

Move over WebJobs, here comes...
Serverless Computing

Presented By:

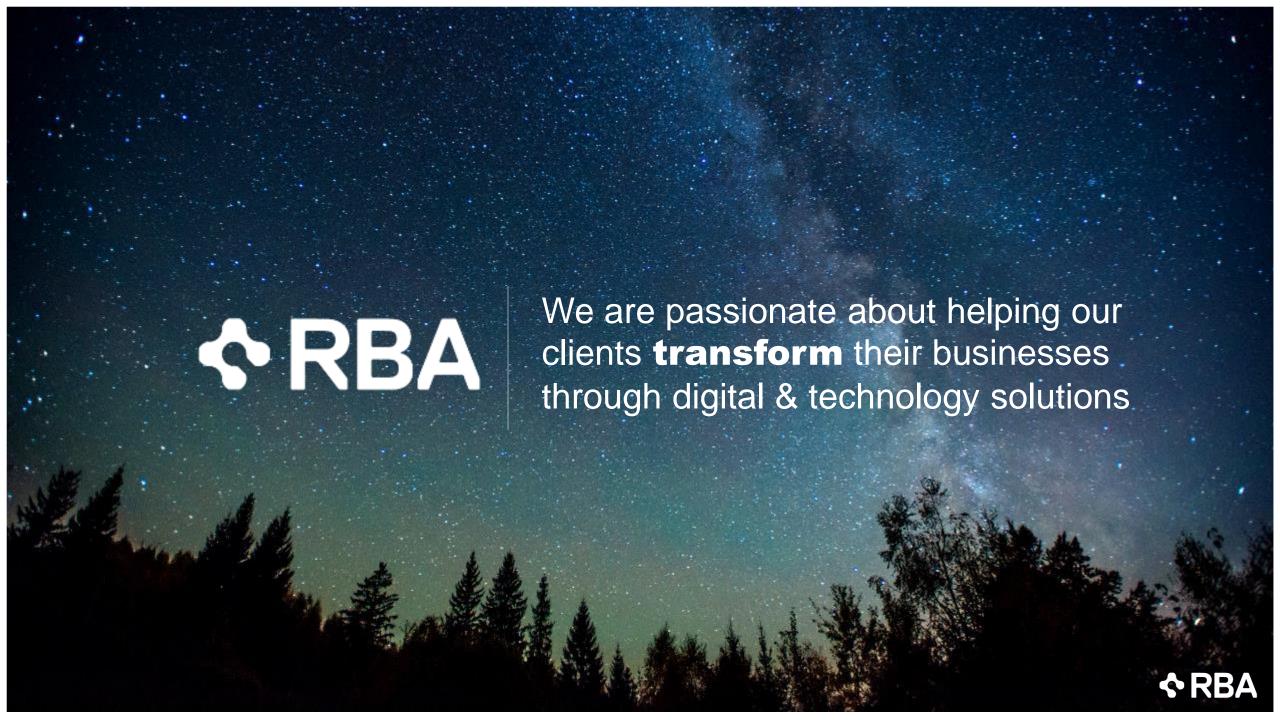
Joe Koletar

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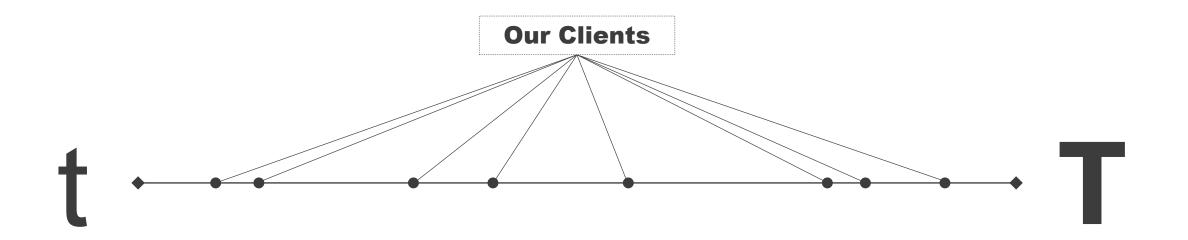


Have spent 30 years in IT, the past 20 focused on Microsoft technologies.

