



Building Ionic applications for Zebra devices

DEVTALK – 2nd May 2018

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Zebra gives 95% of Fortune 500 companies real-time visibility into their operations through rugged enterprise devices, printers & scanners as well as provide cloud services & connected solutions



Introduction

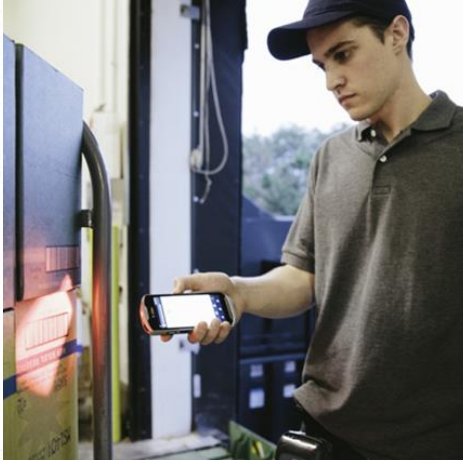
Zebra verticals



RETAIL



T&L



MANUFACTURING



HEALTHCARE

**Simplify Operations****Empower Mobile Workers****Know More About Your
Business and Customers**



**Build amazing apps
in one codebase,
for any platform,
with the web.**



Agenda:

- Introduction: Zebra developer tools
- Demo: Sample app
- Why develop with Ionic?
- Ionic: Getting started
- Adding scanning to your Ionic app
- Coming soon: Capacitor
- Wrap-up

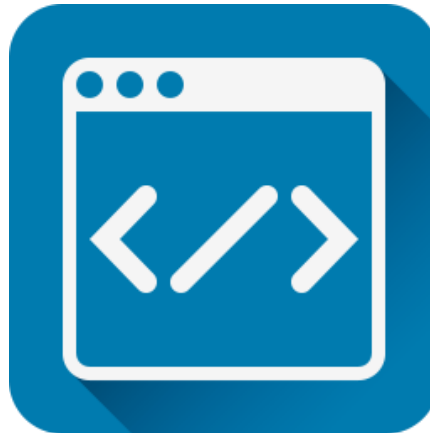
Introduction

Zebra developer tools for mobile devices: where does Ionic fit in?



EMDK

Android or Xamarin
variants
Native SDK
Native development
only



Enterprise Browser

Wraps system webview
component for lockdown
and config.
Exposes JS API
Hybrid development
only



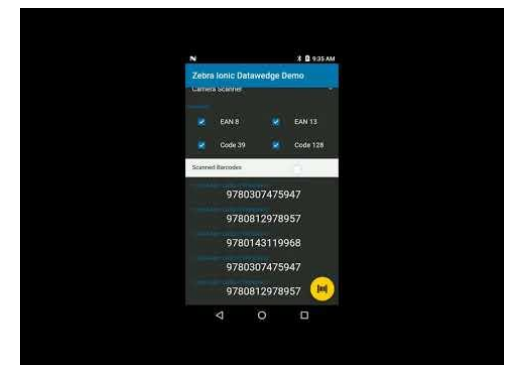
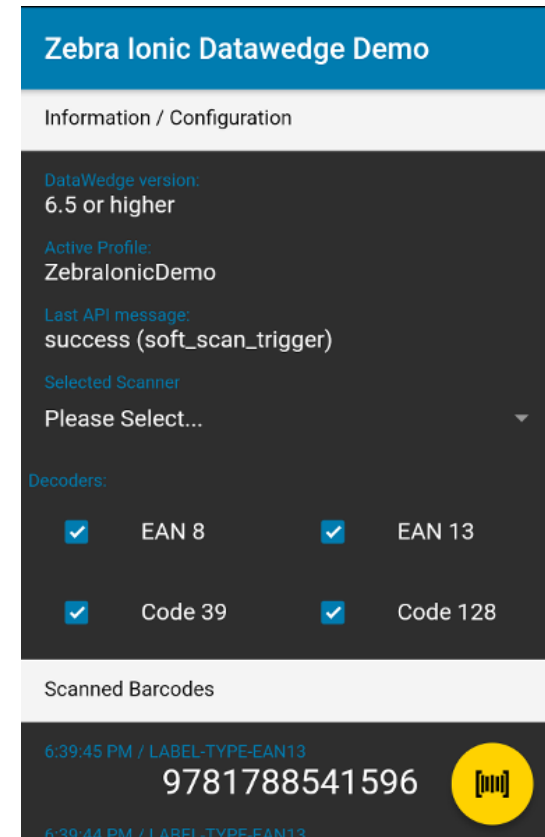
DataWedge

