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# DevTalk - Enterprise Browser 2.5

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May 20th 2020

# DevTalk – Enterprise Browser 2.5

## DOWNLOAD ENTERPRISE BROWSER TOOL

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**INSTALLATION REQUIREMENTS**

Please find the Enterprise Browser compatibility devices in the release notes.

**VERSIONS**

| | |
|---|---|
| + 2.5.0.2 For Android | Release Date: February 2020 |
| + 2.0 For Windows | Release Date: December 2018 |
| + 2.0 For Android | Release Date: December 2018 |
| + 1.8.0.0 For Windows | Release Date: May 2018 |
| + 1.8.0.0 For Android | Release Date: May 2018 |
| + 1.7.1.0 | Release Date: October 2017 |
| + 1.7.0.0 | Release Date: June 2017 |
| + 1.6.0.0 | Release Date: January 2017 |
| + 1.5 | Release Date: October 2016 |
| + 1.4.0.0 | Release Date: January 2016 |
| + 1.3.17.0 | Release Date: November 2015 |
| + 1.2.9.0 | Release Date: July 2015 |
| + 1.1 | Release Date: February 2015 |
| + 1 | Release Date: October 2014 |

# DevTalk – Enterprise Browser 2.5
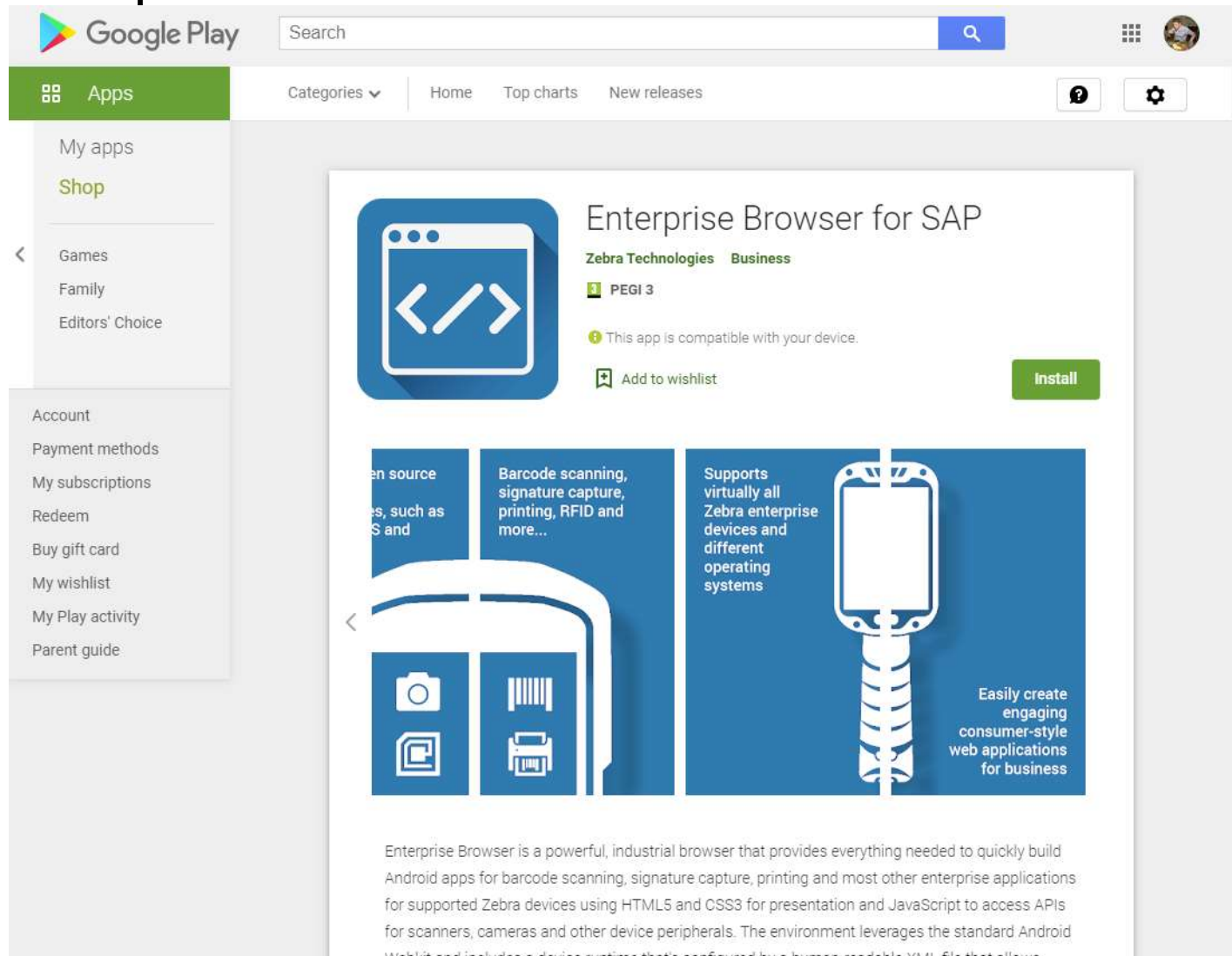
# DevTalk – Enterprise Browser 2.5

## Agenda

- Newly supported devices

- Pinned shortcuts in Oreo+

- Multi-session

- New configuration tags

- <META> Tag filtering

- Changes to SAP behaviour

  – Custom CSS file support

  – New keyboard type

- New API: SerialComm

- Update API: Barcode

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## Newly supported devices

- Android Pie:
  - PS20
  - TC52
  - TC72
- Android Oreo:
  - EC30
  - ET51
  - ET56
  - L10
  - VC83

