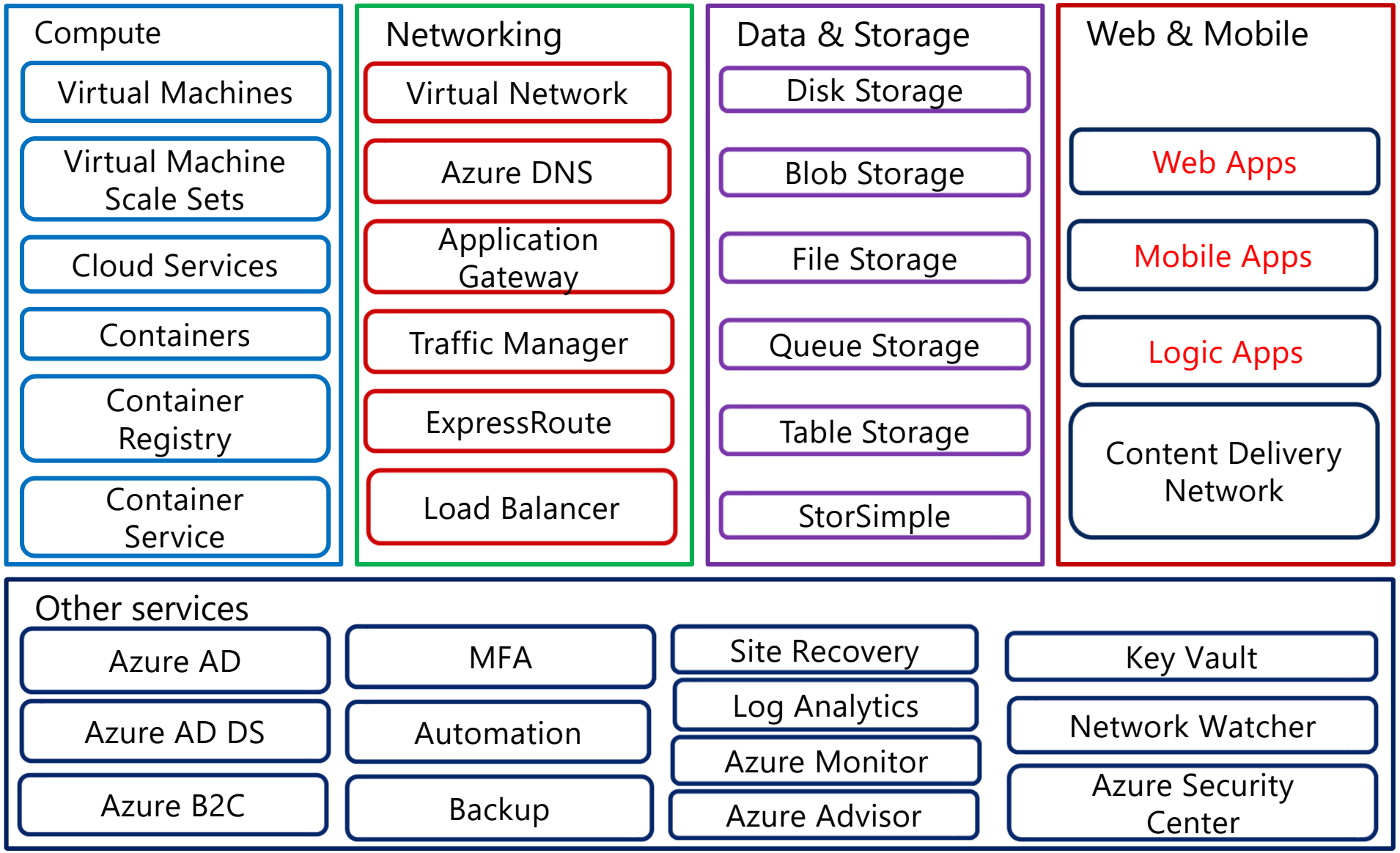
Microsoft

AZ-200.3 Module 01: Creating App Service Web Apps

Overview of App Service



App Service

- Service for hosting web applications, REST APIs, and mobile back ends can develop in many of the following languages:
  - .NET
  - .NET Core
  - Java
  - Ruby
  - Node.JS
  - PHP
  - Python
- Applications can execute and scale in a fully-managed, sandbox environment

