Your vision, your results, your cloud
Digital transformation

Engage your customers

Empower your employees

Transform your products

Optimize your operations
Going digital

1 million/hour new devices coming online by 2020
12 years average age of S&P 500 corporations by 2020
60% computing in the public cloud by 2025
I’m supposed to be an expert on all the new tech as soon as it comes out... I feel like I’m falling behind.

Now that I use the cloud, the expectations to deliver are much higher.

I want to make stuff that won’t get hacked.
Azure Stack: an extension of Azure

- At the edge and disconnected
- Meet every regulatory requirement
- Cloud application model on-premises
42 Azure regions
Microsoft.com/datacenter
Azure. Cloud for all.

Productive  Hybrid  Intelligent  Trusted
CORE INFRASTRUCTURE
Compute  Storage  Networking  Security

ADVANCED WORKLOADS
Web + Mobile  Identity Management
Internet of Things  Data + Analytics
Microservices  Cognitive Services
Serverless  High Performance Compute

TOOLS
Visual Studio + Visual Studio Code + Visual Studio Team Services
Tools
Modernize DevOps solutions with Visual Studio

Mobile DevOps

- Code Repository
- Build + Deploy
- Test Cloud
- User Beta Testing
- Monitor/Analytics
- Backlog

Mobile back-end services

- Cloud and offline data
- User authentication
- Push notifications
Build and innovate with choice and flexibility

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<td>Management</td>
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<td>Applications</td>
<td>WordPress, Joomla, Drupal, Apprenda, Okta</td>
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<td>App frameworks &amp; tools</td>
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<td>Databases &amp; middleware</td>
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<tr>
<td>Infrastructure</td>
<td>Linux, Red Hat, SUSE, Bitnami, Oracle, FreeBSD, Docker</td>
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Scenario

Deliver faster response to 16 million site visitors each month.

Move toward a Dev/Ops model in which software engineers can provision development infrastructure and accelerate the development of new digital services.

Reduce storage costs and gain scale for website images.

Solution

“Azure Storage provided effectively limitless storage with read-accessible geo-replication, so we could deliver increased capability and resilience that was cost-effective.”

Generate images of different sizes on the fly, and cache them for use when needed by various consumer devices.

Modernize the site, making it 100 percent mobile-friendly, and move to a dynamic Dev/Ops development paradigm.

Impact

Tripled the number of images stored and achieved the ability to deliver the right image to the right device.

“Azure PaaS gave us access to a complete set of capabilities such as Azure Redis Cache that we didn’t have to build ourselves.”

“With rapid access to development resources in Azure, we can set up environments, try, fail, repeat. Our whole innovation model speeds up with Azure PaaS.”
Advanced workloads
Build with a platform designed for future growth

App service
Web, mobile, and API apps

DevTest Labs
Integrate with your existing toolchain

Logic apps
Workflow and integration

Cosmos DB
Globally distributed, multi-model database service

RECENT ANNOUNCEMENTS

Scalable quantum computing

Azure Container Instances Service

Cosmos DB and Azure Functions native integration
Add a natural, human touch with Cognitive Services

**Vision**
Computer Vision

**Speech**
Speech-to-text and text-to-speech service

**Language**
Natural Language Processing

**Knowledge**
Knowledge Exploration Service

**Search**
Bing Search

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*Object recognition...*

*Convert this text to speech please...*

*Play today’s conference call...*

*Top publications in AI...*

*Fraud prevention results...*
Simplify IoT with preconfigured solutions

Azure IoT Suite

- Device connectivity & management
- Data ingestion and command & control
- Stream processing & predictive analytics
- Workflow automation and integration
- Dashboards and visualization
- Preconfigured solutions
  - Remote monitoring
  - Predictive maintenance
  - Connected factory (new)
Empower your decisions with business insights

Back-end power

- Big data
- Web data
- Traditional data

Front-end insights
### Predict customer needs with powerful tools

#### Azure Machine Learning templates
- Demand forecasting
- Predictive maintenance
- Vehicle telemetry

#### Azure Machine Learning services
- **Data**
  - Cloud
  - Big data
  - Web data
  - Traditional data
- **Modeling & APIs**
  - ML Workbench
  - API
- **Clients**

#### RECENT ANNOUNCEMENTS
- ML workbench
- ML experimentation service
- ML Model Manager service
Scenario
Need to run heavy 3D applications in the public cloud from any device, with just a browser.
Typically costs 5-10k to run graphics applications.
VMs take months to set up.

