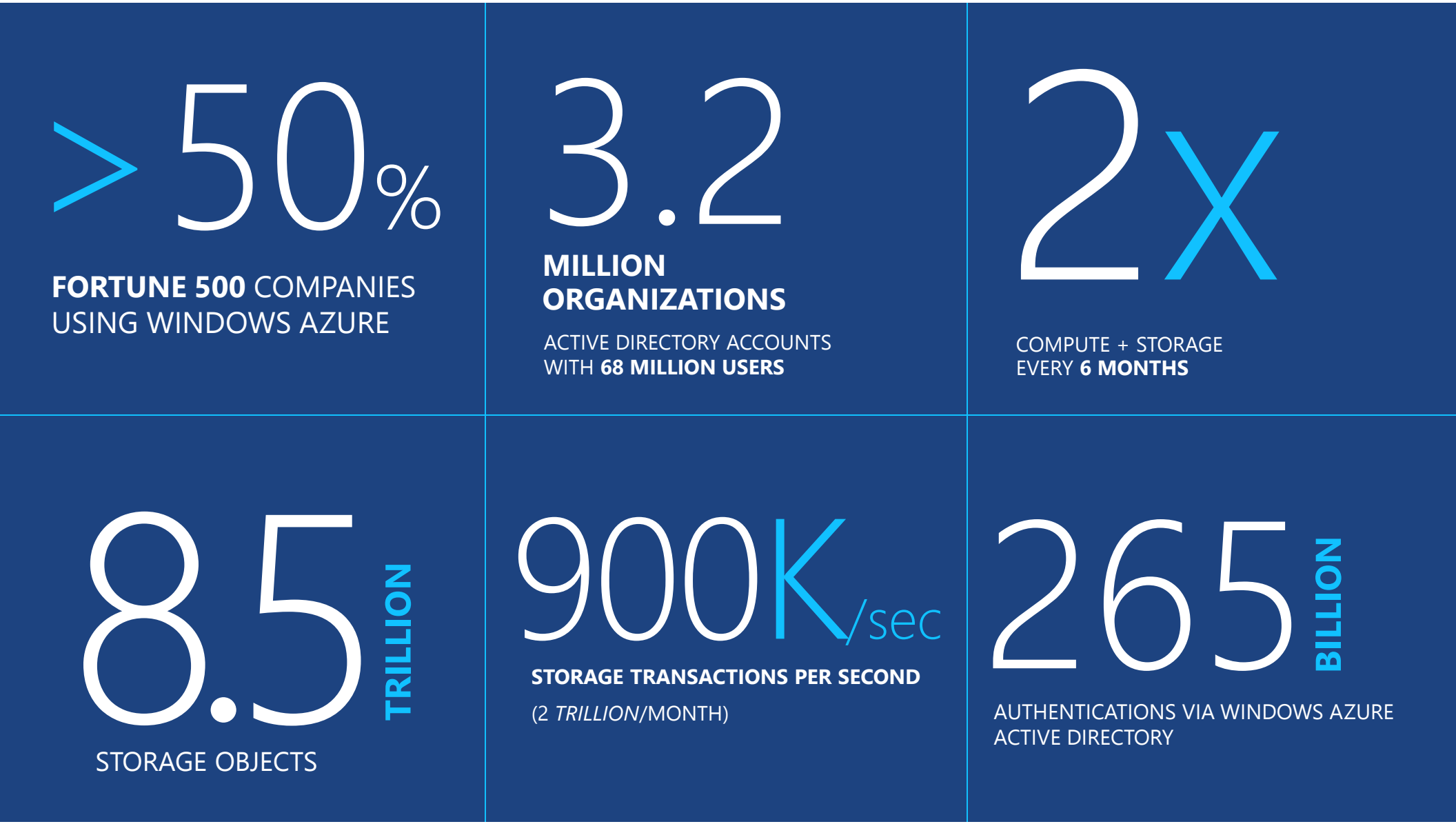
Windows Azure

FAST AND FLEXIBLE CLOUD FOR OPEN SOURCE SOLUTIONS

Cloud World Forum, London

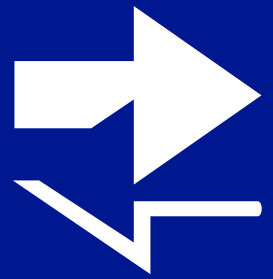
rob craft
senior director, enterprise development & OSS
microsoft corporation

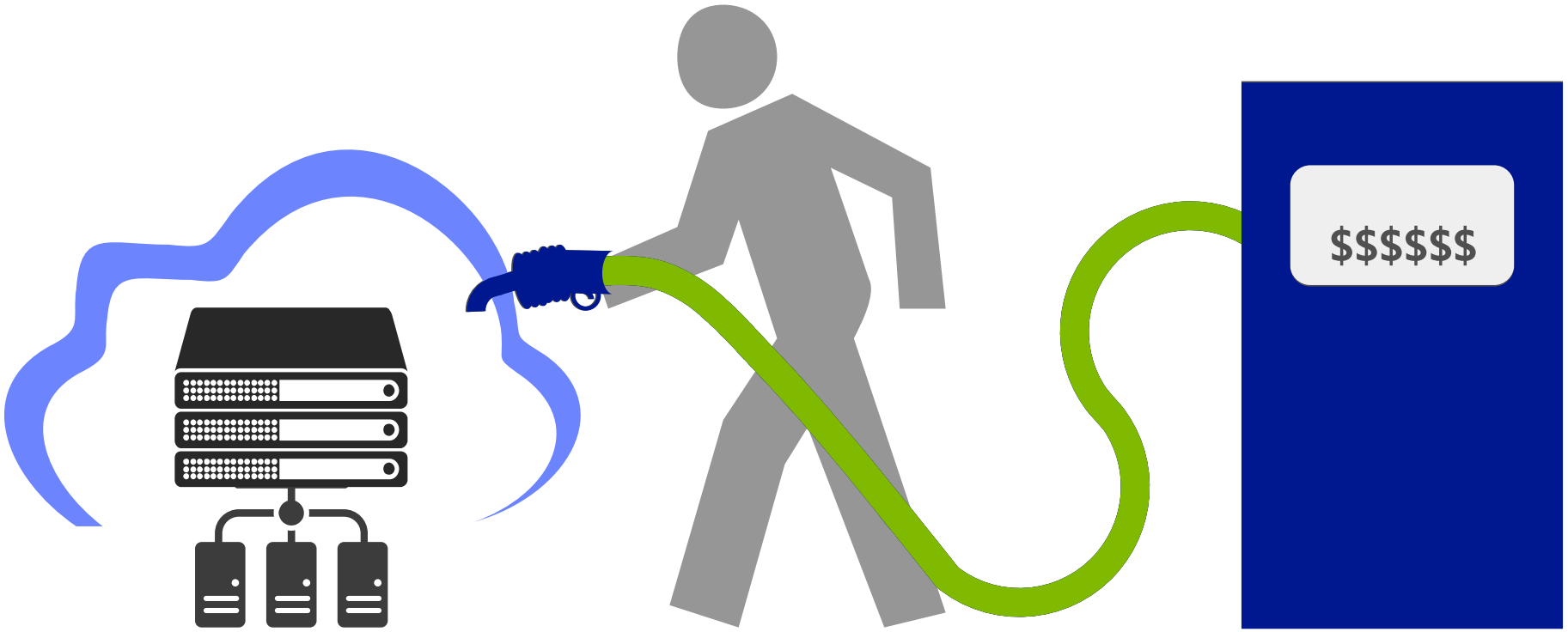

>50%
FORTUNE 500 COMPANIES USING WINDOWS AZURE
3.2
MILLION ORGANIZATIONS
ACTIVE DIRECTORY ACCOUNTS WITH 68 MILLION USERS
2x
COMPUTE + STORAGE EVERY 6 MONTHS
8.5 TRILLION
STORAGE OBJECTS
900K/sec
STORAGE TRANSACTIONS PER SECOND
(2 TRILLION/MONTH)
265 BILLION
AUTHENTICATIONS VIA WINDOWS AZURE ACTIVE DIRECTORY

