ArcGIS Runtime SDK for Qt: Building Apps

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Agenda for today

• Overview
  - Qt Framework
  - ArcGIS Runtime SDK for Qt
• Install the SDK
• Create a basic app
• Use SDK tooling to add functionality
• Deploy the app to different platforms
What is the Qt Framework?

- Portable
  - Write once, run anywhere
  - Builds as native C++

- Approachable
  - Cross-platform libraries
  - High-level abstractions

- Open
  - Pre-built some platforms
  - Source code available
Qt Creator IDE
ArcGIS Runtime SDK for Qt

- Advanced, native mapping apps for mobile & desktop clients
  - Linux, Windows, Android, iOS and OS X
  - Take advantage of Runtime’s C++ core and GPU acceleration

- Leverage the power and versatility of the ArcGIS platform

- Build apps that work whether connected or disconnected
Consider using the ArcGIS Runtime SDK for Qt

• If you need a Native App
  - Online/Offline, Local Storage, Device Sensors

• When you are building apps for more than one O/S and want
  - Same code
  - Same workflow
  - Support of a vibrant open-source community and Qt ecosystem

• When you have in-house experience with Qt Framework, QML, JavaScript, or C++
Installation

- Install the Qt Framework from the Qt Company
- Log onto the Developers site with your developer subscription
- Download ArcGIS Runtime SDK for Qt
- Run the installer and the post installer
Demo: Setting up your dev environment
Supported Frameworks and APIs

• **QML API**
  - Great for JavaScript Developers
  - This is what AppStudio uses
  - Easy, and utilizes Qt Quick Framework
  - Fast – C++ under the hood

• **C++ API**
  - More extensible and flexible
  - Local Server
  - Qt Widgets framework – classic desktop framework (no mobile support)
  - Qt Quick framework – QML UI and C++ backend
Demo: Hello, World!
SDK Resources

• Developer’s site
  - Guide
  - API Reference
  - User Forums (GeoNet)

• Samples
  - Viewer
  - GitHub

• Toolkit
Demo: Using the SDK
Deployment

- Compile on each platform
- Run from Qt Creator
- Create standalone app
  - Process varies per platform
  - Qt provides deployment scripts
Demo: Deployment
Demo: New Features
Where to from here?

- Create a developer account
  - [https://developers.arcgis.com/sign-up](https://developers.arcgis.com/sign-up)

- Download Qt Framework and ArcGIS Runtime SDK for Qt

- Read the guide fundamental topics

- Study and modify the samples
  - [https://github.com/Esri/arcgis-runtime-samples-qt](https://github.com/Esri/arcgis-runtime-samples-qt)

- Use the Forum and join the community discussion
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