- Full list at https://www.zebra.com/us/en/support-downloads/software/developer-tools/enterprise-browser.html

- Note: Android 6.x (Marshmallow), 5.x (Lollipop) and 4.x (KitKat) not supported in EB 2.5

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## Pinned shortcuts in Oreo+

- Android shortcuts were changed (by Google) in Oreo and the APK could no longer create shortcuts on installation or without manual user intervention

- Enterprise Browser 2.5 introduces compatibility for the new Android shortcut mechanism

1. Define shortcuts using the Enterprise Browser shortcut utility

2. Push the shortcuts to the connected device

3. Launch Enterprise Browser and follow the prompt(s) to add the shortcuts

- Currently primarily a manual process, though can be bypassed when using Enterprise Home Screen (EHS)

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## Pinned shortcuts in Oreo+

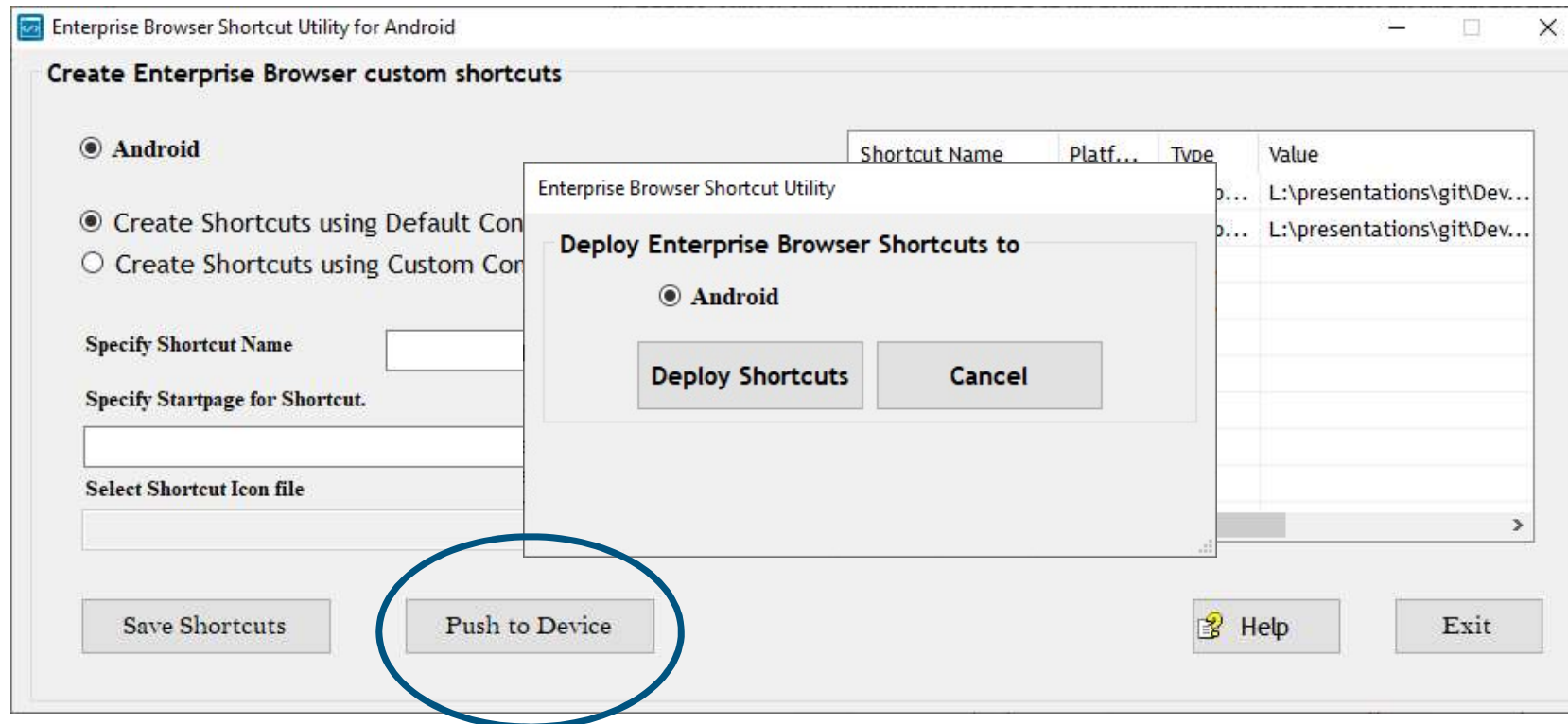1. Define shortcuts using the Enterprise Browser shortcut utility

# DevTalk – Enterprise Browser 2.5
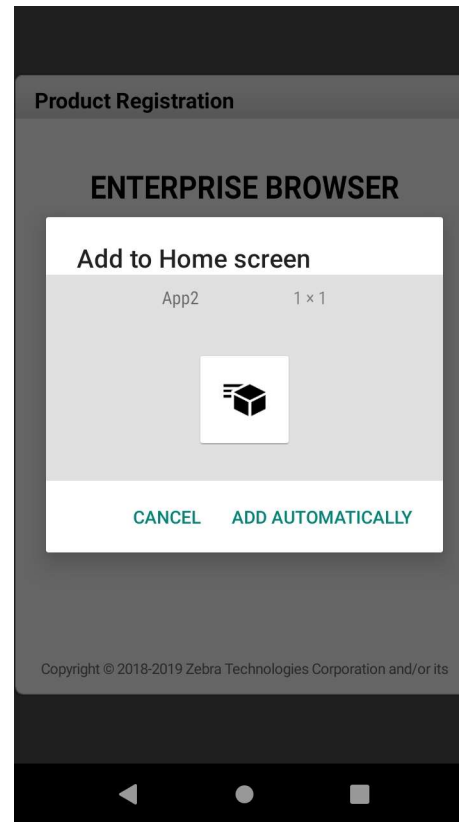
## Pinned shortcuts in Oreo+

2. Push the shortcuts to the connected device

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## Pinned shortcuts in Oreo+

