SCALABLE BROWSER NOTIFICATIONS WITH SIGNALR, SERVICE BUS AND NOTIFICATION HUBS

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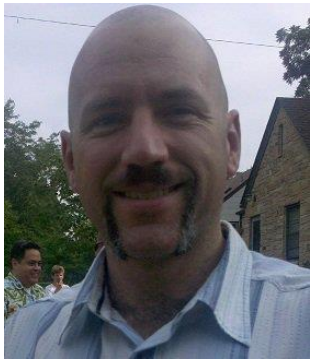

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NOTIFYING YOU OF WHAT WE'LL COVER

- SignalR and pushing data to browsers
- Scaling out SignalR with a back plane
- Notification Hubs
- Browser notifications (native and spec)

- http://mattmilner.com/zombies.zip

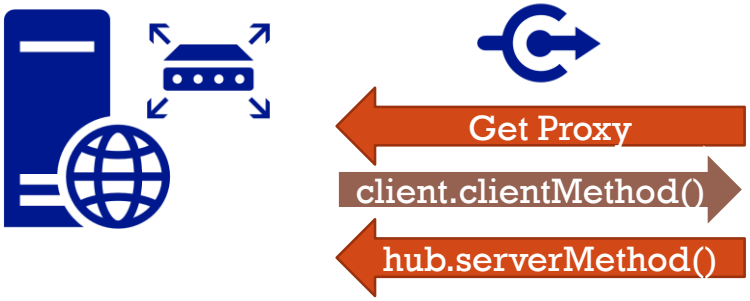
SIGNAL R

- Browsers / HTML is connectionless
- Some app designs require connection
- Various solutions created over time
  - Ajax Long polling
  - Web Sockets
  - Server Sent Events
  - Forever Frame

SIGNAL R – HOW IT WORKS

Server (ASP.NET)

- Hub
  - Server side methods
  - Client side proxies



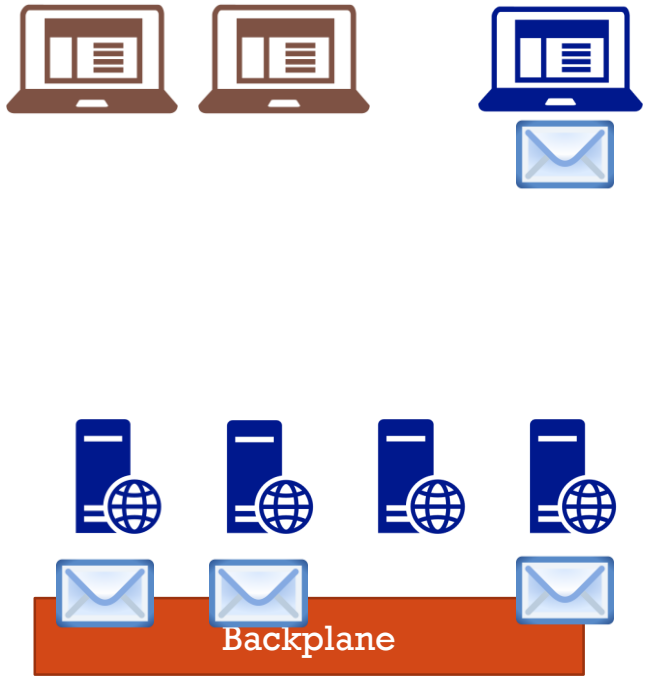
Client (JavaScript, .NET)