Scale

Economics

Speed





pay by the minute

Microsoft: Unmatched in the Cloud

Millions of users, millions of servers

>15 years in consumer and business services

250 million people store content on SkyDrive

1 petabyte+ per month of updates via Windows Update

Windows Azure: used by customers in 41 countries

400M+ Outlook.com users

Cloud investments

$2.3B+ in cloud infrastructure

200+ services, delivered 24x7

Geo-distributed data centers

Rapid modular model

30,000+ engineers involved in cloud-based activities

2,000+ people in cloud infrastructure engineering and operations

Online services operational excellence

Federated operations centers 24x7

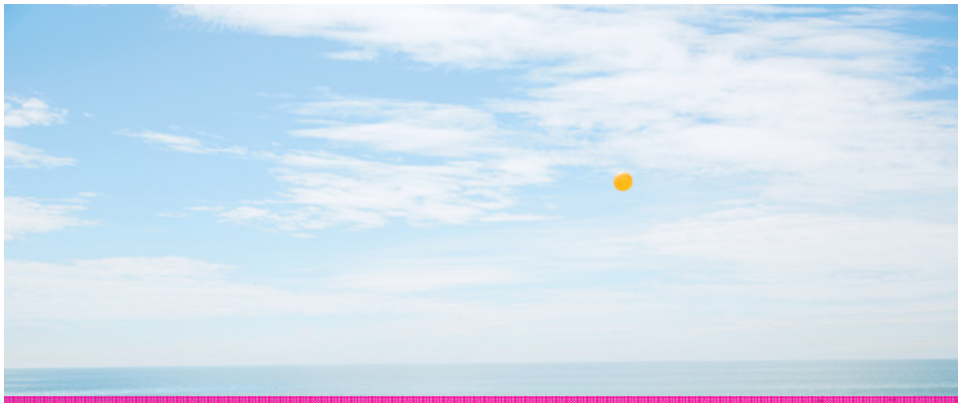
Highly secure, compliant infrastructure

FISMA certified, SAS 70/SSAE 16, and ISO 27001 compliant

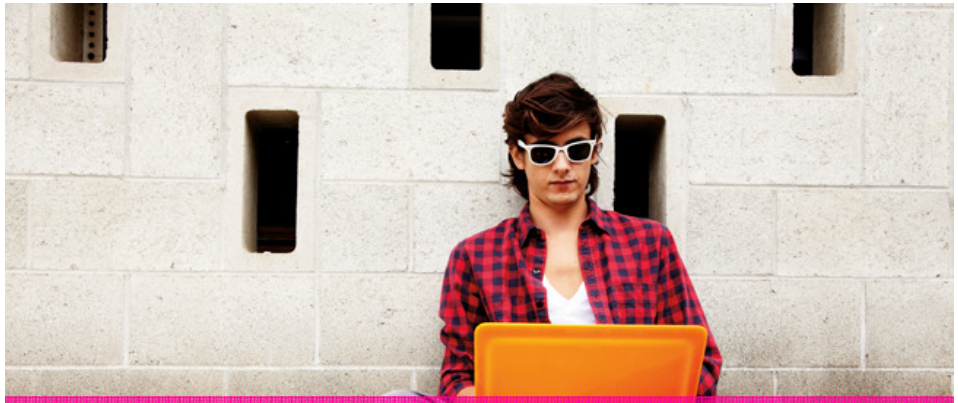
Carbon footprint reduction

99.9% uptime, financially backed SLAs

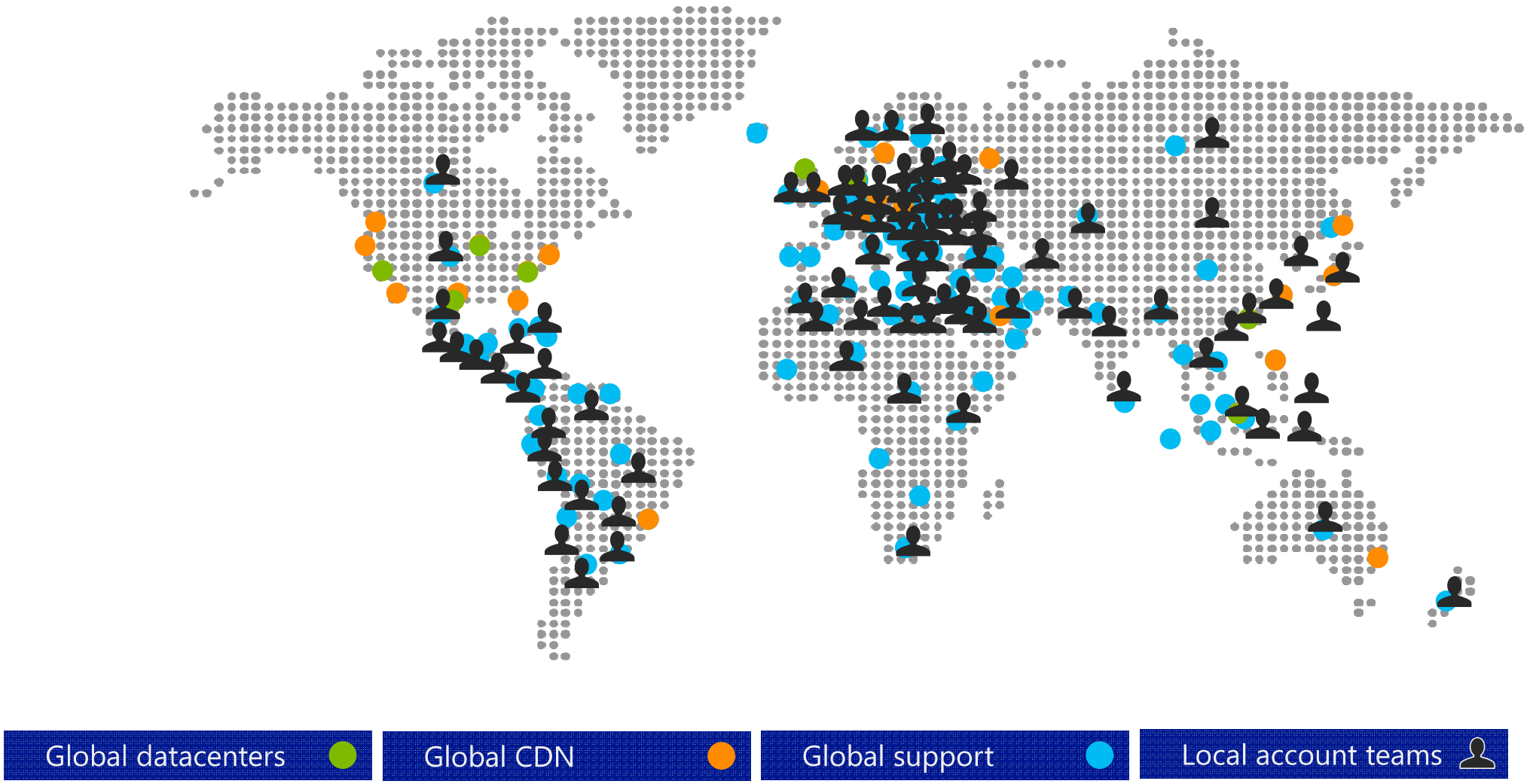
Services & Open Cloud

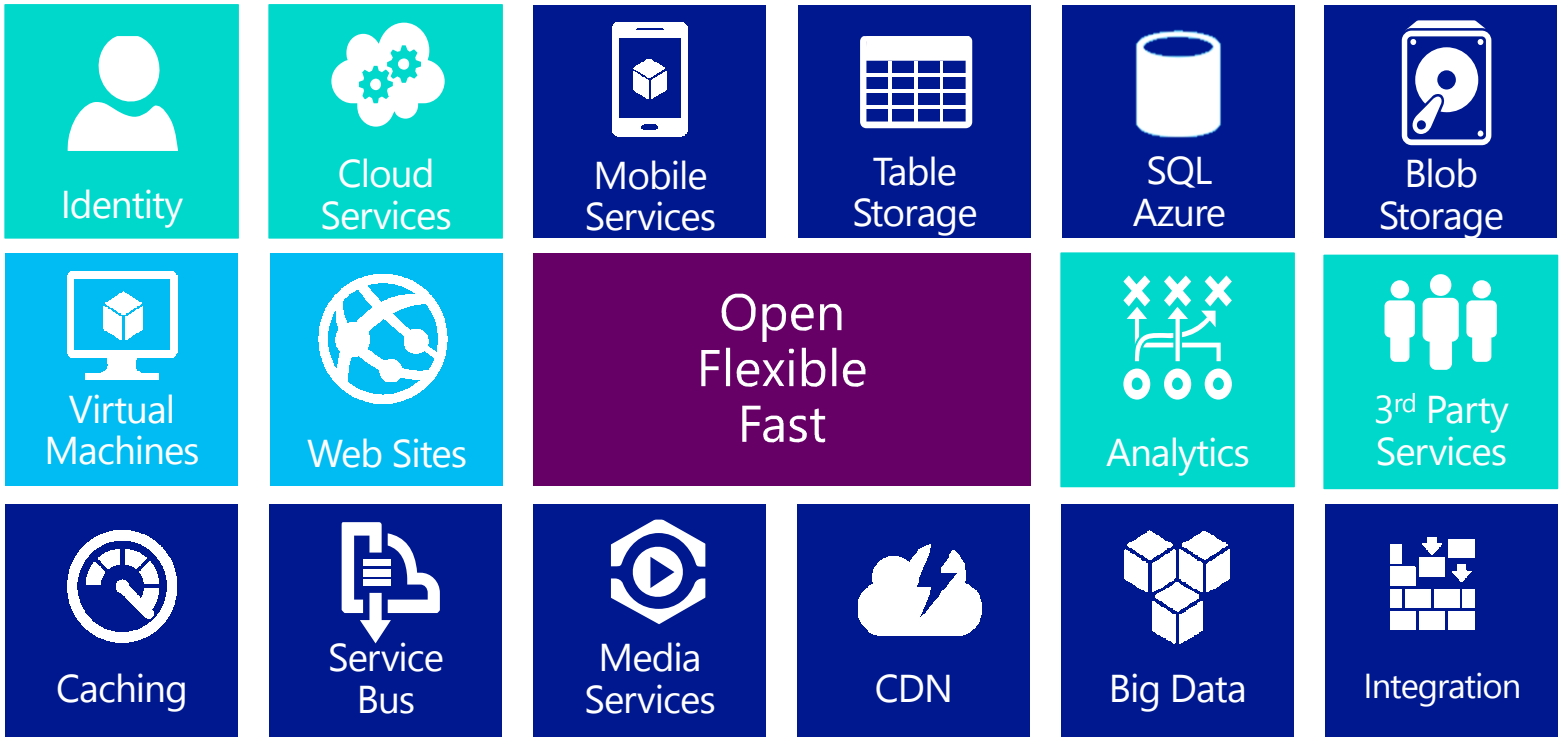


Windows Azure, an open Cloud Operating System



An easy way to onboard open source apps


Global datacenters
Global CDN
Global support
Local account teams


Identity
Cloud Services
Mobile Services
Table Storage
SQL Azure
Blob Storage
Virtual Machines
Web Sites
Open
Flexible
Fast
Analytics
3rd Party Services
Caching
Service Bus
Media Services
CDN
Big Data
Integration

Devices & Developers

Enabling developers to re-use skills to extend their reach.