App Service

- Web Apps
- API Apps
- Mobile Apps
- Azure Functions (When run from App Service Plan)

Overview of API Apps

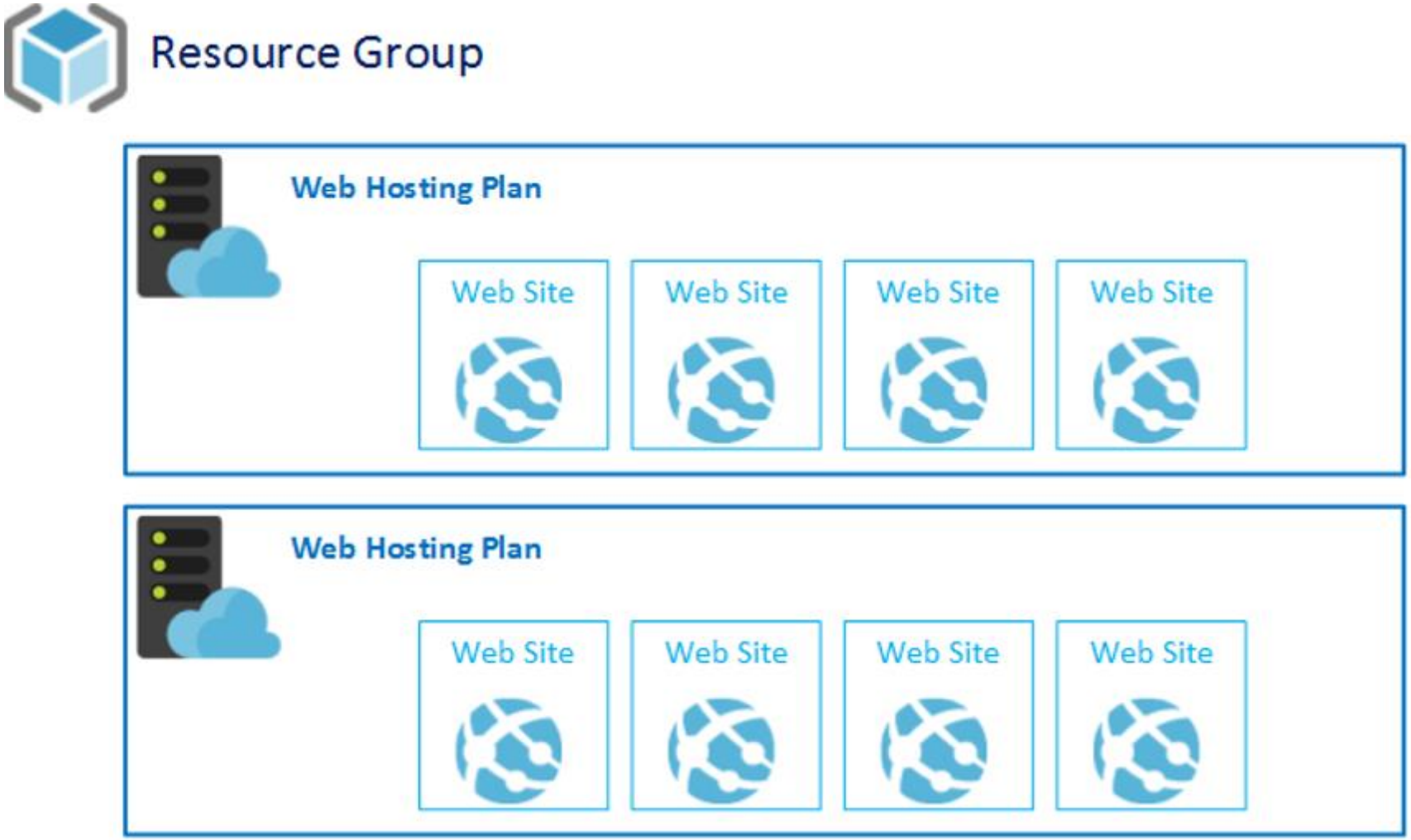
API Apps concepts:

