



# EVERYTHING AS A SERVICE

USING THE CLOUD'S FACILITIES FOR SEPTIC MANAGEMENT



# AGENDA

- The Problems to Be Solved
- Aside: What is “The Cloud?”
- The Solution
- Adapting in Phases

# THE PROBLEMS TO BE SOLVED

- Problem #1 – Compliance with septic regulations
- Problem #2 – Automation of people-intensive processes

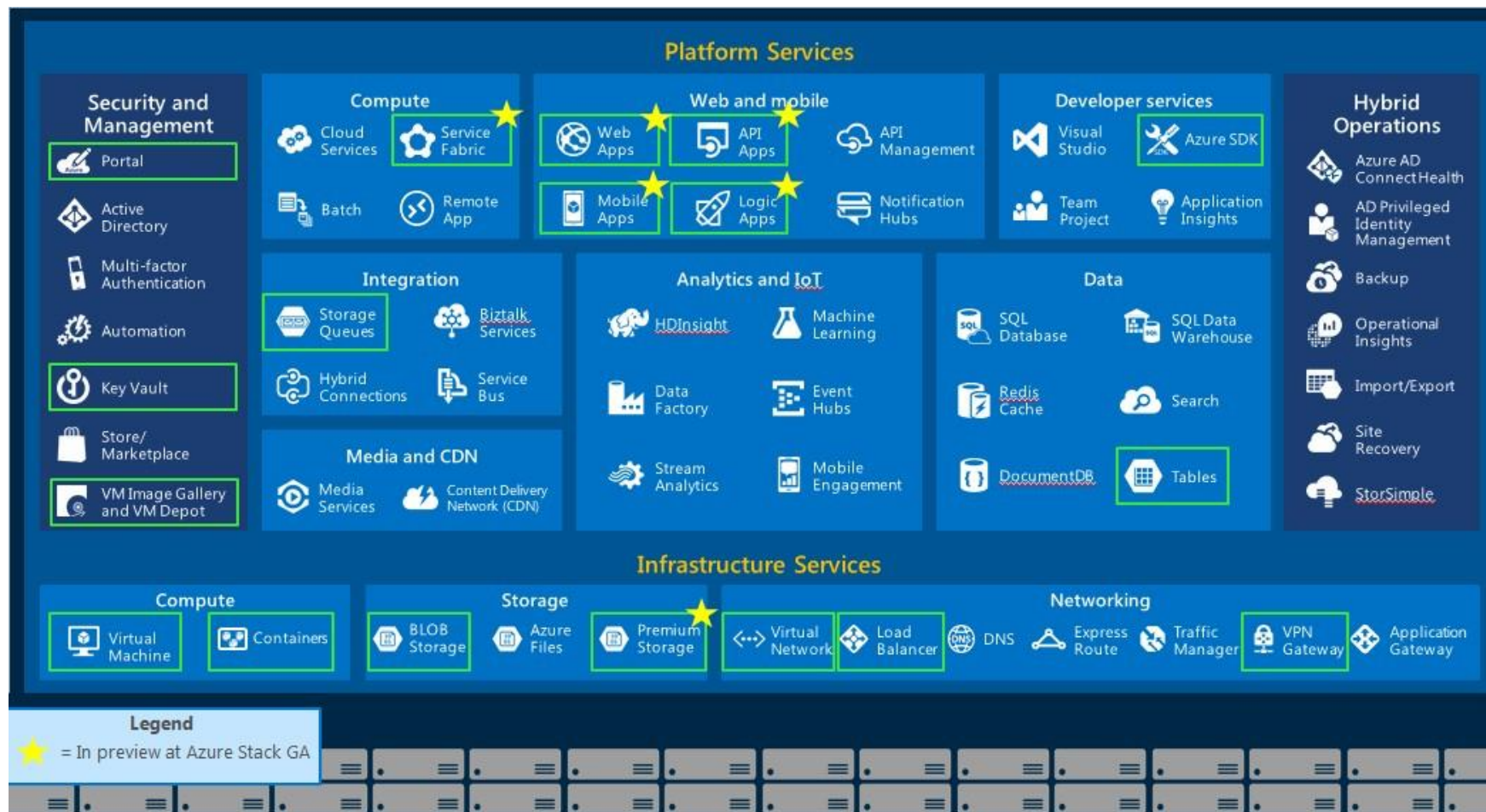
## WHAT IS “THE CLOUD?” – SHORT ANSWER

*The Cloud is just somebody else's computers*

# WHAT IS “THE CLOUD?” – BETTER ANSWER

- “The Cloud” is a set of hardware, software, etc. offered by a company for use by others
- Offerings range from simple, easy-to-adopt things
  - “Offsite hard drives”
  - Virtual computers
  - Databases
- To more complicated things
  - User accounts synced to on-site versions
  - Application hosting systems which react to increased usage by adding new hardware automatically

# TYPICAL CLOUD OFFERINGS



# TYPICAL CLOUD OFFERING #1 – STORING THINGS

- “Object storage” - Fancy term for a place to put files, etc. – like an offsite hard drive
- Databases
  - Just like the databases you probably use onsite (MySQL, SQL Server, Oracle, etc.)
  - Along with some new kinds (“key-value” databases for storing very simple information)
- Backup
  - Copy critical “can’t lose” items to secure cloud-based storage
  - Recover as needed
  - Delete as demand or on schedule

# TYPICAL CLOUD OFFERING #2 – HOSTING THINGS

- Virtual Machines
  - Remotely-hosted computers
  - Accessed in much the same way you'd connect to a computer onsite
  - Get a server in minutes!
- Web Hosting
  - Hosting/running a web site
- Application Hosting
  - Hosting/running an application (designed to run in the cloud)



# TYPICAL CLOUD OFFERING #3 – RUNNING THINGS

- Identity/Authorization Management
  - Keep your user accounts in the cloud
  - Allow certain users access to certain things, deny others
  - Combine your own login accounts with other service's like Google/Yahoo/Microsoft
  - Usable even if you keep a lot of your infrastructure onsite
- Monitoring
  - Check if applications/web sites are running
  - Send logs, etc. to a central place for ease of search
  - Create automated things to respond to certain events (e.g. web site is down)

# BACK TO BUSINESS – THE SOLUTION (AS ENVISIONED)

- A website and database, hosted in Microsoft Azure
- Allow property/septic information to be uploaded/stored
  - Block/Lot/Qual
  - Owner info
  - Septic type
  - Last pumped date
  - etc.

# BACK TO BUSINESS – THE SOLUTION (AS ENVISIONED)

- Allow users (anyone, but probably townspeople) to search for a given property
  - See basic property info
  - See septic system status
    - Last pump/next pump
    - Notifications sent/actions taken
- Allow administrators (who must log in) to perform actions on properties/septic systems
  - Change property type
  - Change septic system type
  - Add pumping information, including notes
- Allow administrators to report on which properties require attention
  - Letter needs to be sent to owner advising of upcoming pump date