3. Launch Enterprise Browser and follow the prompt(s) to add the shortcuts
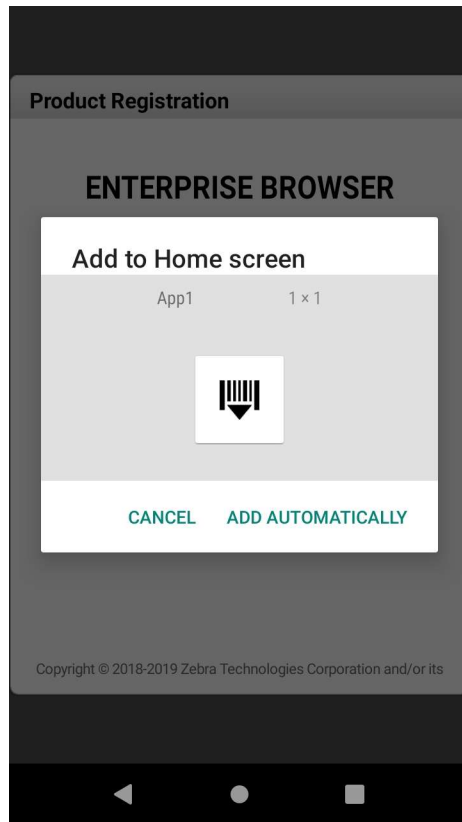
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## Pinned shortcuts in Oreo+

- Demo
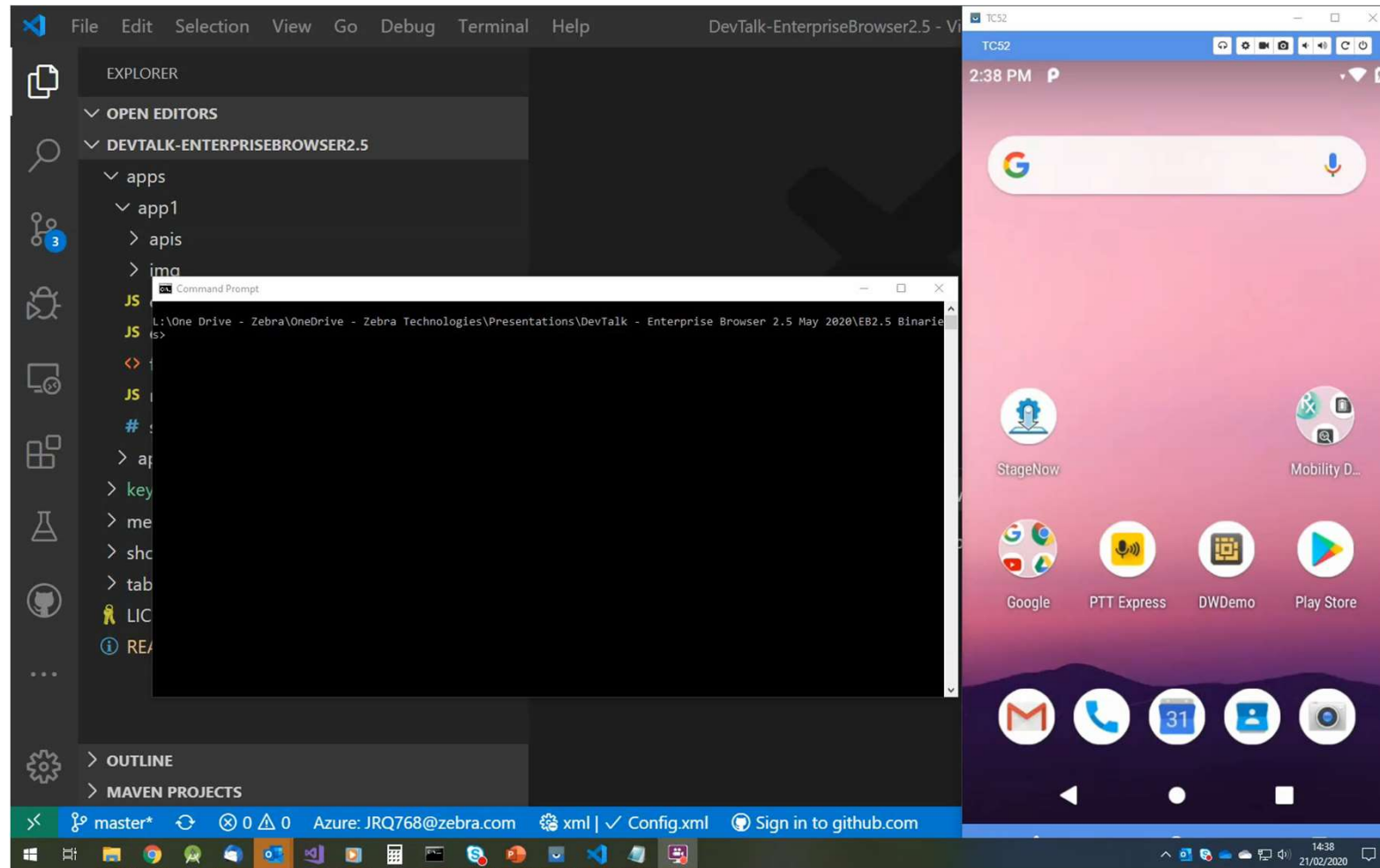
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## Multi-session

