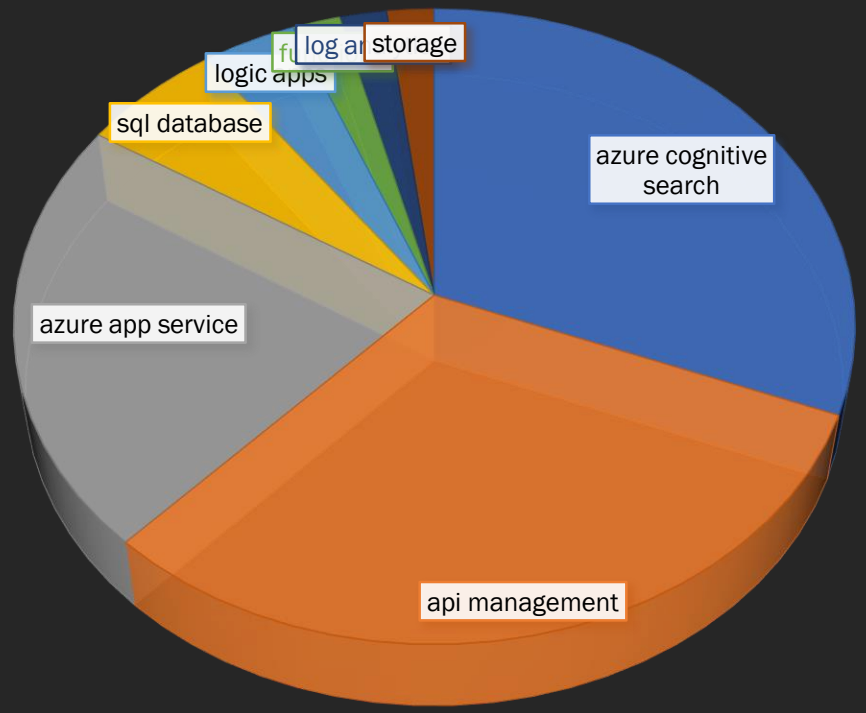
- ARM or Terraform?
- Some components are tricky or not possible to provision with ARM, e.g. API Management, B2C
- API Management operations can be dealt with **API Management Suite** extension for Azure DevOps
  - Updating products, apis, policies etc.

Monthly costs dev/test/prod

Dev/Test ~230€/mo



Production ~395€/mo



Observations from the trenches

- With PaaS you can!
- Doing software without containers is still relevant
- Public procurements in Finland 2018: 27 580 246 640 €
- … significant amount of that is IT services
- … and they are not afraid of public cloud

Questions?

Thanks!

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