

MCL-Technologies

MCL's "Generic" Software for Android Devices

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1. Introduction

MCL Technologies qualifies a series of Mobile Computers from several *auto ID* and ruggedized device manufacturers and manages specific device drivers, device specific software solutions such as Kiosk Mode and hardware specific implementations such as the integrated Barcode Scanner through the Manufacturer's SDKs.

Customers benefit from a **fully qualified setup** as this is **offering an enterprise grade software solution** including features like Silent Software Install (doesn't require any mobile computer operator intervention to roll-out new software versions onto the handheld), setting date/time by MCL's mobile device management functions, and other enterprise features. Customers also benefit from a fully qualified setup completely integrated with the other *MCL* components.

If customers want to deploy MCL software applications onto Android devices for which MCL did not create a qualified *MCL-Agent v4* or *MCL-Client v4* (yet) it is possible to install a **generic MCL software version** that will allow the device to **run MCL software applications**. The generic version of the *MCL* Software includes **most of the features** available in the fully qualified version of the *MCL-Agent v4* and *MCL-Client v4* but is developed without including the hardware manufacturer specific software solutions and SDK's. This means you can run this software, with some limitations, in any device that has an *Android* version (> 4.0) installed.

Your MCL software applications will connect to the *MCL-Mobility Platform* and MCL's communication services such as Filebox, Data Messaging Services and MCL-Net v4.

2. Limitations Associated to the "Generic" *MCL* Software

The "Generic" (MCL-Agent v4 and) MCL-Client v4 will allow you to run any applications developed with MCL-Designer v4 similar to the qualified MCL-Agent v4 and MCL-Client v4. However, some of the features and settings control available in the *MCL* software for qualified device models might not be available in the corresponding *MCL-Agent v4* and *MCL-Client v4* "Generic" versions for *Android* devices.

Typically, these limitations are to be found in:

- **Device Specific Features which requires manufacturer SDK implementation**, including integrated Barcode Scanning (see solution below)
- **Silent Install of Software**, unattended installation of software
- **Kiosk Mode functionality**
- **Setting Data/Time functionality**
- **Device Reboot command**
- **Any other Manufacturer specific implementation for which Manufacturer Software Signature is required**

We recommend you to check if there is a qualified/specific *MCL* Software version available for your *Android* device before opting for the "Generic" version in your devices. The list of supported devices can be found [here](#).

3. Staging Devices with MCL "Generic" Software Version

MCL application Installations on device types for which MCL didn't provide the *qualified MCL-Agent v4 and MCL-Client v4* (yet) can be implemented with the "Generic" *MCL-Agent v4 and MCL-Client v4* made available via *MCL-Loader* or through *MCL's website*.

If you are implementing and licensing your MCL software solutions by using **MCL-Licenses** (items starting with MCL-**MLxxxxx**) and it is required to install the MCL "Generic" version of the MCL-Client v4, **MCL-Loader** can be utilized for easy staging of the devices.

If you are implementing and licensing your MCL software solutions in combination with an **MCL-Mobility Platform Account**, in **subscription mode** (items starting with MCL-**MSxxxxx**/MCL-**MTxxxxx**), and it is required to install the MCL "Generic" MCL-Agent v4, MCL-Loader can also be used for easy staging of the devices. Alternatively, the "Generic" MCL-Agent v4 installation package (APK) can be downloaded from MCL's website. Following the download and installation onto the mobile devices the MCL-Agent v4 will manage the connection between your devices and your MCL-Mobility Platform account. MCL's Software Deployment Service, part of the MCL-Mobility Platform, will allow you to create and deploy a configuration which can include the "Generic" MCL-Client v4.

Instructions on how to install and use MCL-Loader can be found [here](#).

3.1 Staging by using MCL-Loader

If you intend to use *MCL-Loader* to download and install MCL "Generic" software, you select the "Device Software Installation" → **WiFi** connection type → the software type (**license** or **subscription**). At this point you can select "Generic" version of the required *MCL* software:

1. Choose "[Others]" as the manufacturer;
2. Select "*" as the model (Generic);
3. Choose "Android (*)" as the OS;
4. Select the required "Generic" software version.

Pic 3.1 – Example of an *MCL-Client v4* corresponding "Generic" software version:



3.2 Staging by Downloading "Generic" MCL-Agent v4 from *MCL Technologies Website*

1. At www.mcl-mobilityplatform.com website, access the "Downloads" area, download *MCL-Agent v4's* corresponding "Generic" software.
2. Following a successful website download copy and install the "Generic" software onto your *Android* device.