Open Source Up & Down the Stack

- Android, iOS & Node.js back-end via Azure Mobile Services
- Java, Ruby SDKs via Linux VM, Engine Yard & Oracle
- Websites for PHP, Node.js, Python & App Gallery
- MySQL via ClearDB, MongoDB via MongoLab, Hadoop
- From Linux VMs via Image Gallery & VMDepot

Engine Yard

ORACLE

Windows Azure Virtual Machines

Infrastructure as a Service introduces new functionality that allows full control and management of both Windows and Linux virtual machines along with an extensive virtual networking offering.

Flexible

Easily migrate existing applications as-is to the cloud

Assist New Cloud App Development by Integrating IaaS and PaaS Functionality

Set up new virtual machines in Windows Azure with only a few clicks.

Agentless Deployment for Windows Servers

Open

Start from a pre-built image from our image library

Upload your own VHD from on-premises.

Create Your Own Customized Images

Support for community and commercial versions of Linux

Move images back on premise as necessary

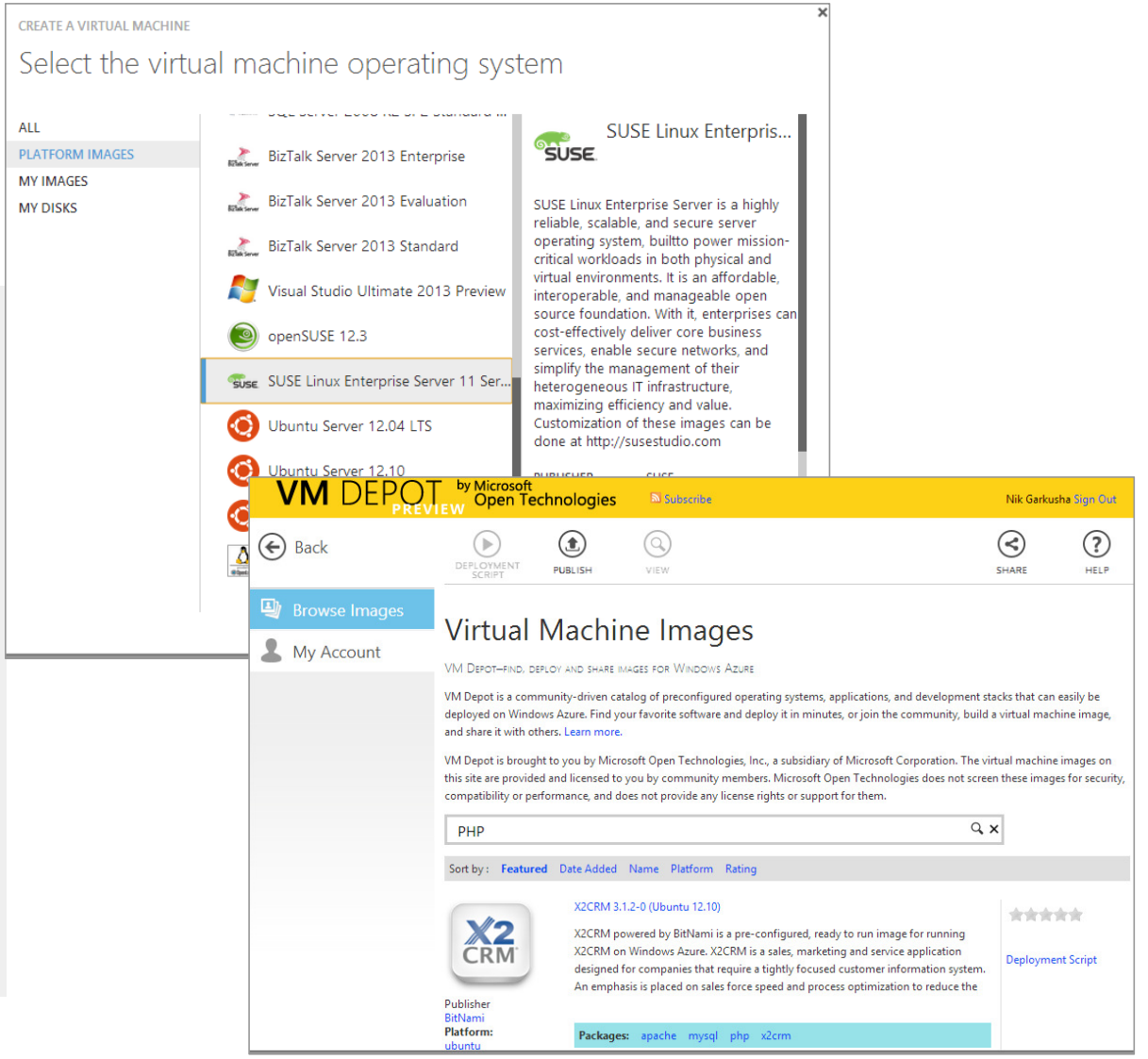
Solid

Run enterprise applications such as SQL Server, SharePoint or Active Directory in the cloud

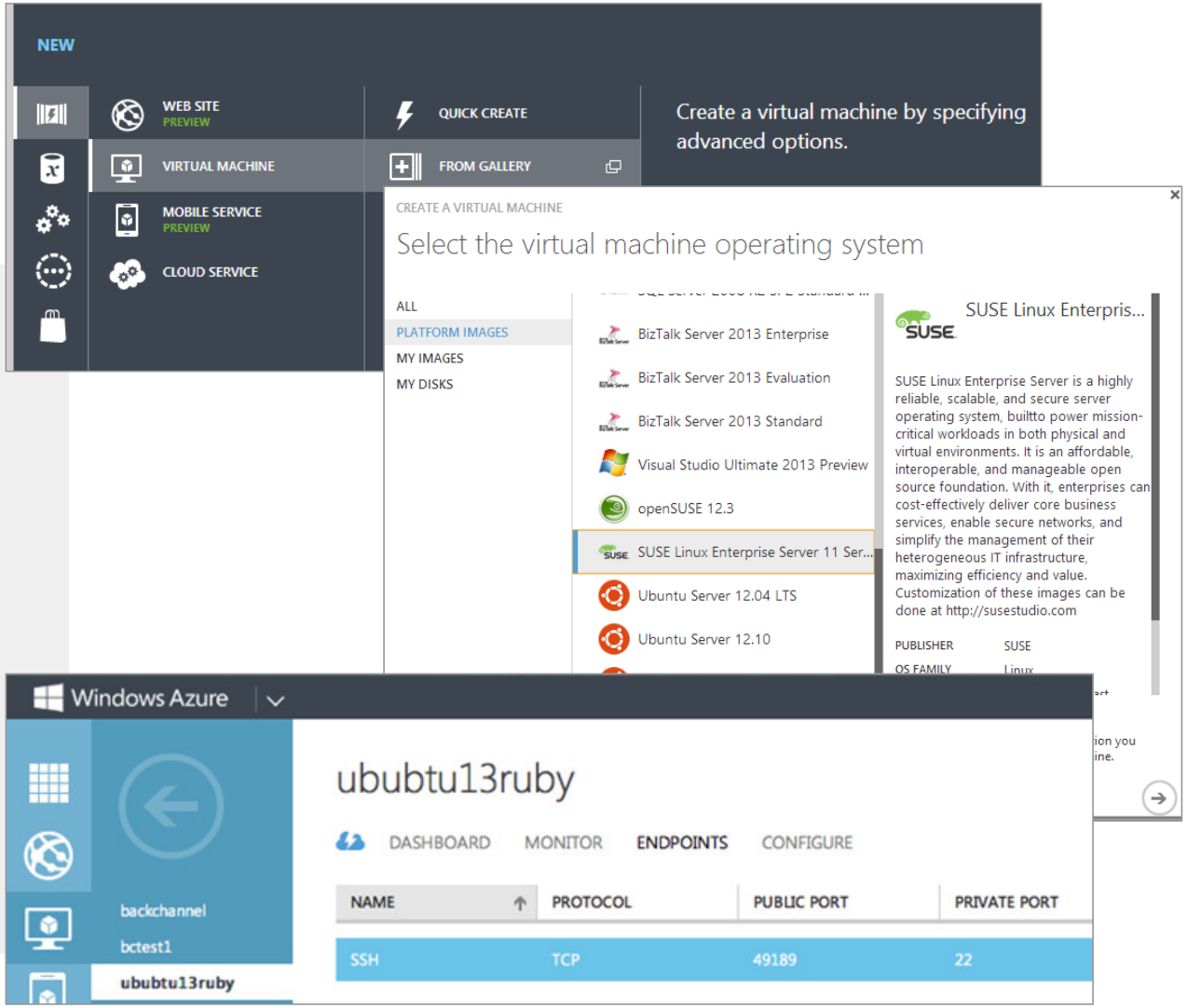
Easily create hybrid cloud and on-premises solutions with VPN connectivity between the Windows Azure Data Center and your own network.

