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# Continuous Deployment to Azure App Service with VSTS

Introduzione

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# Agenda

- Visual Studio Team Services (VSTS) and DevOps

- Manage Infrastructure as Code (IaC) with Azure Resource Manager template

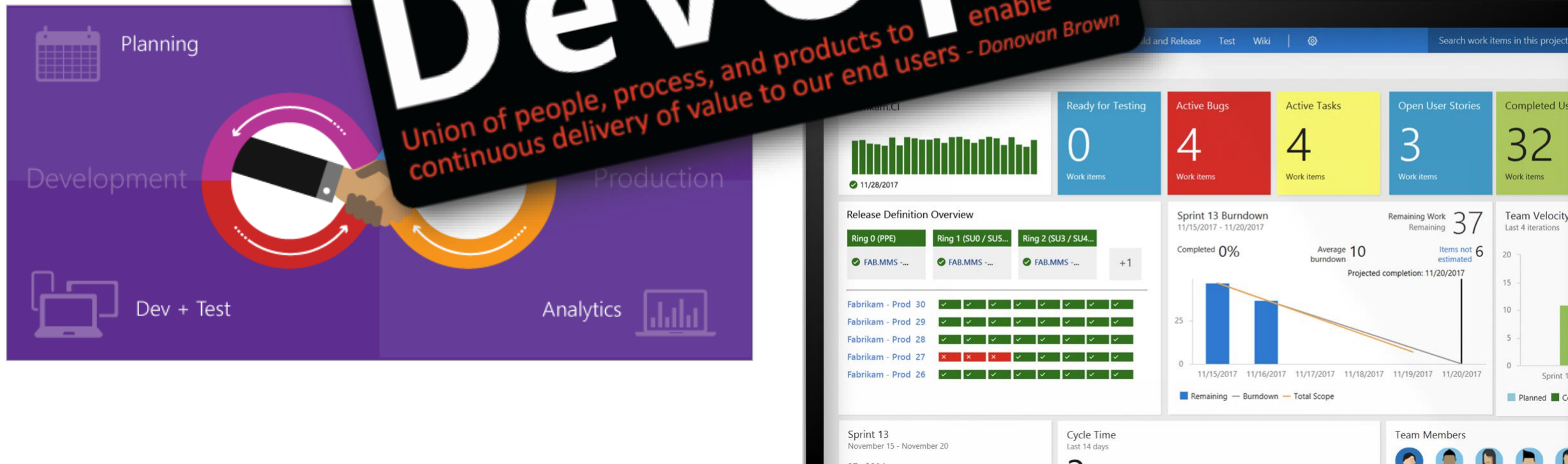- Azure App Service: Platform as a Service (PaaS)
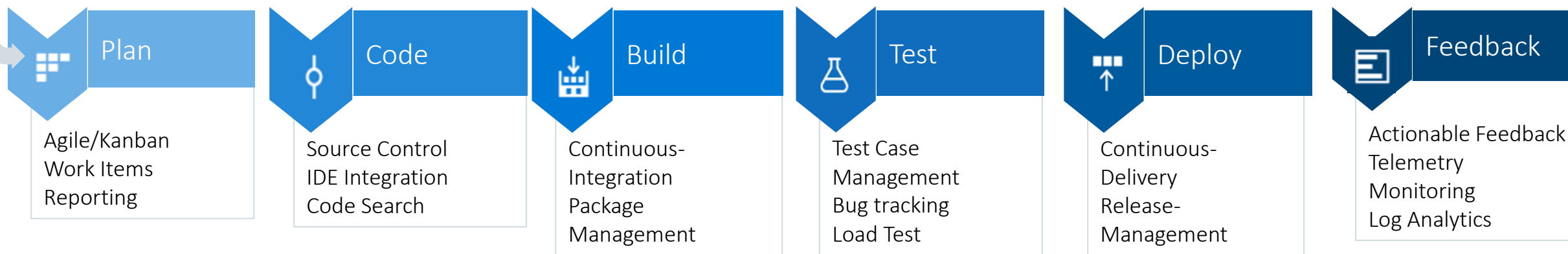
- DEMO

VSTS : Cloud = TFS : On-Premise

Software as-a-Service (SaaS) model on Azure

It covers the Application Lifecycle Management and enable DevOps capabilities.