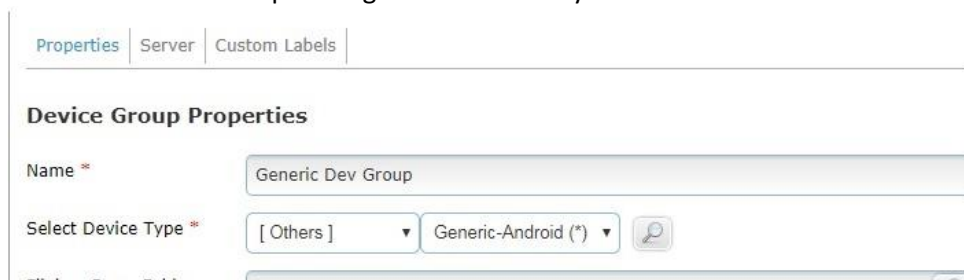
After a successful installation of the "Generic" MCL-Agent v4 software version you will be ready to *pair* the device to your *MCL-Mobility Platform* account. See [here](#) for more information 'how to Pair the device' with an MCL-Mobility Platform account (opens Online help MCL-Mobility Platform).

When pairing the devices (with the installed "Generic" MCL-Agent v4 software) with your *MCL-Mobility Platform* account, you **MUST** group them into a "Generic" Device Group, meaning, you must create a compatible Device Group with the following settings:

Manufacturer = "[Others]"

Model = "Generic-Android (*)"

Pic 3.2 – Device Group Settings in MCL-Mobility Platform Account:



Refer to our [MCL-Mobility Platform User Guide](#) for more information on how to create a device group.

4. How to Update MCL's "Generic" Software

In constant efforts making the MCL-Client and MCL-Agent more feature rich and to provide bug-fixing for potential issues we are releasing updated versions of the software when needed.

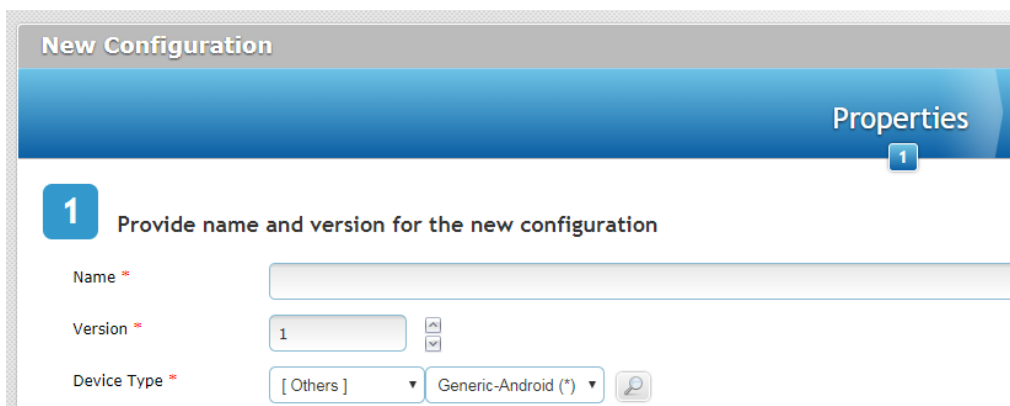
Based on your Service Level Agreement for MCL software products you are eligible to update your installed "Generic" MCL-Agent v4 and MCL-Client v4.

- If your *Android* devices are staged with the **"Generic" MCL-Client v4 version and licensed with a Perpetual MCL License** (item numbers starting with MCL-MLxxxx) typically an update of the MCL-Client v4 is performed via *MCL-Loader*.

Simply repeat the steps of the initial "Generic" software version download/installation and select the more recent version of what you already have installed in your *Android* device (steps described previously in this document). Please make sure that the service window of your MCL License is still active as otherwise you are not eligible to update your devices with newer "Generic" MCL-Client v4 software.

- If your devices have been paired with an **MCL-Mobility Platform account (subscription)** (item numbers starting with MCL-MSxxxx or MCL-MTxxxx), the updates of the "Generic" MCL-Agent v4 and MCL-Client v4 are managed from within the account by deploying a (an updated) configuration to the devices. Check the following steps:

1. Open the 'Configurations' submodule and click + to create a configuration.
2. In the Configuration wizard, **step (1)**, select '[Others]' as the manufacturer and 'Generic-Android (*)' as the model/device type.

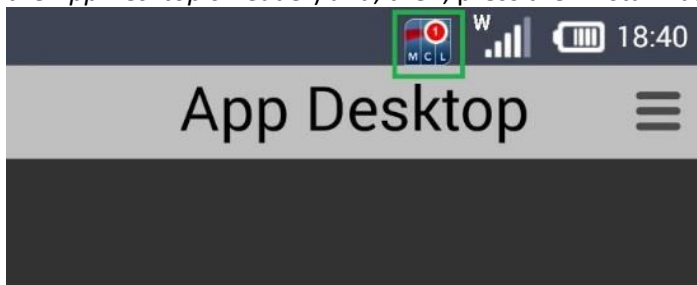


The screenshot shows the 'New Configuration' wizard in the MCL-Mobility Platform. The title bar is 'New Configuration' with a 'Properties' button on the right. Below the title bar is a blue header with a white '1' in a blue square, indicating the first step. The main content area is titled '1 Provide name and version for the new configuration'. It contains three fields: 'Name' with a text input box, 'Version' with a dropdown menu showing '1', and 'Device Type' with a dropdown menu showing '[Others]' and a search icon. Below the 'Device Type' dropdown, there is a button labeled 'Generic-Android (*)'.

