

HOL02 – HOL Xamarin Mobile First Architecture

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Respect the Past.
Code the Future.



Level: Introductory - Intermediate



Railroad Case Study



Requirements



- Frontliner reports for duty every morning to start their shift
- Get an overview of their shift for the day
 - Which train to drive
 - Which stations
 - Construction activities to take into account
- During the shift
 - Any obstacles or delays have to be signaled immediately

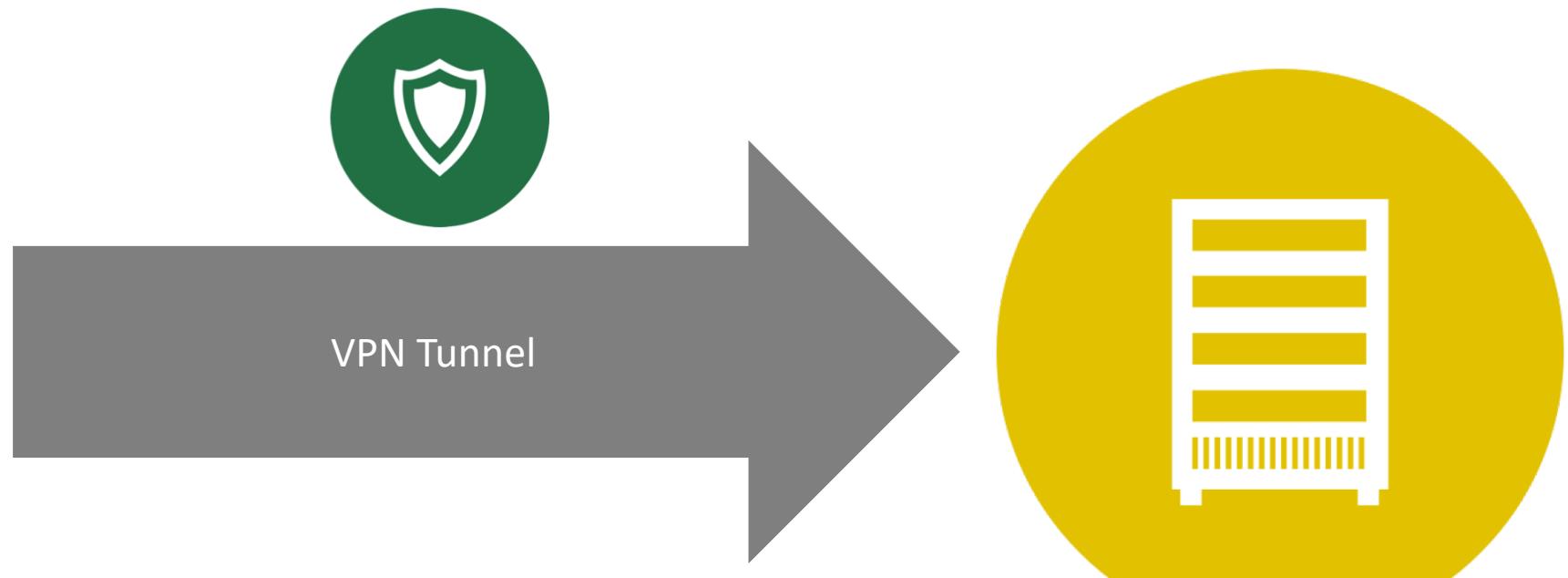
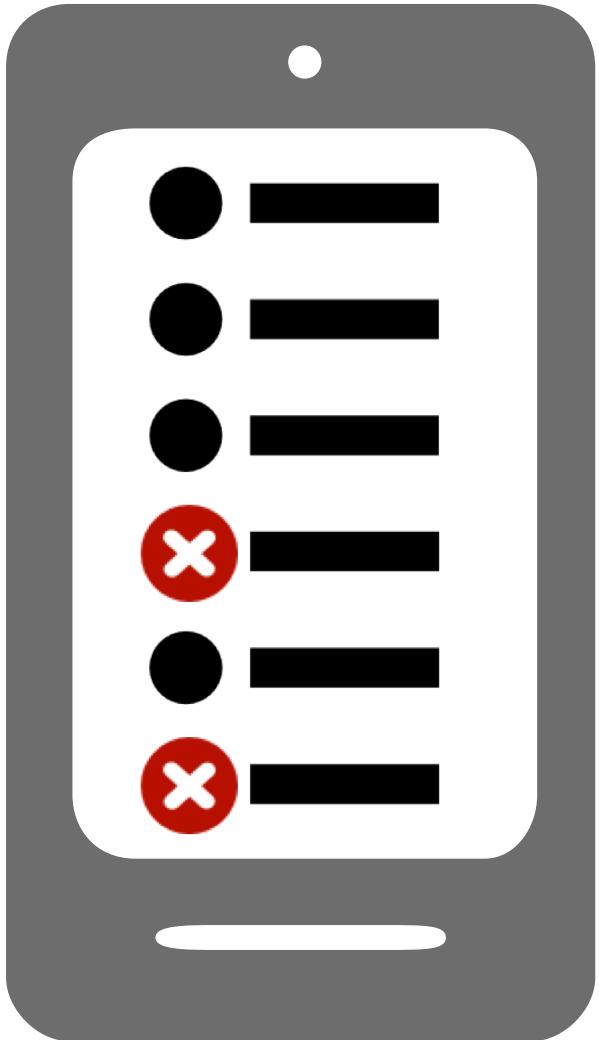
There's more...

