Anatomy of Azure App Service on Linux: Bringing Containers into Existing PaaS Platform

Michimune Kohno
Senior Software Engineer

Nazim Lala
Principal Software Engineer

Open Source Summit Tokyo 2017
Agenda

• What is Azure App Service
• Why Linux
• High level architecture
• Demos (a lot of them!)
• How you can contribute to our many OSS projects
• Questions
What is Azure App Service?

- **Web apps**: Web apps that scale with your business.
- **Mobile apps**: Mobile apps and back-ends for any device.
- **Functions**: A serverless event based experience to accelerate your development.
- **API apps**: Easily build and consume APIs in the cloud.
Why Linux?

- One of the top customer asks!
- Support more open source solutions (e.g. RoR)
- Support micro-services development paradigm on Docker
- Bring years of PaaS investments to the Linux & Docker community
  - Auto scale
  - Deployment slots & slot swap
  - Always On
  - Testing in Production ("A/B testing")
  - Overlapped recycle
  - And many more!
Demo
GitHub Continuous Integration
Linux Worker: main site

- Proxy
- Orchestrator
- App 1 Container
- Local Container Cache
- Persistent Site Content Mounts
- Security & Audit Service
- Monitoring & Logging Service

Flow:
- Incoming HTTP Traffic
- Metadata From SQL
- Bridge
Linux Worker: source control site

- Proxy
- Orchestrator
- Local Container Cache
- App 1 Container
- SCM 1 Container
- Persistent Site Content Mounts
- Bridge
- SSH
- Security & Audit Service
- Monitoring & Logging Service
Demos

Bring Your Own Container (BYOC)
Docker tools for Visual Studio on Mac
Docker Continuous Integration / Delivery (CI/CD)
SSH
Container Image Sources

- Built-in images (PHP / Ruby / .NET / Node)
- Custom images
  - Docker Hub (Public / private repositories)
  - Azure Container Registry
  - Private Registry
Open Source That We Use

- Docker
- Apache
- Mono
- Ruby/PHP/node/Perl/ASP.NET Core
- Git
- OpenSSH / WebSSH / Xterm.js
- Kudu
How can I contribute?

- All Docker Files: https://github.com/azure-app-service
- All Docker images: https://hub.docker.com/r/appsvc/
- SCM (Kudu): https://github.com/projectkudu/kudu
- .NET: https://github.com/dotnet/

How can I give feedback?

- Submit your ideas: https://aka.ms/webapps-uservoice
- Forums: https://aka.ms/webapp-forums
Q & A