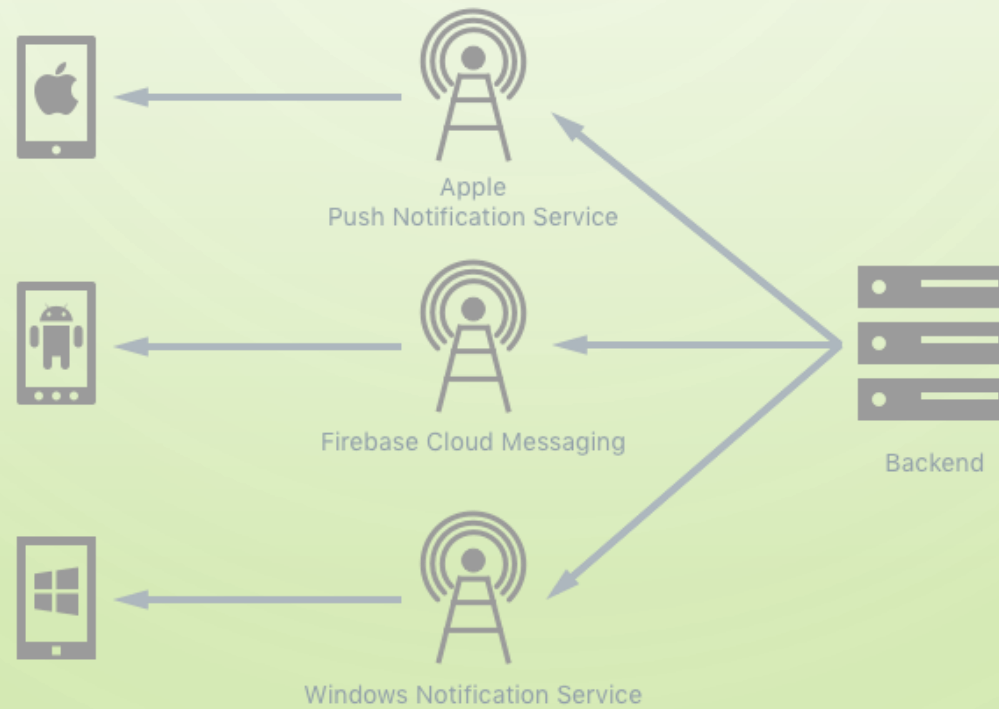


A decorative graphic on the left side of the slide, consisting of a network of white lines and small circles on a blue background, resembling a circuit board or a neural network.