Husband of 26 years, father of three, avid traveler and high school robotics coach.



#### The continuum of Digital Transformation



#### (t)actical

Quick hit type efforts

Not looking to add new features

Want to avoid loss of support

Tend to think in a silo'd way

#### (T)RANSFORMATIONAL

Embraces data driven decisions
Rethink of how they engage users
Want to leverage platforms / capabilities
Tend to embrace ecosystem idea





## DESIGNED TO DELIVER



Strategy

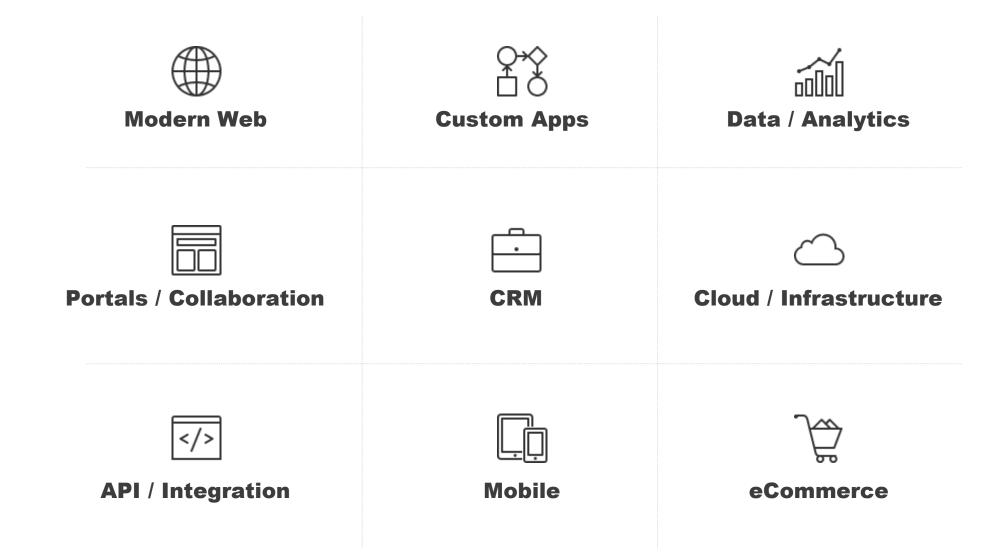


Design



**Technology** 

#### The Solutions we Deliver





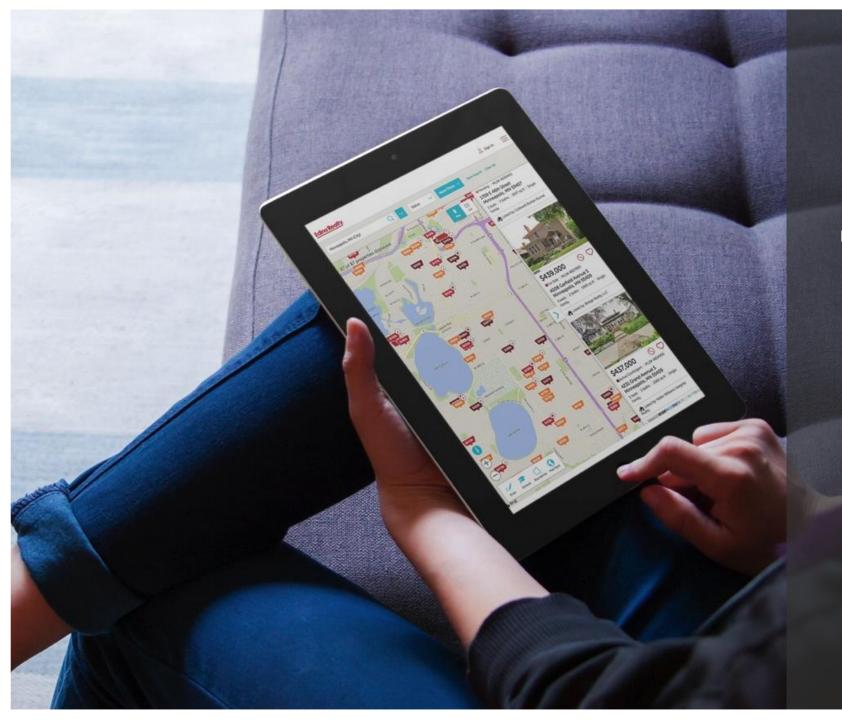
# Agenda

- EdinaRealty.com
- WebJobs
- Azure Functions and Logic Apps
- Demo



# EdinaRealty.com



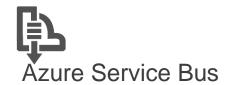




# **Edina Realty**

Taking home buying to the next-level.