- Bring your existing API
- Support for Swagger metadata
- Support for cross-origin resource sharing
- Autoscaling
- Continuous integration and deployment
- Deployment slots
- Visual Studio integration
- Azure virtual network integration
- Authentication and authorization

App Service Plans

- App Service Plans can logically group apps within a subscription:
  - Characteristics such as features, capacity, and tiers are shared among the website instance in the group
  - The App Service Plan is the unit of billing in most cases
- Multiple App Service Plans can exist in a single Resource Group and multiple Apps can exist in a single App Service Plan

App Service Plans



Managing App Service plans

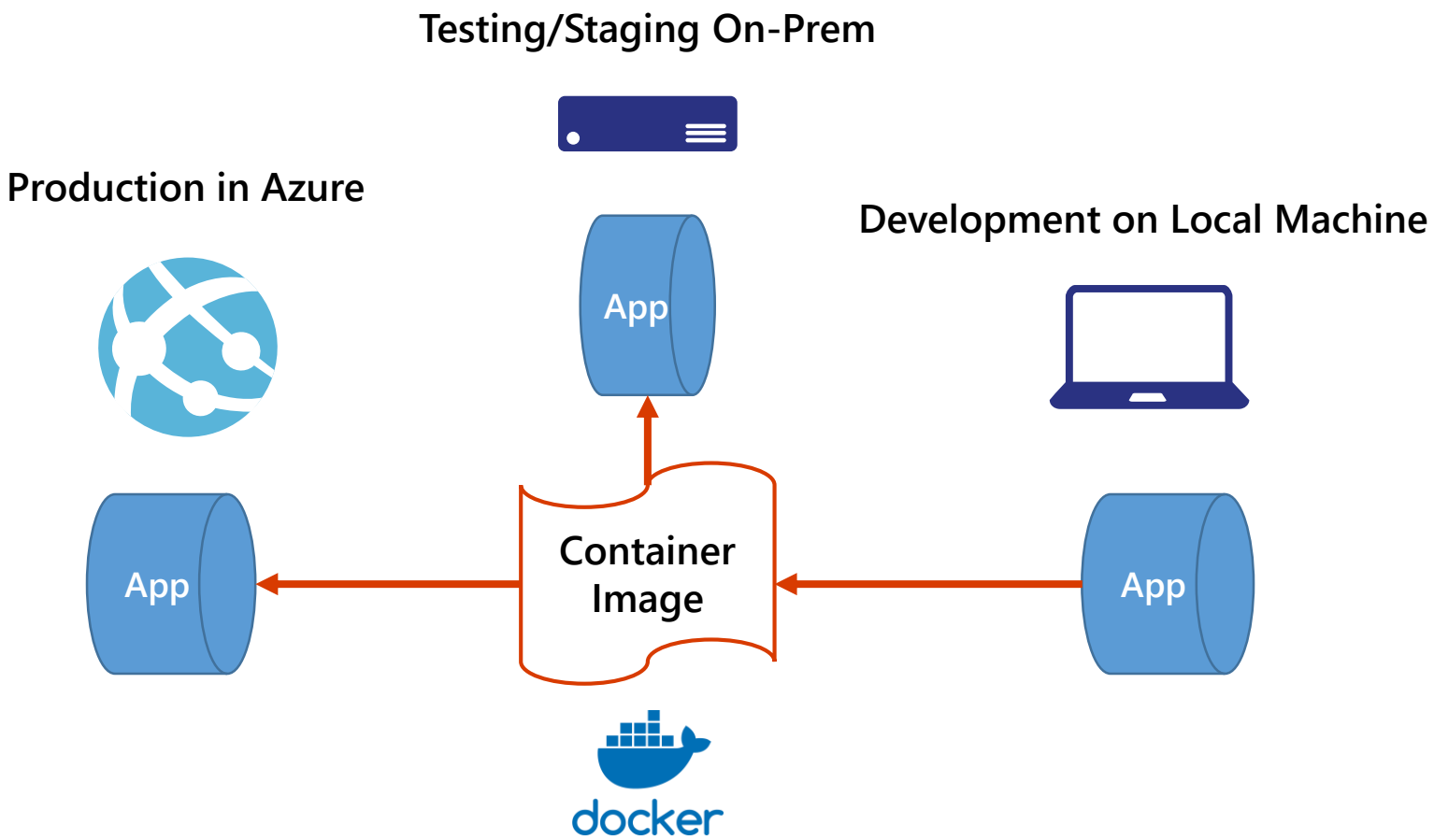
Tier	Free	Shared	Basic	Standard	Premium	Premium V2	Isolated
Websites	10	100	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Storage	1 GB	1 GB	10 GB	50 GB	250 GB	250 GB	1 TB
Compute instance	Shared	Shared	Dedicated	Dedicated	Dedicated	Dedicated	Dedicated
Custom domains	No	Yes	Yes	Yes	Yes	Yes	Yes
SSL for custom domains	No	No	Yes	Yes	Yes	Yes	Yes
Integrated load balancer	No	Yes	Yes	Yes	Yes	Yes	Yes
AlwaysOn	No	No	Yes	Yes	Yes	Yes	Yes
Staged publishing	No	No	No	Yes	Yes	Yes	Yes
SLA	None	None	99.95%	99.95%	99.95%	99.95%	99.95%