System service to
capture data for app
consumption
Exposes Intent API
Very flexible approach

Demo: Sample application

- Sample of capabilities available to Ionic applications on Zebra devices
- Code: <https://github.com/Zebra/ZebralonicDemo>
- Video: <https://www.youtube.com/watch?v=puMz0yYK42g>
- Uses DataWedge in conjunction with a 3rd party Intent plugin
- Supports all Zebra devices with DataWedge service
- Full control of scanner
- Responsive with smooth scrolling
- Quickly developed using web skills
- Visually appealing (by my standards!)

Will dive into detail in subsequent slides

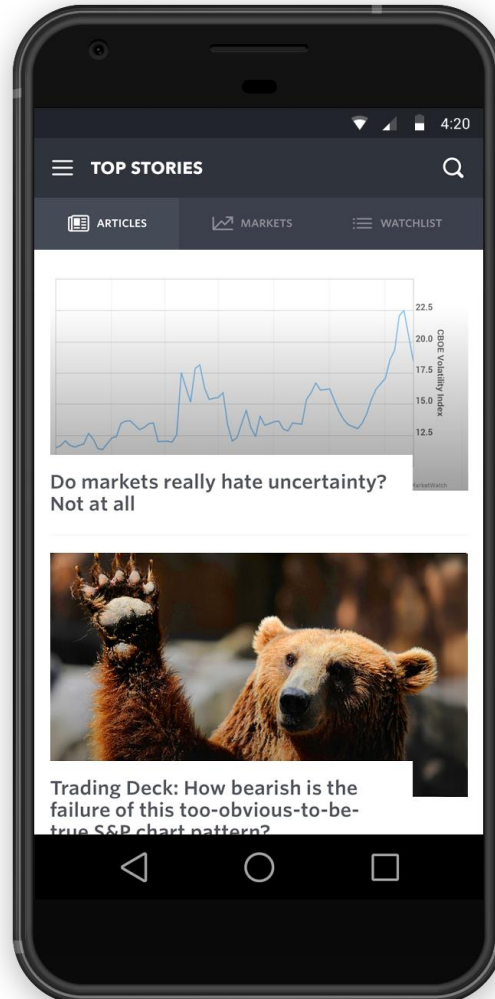


What is Ionic?

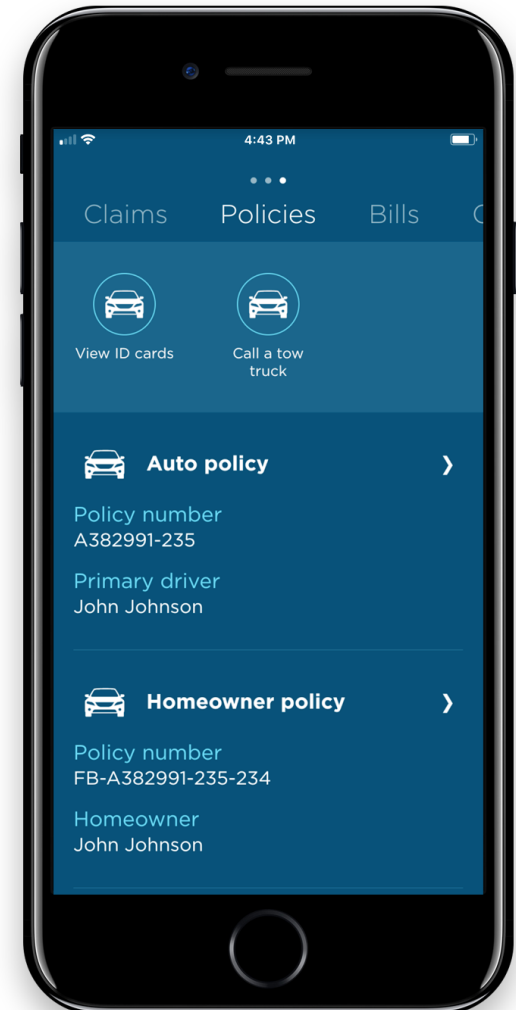
- Open source, cross-platform UI framework
 - iOS, Android, Progressive Web App, Electron
 - One app everywhere
- Build with open web technology (HTML, JS, CSS)
 - Still access native features on any device
- Very large, global community
 - Top 50 OSS projects on Github (33k stars)
 - 5M developers in 200+ countries
- Professional tools & services
 - Ionic Pro for testing, monitoring, updates, etc.
 - Enterprise support and services

Examples of Ionic apps

MarketWatch



 **Nationwide[®]**
Insurance



Why develop with Ionic?