### Edina Realty – All Azure PaaS











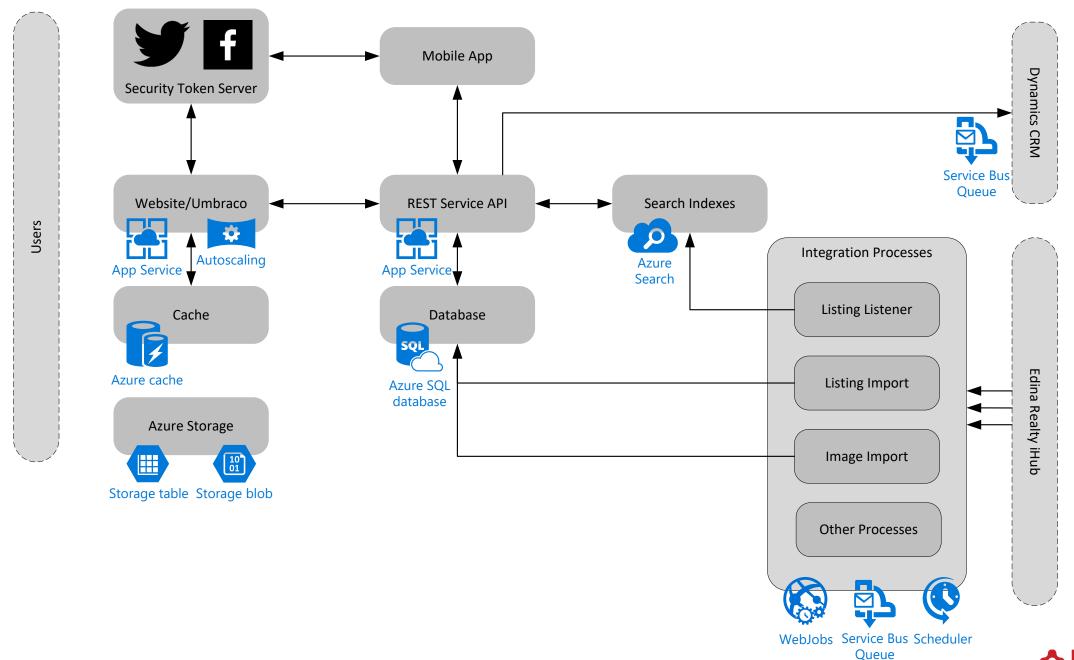










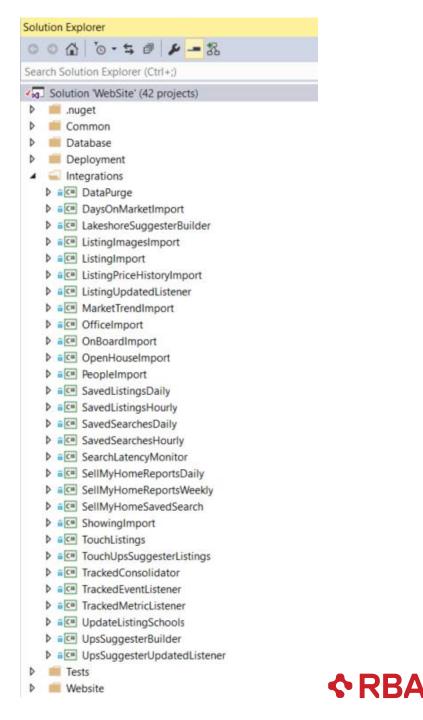


**♦ RBA** 

## Edina Realty – Integrations

# Made extensive use of WebJobs to support:

- Content import
- Reports to users
- Data consolidation
- Data clean up

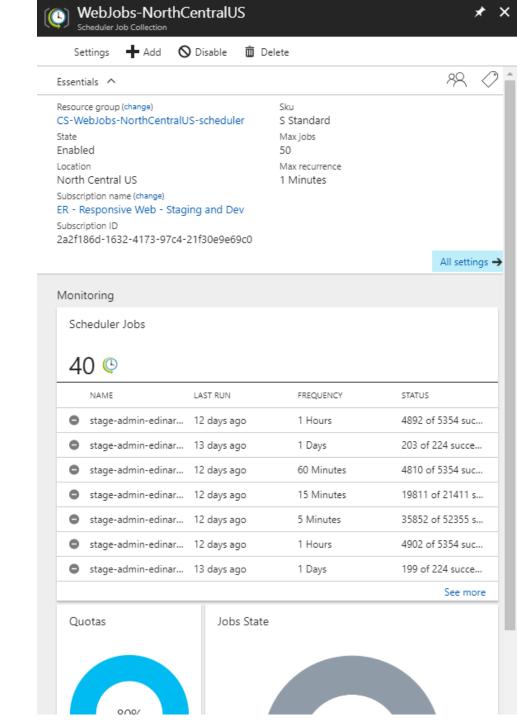


# WebJobs



#### WebJobs

- Run a program or script on Web Server
- Jobs are triggered by schedule or event
- Manage via Azure Portal or via Kudu WebJobs dashboard
- Long running WebJobs can be troublesome



# Azure Functions and Logic Apps



#### Azure Functions Background

- Azure Functions support small pieces of code in the cloud
- Can be developed in JavaScript, C#, F#
  - Python, PHP, Typescript supported as experimental
- Can be developed in the portal or IDE
- Can be run locally or in the cloud
- Can be deployed from VSTS, Github, Jenkins, etc.
- Capable of being serverless



### **Azure Function Triggers**

- Triggers define how a function is invoked