App Service on Linux

Why Linux?

- Many application stacks are optimized for Linux:
  - Ruby/Rails, PHP, Node, etc.
  - Often better tools are available on Linux for these stacks
- New and upcoming frameworks are built for Linux first and then Windows
- Portability of Docker containers
- Linux is at the forefront of innovations in Nano and Micro-service architecture

Docker in App Service on Linux



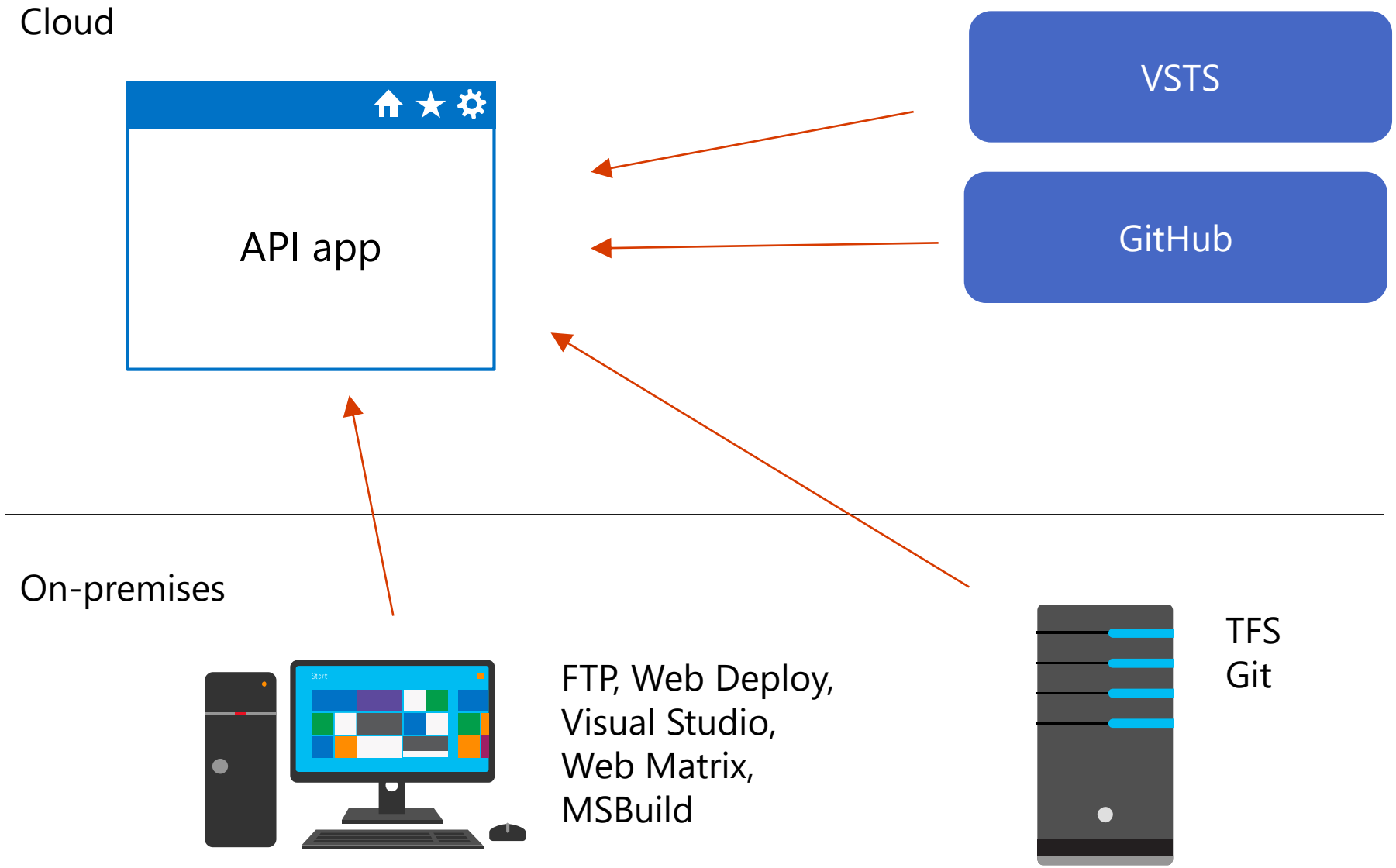
API Apps

- Scalable hosting for web applications
  - Provides a quick way to host your API application in the cloud
  - Allows you to scale your API app without being required to redesign for scalability
  - Integrates with Visual Studio
  - Provides an open platform for many different programming languages
- Advantages
  - Near instant deployment
  - SSL and Custom Domain Names available in some tiers
  - Can Scale to larger machines without redeploying applications

Web App Deployment Options

- Create Packages
  - Continuous Delivery with VSO or GitHub
  - Can use Team Foundation Version Control (TFVC) or Git for source control
- Deployment Slots
  - Can create slots such as: Staging, Production, and Testing
- Web Deploy
  - Older IIS Extension method to Export and Import
- Zip Deployment
  - Create a compressed folder with web application content
- FTP Deployment

Comparing app deployment methods in App Service



Configuring availability and scalability

- Free and shared pricing tiers – no scaling support
- Basic pricing tier:
  - Instance size
  - Instance count
- Standard and premium pricing tiers:
  - Instance size
  - Instance count
  - Scale based on a metric:
    - One or more rules
    - Instance limits
    - Schedule
  - Scale to a specific instance count:
    - Instance count

Monitoring web apps

- Access diagnostic logs by using:
  - FTP
  - Azure PowerShell
  - Azure CLI
- View logs in Visual Studio by using Application Insights
- Monitor web apps in the Azure portal by:
  - Adding metrics
  - Configuring alerts:
    - Email notifications
    - Webhooks
    - Logic apps

Configuring authentication

- Register with a provider:
  - Azure Active Directory
  - Microsoft account
  - Facebook
  - Twitter
  - Google
- Configure authentication in the API app
- Cache the authentication token on the client device

App Service Environments

- App Service variant that provides a fully isolated and dedicated environment for securely running App Service apps at high scale
- Ideal for application workloads that require:
  - Very high scale, higher than typical App Service capacity
  - Network isolation and secure network access
  - High memory utilization
- Single or Multi region
- Deployed to a Virtual Network
- An ASE is dedicated exclusively to a single subscription
  - Max 100 instances