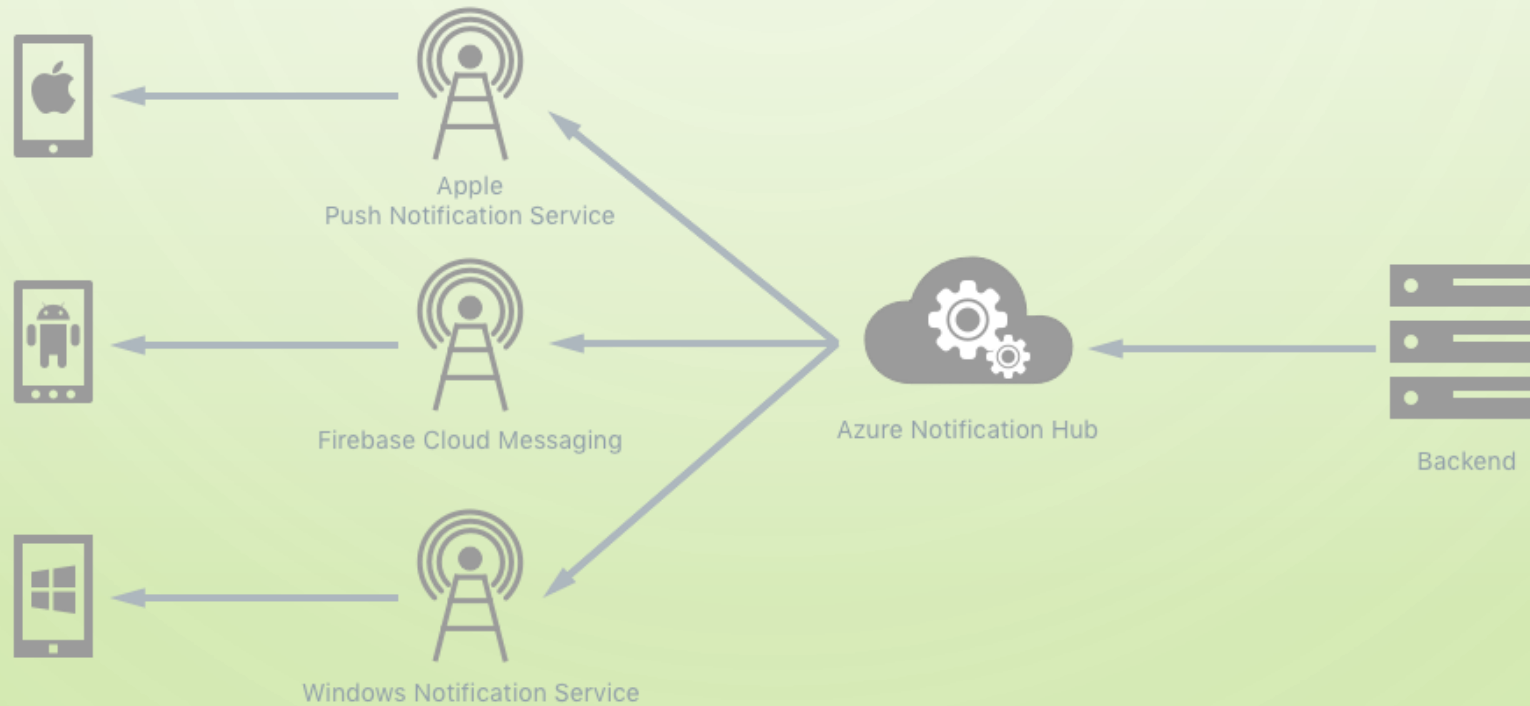
PUSH NOTIFICATION

- AZURE INFRASTRUCTURE
- PLATFORM NOTIFICATION SYSTEMS
- NOTIFICATION HUBS
- METRICS & TEST NOTIFICATION DEMO













ARCHITECTURE WITHOUT NOTIFICATION MIDDLEWARE



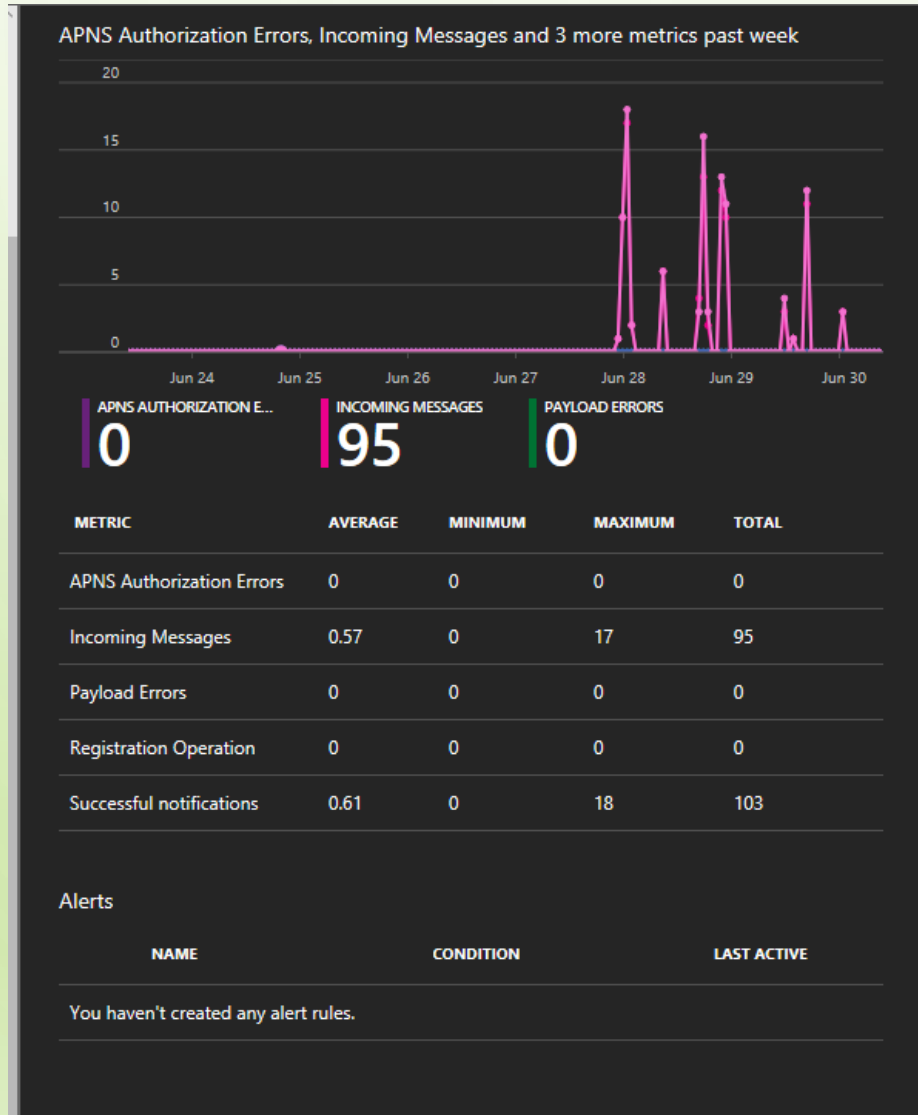
AZURE NOTIFICATION HUB SOLUTION



NOTIFICATION HUB PRICING TIER

Free		Basic		Standard	
1M	Included Pushes	10M	Included Pushes	10M	Included Pushes
500	Active Devices	200K	Active Devices	10M	Active Devices
	Cross-Plat Push		Cross-Plat Push		Cross-Plat Push
	Push Variables		Push Variables		Push Variables
	Limited Telemetry		Limited Telemetry		Rich Telemetry
					Bulk Operations
					Scheduled Push
					Multi-Tenancy
0.00		10.00		200.00	
USD/MONTH (ESTIMATED)		USD/MONTH (ESTIMATED)		USD/MONTH (ESTIMATED)	

METRICS & VISUALIZATION ON AZURE PORTAL



Edit Chart

Time Range
past hour today past week custom