- Hub proxy
  - Client side methods
  - Server side proxies

SCALING SIGNAL R

Scaling Up

Scaling Out



SignalR Backplane

Service Bus, SQL, Redis Cache

Uses publish / subscribe pattern

Message sent to ALL servers to handle

BROWSER NOTIFICATIONS

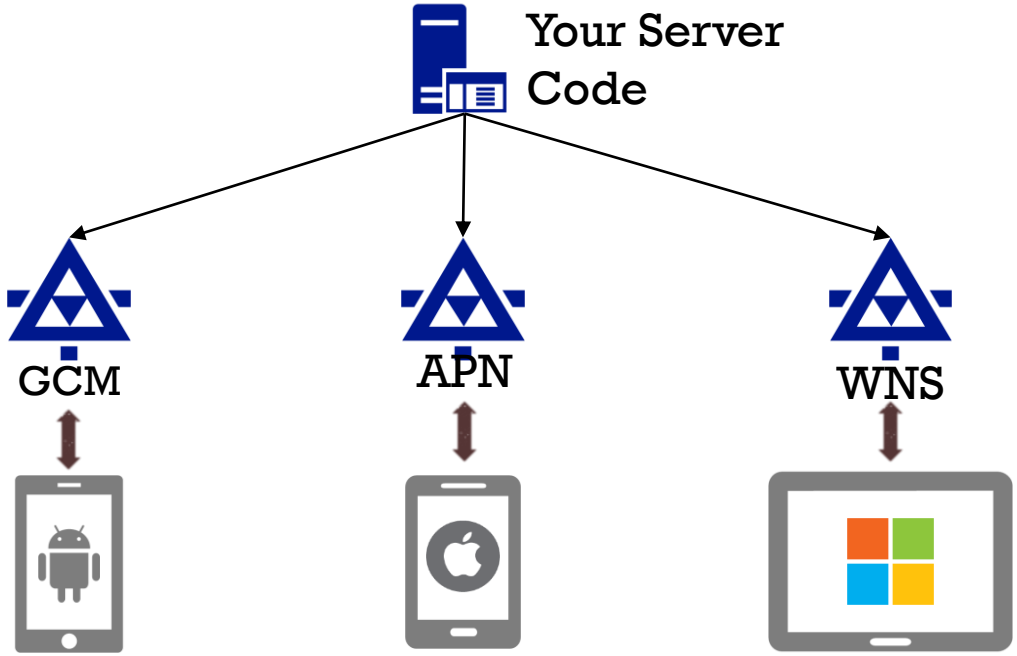
Browser push notifications

- Uses push notification services
- Requires service configuration
- Implementation varies by vendor

Local browser notifications

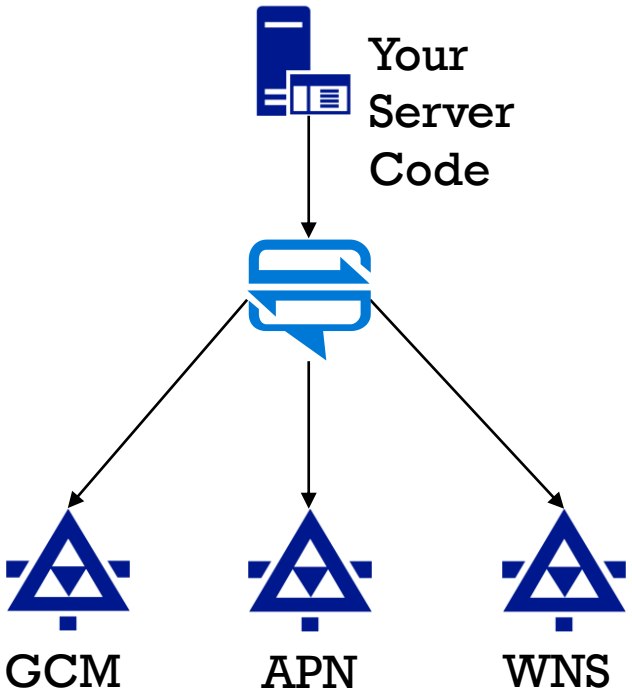
- Standards-based browser notifications
- Outside the main window
- Permissions required
- Generally supported in workers

HOW NOTIFICATIONS WORK



SERVICE BUS NOTIFICATION HUBS

Device notifications at scale



NOTIFICATION HUBS

- Simplify client management
- Abstract messaging services
- Provide rich subscription features
- Broadcast to millions of devices

SUPPORTED CLIENTS

Windows 8.x / 10	Windows Phone	iOS	Safari
Android	Google Chrome	Amazon Kindle	Baidu

SUMMARY

- SignalR – server / client communication
- Notifications – displaying data to users
- Push notifications – out of band notify