



**black
marble**

The Interoperable Platform

Microsoft

Interoperability by design.

Connecting people, data, and diverse systems.

Cast

In order of appearance...

- Simon Thurman, Microsoft
- Simon Davies, Microsoft
- Rob Blackwell, AWS
- Richard Fennell, Black Marble

What we're going to talk about...

- Does Microsoft take interop seriously?
- What are the points of interop?
- What about the cloud?
- What tools can I use?

Initiatives

- Interoperability Principles
 - Open Connections, Standard Support, Data Portability, Open Engagement
- Interoperability Executive Customer Council / UK
- Document Interop Initiative
- Open Specification Promise
- Windows Principles
- Interop Vendor Alliance
- Interop Ability
 - moreinterop.com

Interoperability Model

Architectural Model

Programming Model

Message Format

Data Format

Transport Protocol

Language

Tools

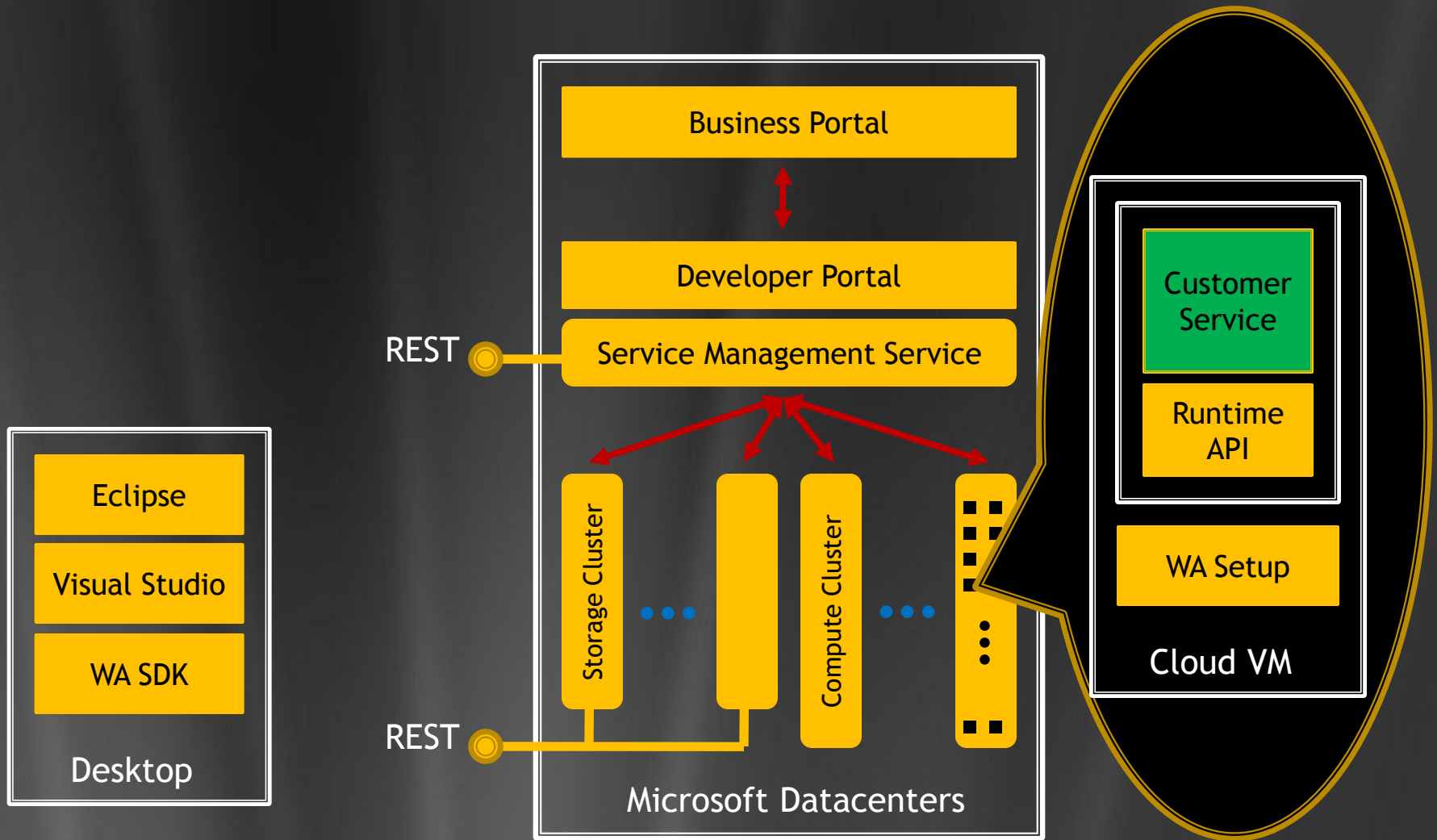
- Interoperability Bridges

- <http://www.interoperabilitybridges.com/>

- Python

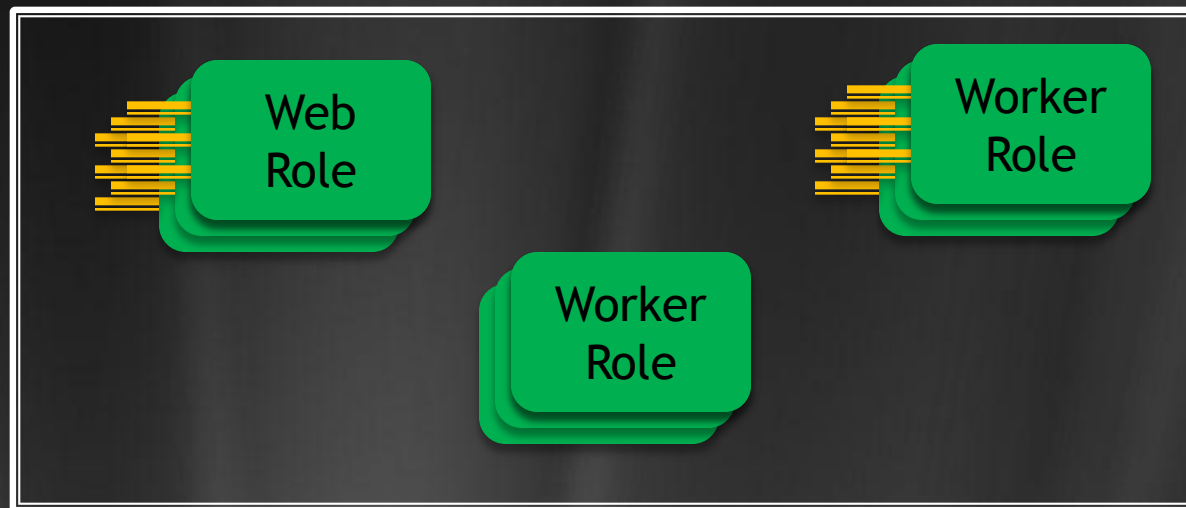
- <http://www.visitmix.com/labs/gestalt/getstarted/>