- More information on TechDocs: https://techdocs.zebra.com/enterprise-browser/latest/guide/multisession/

- Run multiple instances of Enterprise Browser applications simultaneously in different 'sessions'

- Tabs can be hidden and launched via Shortcut:

- Tabs can behave visible, akin to normal Browser tabs
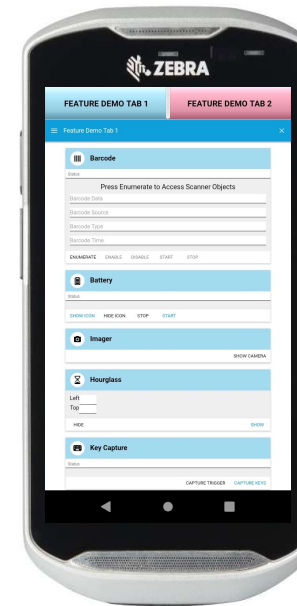
# DevTalk – Enterprise Browser 2.5

## Multi-session – Tab based

- Define a tabbar.xml file to describe how the tabs are displayed

- Modify your Config.xml to tell Enterprise Browser to use Tabs

- Note: *Optionally* each tab can have its own Config.xml

```xml
<TabGroup>
    <placeTabsBottom>false</placeTabsBottom>
    <hiddenTabs>false</hiddenTabs>
    <backgroundColor>false</backgroundColor>
        <Tab>
            <action>http://192.168.0.2:8081/apps/app1/feature-demo.html</action>
            <label>Feature Demo Tab 1</label>
            <disabled></disabled>
            <reload>false</reload>
            <selectedColor>#A4DBF1</selectedColor>
        </Tab>
        <Tab>
            <action>http://192.168.0.2:8081/apps/app2/feature-demo.html</action>
            <label>Feature Demo Tab 2</label>
            <disabled></disabled>
            <reload>false</reload>
            <selectedColor>#f1a4b9</selectedColor>
        </Tab>
</TabGroup>
```
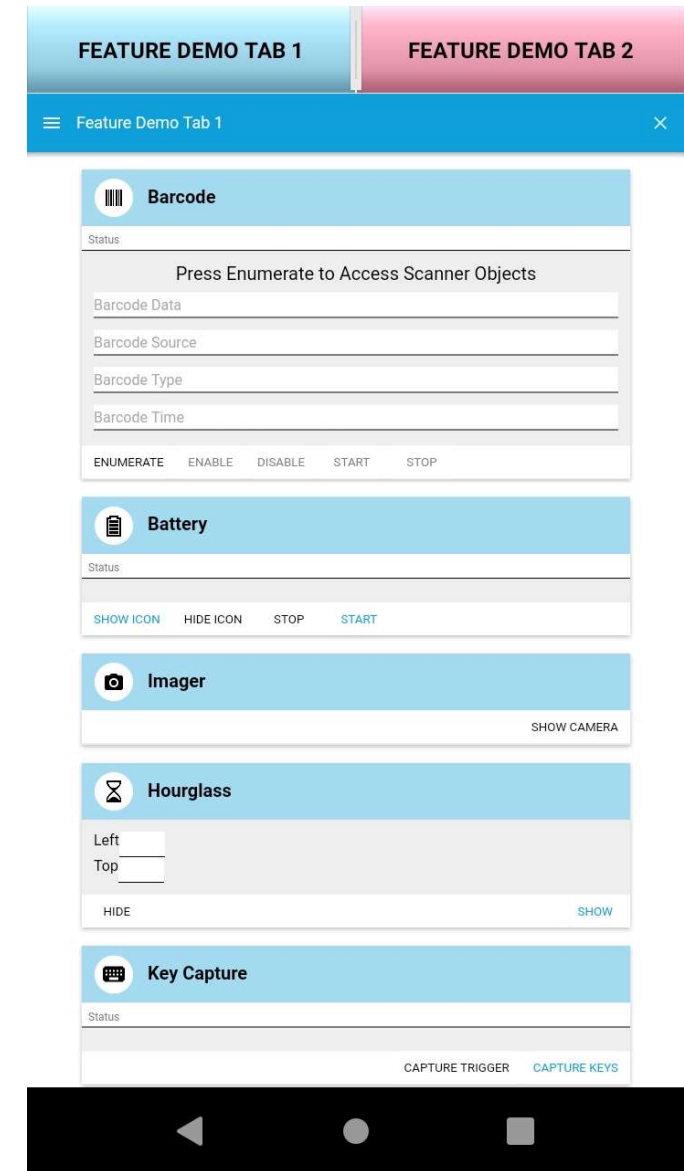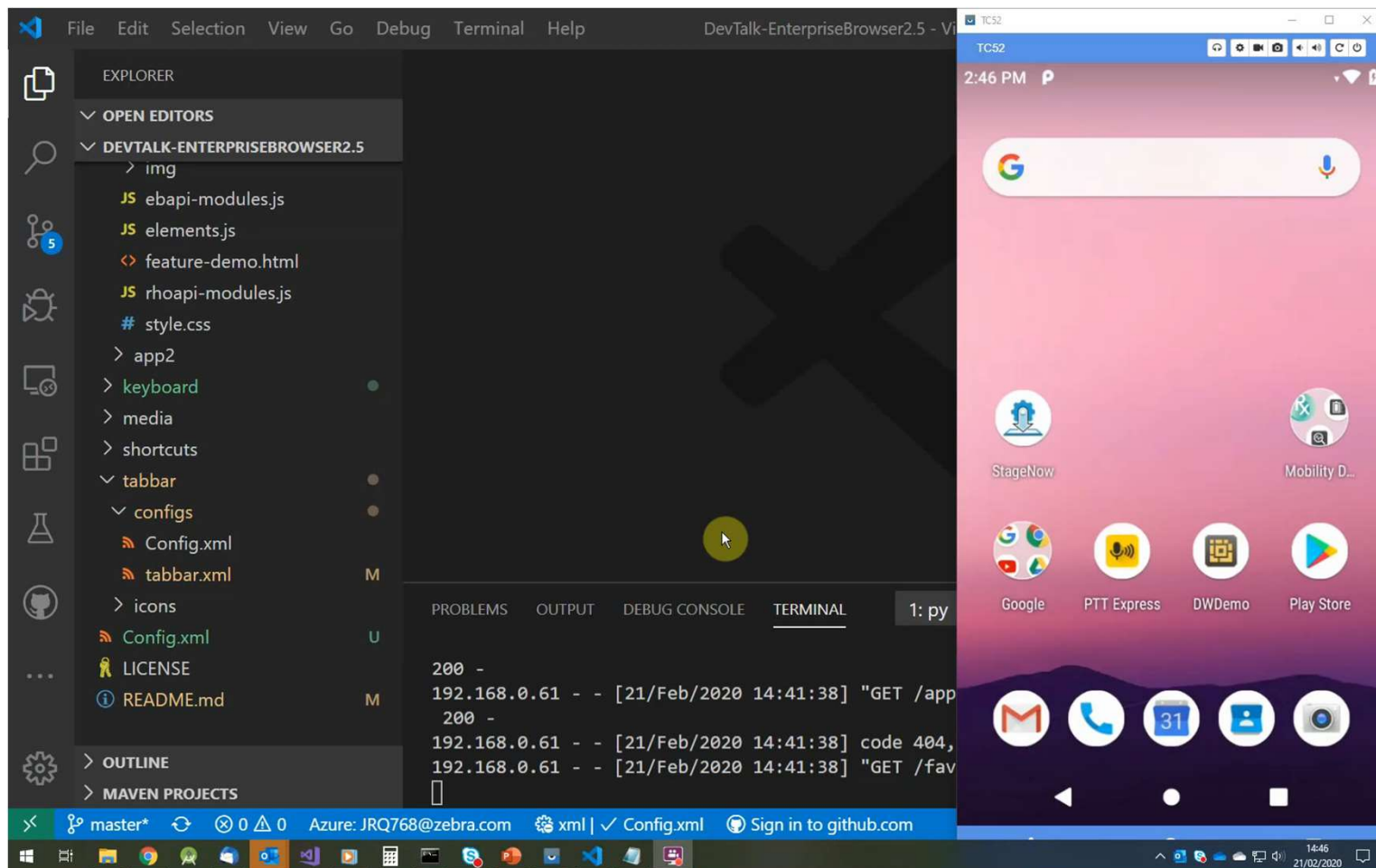
# DevTalk – Enterprise Browser 2.5