- It must run on smartphones!
- Bring Your Own Device
- Secure access to enterprise backoffice systems
- Backoffice exposes SOAP/XML webservices
- Single Sign On across all apps



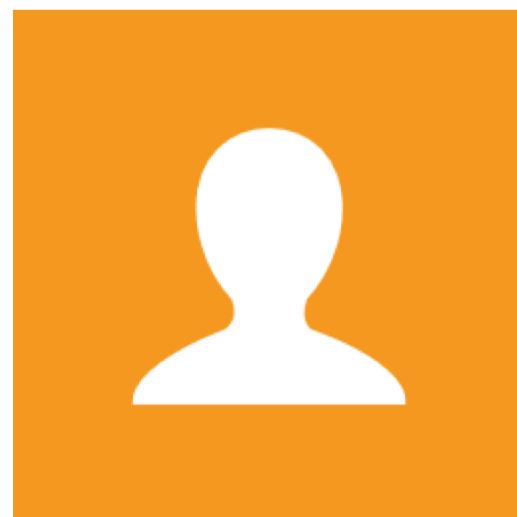
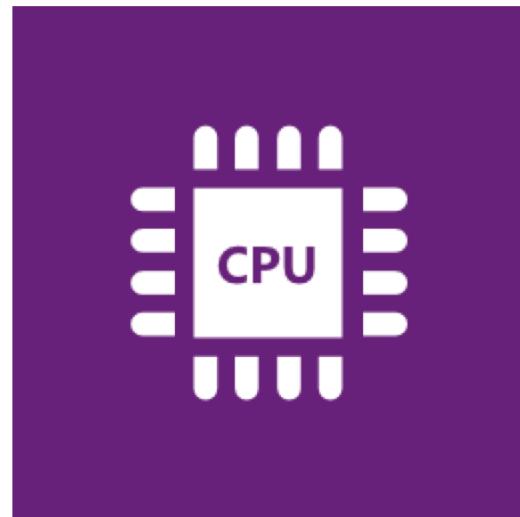


How would
you architect
this?