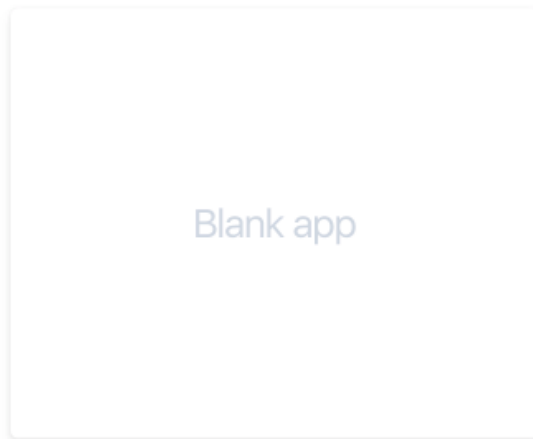
- Target iOS, Android, Windows, and PWAs - with one codebase
- Build with open web tech familiar to 90% of developers
- Developer-friendly platform with a huge OSS community
- Backed by a real company

Building your first Ionic app

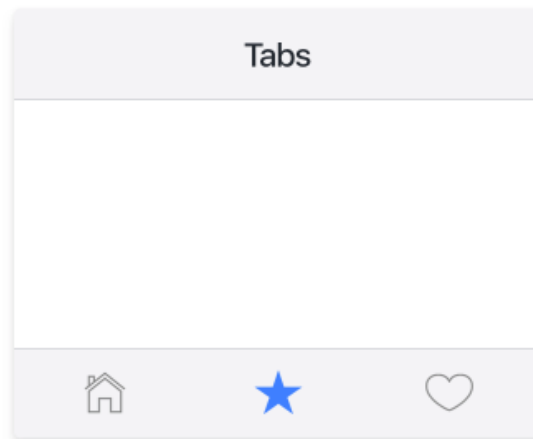
1. Download and install Ionic
2. Choose your starter
3. Build the UI
4. Add native functionality

2) Choose your starter

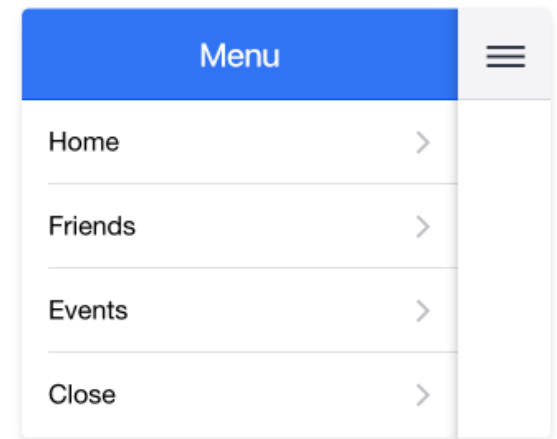
- Pick a ready-made template
- Or start with a blank project



\$ ionic start myApp blank



\$ ionic start myApp tabs



\$ ionic start myApp sidemenu

1) Download and install Ionic

- Make sure you have node and npm installed
- `npm install -g ionic`
- `ionic start`