Windows Azure - High Level



Service Model

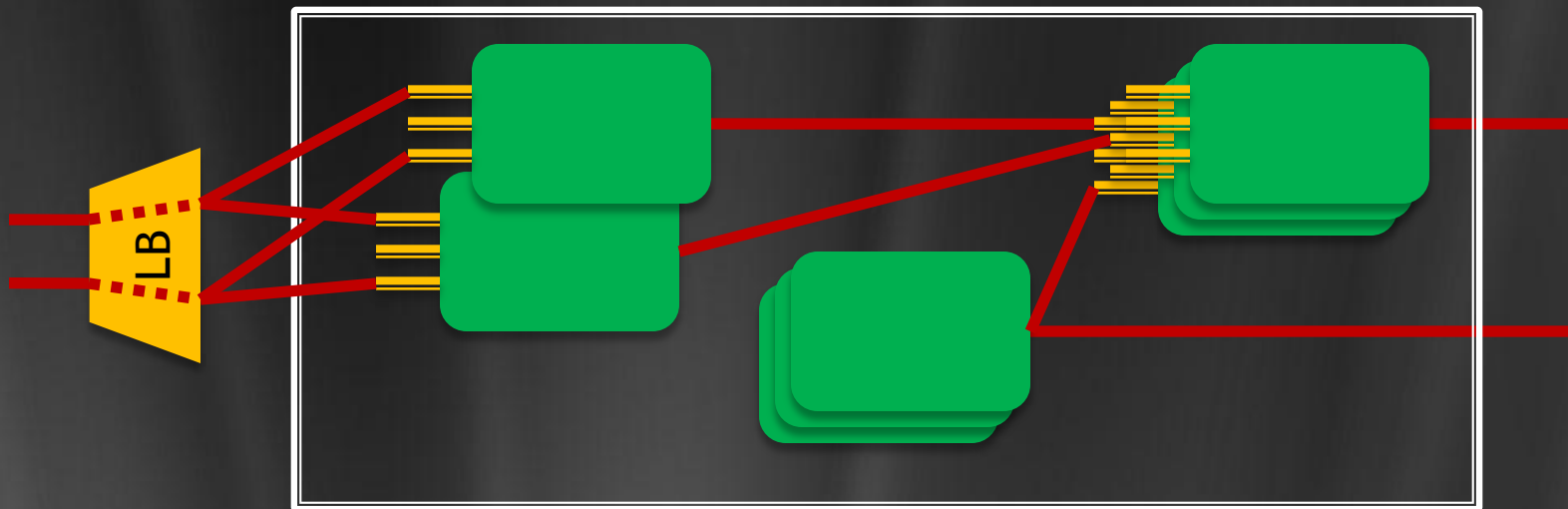
- Service architecture



- A service is made up of components called *roles*
 - Arbitrary # of endpoints per role
 - Arbitrary # of identical instances of each role, one per VM, variable size
 - Arbitrary # of roles
- 2 kinds of roles
 - Web Role: We host your role on IIS
 - Worker Role: Provides an entry point for you to run your code, can have both external and internal network connectivity

Service Model

- Communication (TCP, HTTP, HTTPS)



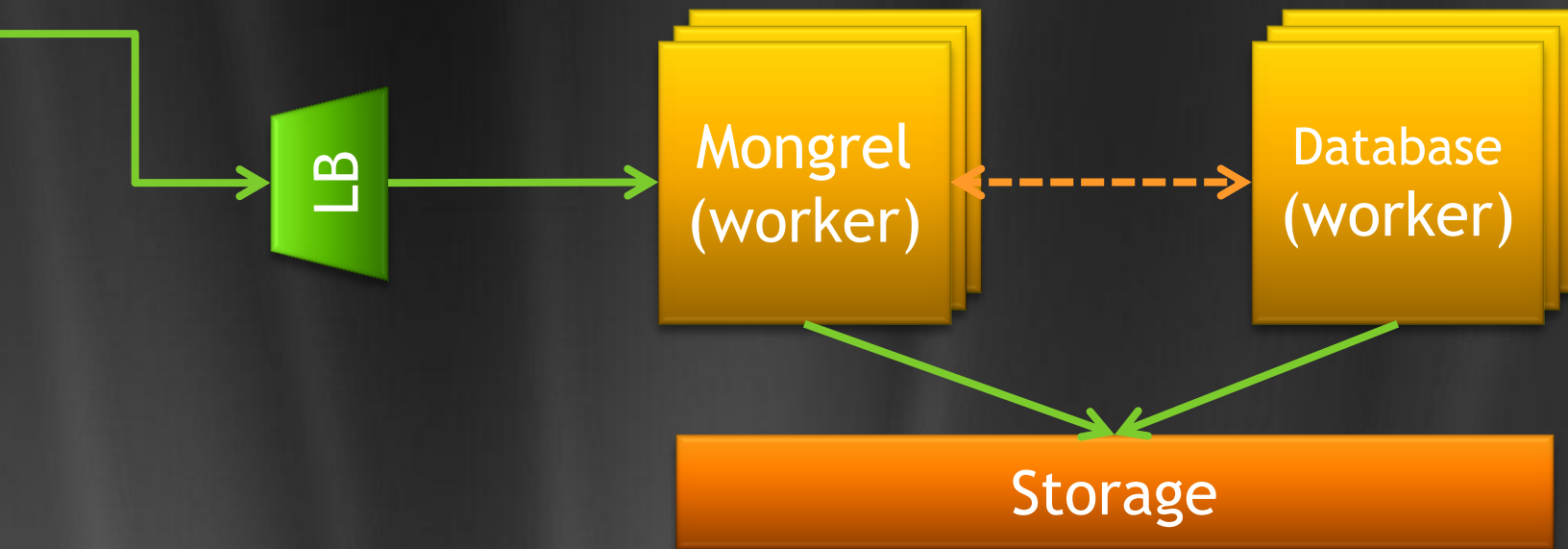
- **Internal to service:**

- Any role instance can reach any endpoint by IP/Port#
- Port #s assigned by platform, a query API is provided