Chart type
Bar Line

- ☒ APNS Authorization Errors
- ☐ APNS Bad Channel Error
- ☐ APNS Errors
- ☐ APNS Expired Channel Error
- ☐ APNS Invalid Notification Size Error
- ☐ APNS Successful Notifications
- ☐ All Incoming Failed Requests
- ☐ All Incoming Requests
- ☐ All Outgoing Notifications
- ☐ Bad or Expired Channel Errors
- ☐ Channel Errors
- ☐ Create or Update Installation Operations
- ☐ Delete Installation Operations
- ☐ External Notification System Errors
- ☐ GCM Authentication Errors
- ☐ GCM Authorization Errors (Invalid Credentials)
- ☐ GCM Bad Channel Error
- ☐ GCM Errors
- ☐ GCM Expired Channel Error

OK

DEMO & 3 WAYS TO TRIGGER NOTIFICATION

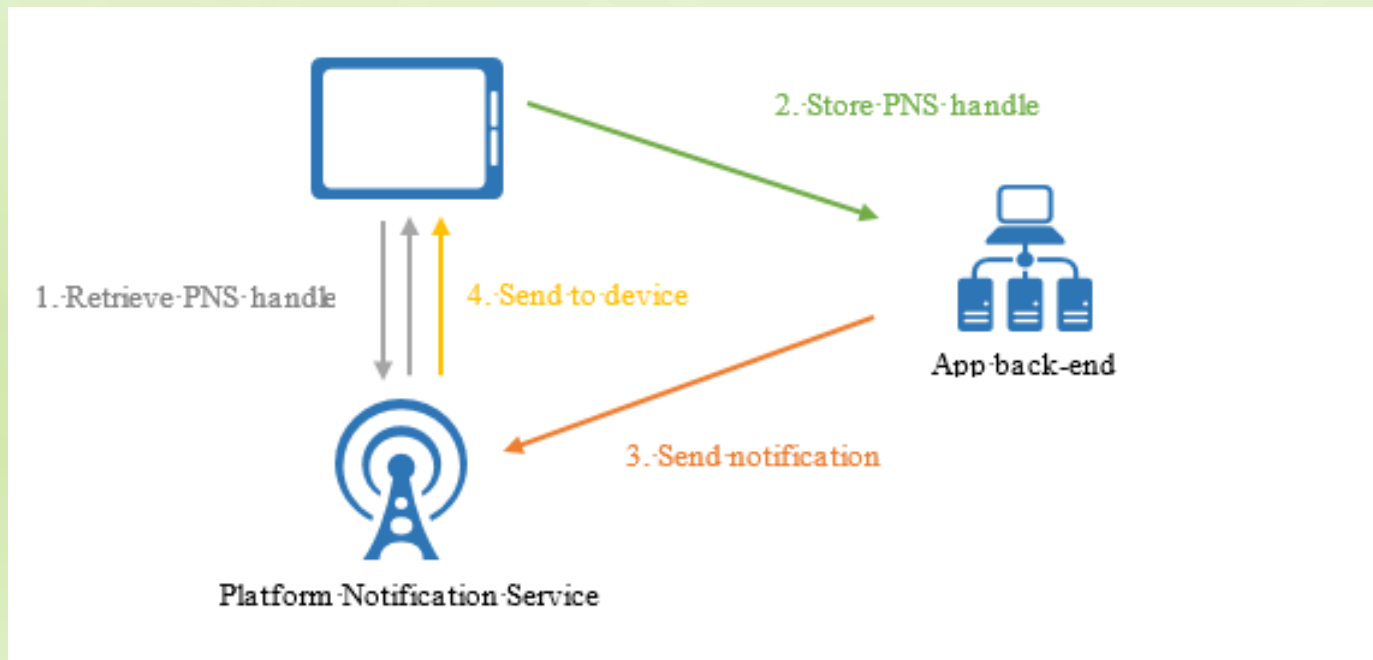
- Sample mobile app triggers notification after data entry
- Console app triggers notification
- Azure portal has limited option to 'Test Send' notification