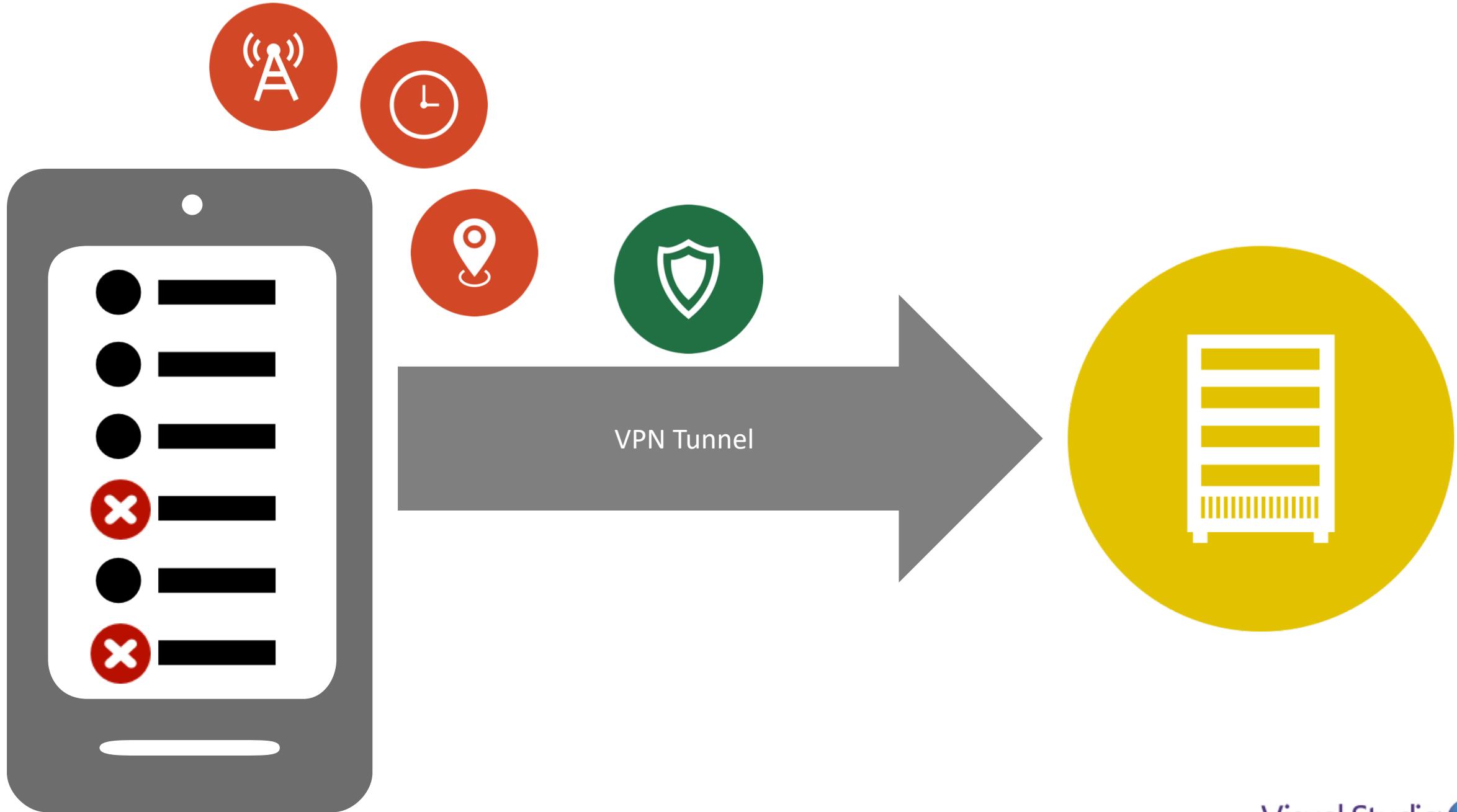


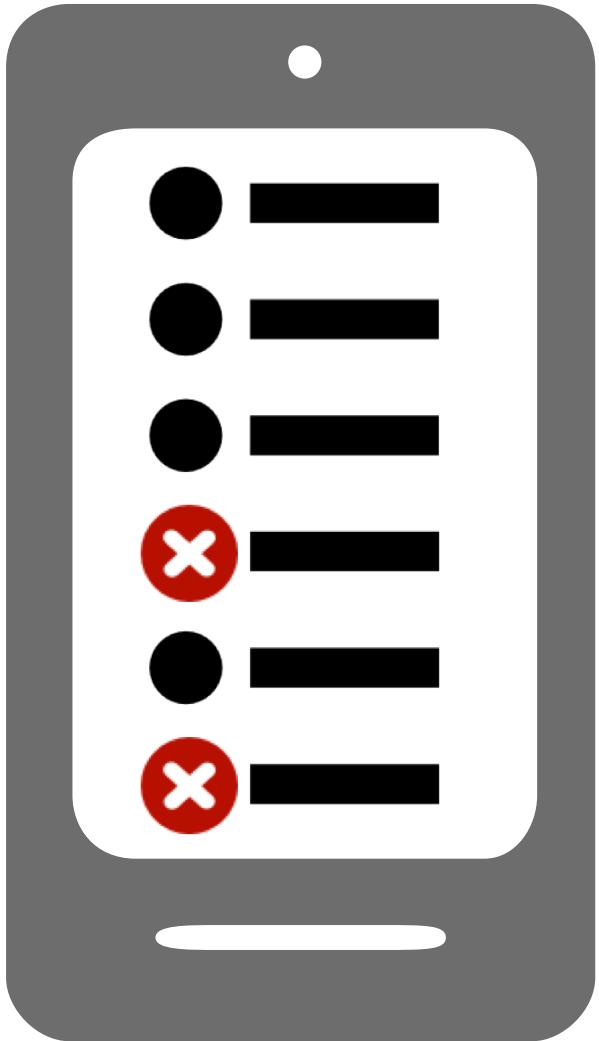


