

Infinite Budget, Infinite Scale

How A Simple 30 Day Migration Project Turned Into A Top 3 Global Initiative
With An Infinite Budget And An Even Bigger Delivery Need

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Story

- Intro
- Checklist
- Infinite Requests
- Build It To Scale Yesterday
- The ASE Elephant In The Room
- Tell Me A Secret
- What's A Design Pattern?
- Lessons Learned

Intro

- Problem: Migrate An On Premise App To Azure And Establish A DevOps Plan To Standardize All Future Projects
- Requirements: Use PaaS For Everything Possible
- Timeline: 30 Days

Checklist

Source Control

Build / Release
Definitions

Azure
Subscription

ARM

Support

Infinite Requests

- Taught Developers How To Use ARM
- 2 Weeks Later 3 Business Units Have Permutations of the App
- Started Getting Calls About Cost
- People Were Just Provisioning Without Understanding the Apps Needs
- New Environments Are Requested Almost Every Day
- ARM Template Changes Were Growing Out of Control Across BU's
- The Potential of The Platform Drove Need and Need Drove New Requirements
- Shared vs. Dedicated Environments / Resource Groups / ARM Templates

Build It To Scale Yesterday

- The Scale Grew From The Initial Requested:
 - 250 VM's Max
 - 150GB Per VM Max Storage
- To:
 - Full Use Potential of 9800VM's
 - Approx. 2PB of Storage Across Managed and Blob Storage
- Hit Several Azure Limits Documented....and Some That Weren't
- Learned To Build In Retries For Some API Calls
- Needed A Way To Manage All This App Conversation
- Needed A Way To Keep Track and Handle API Call Limits

The ASE Elephant In The Room

- Everyone Wants Private, No One Wants To Pay
- Decision Makers Didn't Understand The Added Complexity of ILB ASE
- Several Moving Parts And Business Needs That Are Out of Scope
 - Need Private Certificates On ASE Infrastructure
 - On The Fly Proxy Needed To Handle Internal API Communications
- No One Knows What The Environment Design Should Be
 - Use One And Scale or Use Many
 - What's The Right IP Range Size?

Tell Me A Secret

- Need To Remove All Sensitive Information From Code
- Honestly Need To Remove It From Developers View In Portal Too
- How Do You Give Access To Devs On Local Machines To Cloud KeyVault
- How To Remove Values From Even Showing Up In Portal Settings Pages

What's A Design Pattern

- Needed To Follow A Design Pattern To Handle Complex Communication
- Need All Involved Parties To Understand How Things Communicate
- Follow Best Practices For Interoperability

Lessons Learned

- Embrace Iterative Design (Will Provide Huge Gains)
 - Lessons Learned
 - VM archive to Blob => VM Detaches Managed Storage (8h -> 8m)
 - ARM: Static Values -> Dynamic Values -> Vaulted Values (Drastically Increased Security)
 - Static Orchestrator -> Service Bus -> Event Manager (Exponentially Faster Event Servicing)
 - Provides Developers Faster Route To POC and Ultimately Resolution
 - Think About If the Rest of the Business Could Use Your Product, Consider Building For Multitenancy
- Use Low Budget Service And Billing Plans To Vet Out Ideas
- Logging (App Insights / Azure Audit) Is Your Friend
- Don't Try To Solve All Problems At Once
- Adopt A Design Pattern When Complexity Happens
- Support Your Developers And Enable Them To Be Self Sufficient

Q & A

Stay Connected

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