

# SQL Azure briefing

Microsoft / Pasi Mäkinen  
at DBTech EXT Symposium 2010-11-26

## SQL Azure core scenarios today

### Departmental Applications



*Departmental workgroup applications with low concurrency and cyclical usage patterns*

### Web Applications



*Small customers or start ups with Web applications of all scale that have simple RDBMS needs*

### ISV LOB Applications



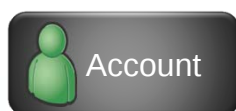
*Traditional ISVs extending offering or selling software hosted in the cloud*

### Data Hubs

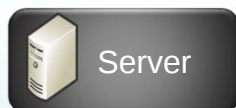


*Data hubs that consolidate multiple data sources and enable access from multiple locations and devices*

## SQL Azure core concepts



Account



Server



Database

- Each **account** has zero or more **servers**
  - Establishes a billing instrument
- Each **server** has one or more **databases**
  - Logical concept equal to a master DB
  - Unit of authentication, geo-location, billing, reporting
  - Generated DNS-based name
- Each **database** has standard SQL objects
  - Users, Tables, Views, Indices, etc
  - Unit of consistency

Windows Azure

## SQL Azure Pricing

- Two SQL Azure Database SKUs: *Web & Business*
  - **Web Edition:** 1 GB @ \$9.99/month | 5 GB @ \$49.95/month
  - **Business Edition:** Up to 50 GB @ \$99.99/10 GB/month  
10 GB @ \$99.99 | 20 GB @ \$199.98 | 30 GB @ \$299.97 | 40 GB @ \$399.96 | 50 GB @ \$499.95
- You specify Web or Business Edition
  - Web: EDITION = Web
  - Business: EDITION = Business
- You specify MAXSIZE
  - Web: MAXSIZE = 1GB| 5GB
  - Business: MAXSIZE = 10GB | 20GB | 30GB | 40GB | 50GB
  - *This is the size we will not let you grow beyond*
  - *You will be charged for the actual (peak) size (in any one day)*



Business Edition  
Up to 50 GB  
10 GB increments



Web Edition  
Up to 5 GB  
1 GB or 5 GB

```
CREATE DATABASE foo1 (EDITION='business', MAXSIZE=50GB);
CREATE DATABASE foo2 (EDITION='business', MAXSIZE=30GB);
CREATE DATABASE bar1 (EDITION='web', MAXSIZE=5GB);
CREATE DATABASE bar2 (EDITION='web'); -- Defaults to 1GB
```

Windows Azure

# SQL Azure Reporting



## Features:

- Based on SQL Server Reporting Services
  - Interactive and tabular reporting
  - Data visualizations: charts, graphs, mapping, gauges
- SQL Azure Database data sources
- Export to Excel, PDF, CSV formats

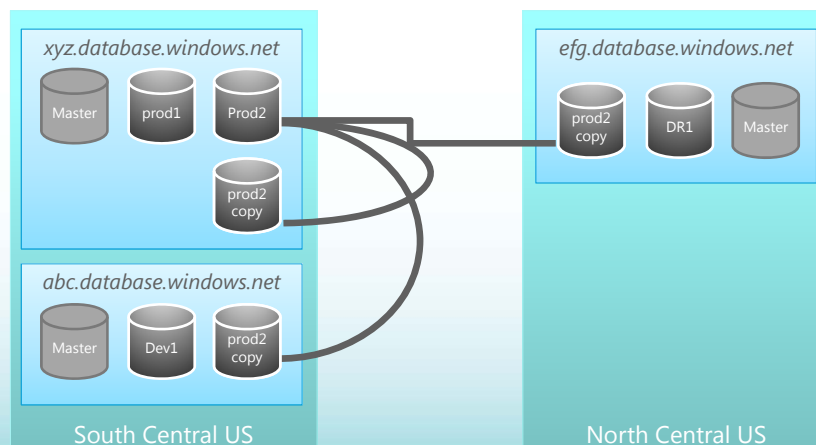
## Core scenarios:

- Embed reports into Windows Azure or on-premises applications
- Operational reporting on SQL Azure data

CTP 12/2010, production version 2011/H1

Windows Azure

# Database Copy



```
CREATE DATABASE abc.prod2clone AS COPY OF xyz.prod2
```

Windows Azure

## Scalability

- Provisioning
  - Growing and shrinking capacity
- Managing
  - Upgrading, patching, HA for lots of databases

Covered by  
SQL Azure  
today

- Routing
  - Where is the directory?
  - How to scale it and use it?
- Partition Management
  - Splitting and Merging, without loss of availability
  - Fan-out