## Multi-session – Tab based

- Demo

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## Multi-session – Shortcut based

- (optional) Define a Config.xml for each tab

- Follow same process as previously to create multiple shortcuts

- Each shortcut has an associated start page
  - Or Config.xml that defines the start page
  - Some configuration settings are common for each session – see the documentation for more information:
    https://techdocs.zebra.com/enterprise-browser/latest/guide/multisession/

- Not compatible with EB Kiosk mode as you need access to the home screen
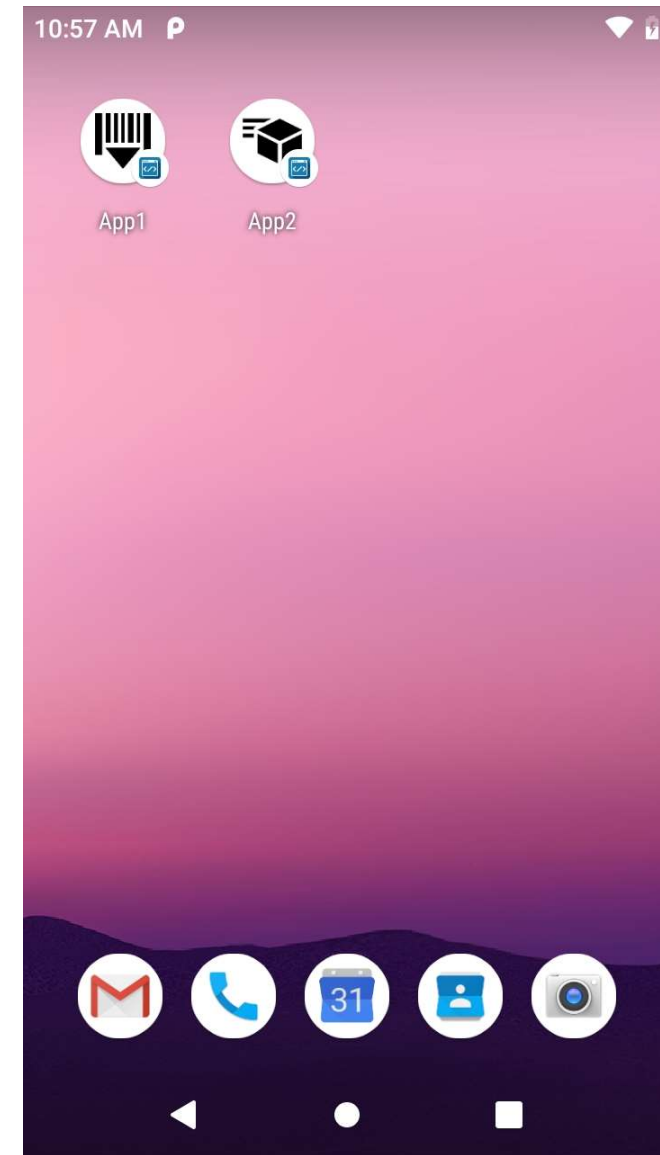
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## Multi-session – Shortcut based