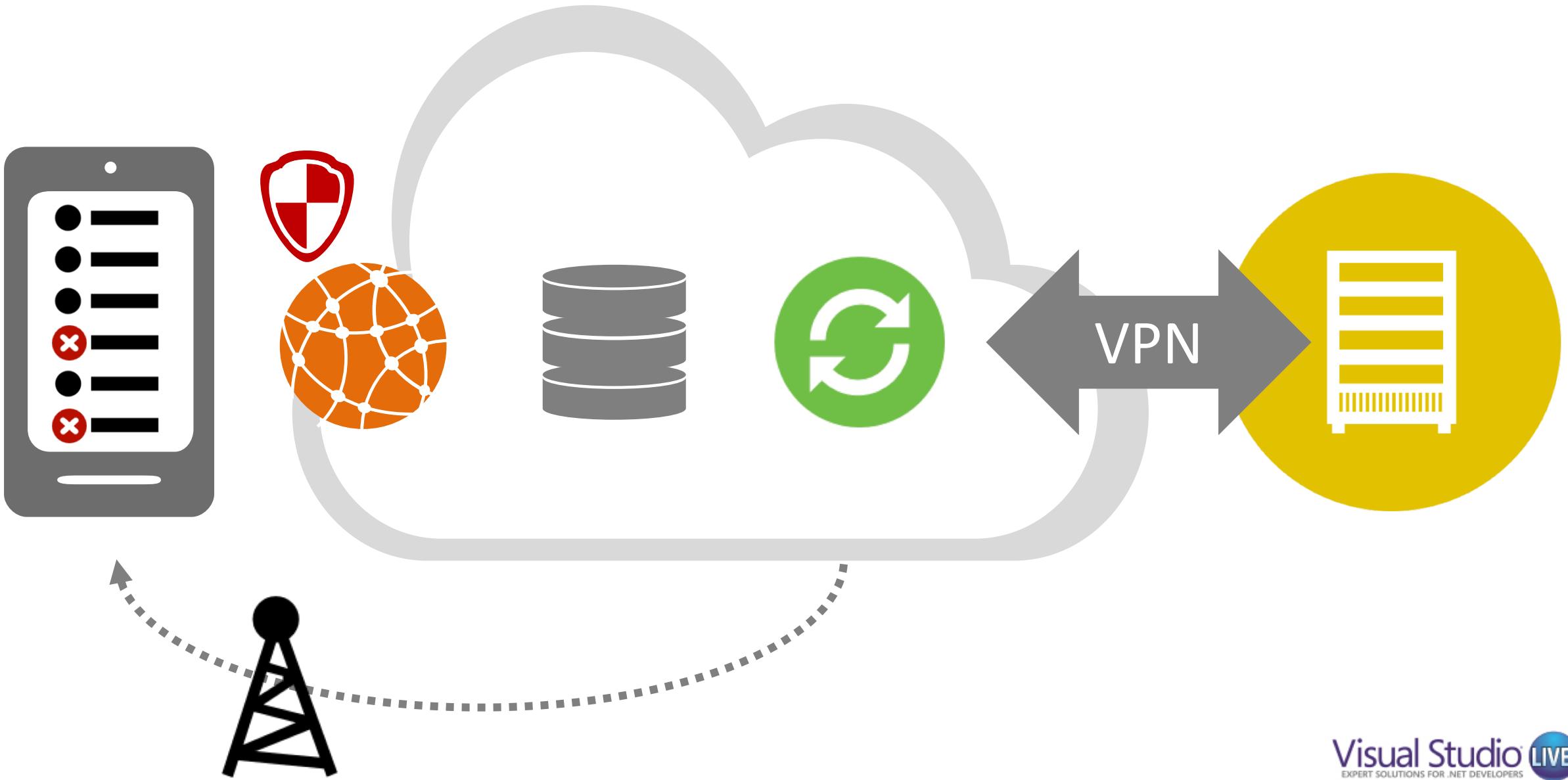
But what about...