1 Install Ionic

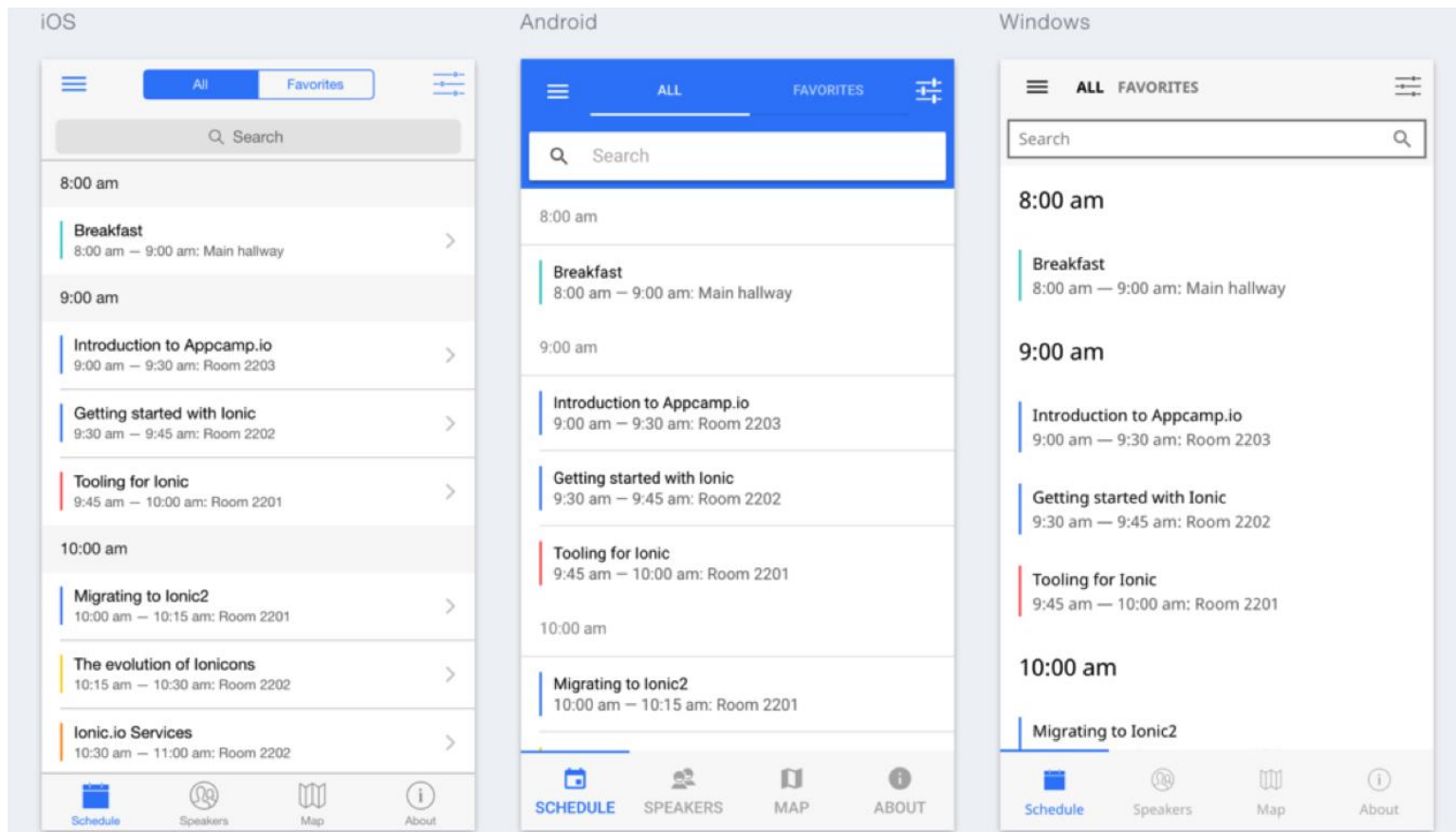
```
npm install -g ionic
```

First, install [Node.js](#). Then, install the latest Ionic command-line tools in your terminal. Follow the [Android](#) and [iOS](#) platform guides to install required tools for development.

 If you're new to the command line, read our [Terminal tutorial](#) >

3) Build the UI

- All components feature iOS and material design
- Customize components or set a [Theme](#) for your app



4) Add native functionality

- Access native features with Cordova (or Capacitor)
- Choose an existing plugin or build a new one
- Native layer exists separate from Ionic