Linux VMs

- Image Gallery: choices of Oracle Linux, SUSE, Ubuntu, CentOS distros on Azure
- VMDepot: extending choices with complete stacks
- Portal, Xplat-CLI & REST API for deployment & management
- Scripting & Automation w/ Xplat-CLI (Linux, OSX) & PowerShell (Windows)



- Portal / VMs
- Custom VMs
- Platform Images



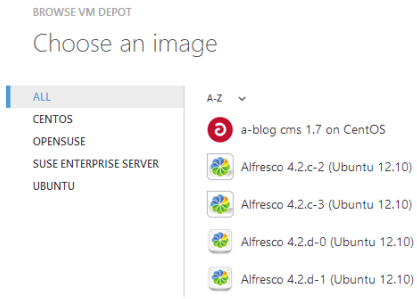
Current Linux support in Azure

Azure IaaS: Supported Platform Images

- Pre-built images optimized for cloud
- Up-to-date VMs validated by Linux vendors
- Microsoft support via forum
- Easy path for moving on-prem VMs to cloud
- Manage via familiar tools / SSH

Azure IaaS: VM Depot community images

- Gallery of community-built images
- Supported by 3rd party vendors (e.g. BitNami)
- Integrated into Azure portal and management tools
- Options to add vendor provided support for a VM



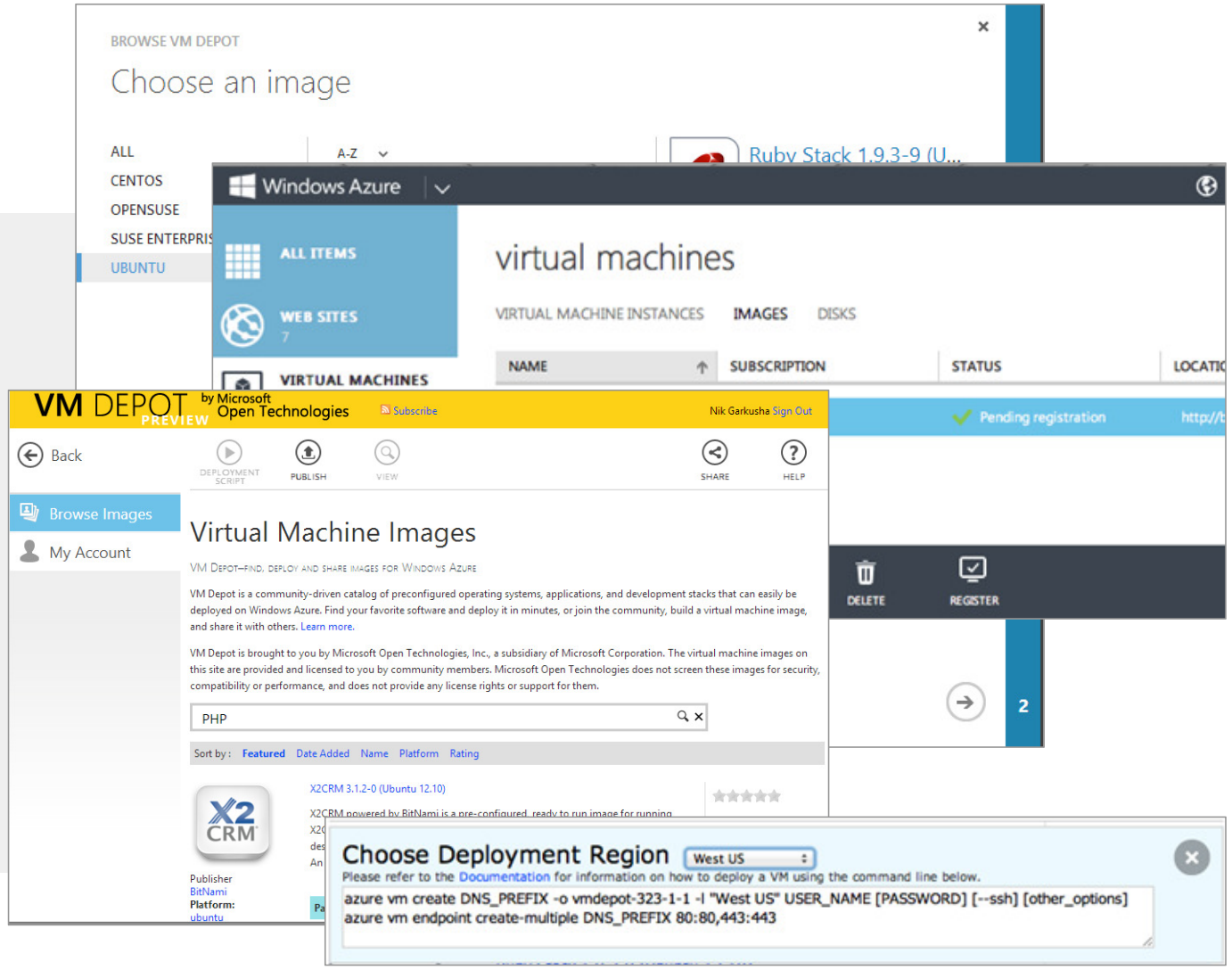
"Our biggest benefit is scalability, that's our main reason for a migration. We were sincerely and positively surprised by cost of migration and Azure server itself" Ivan Baruzin, Ademptio (2 Linux Servers VPS to 20 Linux VMs on Azure)

"Wired"

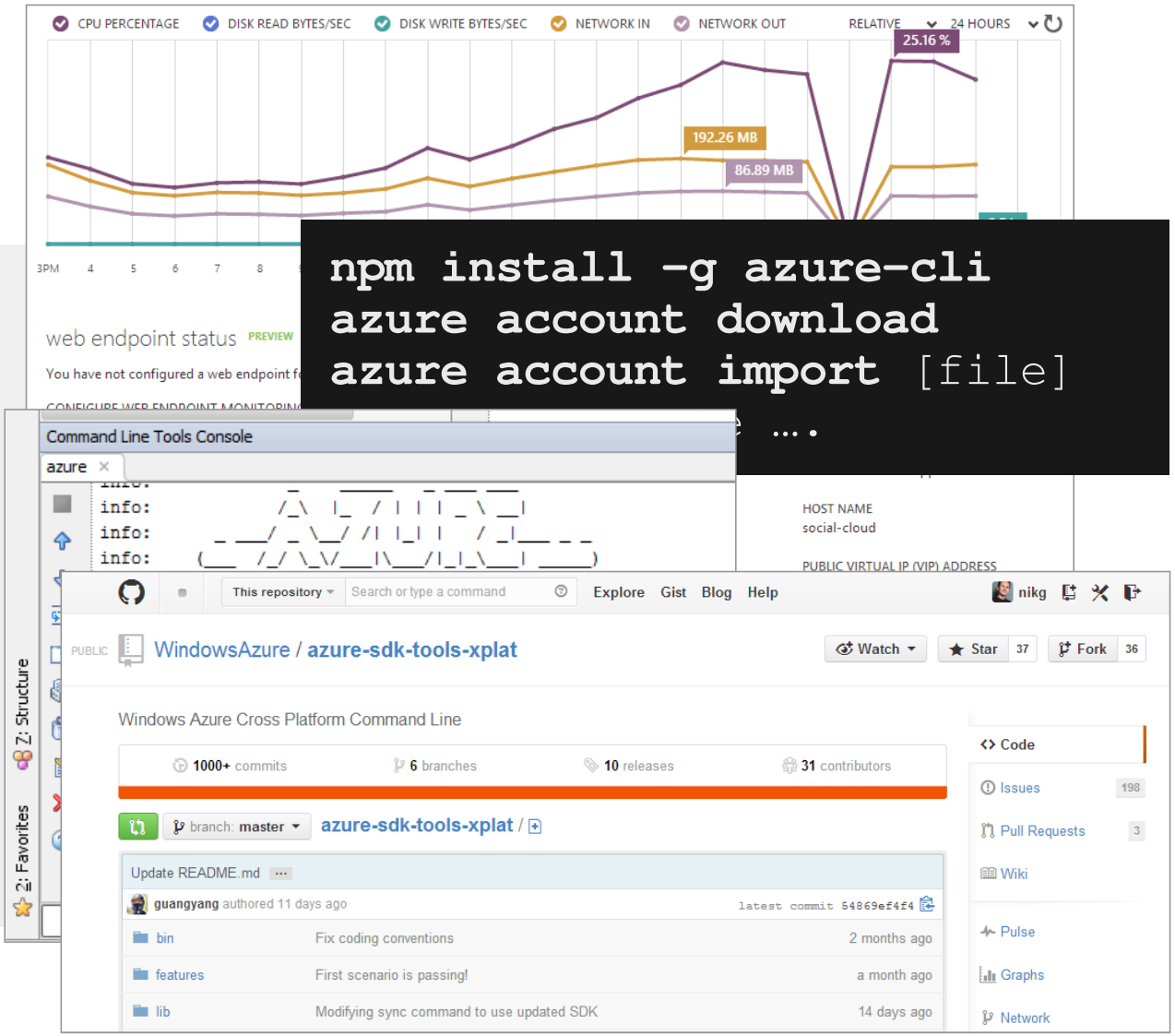
"Microsoft is playing quite nicely with Linux and other open source tools. "

-Robert McMillan, Wired Enterprise

- VM Depot
- Complete Stacks



- Manage & Scaling
- Portal, Xplat-Cli & REST API
- Scripting & Automation



Full support for Oracle software on Windows Server Hyper-V and Windows Azure

Oracle license mobility for Azure public cloud

Pay-as-you-go Azure images of Oracle Database, WebLogic Server, and JDK

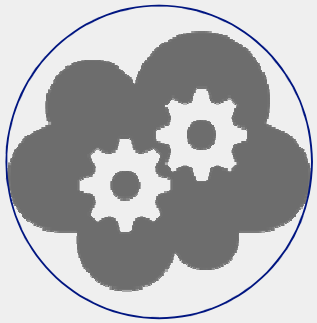
Oracle Linux as preconfigured instances on Windows Azure

Fully licensed and supported Java on Windows Azure

Java on Windows Azure

IaaS

- Windows or Linux VMs
- Official Oracle JDK v6 & v7
- Pre-configured VMs
- Oracle WebLogic, VM Depot or your own JVM



PaaS

- 64 bit OpenJDK build by Azul (Zulu)
- Or bring any VM
- Eclipse plugin for deployment, monitoring and management

Services

- Windows Azure SDK for Java: Blob, table, queue, service bus, SQL, etc
- Other Azure SDKs and azure-cli / tools

Windows Azure Websites

A highly scalable Web hosting service for private and public clouds optimized for cloud hosting economics and integrated with the worlds best applications, frameworks and tools.