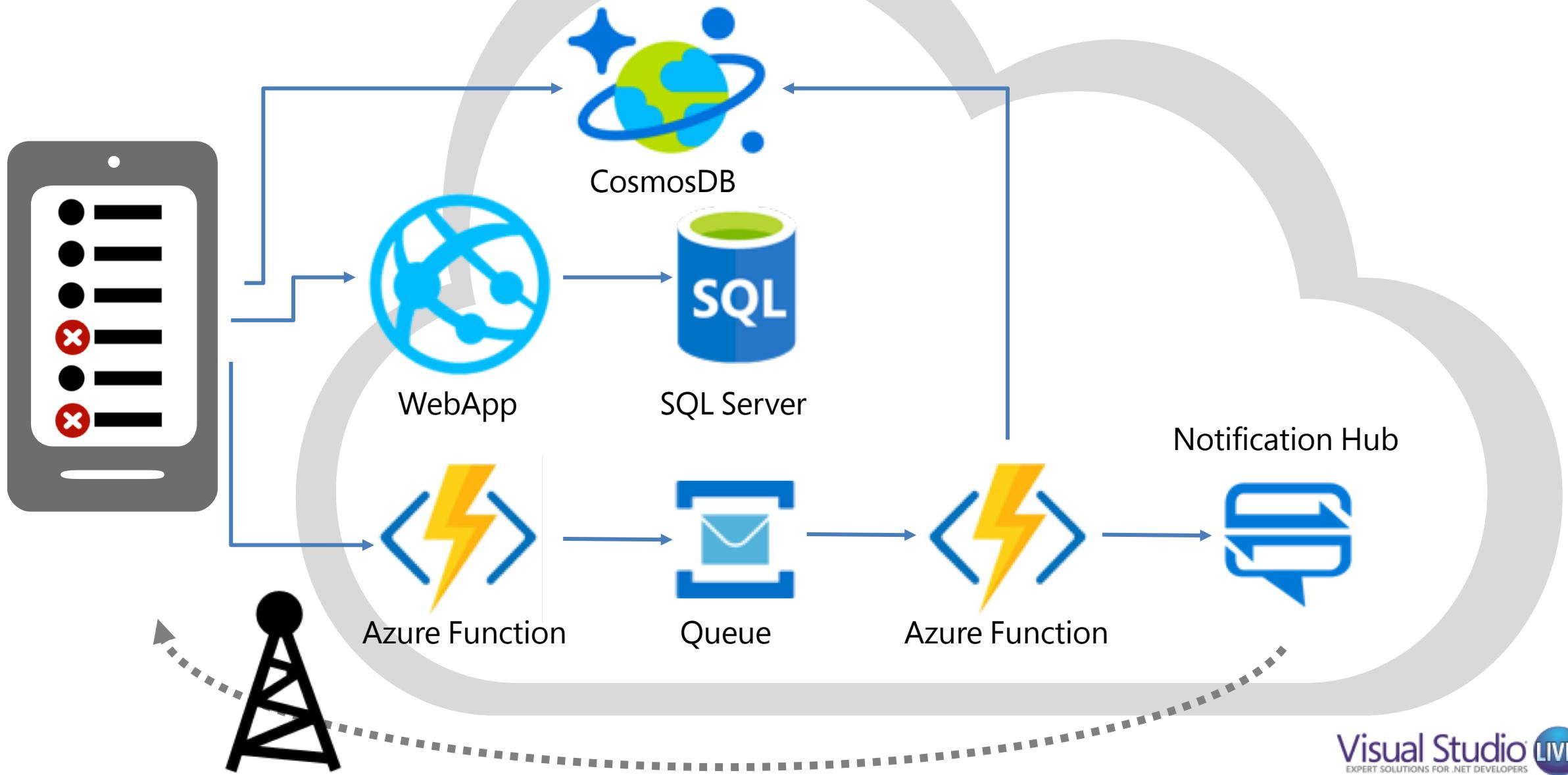








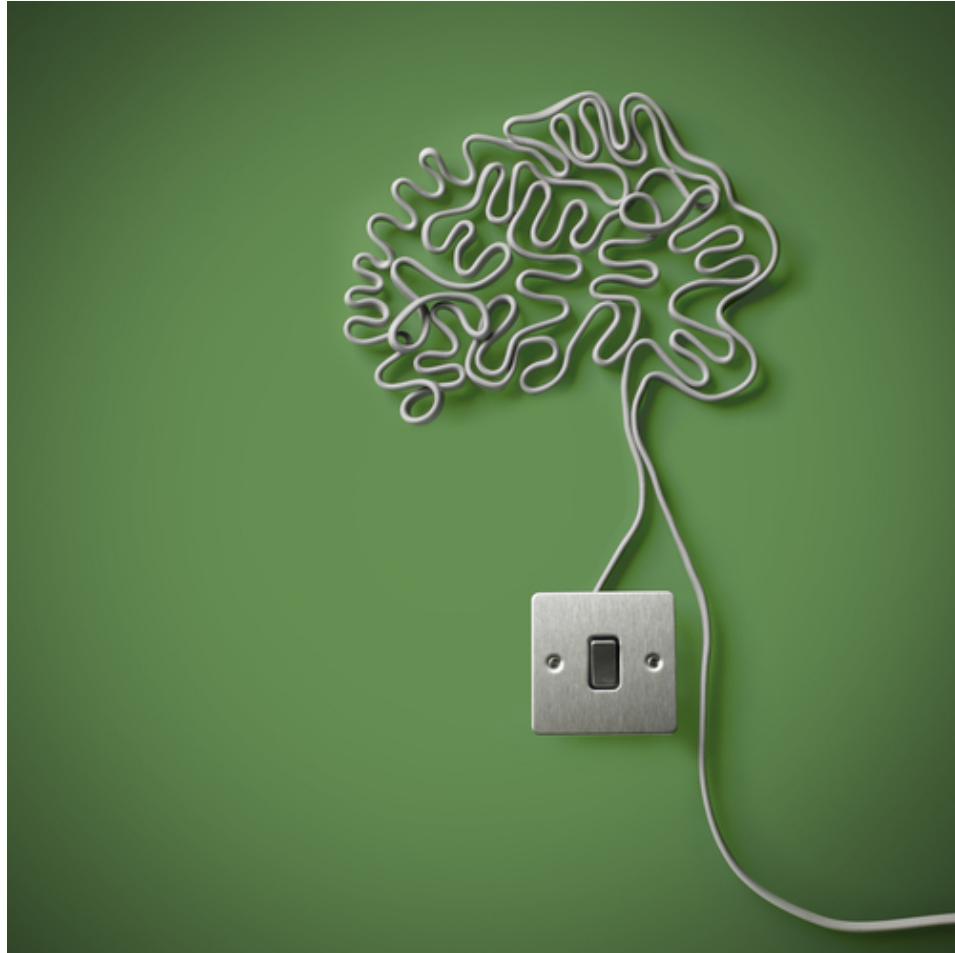
How this could look in Azure...



Architecture tips & tricks

- Use offline data on the device to reduce network traffic
- Use local device resources sparingly
- Create optimized API's for your mobile apps
- Leverage cloud native components
- Use both pull and push style communication for getting data across

Summary



- Remember that devices have limited or expensive resources
- Take the context of the user into account, e.g. BYOD
- Try to focus on creating "**smart systems**" instead of just "apps on smartphones"
- Leverage the cloud to add more brainpower to your solution



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