- Available Triggers
  - HTTP
  - Timer
  - GitHub
  - Generic webhook
  - CosmosDB

- Blob Storage
- Azure Storage Queue
- EventHub
- ServiceBus Queue
- ServiceBus Topic



### Azure Functions Bindings

- Bindings provide a declarative way to connect to data from within your code
- Can optionally specify both input and output bindings
- Available bindings
  - Blob Storage
  - Cosmos DB
  - Event Hubs
  - HTTP
  - Microsoft Graph
    - Excel
    - OneDrive
    - Outlook

- Queue Storage
- SendGrid
- Service Bus
- Table Storage
- Timer
- Twilio



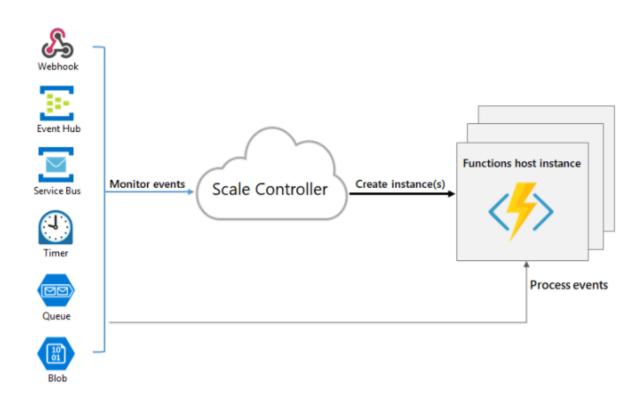
#### Azure Functions Scale

- Must choose plan on function creation/deployment
- App Service plan
  - Run your functions just like your web, mobile, and API apps
  - No additional cost
  - Scales with service plan
- Consumption plan
  - Azure dynamically provides computational resources.
  - Only pay for what you use
  - Scaled to meet anticipated need