# Azure DevOps with VSTS

**Plan**
- Agile/Kanban
- Work Items
- Reporting

**Code**
- Source Control
- IDE Integration
- Code Search

**Build**
- Continuous-Integration
- Package Management

**Test**
- Test Case Management
- Bug tracking
- Load Test

**Deploy**
- Continuous-Delivery
- Release-Management

**Feedback**
- Actionable Feedback
- Telemetry
- Monitoring
- Log Analytics

**Open, Flexible**

# List of DevOps practices

- Infrastructure as Code (IaC)
- Continuous Integration (CI)
- Automated Testing
- Continuous Delivery/Deployment (CD)
- Release Management
- App Performance Monitoring
- Load Testing & Auto Scale

Automate deploying resources with Azure Resource Manager templates in a single, coordinated operation.

Define resources and configurable input parameters and deploy with script or code.

Infrastructure as Code (IaC)

Declarative model driven deployment

ARM template (JSON files): idempotent provisioning resources in the Azure cloud

Azure Resource Groups

# Azure Resource Manager (ARM)

```json
{

    "$schema": "http://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
    "contentVersion": "",
    "parameters": {   },
    "variables": {   },
    "resources": [   ],
    "outputs": {   }
}
```

# ARM template

```
"parameters": {
  "siteNamePrefix": {
    "type": "string",
    "minLength": 1,
    "metadata": {
      "description": "The name prefix of the web app that you wish to create."
    }
  },
},
```

# ARM template

```
"resources": [
  {
    "apiVersion": "2016-08-01",
    "name": "[variables('webSiteName')]",
    "type": "Microsoft.Web/sites",
    "location": "[resourceGroup().location]",
    "properties": {
      "serverFarmId": "/subscriptions/<subscription-id>/resourcegroups/<resource-group-name>/providers/Microsoft.Web/serverFarms/<plan-name>"
    }
  }
],
```
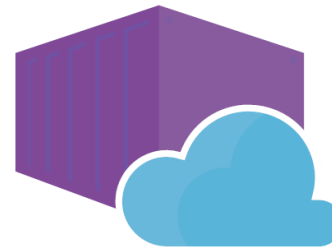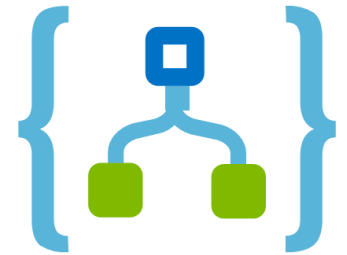
**Azure App Service**

**Web App**     **API App**     **Mobile App**     **Web App for Containers**     **Functions App**     **Logic App**
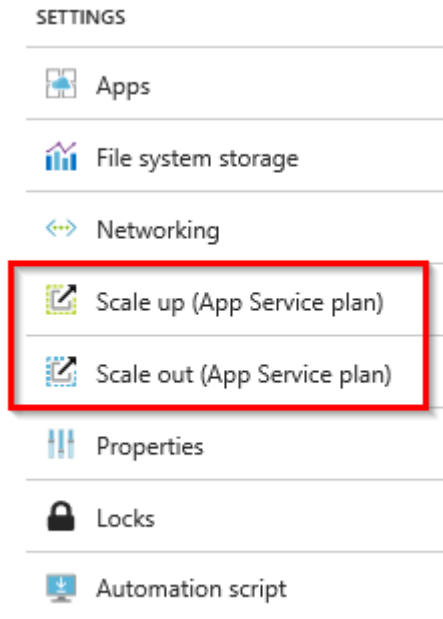
`"Microsoft.Web/sites"`

**Web Apps**

Multiple languages and framework (.NET, Node.js, Java, PHP, and Python)

DevOps optimization: CI/CD with VSTS, GitHub, BitBucket, Docker Hub, Azure Container Registry

Scalable: up or out



**Scale up**

**Scale out**

**Web Apps: Staging environments (deployment slot)**

Deploy app to separate deployment slot (staging) instead of the default slot (production)

Swap App content and configurations elements

All instances are warmed up before being swapped into production → No downtime

Rollback strategy



**Staging**
mysite-staging.azurewebsites.net

**Production**
mysite.azurewebsites.net

Demo

# Grazie

Domande?

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