- Tabs are launched 'full screen', just like a standard EB app but switching does not reload the page.
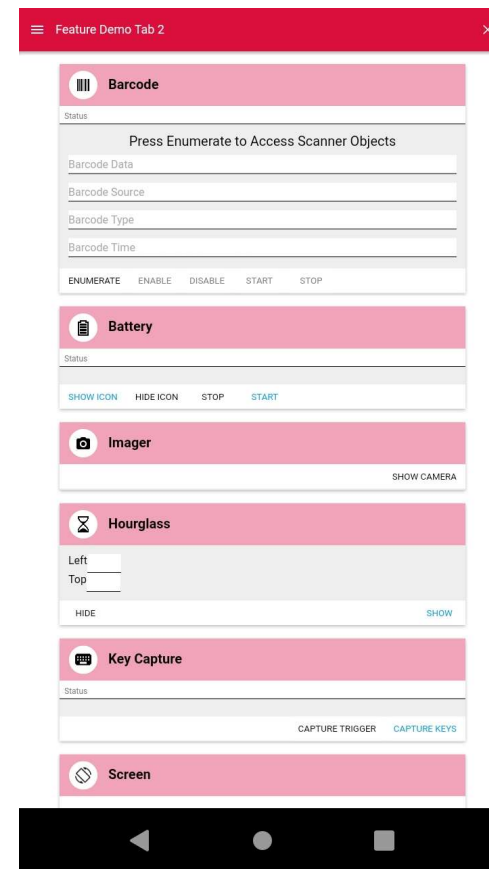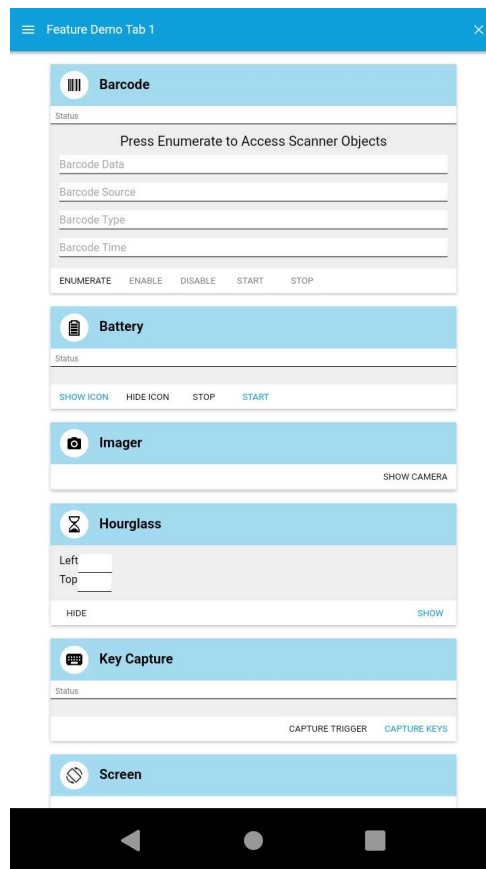
# DevTalk – Enterprise Browser 2.5

## Multi-session – Shortcut based

- Demo
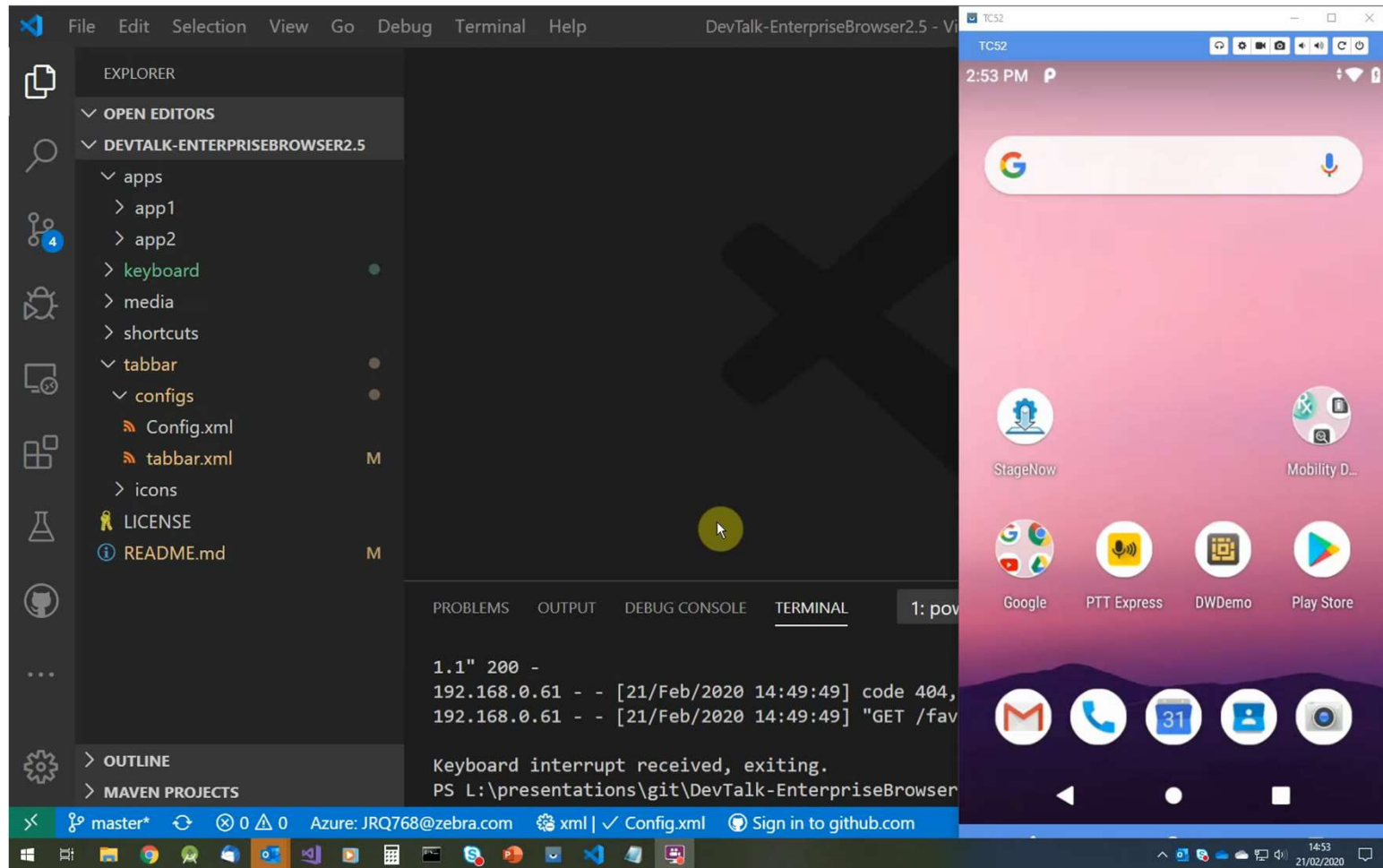
# DevTalk – Enterprise Browser 2.5