Flexible

Easy to get started with 10 free web sites

Easy to create sites in a few clicks

Easy to deploy existing sites

Easy to manage and scale your sites

Open

Supports multiple frameworks (ASP.NET, Classic ASP, PHP, Node.js)

Pick from popular Open Source apps

Pick your DB (SQL Azure, MySQL)

Choose your tools
(Visual Studio, Git, FTP, WebMatrix)

Build on any platform
(Windows, Mac, Linux)

Solid

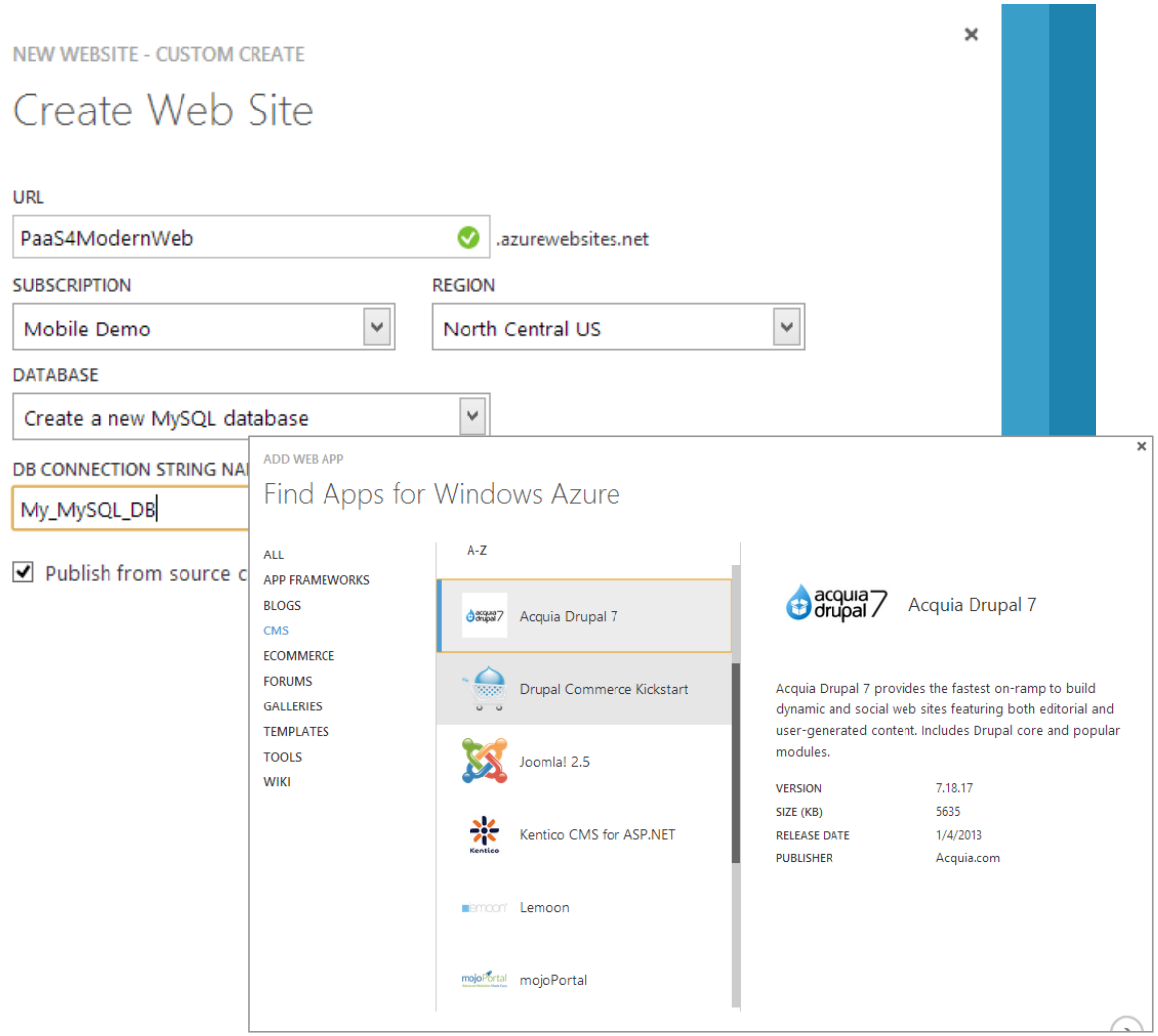
Nearly instant deployment

Scale out for greater availability or scale up for improved performance using our global cloud platform

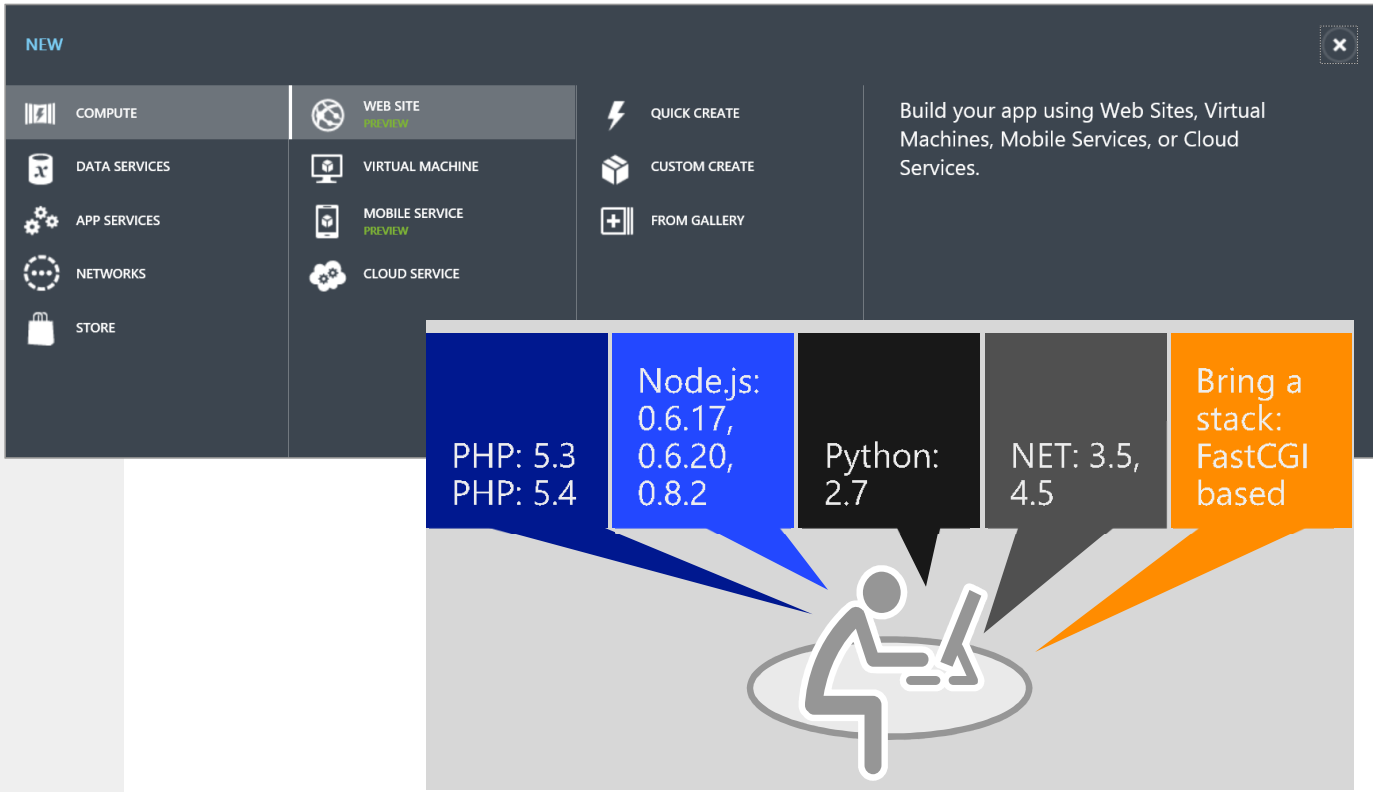
Integrated source control with Team Foundation Server (TFS) and Git