TOUCH ID

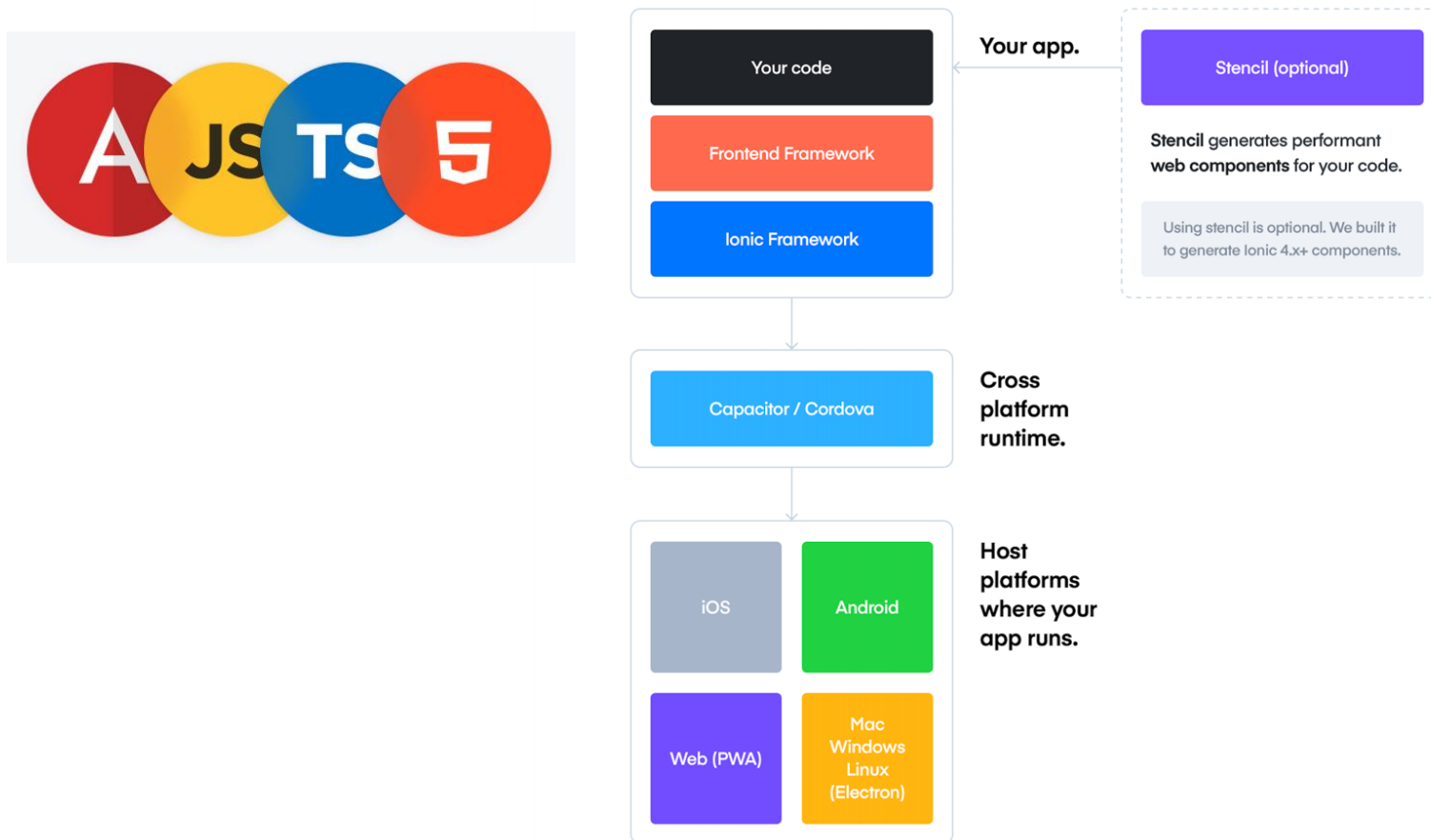


CAMERA



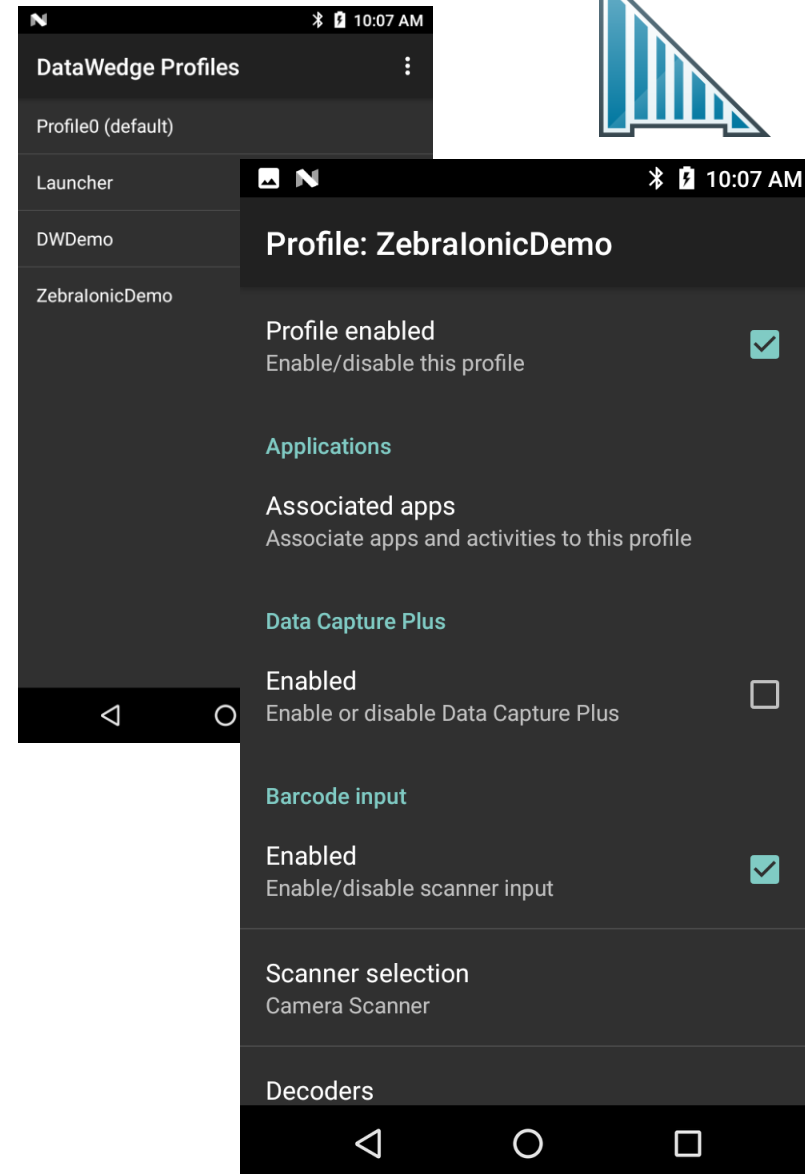
Social

What's under the hood?



Ionic: Adding scanning capabilities DataWedge

- Profile based configuration of data capture
 - Define input: e.g. **Scanner**, SimulScan
 - Configure input: e.g. Symbologies, scanner sounds, code lengths etc.
 - Define output: e.g. **Intents**, Keystroke, IP
 - Configure output: e.g. Intent action
 - Associate the profile with an application or activit(y/ies)
- Control / configure DataWedge via Intent API
 - Demo app will automatically create and configure the profile for you
- Import / export profiles for mass deployment

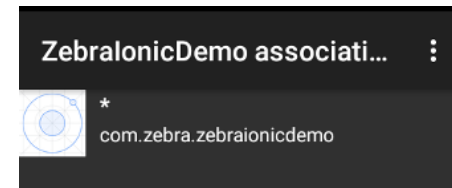


Ionic: Adding scanning capabilities

3 steps to add scanning to an Ionic application:

1. Add Cordova plugin to handle Intent communication with DataWedge
- ```
> ionic cordova plugin add com-darryncampbell-cordova-plugin-intent
```

1. Configure DataWedge profile

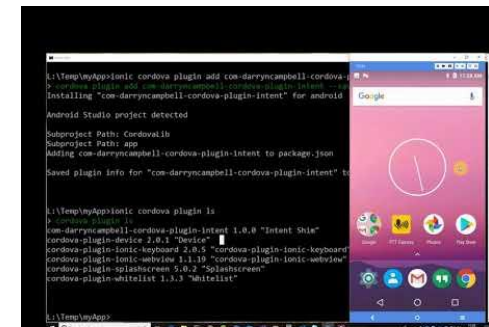


1. Define callback in the application to handle barcode data

```
(<any>window).plugins.intentShim.registerBroadcastReceiver({
 filterActions: ['io.ionic.starter.ACTION'],
 filterCategories: ['android.intent.category.DEFAULT']},
function (intent) {console.log('Received Intent: ' + JSON.stringify(intent.extras));});
```

1. Optional: Further control DataWedge & scanner via API (see demo)

Video: <https://www.youtube.com/watch?v=YIXBsF65eKc>



## Zebra Resources

- Blog: [Ionic apps on Zebra devices](#)
- Sample: [Application on GitHub](#)
- Videos shown during this presentation: [YouTube playlist](#)
- Contact Zebra:
  - [Sign up for news](#)
  - [Join the ISV program](#)

**ZEBRA DEVELOPER PORTAL**  
<http://developer.zebra.com>



- New native bridge from Ionic team
- Full native SDK on iOS, Android, Windows, PWA
- MIT open source
- Simple and extensible
- Web native



**Starting to build your first Ionic app is as easy as visiting:**

1. <https://ionicframework.com/>

Then check out our getting started guide

1. <https://ionicframework.com/getting-started>

- Sign up for an Ionic account
- Dive into our developer docs

# Questions?

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**IONIC FRAMEWORK**

<https://ionicframework.com>