## New configuration tags

Show License Confirmation

`<ShowLicenseConformation value=[value]/>`

| Value | Behaviour |
|-------|-----------|
| 0 | Do not show licensee confirmation |
| 1 | Show licensee confirmation |

# DevTalk – Enterprise Browser 2.5

## New configuration tags – Disable TTS/ASR During Navigation

Control Text to Speech (TTS).  Only applies to GMS devices.

Controls whether TTS / ASR is enabled when navigating between pages

```
<TTS>

      <DisableTTSDuringNavigation value=[value]/>

      <DisableASRDuringNavigation value=[value]/>

</TTS>
```

| Value | Behaviour |
|-------|-----------|
| 0 | TTS / ASR remains enabled during navigation |
| 1 | TTS / ASR is disabled during navigation |

# DevTalk – Enterprise Browser 2.5

## New configuration tags – Delay For TTS

Control Text to Speech (TTS).  Only applies to GMS devices.

Forces a delay between ASR and TTS if invoked serially.  Ensures the ASR engine is fully disabled

```
<TTS>

        <DelayForTTS value=[value]/>

</TTS>
```

| Value | Behaviour |
|-------|-----------|
| 0 | No delay (default) |
| int | Delay, in milliseconds |

# DevTalk – Enterprise Browser 2.5

## Meta Tag filtering – overview 1

The previous incarnations of Enterprise Browser, (i.e. PocketBrowser and RhoElements Shared Runtime) made extensive use of META-Tags:

e.g.
```
<META HTTP-Equiv="scanner" Content="enabled">
<META HTTP-Equiv="scanner" Content="DecodeEvent:url('javascript:doScan('%s', '%s', %s, '%s', %s);')">
```

When migrating EB apps from Windows Mobile / CE to Android, the developer may wish to take advantage of new EB features without modifying the application, e.g.

- DOM Injection

- Use DataWedge for scanning

- Use Enterprise Keyboard

- Use Button Bar

# DevTalk – Enterprise Browser 2.5

## Meta Tag filtering – overview 2

Where these new features overlap with previously specified Meta tags, upgrading may be problematic:

e.g.
```
<META HTTP-Equiv="scanner" Content="enabled">
<META HTTP-Equiv="scanner" Content="DecodeEvent:url('javascript:doScan('%s', '%s', %s, '%s', %s);')">
```

The above meta tags enable and take exclusive control of the scanner, preventing the use of DataWedge for scanning

e.g.
```
<META HTTP-Equiv="QuitButton" Content="Visibility:Visible">
<META HTTP-Equiv="QuitButton" Content="Left:50">
```

The above meta tags display a quit button on the page, duplicating potential functionality of the button bar

# DevTalk – Enterprise Browser 2.5

## Meta Tag filtering - MetaTagFilteringEnabled

```
<MetaTagFiltering>

        <MetaTagFilteringEnabled value=[value]/>

        <WhiteListingMetaTags value=[value]/>

        <BlackListingMetaTags value=[value]/>

</ MetaTagFiltering >
```

| Value | Behaviour |
|-------|-----------|
| 0 | MetaTag filtering is not in effect |
| 1 | MetaTag filtering WILL have an effect |

# DevTalk – Enterprise Browser 2.5

## Meta Tag filtering - WhiteListingMetaTags

```
<MetaTagFiltering>

        <MetaTagFilteringEnabled value=[value]/>

        <WhiteListingMetaTags value=[value]/>

        <BlackListingMetaTags value=[value]/>

</ MetaTagFiltering >
```

| Value |
| --- |
| List of meta tags (*technically EMML tags*) that are **allowed**.  Any tag not specified will be blocked.<br>META (EMML) tags are separated with '+'<br>Find your tags on your HTML pages or in your Config.xml under <DefaultMETATags> |

```
<MetaTagFiltering>
            <WhiteListingMetaTags value="scanner~enumerate;enabled:SCN2;enumscannerevent:enumscanners(%s)+quitButton~Visibility:Visible;Width:50;"/>
</MetaTagFiltering>
```