#### Azure Serverless model

- Azure Hosts dynamically added to meet demand
  - Each instance is small (1.5 GB)
  - Max 200 instances
  - New instances every 10 secs
  - Instances may be multi threaded
  - Function App is scalable unit



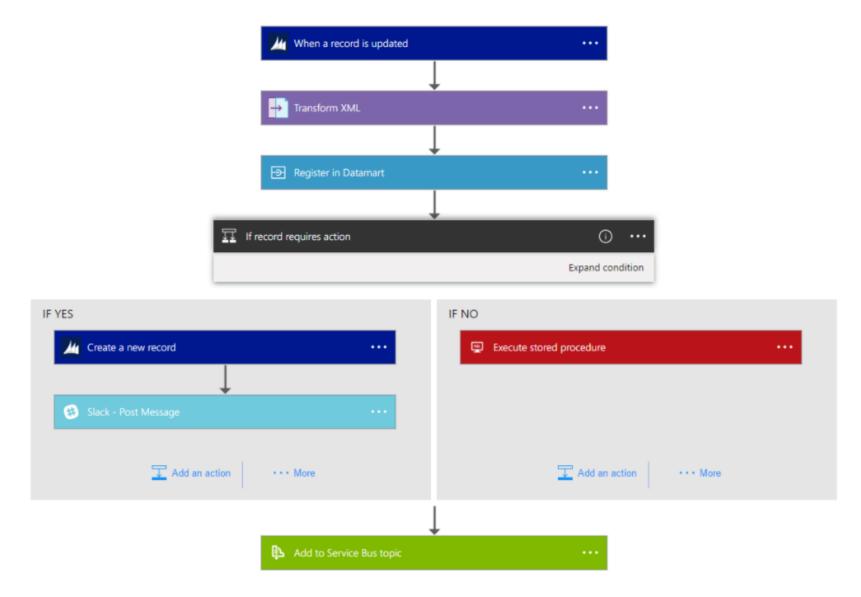


#### Azure Logic Apps Background

- Scalable integration in the cloud
- Supports building workflows by assembling off the shelf connectors or custom code
- Can only be run in the cloud
- Capable of being serverless