- **External to service:**

- Outbound: No restrictions
- Inbound: Single VIP; port slicing for multiple endpoints
- Developer can specify port # for any input endpoint

Running Rails on Windows Azure



<http://code.msdn.microsoft.com/railsonazure>

Beyond Simple HTTP serving

- Can utilise Web Role for other requirements
 - e.g. HTTPS
 - Reverse proxy required
 - Sample solution published soon

Basic Approach

- Will It Run?
 - Windows
 - Non-admin user
 - Copy to Deploy
- General Approach
 - Declare network requirements
 - Copy your code to a compute node
 - Query for IP\Port information
 - Create a process from a Worker Role



Microsoft Interop @ QCon Java and Ruby on Windows Azure



Rob Blackwell, R&D Director

ukinterop.cloudapp.net



Windows® Azure™



ukinterop.cloudapp.net

- Written in Java using the Restlet framework
- Uses Windows Azure Queues and Tables for Storage
- Running in Windows Azure Compute

[Demo..](#)

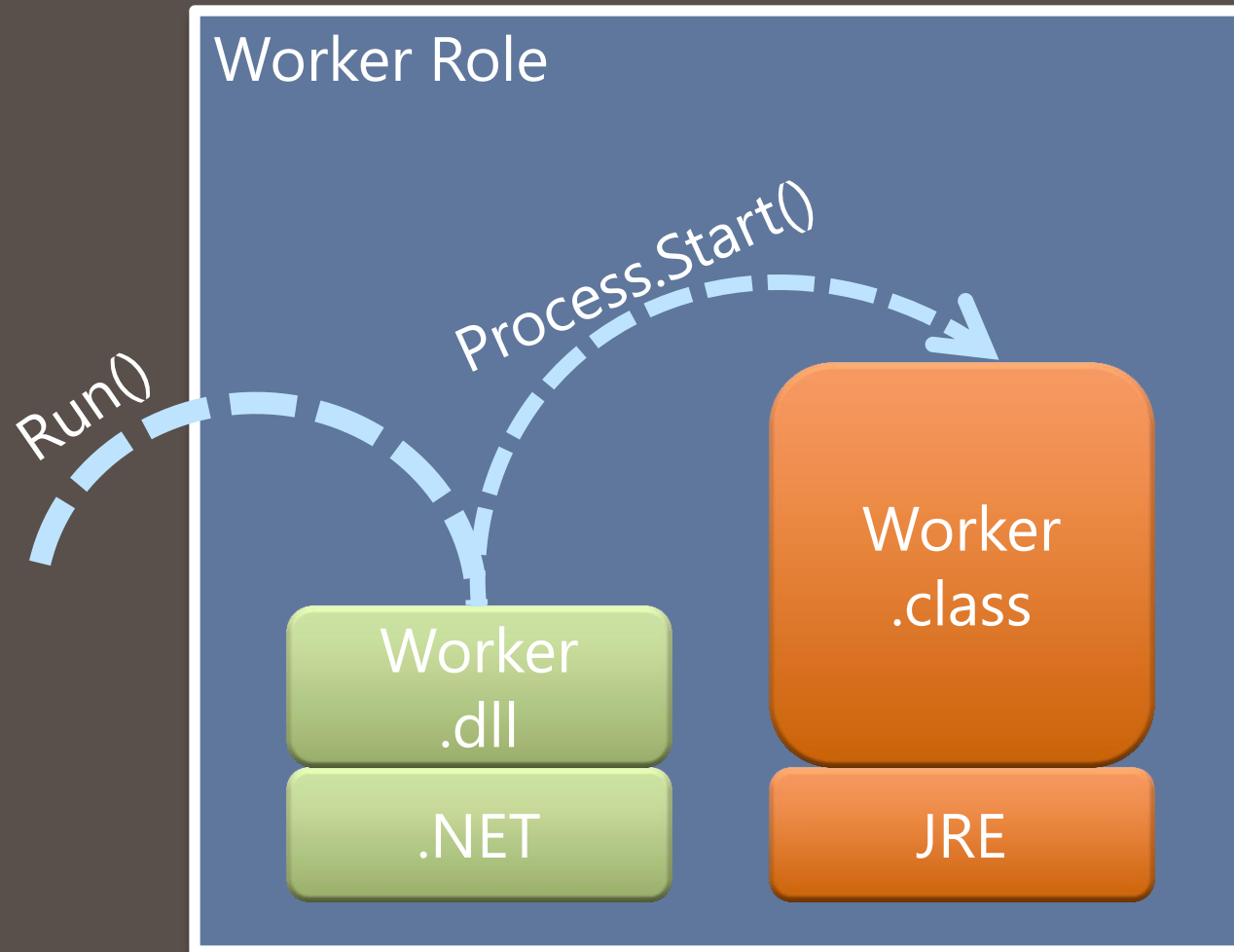


rubykinterop.cloudapp.net

- Work in Progress ...
- Written in Ruby on Rails
- Uses Windows Azure Queues and Tables for Storage
- Running in Mongrel on Windows Azure Compute

[Demo..](#)