# DevTalk – Enterprise Browser 2.5

## Meta Tag filtering - BlackListingMetaTags

```
<MetaTagFiltering>

    <MetaTagFilteringEnabled value=[value]/>

    <WhiteListingMetaTags value=[value]/>

    <BlackListingMetaTags value=[value]/>

</ MetaTagFiltering >
```

| Value |
| --- |
| List of meta tags (*technically EMML tags*) that are **blocked**.  Any tag not specified will be allowed. META (EMML) tags are separated with '+' Find your tags on your HTML pages or in your Config.xml under <DefaultMETATags> |

```
<MetaTagFiltering>
            <BlackListingMetaTags value="scanner~enumerate;enabled:SCN2;enumscannerevent:enumscanners(%s)+quitButton~Visibility:Visible;Width:50;"/>
</MetaTagFiltering>
```

# DevTalk – Enterprise Browser 2.5

## Changes to SAP behaviour

- Changes to SAP behaviour: Custom CSS support
  - By default, the SAP distribution of EB will ship with custom CSS that is loaded to style the SAP pages nicely on a modern mobile device
  - Default location of the custom CSS file is located in a **<u>txt</u>** file, as defined in your Config.xml

```
<customcssfile
value="file://%INSTALLDIR%/android_sap/sapstyle.txt"/>
```

  - The sapstyle.txt file that ships as part of the EB installation can be modified

```css
@import url("../ALV_GRID.CSS");

.MobileUserArea, input {
 font-family:arial;
 font-size:100%;
}


.MobileUserArea, textarea {
 font-family:arial;
 font-size:100%;
}
.....
```

```
adb pull /storage/emulated/0/Android/data/com.symbol.enterprisebrowser/android_sap/sapstyle.txt sapstyle.txt
```

# DevTalk – Enterprise Browser 2.5
## Changes to SAP behaviour

- Changes to SAP behaviour: New keyboard type configuration – context:
  - A special JavaScript file will be injected for keyboard handling when EKB is in its SAP configuration
  - This JS file which handles keyboard behaviour (sapkeyboard.js) is injected through the DOM Injection mechanism
  - Sapkeyboard.js is responsible for intelligently showing / hiding the keyboard as well as changing the displayed keyboard layout (numeric, text, symbol)
  - When first introduced, EB used the "ButtonBar", a somewhat mysterious name for what was essentially custom keyboard layouts
  - The "ButtonBar" functionality evolved into Enterprise Keyboard but prior to EB 2.0, the "ButtonBar" was still the default input mechanism used for SAP apps with custom keyboard layouts.
  - EB 2.5 changes this so Enterprise Keyboard is now used for SAP apps with "custom" keyboard layouts, e.g. numeric.
  - Administrator can choose to default to the old "ButtonBar" implementation or the default IME for input
  - You MUST have Enterprise Keyboard installed on your device for this to work (a separate apk)

# DevTalk – Enterprise Browser 2.5
## Changes to SAP behaviour

- Changes to SAP behaviour: New keyboard type configuration

```
<KeyboardConfiguration>

      <KeyboardType value=[value]/>

</KeyboardConfiguration>
```

| Value | Behaviour |
|---|---|
| ButtonBar | Uses the EB Button Bar layout (legacy behaviour, EB 1.7) |
| EnterpriseKeyboard | Enables custom layouts made for Zebra's Enterprise Keyboard |
| Default | Uses the default IME (Gboard in most cases) |

# DevTalk – Enterprise Browser 2.5
## New API: Serial Communications

- Many Zebra devices interface with legacy hardware over the serial port

- E.g. Scales, Industrial equipment

- Enterprise Browser 2.5 has introduced a new Serial API

- Fully documented at https://techdocs.zebra.com/enterprise-browser/latest/api/serialcomm/

- Methods:
  - Enable, Disable, Read, Write

- Properties:
  - Parity, baud rate, data bit, flow control, stop bit

- Replaces the previous PocketBrowser and RhoElements Shared Runtime Comm API
  - No new functionality but API now follows the more modern EB syntax

# DevTalk – Enterprise Browser 2.5

## Update API: Barcode

The following properties have been added to the Barcode API:

- barcodeCount
- instantReporting
- SceneDetectionQualifier
- dotCode
  - dotCodeInverse
  - dotCodeMirror
- gridmatrix
  - gridmatrixinverse
  - gridmatrixmirror
- i2of5febraban
- gs1qrcode

- gs1datamatrix
- decodeScreenNotification
- decodeScreenNotificationTime
- decodeScreenTranslucencyLevel
- zoom
- signatureImageBitsPerPixel
- signatureImageFormat
- illuminationBrightness
- aimType
  - PRESENTATION

# DevTalk – Enterprise Browser 2.5

## Resources

- Download: https://play.google.com/store/apps/details?id=com.symbol.enterprisebrowser

- Enterprise Browser 2.5 documentation is available on TechDocs:

  – https://techdocs.zebra.com/enterprise-browser/2-5/guide/about/

- Including guides for:

  – Shortcut creation: https://techdocs.zebra.com/enterprise-browser/latest/guide/configreference/#shortcutcreation

  – Multi session: https://techdocs.zebra.com/enterprise-browser/latest/guide/multisession/

- Demo files available from the associated Github repo:

  – https://github.com/darryncampbell/EnterpriseBrowser-2.5-DevTalk/

- Video demos:

  – Creating a shortcut: https://youtu.be/roHgZgQ7RoM

  – Multiple instances with the tabbar: https://youtu.be/r1VRnn32vYY

  – Multiple instances with shortcuts: https://youtu.be/z6LHZnL8m-U

# Questions?

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