Installing Barcoders Android Server

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1 Installing Barcoders Android Server

Note: This is an incomplete guide at present

1.1 Installing the server

Install on Windows Server.

This server must have the following configured by TechHub:

- Port 50061 for TCP
- Access to internet for license validation and application download.

Install on the RDT server:

- Show hidden files and files with known extensions
- Create the following directories:
  - c:\logs
  - c:\data
- Set the PC power settings to not turn off.
- Open the firewall port.
  - Add inbound exception to port 50061 for TCP, named "Barcoders Android"
- Navigate to the "Android RFServer Files" folder.
  - Cut and Paste the "Barcoders" folder to the c:\Program Files directory.
  - Cut and Paste the "Barcoders.com" folder to the c:\ProgramData directory.
- Find your License folder and copy your two license files (userid.dat and license.xml) into the c:\ProgramData\Barcoders.com folder.
- Update the server to the latest version (see section #Updating the server

- Create some shortcuts on the desktop, running from C:\Program Files\Barcoders:
  - "Start Barcoders Updater", from "C:\Program Files\Barcoders\BarcodersUpdater.exe", set as Run as Administrator
  - "Start Barcoders Server", from "C:\Program Files\Barcoders\AndroidStudio\Android Connector.exe"
  - "Start Barcoders Admin", from "C:\Program Files\Barcoders\AndroidConnectorWindow\TermProtoTestWindow.exe"

1.2 Updating the server

- Ensure that the server is stopped (close the Admin and Server windows).
- Run BarcodersUpdater.exe as administrator (or use the "Start Barcoders Updater" shortcut.
- A window will display - click the button to update to that version.
- When complete, close the window.

1.3 Updating to a specific version

To revert to a prior version of the server

- Run CMD (DOS level) as administrator.
- Navigate to the c:\program files\barcoders directory.
- Type the following at the c:\ prompt

```
c:\BarcodersUpdater --license-id versions/{vers}
```

- Where {vers} is the required version number

e.g.

Ready for What's Next, Now™

```
WIN-R
cmd
CTRL-SHIFT-ENTER
Confirm Administrator rights
cd c:\program files\barcoders
BarcodersUpdater --license-id versions/23.52
```

1.4 Configuring the Applications

In "C:\Program Files\Barcoders\AndroidStudio" there are two configuration files:

- appsettings.json - application log levels
- config.json - the applications being run by ABSStudio

To configure applications that can be run by the system, add entries to the config.json file, example below:

```
{
        "ProgramTasks": [
                {       "ExecutablePath": "C:/WCSTEST/RDTMenu1_Android.exe",
                        "Name": "RDTMenu1 (TEST)",
                        "UsePipes": "True",
                },
                {       "ExecutablePath": "C:/WCSLIVE/RDTMenu1_Android.exe",
                        "Name": "RDTMenu1 (LIVE)",
                        "UsePipes": "True",
                },
        ]
}
```

To change logging for the application, modify the Logging setting of the appsettings.json file, example below:

```
  "Logging": {
    "LogLevel": {
      "Default": "Info",
      "Microsoft": "Warning",
      "Microsoft.Hosting.Lifetime": "Error"
    }
  },
```

Values can be changed to

- Info
- Warning
- Error
- Debug

Note: We can clear (delete) the log file and it will recreate with no issues whilst still running.

Note: A single copy of the log file is added to by the server - it does not change or rotate every day or hour.

A script is being investigated to copy and to cleardown old scripts - details will be added here and in the support guide when available.

1.5 Updating Licenses

To update the license manually:

- Contact Barcoders
- Get updated license files.
- Drop into ProgramData
- Stop and restart ABS server.

To renew the license automatically:

- Contact Barcoders
- Barcoders renew license on server
- Stop and restart ABS server.

Note: Confirmation on some processes is being sought:

- Who in Aptean is in charge of renewals of Android licenses?
  - We want to be changing and updating licenses BEFORE expiration.
  - We want to plan downtime for this.
  - Customer Product Manager should handle this.
- Confirmation of the license renewal process with Barcoders requested.

1.6 Downloading the Android App

Side-load the Barcoders Android application on your device.

- Enter URL in Google Search or Chrome, or scan the barcode in above, or scan using Zebra Xing scanner app.

```
https://www.barcoders.com/app-release.apk
```

- Download APK (confirm if asked)
- Confirm name if asked.
- Open Downloaded APK (from open/install button or from notification drag down from top of screen or from Apps/Downloads or from Apps/Files).
- Confirm installing.
- If prompted confirm settings to allow installing unsafe apps, then return to * above.
- Install - confirm install location if requested (accept default)

The application will be named "Warehouse Terminal" and have a green Barcoders icon for its graphic. Drag to the home screen for easy access.