PaaS: Web Sites

- PHP, Node.js & Django Python in Azure Web Sites
- Choices of Database & add-ons (Mongo, MySQL)
- Drupal, WordPress, Joomla & other OSS frameworks in App Gallery
- Deployment Choices (Git, FTP) & Continuous delivery
- Global scale with control & integration: IDE, command line & APIs



- Rapid & Flexible
- Choice of Languages
- Choice of Databases

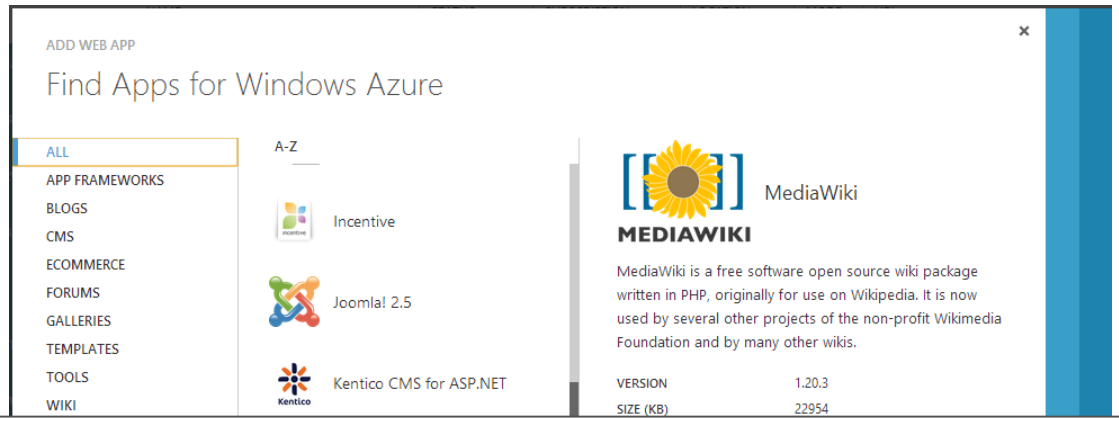


mongolab

cleardb

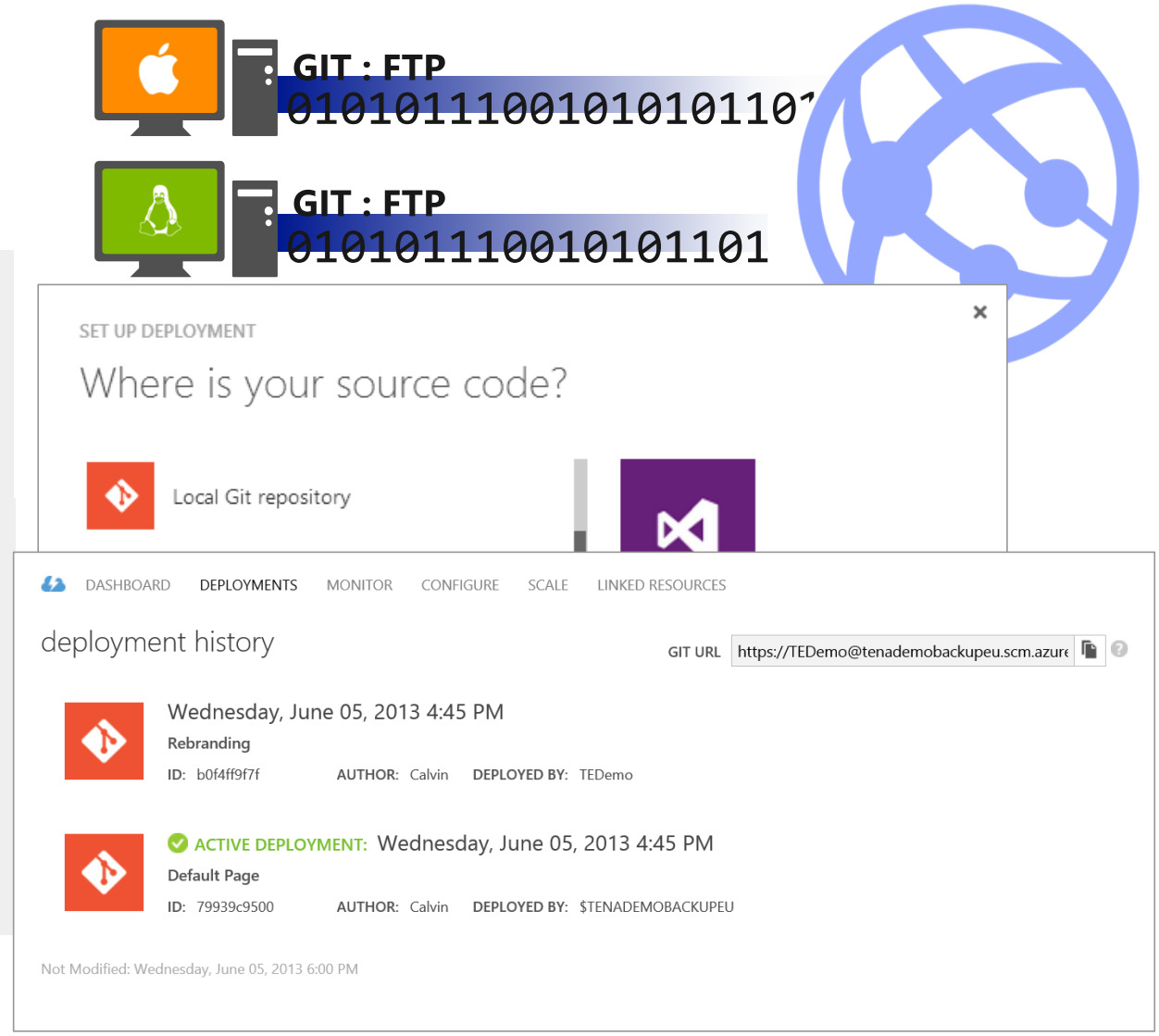
Microsoft® SQL Azure™

- App Gallery

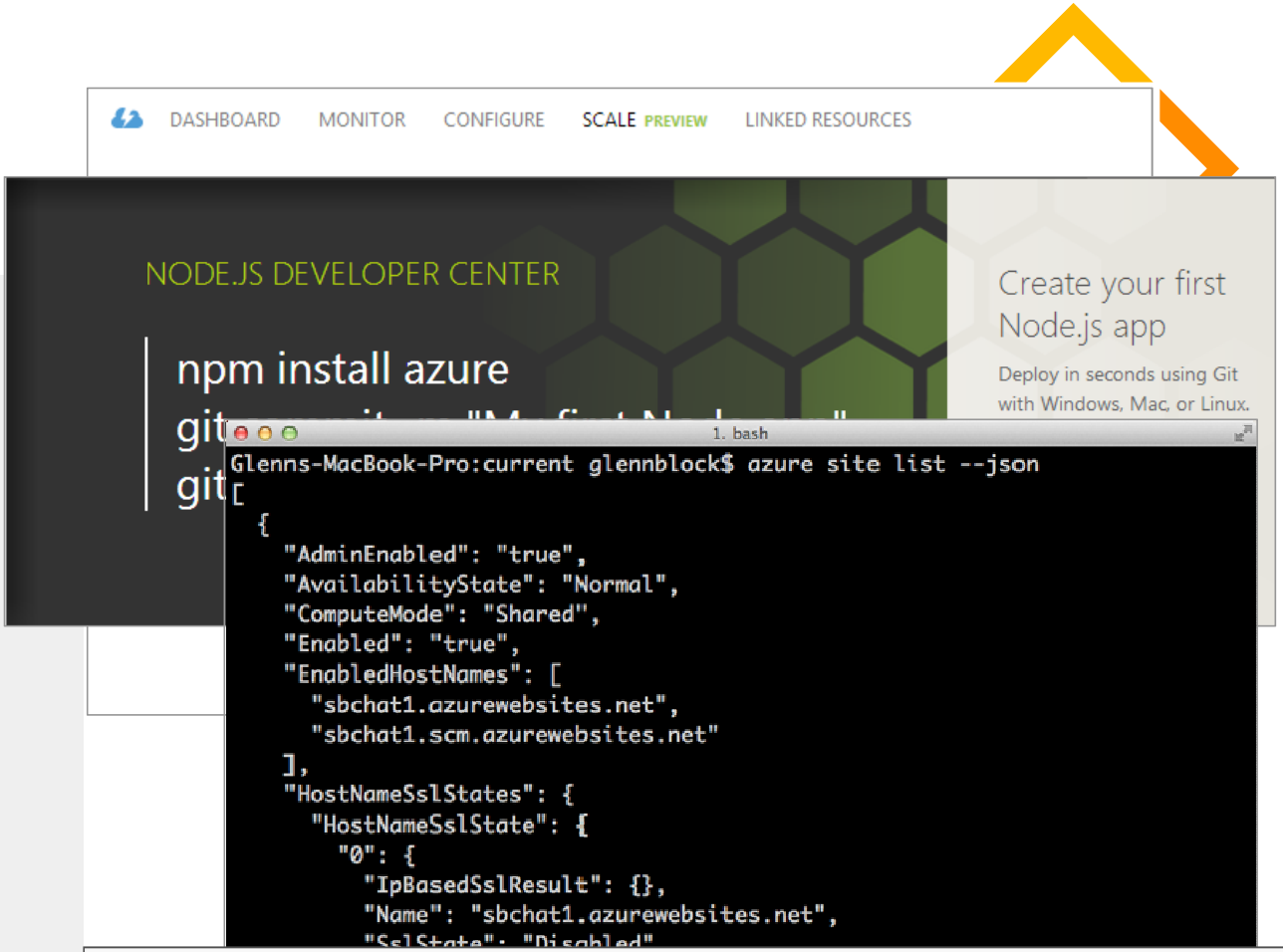

ADD WEB APP
Find Apps for Windows Azure
ALL
APP FRAMEWORKS
BLOGS
CMS
ECOMMERCE
FORUMS
GALLERIES
TEMPLATES
TOOLS
WIKI
A-Z
Incentive
Joomla! 2.5
Kentico CMS for ASP.NET
MediaWiki
MEDIAWIKI
MediaWiki is a free software open source wiki package written in PHP, originally for use on Wikipedia. It is now used by several other projects of the non-profit Wikimedia Foundation and by many other wikis.
VERSION 1.20.3
SIZE (KB) 22954