Solution
NVIDIA Tesla graphics
Fastest performance workstation
Deliver service in minutes vs. months.
Performance that was approximately 28 percent faster than AWS G2.2xlarge VMs.
Can run Autodesk Revit, AutoCAD, and demanding Windows applications on a MacBook, iPad, Chromebook, or any low-performance device.

Impact
“Azure GPUs are faster than the AWS GPUs because Azure uses a newer-generation GPU architecture,” Boitano says. “The Azure N-Series VMs also have a larger frame buffer, so customers can host larger scene sizes.”
Deliver a massive online course with capacity for 1,000 students. With Frame, it took an hour to set up the environment, and the customer paid for it only as long as the team used it.
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High performance computing
<table>
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<tr>
<th>Scenario</th>
<th>Solution</th>
<th>Impact</th>
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<tr>
<td>High quality, precision instrument manufacturing.</td>
<td>Convert experience to digital knowledge and apply machine learning to provide predictive maintenance.</td>
<td>Help operators and technicians make better decisions based on objective integrated production data.</td>
</tr>
<tr>
<td>In-depth knowledge of machining and tooling processes.</td>
<td>Leverage Azure IoT Suite to collect sensor data.</td>
<td>Set up predictive maintenance schedules and set alarms to take machines offline before failure.</td>
</tr>
<tr>
<td>Empower customers to make best possible business decisions.</td>
<td>Integrate into Dynamics 365 for Field Service.</td>
<td></td>
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- Cognitive Services
- High Performance Compute

**TOOLS**
- Visual Studio + Visual Studio Code + Visual Studio Team Services
Scenario

12,000 employees, customers in 60 countries.

Material analytics compares thousands of different existing combinations.

Uncontrolled documents becoming a potential security risk.

Solution

Already moving to Office 365 and Dynamics CRM.

Power BI for easy data analytics and visualization.

Windows 10 tablets for mobile access.

Cortana integration with natural language search.

Impact

Natural language querying and rich visualization tools make data more straightforward and accessible.

“Power BI is just way more fun”

Leverage intellectual property to introduce products up to 20% faster.
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TOOLS
- Visual Studio
- Visual Studio Code
- Visual Studio Team Services
Scenario
Want to improve elasticity, performance and costs of datacenter assets.
7,000 employees across multiple locations and time zones.
60 manufacturing facilities.
Manufacturing siloed geographically.
SAP reports taking hours to generate, delaying business decisions.
180 SAP servers.

Solution
Mixed environment of Windows and Linux moved to the cloud.
Comprehensive Azure security capabilities.
SAP HANA on Azure:
- Four regional instances of SAP ECC
- One consolidated instance of ERP suite

Impact
Moved 75% of datacenter infrastructure to cloud, planning for 90%.
Significantly lower capital and operating costs.
Consistent levels of security, more responsive when threats identified.
Reports that took 6 hours now done in 6 minutes.
Can now adopt same day planning and rush orders.
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Microservices   Cognitive Services
Serverless   High Performance Compute

**TOOLS**
Visual Studio + Visual Studio Code + Visual Studio Team Services
Core infrastructure
Leverage a secure and well-managed infrastructure

**Compute**
- Virtual machines
- Availability sets
- VM scale sets
- Controlled maintenance

**Storage**
- Disks
- Blob storage
- File sync

**Networking**
- Virtual networks
- VPN, ExpressRoute
- Load Balancer
- DNS, Traffic Manager

**Management**
- Log analytics
- Cloud Shell
- Site Recovery
- Security Center

**RECENT ANNOUNCEMENTS**
- Azure Cost Management
- Azure Availability Zones
- Reserved VM instances
## Scenario

One week lead-time for back-up restoration.
After 9/11, needed a better solution – blocks away.
68 countries and 65M customers.

## Solution

- **Azure Site Recovery**
- Coordination of VMs.
- Use Azure, their own data center as recovery site.
- Can run off Azure indefinitely during disaster.