1.7 Configuring the Android App

- When you start the APK for the first time, it will display an IP address pointing to our RFServer here. You?ll need to change it to point to the IP address of your Android RFServer. To do this navigate to https://www.barcoders.com/make-server-barcode.php and generate a barcode PNG for the IP address of your Android RFServer. Print it out and scan it at the step above. You may have to exit and get back in for it to recognize the new IP address.
- When the menu come up, select the bottom option and test.

1.8 Zebra Enterprise Keyboard

Zebra provide a freely-downloadable enterprise keyboard that can be configured for function key presses.

https://www.zebra.com/gb/en/products/software/mobile-computers/enterprise-keyboard.html

https://www.zebra.com/us/en/support-downloads/software/productivity-apps/enterprise-keyboard.html

https://techdocs.zebra.com/enterprise-keyboard/4-1/guide/about/

https://www.zebra.com/us/en/support-downloads/software/productivity-apps/enterprise-keyboard-designer.html

There are two versions:

- Version 1.6 does not allow function keys. Only works on Android 5 below
- Version 4 allows function and special keys to be set up. Only works on Android 6 above.

Versions should be downloaded from the links above. Alternatively, these can be supplied by Aptean for sideloading.

1.8.1 General Configuration

After installation, the keyboard must be enabled.

- Go to Settings/System/Languages/On-screen Keyboard/Manage On Screen Keyboard.
- Enable Enterprise Keyboard.

On devices with a physical keyboard:

- Exit and return to any app that allows the popup keyboard and display it.
- Click the keyboard icon in the bottom right.
- Enable "Show Virtual Keyboard".

1.8.2 Zebra EKB v1.6

Guide: https://techdocs.zebra.com/enterprise-keyboard/2-0/guide/settings/

Function keys can be set up on this standard keyboard (on this or the later version).

- Go to Settings/System/Languages/On-screen Keyboard/Manage On Screen Keyboard.
- Click Enterprise Keyboard.
- Click Remapping
- Pick the key to be remapped on which layout - there are 4 on Numeric, 1 on Alpha and one on Symbol that can be remapped.
- Remap the key to output Unicode (U+24BB)

The remapped key will then display as an F on the keyboard.

You can then hit the F key - an F will appear, and then you can enter the number keys 1-9 and hit ENTER - this will enter the selected function key e.g. the remapped key, plus 8 plus ENTER will send F8.

1.8.3 Zebra EKB v4.x Configuration

Creation of full keyboard layouts can be completed through the Zebra EKB Designer. This tool allows creation of multiple keyboard layouts.

- Guide:
  - https://techdocs.zebra.com/enterprise-keyboard/latest/guide/settings/
  - https://techdocs.zebra.com/ekd/1-9/guide/about/
- Keycodes: https://techdocs.zebra.com/mx/keymappingmgr/
- Download:

https://www.zebra.com/us/en/support-downloads/software/productivity-apps/enterprise-keyboard-designer.html

You will need to deploy to each device. This can be through:

- The EKD application itself, device by device.
- Sideload, through ADB, device by device.
- Your chosen MDN software if it supports it.

The blow guide focusses on deploying a pre-created custom keyboard layout through the EKD software. You will need:

- The EKD software
- The keyboard layout
- A direct connection between the device and the PC running the software.

The sample SAP project works perfectly on supported devices - download from here: https://techdocs.zebra.com/ekd/latest/samples/.

- Get the keyboard layout project from URL or pre-created (MC3x-FKeys)
- Start EKD
- Load the project
- Select a layout
- Connect the device to your computer
- Send to the device

Alternatively, this designer keyboard can be sideloaded onto the device into the following area: /enterprise/device/settings/ekb/config

Once the keyboard is loaded, the layout must be enabled.

- Got to DataWedge
- Select the profile associated to your app (in this case BC-AndroidTerminal-v2)
- Click the Enterprise Keyboard section
- Ensure Enabled is checked.
- Click Select Layout
- Choose "qwertylayout" as the default under the loaded EKD layout project (MC3x-FKeys)

Now the standard keyboard will be the selected custom keyboard layout.

The keyboard supports

- Alpha uppercase and lowercase layouts
- Accessible numbers and symbols when long-pressing keys
- Symbols layout
- Numeric Only layout
- Functions layout, supporting
    - Numbers
    - Function Keys
    - ESC key
    - Cursor Keys
    - and more.

When displayed, the keyboard will start on alpha layout.

- Use the Caps or ABC key to switch between Alpha Uppercase and Lowercase.
- Use the 123 key to switch to numeric
- Use the FUNC key to switch to function and control keys (including cursor keys)
- Use the /*?# key to switch to symbol keys.