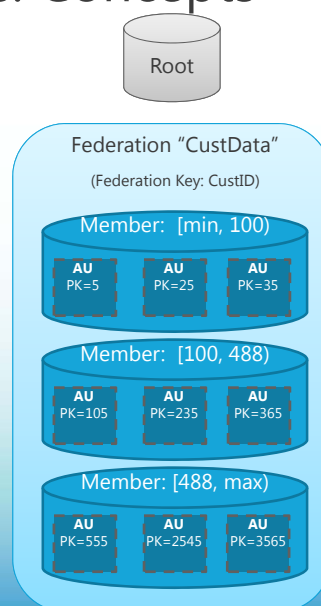
Coming up  
in SQL  
Azure:  
Federations

2011

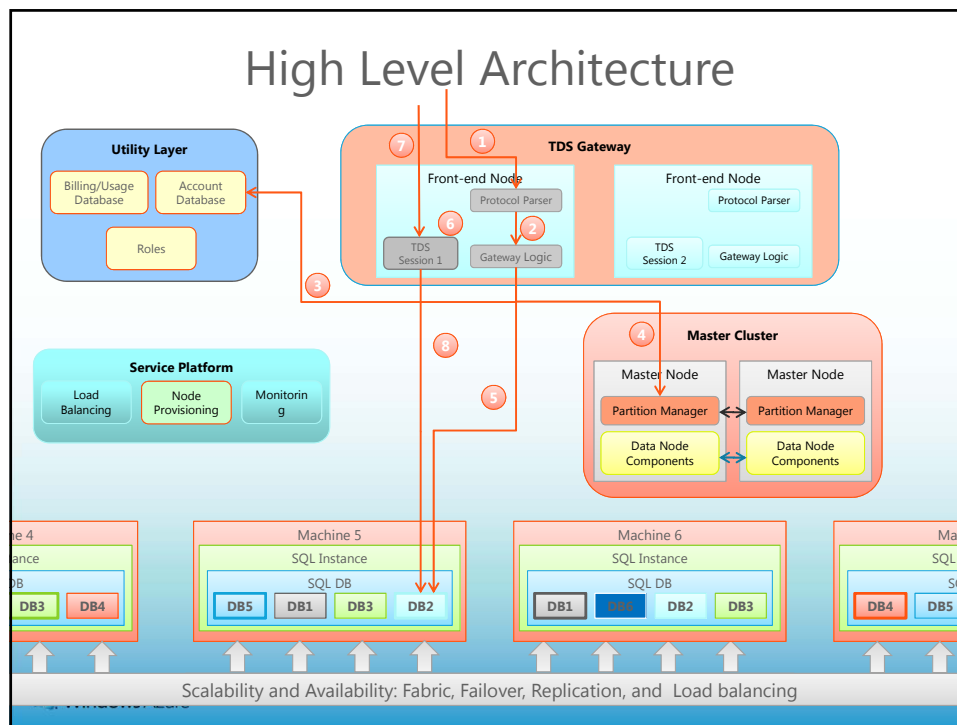
Windows Azure

## SQL Azure Federations: Concepts

- **Federation**
  - Represents the data being shared
- **Federation Key**
  - The value that determines the routing of a piece of data
- **Atomic Unit**
  - All rows with the same federation key value: always together!
- **Federation Member (aka Shard)**
  - A physical container for a range of atomic units
- **Federation Root**
  - The database that houses federation directory



Windows Azure



## Easily Discover And Explore Datasets

The image displays two screenshots illustrating the ease of discovering and exploring datasets:

- Left Screenshot:** Shows the Windows Azure Marketplace interface. It features a "One stop shop for Data." banner, a "DataMarket Excel Add-in" section, and a "Categories" list including Entertainment and Media, Financial, Health and Wellness, Location Based Services, Mathematics, Movies and Events, News, Points of Interest, Real Estate, Retail and Merchandise, Statistics, and Transportation and Navigation. The "Datasets" section lists various datasets like "European Greenhouse Gas Emissions", "STATS Sports Database - 100 year...", and "Museum Development Goals".
- Right Screenshot:** Shows the DataMarket Excel Add-in interface. It displays a dataset titled "2006 - 2008 Crime in the United States" with a table of data. The table includes columns for State, City, Year, Population, Violent Crime, Murder, Rape, Robbery, and Burglary. The interface also shows a map of the United States and a "2010 Key US Demographics by ZIP Code, Place and County - Esri" dataset.

Windows Azure