## Impact

- DR cost reduced by 65%.
- Easy testing
- Instead of a week, running again in minutes.
- Maximum data loss of 30 seconds.
### CORE INFRASTRUCTURE
- Compute
- Storage
- Networking
- Security

### ADVANCED WORKLOADS
- Web + Mobile
- Internet of Things
- Microservices
- Serverless
- Identity Management
- Data + Analytics
- Cognitive Services
- High Performance Compute

### TOOLS
- Visual Studio + Visual Studio Code + Visual Studio Team Services
Security and compliance
Rest assured with layered datacenter security

**PERIMETER**
- Perimeter fencing
- Video coverage
- One defined access point
- 24x7x365 security operations
- Verified single person entry
- Two-factor authentication with biometrics

**BUILDING**
- Secure destruction bins
- Inability to identify location of specific customer data
- 100+ datacenters
- Millions of servers
- Two-factor authentication with biometrics

**ACCESS APPROVAL**
- Background check
- System check
- Employee & contractor vetting

**SERVER ENVIRONMENT**
- Employee & contractor vetting
- Inability to identify location of specific customer data
- Millions of servers
Comply with industry and regional requirements

**GLOBAL**
- ISO 27001
- ISO 27018
- ISO 27017
- ISO 22301
- SOC 1 Type 2
- SOC 2 Type 2
- SOC 3
- CSA STAR Self-Assessment
- CSA STAR Certification
- CSA STAR Attestation

**US GOV**
- Moderate JAB P-ATO
- High JAB P-ATO
- DoD DISA SRG Level 2
- DoD DISA SRG Level 4
- DoD DISA SRG Level 5
- SP 800-171
- FIPS 140-2
- Section 508 VPAT
- ITAR
- CJIS
- IRS 1075

**INDUSTRY**
- PCI DSS Level 1
- CDSA
- MPAA
- FACT UK
- Shared Assessments
- FISC Japan
- HIPAA / HITECH Act
- HITRUST
- GxP 21 CFR Part 11
- MARS-E
- IG Toolkit UK
- FERPA
- GLBA
- FFIEC

**REGIONAL**
- Argentina PDPA
- EU Model Clauses
- UK G-Cloud
- China DCP
- China GB 18030
- China TRUCS
- Singapore MTCS
- Australia IRAP/CCSL
- New Zealand GCO
- Japan My Number Act
- ENISA IAF
- Japan CS Mark Gold
- Spain ENS
- Spain DPA
- India MeitY
- Canada Privacy Laws
- Privacy Shield
- Germany IT Grundschutz workbook
Azure Stack + hybrid
Providing the only consistent, hybrid cloud

- **Azure Active Directory**
- **Azure Data Services**
- **Azure Services**
- **Azure Security & Management**

- **Common Identity**
- **Data Platform**
- **Unified Development**
- **Security & Management**

- **Active Directory**
- **SQL Server**
- **Azure Stack**
- **On-premises Infrastructure**
Extend Azure with Azure Stack

Bring the agility and innovation of the cloud to your datacenter

- Edge and disconnected solutions
- Cloud applications that meet every regulation
- Modern applications across cloud and on-premises

Portal | PowerShell | DevOps tools

Azure Resource Manager

Azure IaaS | Azure PaaS
Compute | Networking | Storage | App Service | Functions | Service Fabric* | Container Service*

Cloud infrastructure
(Integrated systems)

Azure Stack

Azure

Edge and disconnected solutions

Cloud applications that meet every regulation

Modern applications across cloud and on-premises
**Scenario**

Desire to improve IT management services offered, including security, support, and service continuity.

Help fine-tune cloud customers with precision and transparency.

Leverage a platform to deploy their solutions, including openshift.

**Solution**

Implemented managed cloud using RedHat on Azure with tools to manage resource usage.

Enabled customers to control costs with capabilities such as scheduling when to switch on their VMs.

Deployed simplified dashboard and catalog of solutions building on top of Red Hat on Azure, such as Openshift.

**Impact**

Deploy Openshift on Azure, accelerate app dev.

Flexible and upgradeable.

Manage hybrid cloud.
Service essentials
Expand your solutions with Azure Marketplace
Azure Advisor,
Monitor and Cost Management

Cloud Shell

Built-in security and management

Azure mobile app
Azure solutions

- Dev/Test
- SAP on Azure
- Internet of Things
- RedHat on Azure
- BI + analytics
- Big data & data warehouse
- Backup, Archive, DR
- High performance computing
- Internal business apps
- Customer facing apps
- High performance computing
- Internal business apps
- Customer facing apps
Trusted
Productive
Hybrid
Intelligent
Trusted
Azure. Cloud for all.

Productive  Hybrid  Intelligent  Trusted
>90% of Fortune 500 use Microsoft Cloud
Thank You!

ευχαριστώ    Salamat Po    شكراً    متشكرم    Grazie
благодаря   ありがとうございます    Kiitos   Teşekkürler   谢谢
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Hvala    Köszönöm    Tak    Dank u Wel    Дякую    Tack
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多謝晒    Ḏakujem    荘子    ধনঃ    Děkuji    감사합니다