Anatomy of a Java Worker Role



Azure RunMe

- <http://azurerunme.codeplex.com>
- Allows Java apps to run on Windows Azure (or Ruby, Python ... etc)
- Just ZIP your app and put it in Blob storage
- Your app must
 - run on Windows as non-admin user
 - be self contained
 - have no traditional install or setup
 - “Run from a BAT file”

C:\code\ukinterop\trunk\Trace\JavaQueueProcessor\TraceConsole.exe

```

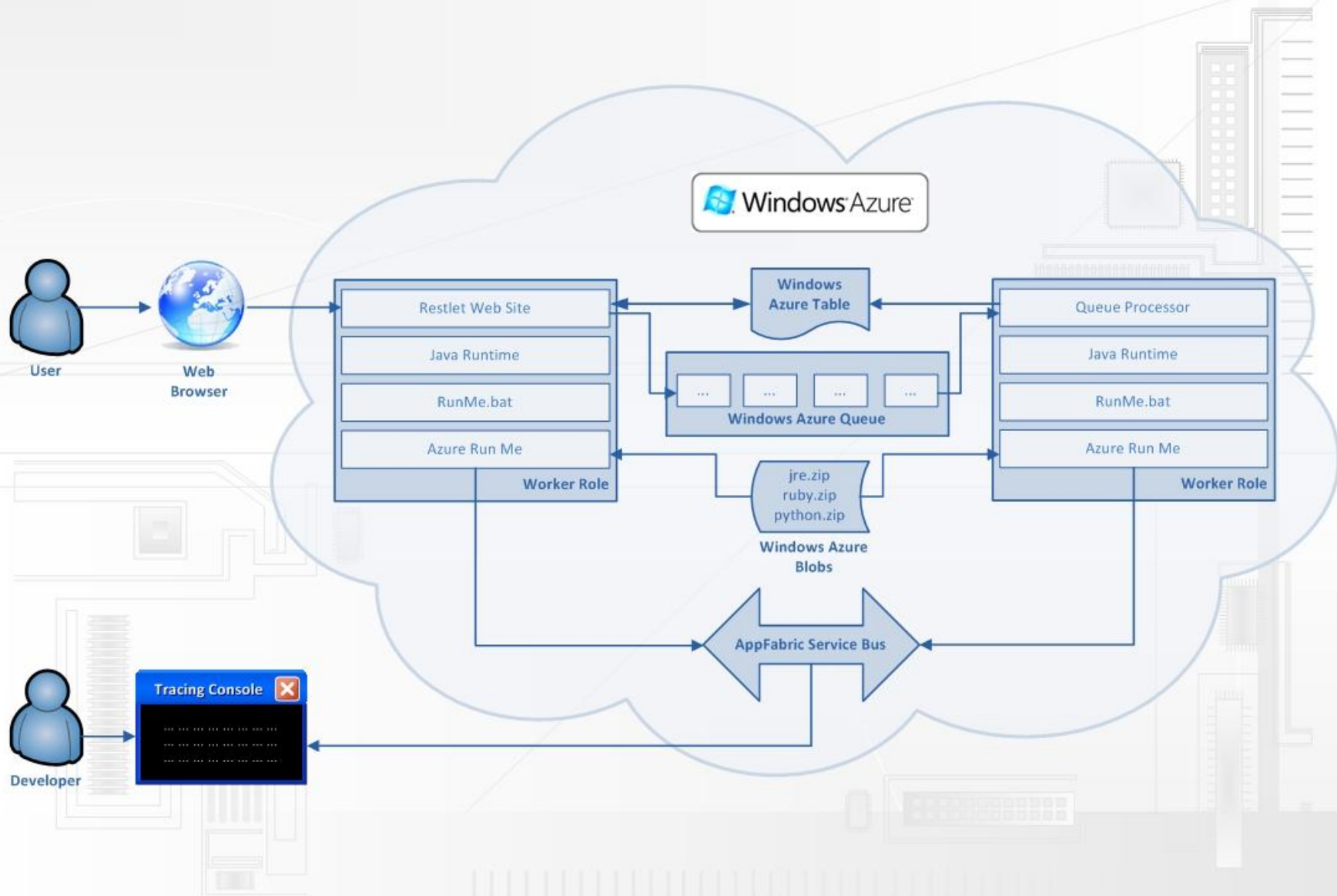
CloudTrace Console
Connecting ...
Connected To: sb://robblackwell.servicebus.windows.net/samples/trace2/
Hit [Enter] to exit
Information WorkerRole entry point called
Information Downloading jre.zip from packages
Information Extracting jre.zip
Information Extraction finished
Information Downloading javaqueueprocessor.zip from packages
Information Extracting javaqueueprocessor.zip
Information Extraction finished
Information InstanceEndpoint Port=20000
Information Start Process E:runme.bat 20000
Information Process 1564
Information
Information E:\approot>cd JavaQueueProcessor
Information
Information E:\approot\JavaQueueProcessor>..\jre\bin\java -cp QueueProcessor.jar
;lib\* QueueProcessor
Information INFO: Checking queue...