## Azure Logic Apps

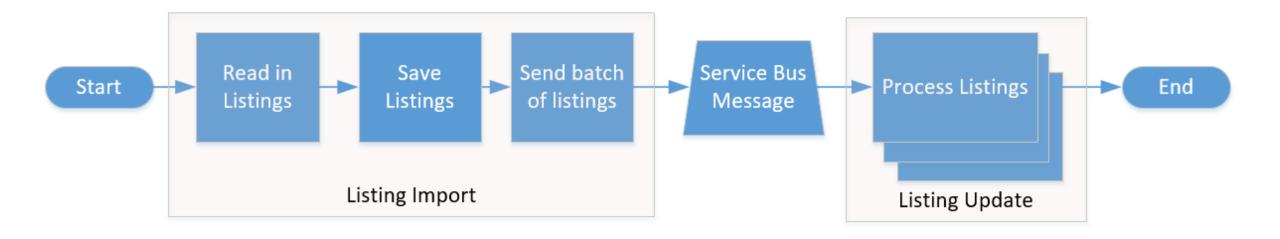




# Azure Logic App and Function Demo

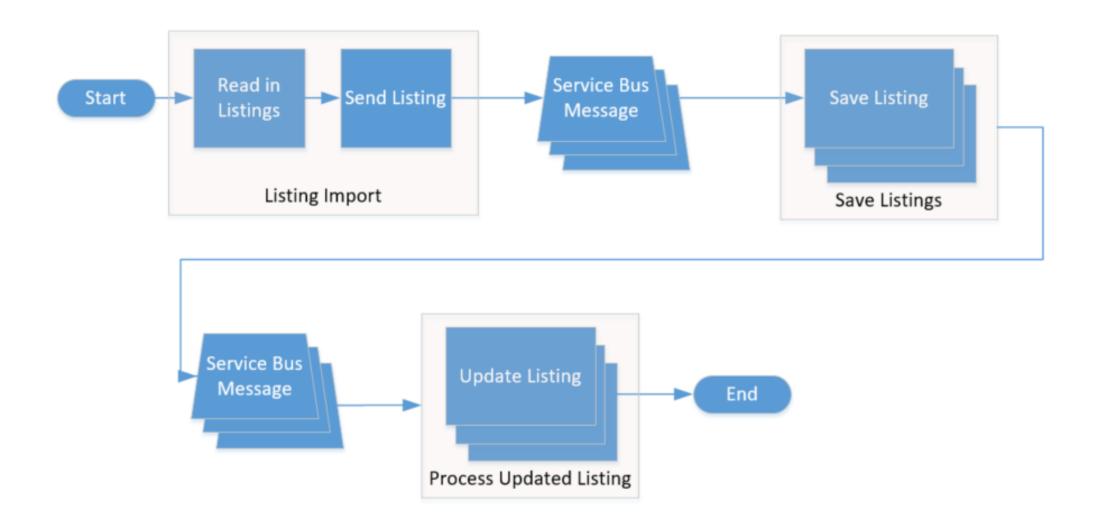


### **Current Listing Configuration**



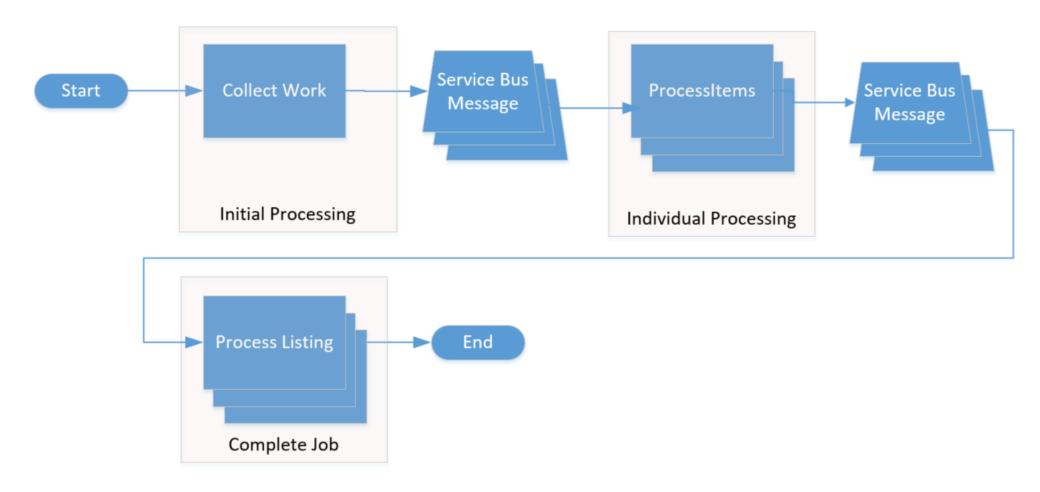


## Desired Listing Configuration





## Simplified Desired Configuration





#### **Azure Functions Nuances**

- One function app can house multiple functions
- Function app is the deployable unit
- Functions App can be housed on a app server or serverless
  - Specify configuration in deployment



### Practical Examples

- Monitor API, tweet updates
- Refresh and Rebuild Cache
- Image Processing



#### Thank You!

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