DotNetNuke
blogengine.net
acquia drupal 7
Gallery Server Pro
Sharing made easy
incentive
Kentico
phpBB
MEDIAWIKI
mojoPortal
Advanced Websites Made Easy
nopCommerce
OpenX
Das Blog
lemoon

- Deployment Choices
- Source Control
- Continuous delivery



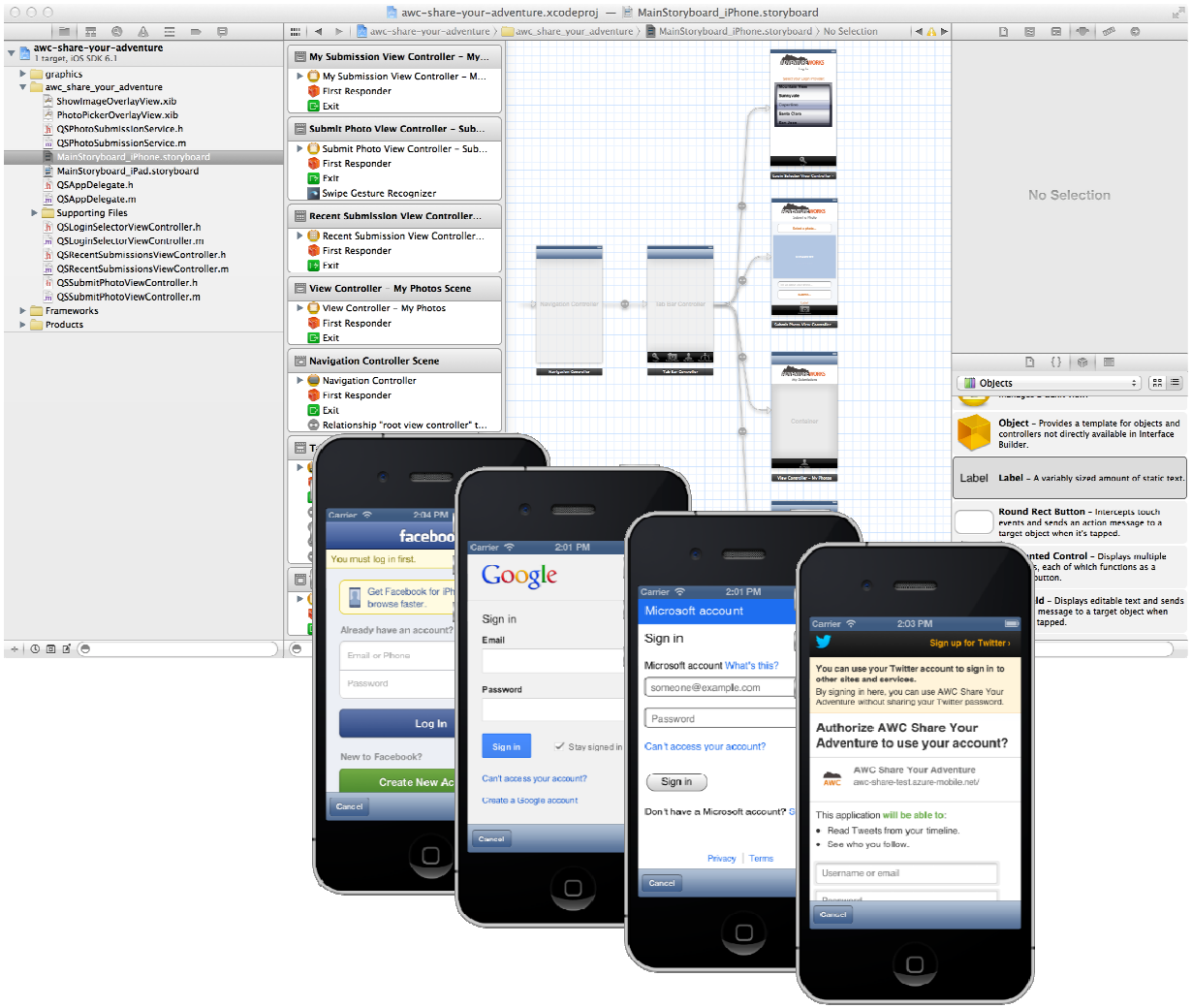
- Scale / Autoscale
- IDEs / Tools
- Command line / API



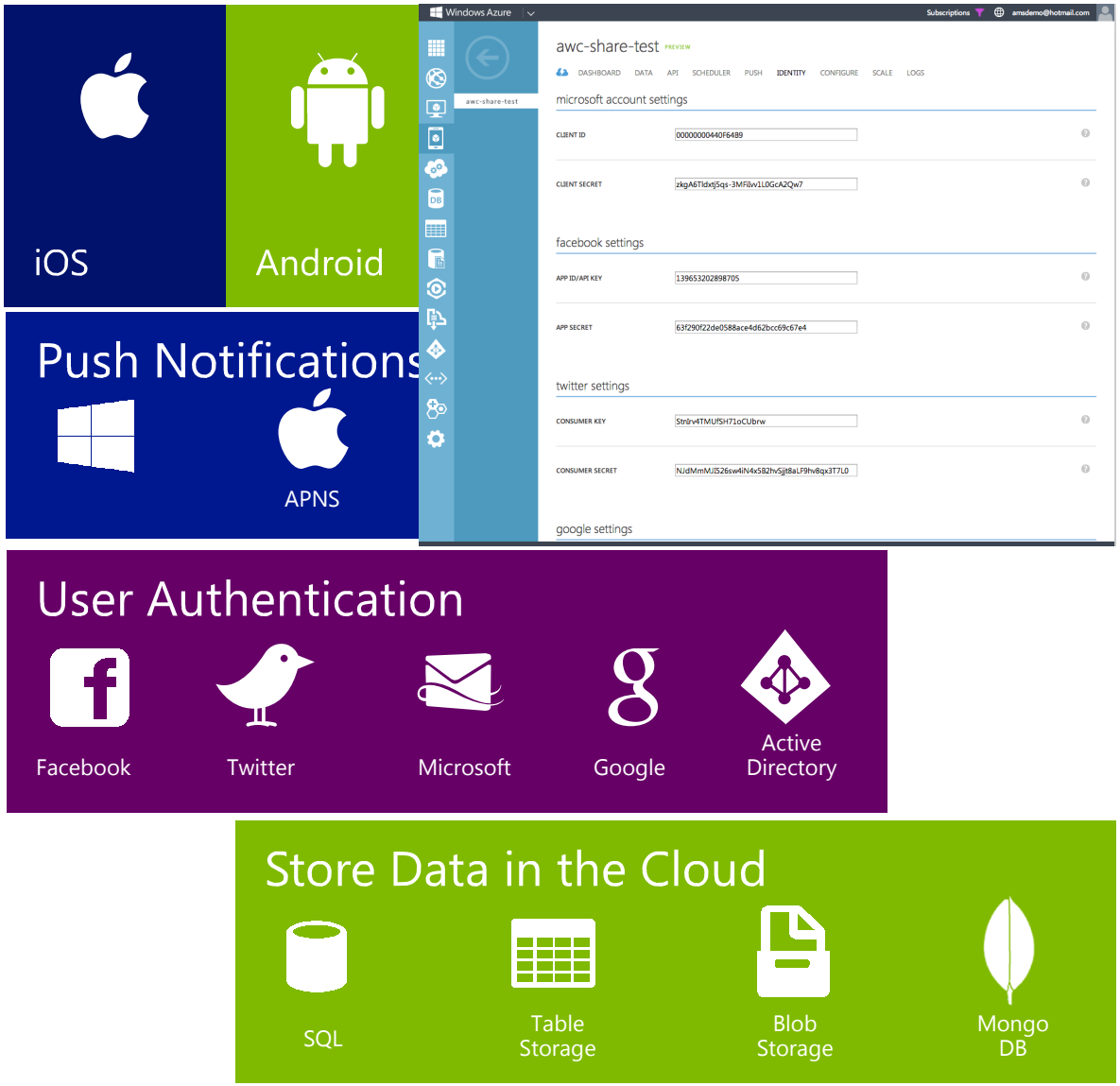

```
var scripty = require('azure-scripty');
scripty.invoke(['site create mysite --git', 'site config add foo=bar', 'site show mysite'],
function(err, results){
            console.log(results[2]) //shows the site details
});
```