```

WindowsAzure4j

- <http://www.windowsazure4j.org/>
- Allows Java apps to access Windows Azure Storage.





Conclusions

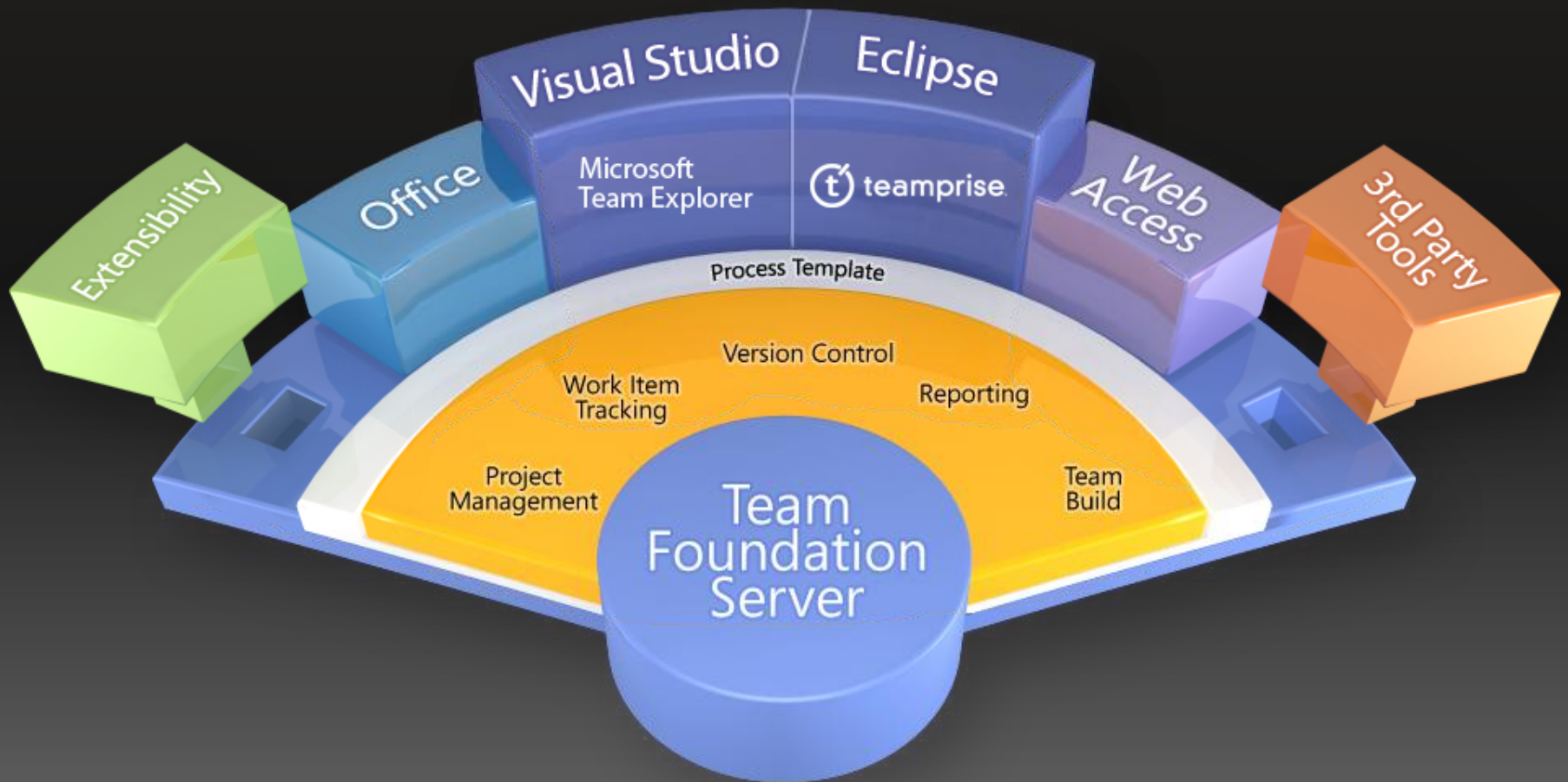
- Windows Azure Compute and Storage is interoperable with Java. (& Ruby, Python etc).
- Windows Azure actually **makes sense** for some Java apps
- Resources:
 - <http://www.windowsazure4j.org/>
 - <http://azurerunme.codeplex.com>
- Let us have your feedback
 - <http://ukinterop.cloudapp.net>

Richard Fennell
Engineering Director, Black
Marble



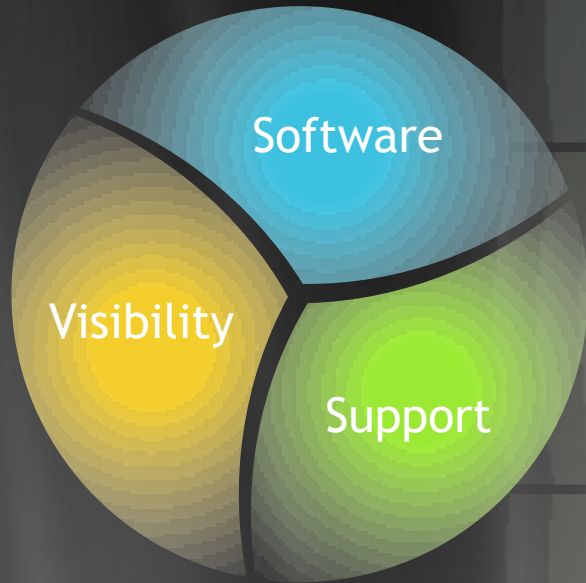
black
marble

Team System



Microsoft BizSpark™

Microsoft BizSpark™ is a global program designed to help accelerate the success of early stage startups, providing:



Software

- Development tools and production licenses
- No upfront costs

Support

- Community support from over 300 plus network and hosting partners
- Professional technical support from Microsoft

Visibility

- Profile and promotion on the BizSparkDB

Thank you

- <http://www.microsoft.com/interop>
- <http://ukinterop.cloudapp.net/>
- <http://www.interoperabilitybridges.com/>
- <http://code.msdn.microsoft.com/railsonazure>
- <http://azurerunme.codeplex.com>
- <http://www.teamprise.com/products/plugin/>
- **Microsoft “Eaglestone” Beta Client for TFS 2010**
<http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=3c9454e0-523a-4ee1-b436-5c6fc2110b34>