TARGETING SPECIFIC REGISTRATIONS

- The only way to target specific notification registrations is to associate tags with them, then target those tags
- Once a registration is created on a notification hub, the application backend can send push notifications to it
- The application backend can choose the registrations to target with a specific notification in the following ways

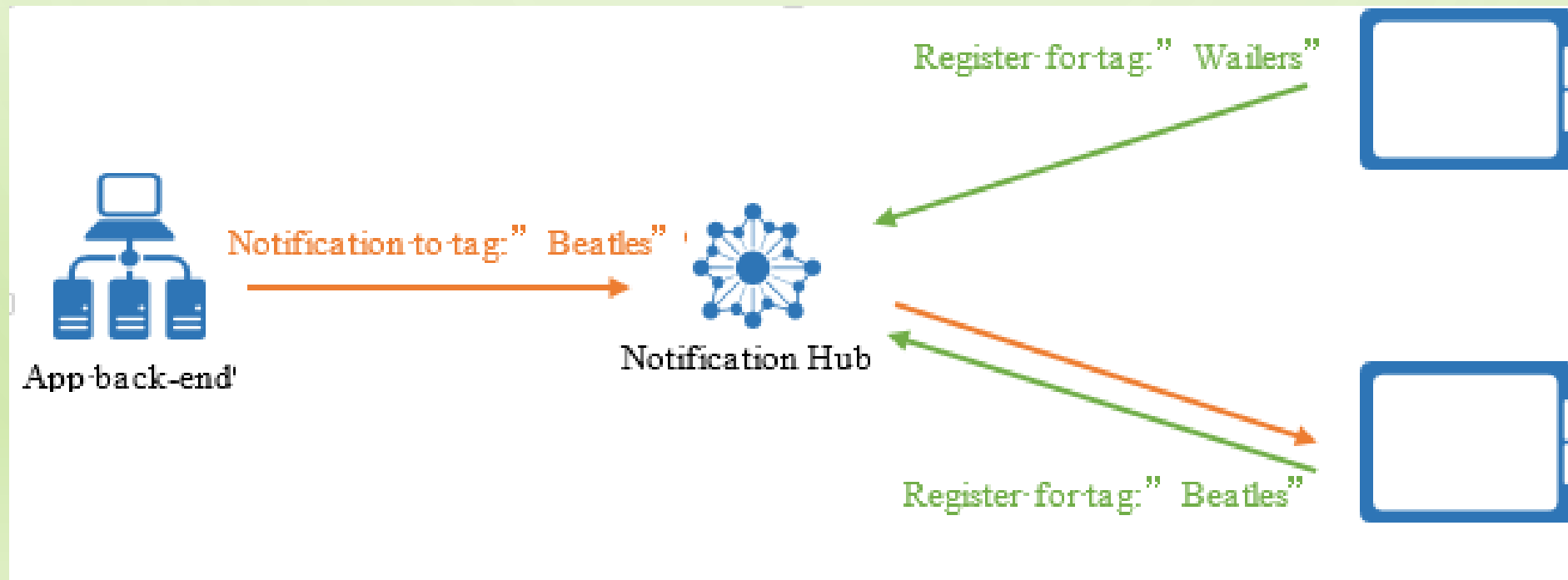
WHAT ARE PUSH NOTIFICATIONS

- Push notifications help app back-ends display fresh information on mobile devices even when the app on the device is not active
- Push notifications are delivered through platform-specific infrastructures called *Platform Notification Systems (PNS)*
- First look at high level PNS interaction with minimum infrastructure



TAGS

- A tag can be any string, up to 120 characters, containing alphanumeric and the following non-alphanumeric characters: '_', '@', '#', '.', ':', '-'
- A simple way to route notifications is to label registrations with tags that represent the different bands, as in the following picture.



DEMO

- Using fiddler to initiate a backend calls to NH to add & remove tags
- Sending push notifications from Azure portal using tags
- Sending customize push notifications & targeting tags from console app
- Azure notification hub namespace and registering dev environment
- Configuring 'Access Policy' & permissions on Azure portal
- Security practices & regeneration of access tokens