Mobile Services

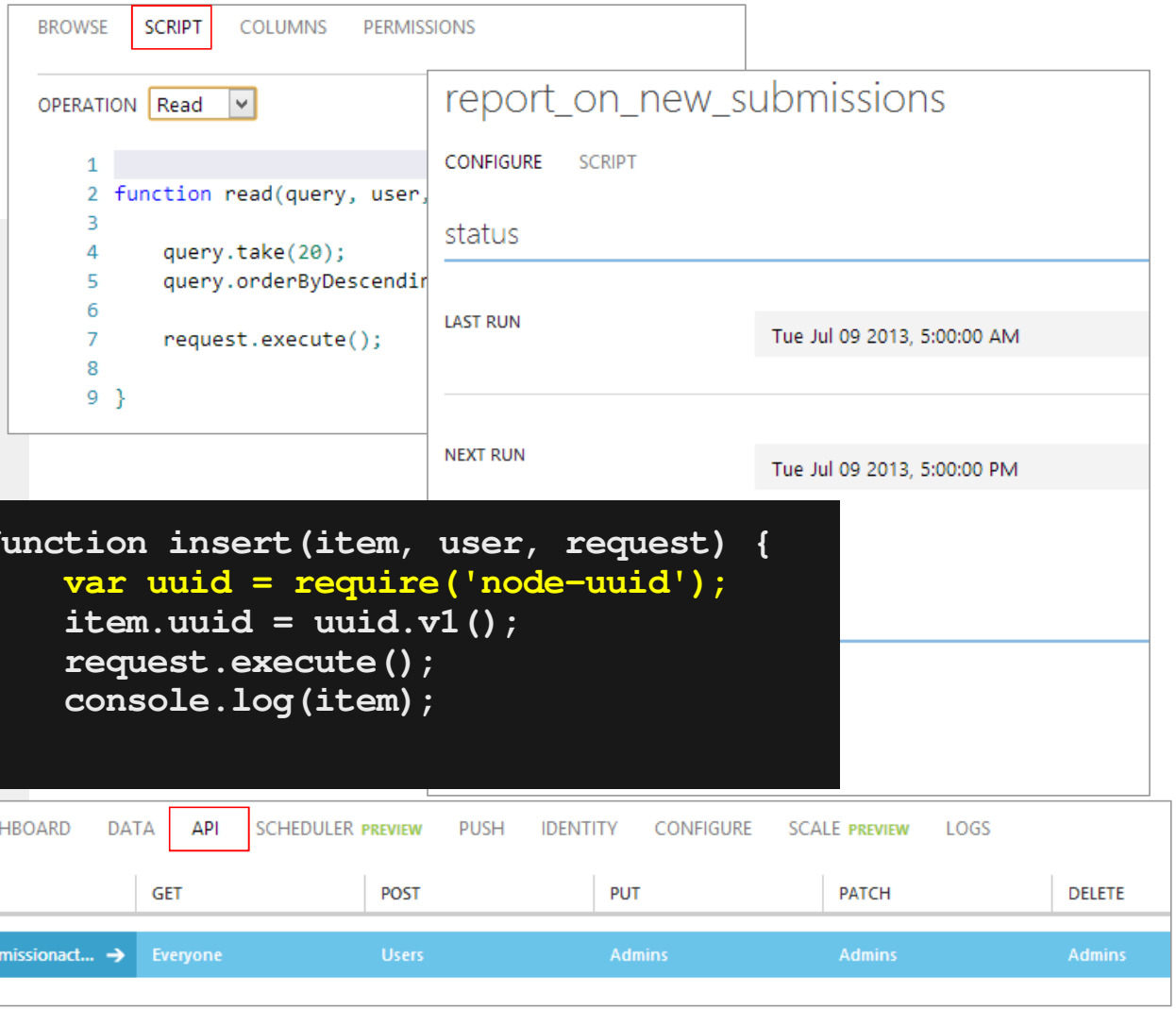
- iOS, Android & HTM5 /JS Mobile SDKs
- Push Notification, oAuth & Data choices (SQL, noSQL)
- Powerful scripting, modules & custom APIs
- 3rd Party Services integration
- Git, Continuous Deployment
- IDEs (via SDKs), Command Line & API



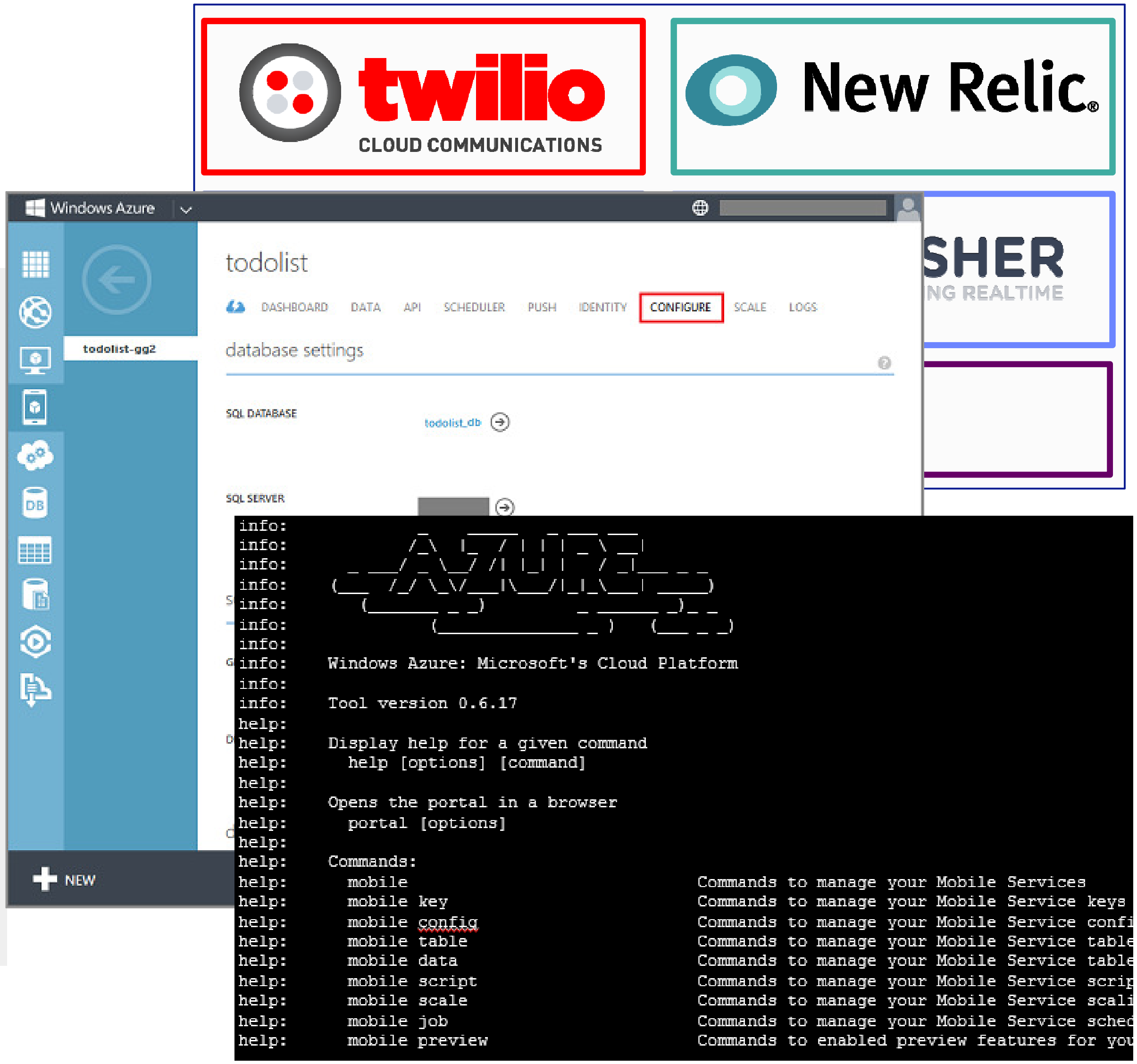
- Multiple Platforms
- Push Notifications
- Authentication
- Data in the Cloud



- Scripting: Node.js !
- Custom Node.js modules
- Custom API



- 3rd Party Services
- Continuous Integration
- Command line



A few of our Linux / Azure Customers

codeanywhere

- Codeanywhere online IDE
- Scale, reliability & management
- 2 VPS Linux servers to 20+ IaaS VMs
- Trial engagement & ease of migration (2 days)
- IaaS (Linux)

Scale

TREK

- Bicycle retail mgmt system
- Reduced IT support, development cost & scale
- Ubuntu VM for headless web automation tests
- Broader IaaS → PaaS stategy
- IaaS (Linux & Windows), Cloud Services

Speed

- Online newspaper, podcast & mall websites
- Security (DDoS), reliability, easier management & cost
- Custom PHP (LAMP)
- DDoS & scale issues – time to move to cloud
- IaaS (Linux & Windows) & PaaS

Security

A few of our Java on Azure customers

travelocity

- BI & Analytics extension
- Fast time to market, flexible development & scale
- Java / Tomcat + Jiffy/Solr
- Time pressure (3 mo)
- Table storage & Cloud Services / PaaS

Speed

everest
TSS BUSINESS ENGINEERING

- Call center solution
- Scale, management & efficiency + heterogeneity
- Java EE / JBoss
- 3-day windows azure lab
- Looked at Google / Amazon
- SQL Azure

Scale

TECHILA

- HPC middleware (case study)
- Shorten sales cycle by 70%, increase revenue
- Java on Linux + Postgres
- Strategic alignment w/ MS
- Moved away from AWS / EC2 because of Windows skillset
- SQL Azure

Skills