Pic 4.0 – How to create a new configuration for "Generic" MCL-Client v4 in MCL-Mobility Platform

3. The available "Generic" MCL software is provided in the 'Firmware' tab, **step (2)**. Select the required "Generic" software version and conclude the *configuration wizard*.
 4. Deploy this configuration – plan a deployment in the "Deployments" submodule for the "Generic" device group.
- Within the *MCL-Mobility Platform*, any devices with an installed "Generic" MCL software MUST be grouped into "Generic" Device Groups, meaning, the intended Device Group MUST be defined for the "[Others]" manufacturer and "Generic-Android (*)" model.

5. The silent install is not available so you must access *App Desktop*, press the *MCL* icon (located on the *App Desktop*'s header) and, then, press the "Install" button to conclude the install.



Pic 4.1 – MCL App Desktop indicating the need of a manual action

5. Barcode Capture Usage

One of the key differences between the "Qualified" and the "Generic" MCL-Client v4 is the fact that in the "Generic" no Manufacturer Specific SDK's are enabled in the software solution. As referenced in the introduction of this document, the "Generic" (MCL-Agent v4 and) MCL-Client v4 will allow you to run any applications developed with MCL-Designer v4 similar to the "Qualified" (MCL-Agent v4 and) MCL-Client v4. However, some of the features typically supported by the Manufacturer's SDK are not supported, the integrated Barcode Scanner being one of these features.

In the "Generic" MCL-Client v4 applications can utilize the scan capabilities of the build in camera, or the integrated Barcode Scanner running in *Scanwedge/Datawedge* or similar mode.

5.1 Android Camera

By default, the "Generic" MCL software uses the *Android* device's camera to capture barcodes. Consider the following to manage this feature when the MCL application reaches a screen with an "Input Barcode" control:

- Call the camera by pressing the *Back* button .
- Press the *Home* button  to close the camera.

5.2 Scanwedge/Datawedge or similar

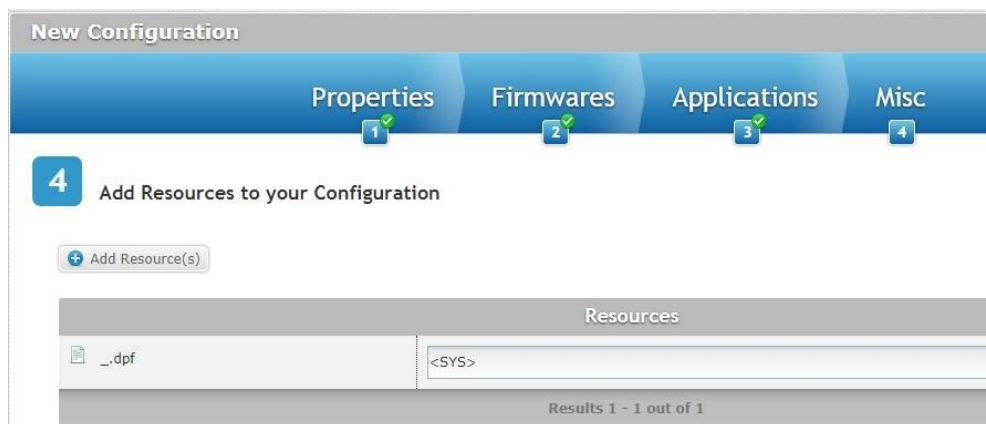
When the *Android* device is equipped with an embedded barcode scanner (laser beam or imager), it is possible to configure the "Generic" MCL software to use this embedded barcode scanner instead of the device's camera.

To do this, you must use a specific configuration file – "*_.dpf*" - (attached to this *Knowledge Base* article) and place it in the MCL installation folder on the device. This folder is the "system" folder.

Depending on the way the devices are implemented it is possible to either use the MCL-Mobility Platform Configuration Deployment Services (**subscription**) or to upload by using MCL-Loader (**license mode**) the file manually to your device.

If your *Android* device is paired with an *MCL-Mobility Platform* account (**subscription**), you must create a configuration and deploy it to the intended device group:

1. Open the "Configurations" submodule and click .
2. Fill in the mandatory options of the *wizard* steps as required and, when you reach the "Misc" step, add the "*_.dpf*" file as a resource.
3. Define the path for the file.
Ex: `/sdcard/Android/data/com.mcltechnologies.android.agent.generic/files/system/`
As an alternative, you can use the <SYS> alias in the path for the *_.dpf* file.



Pic 5.2.3 – Deploy the _dpf file in the “Misc” section. Use the <SYS> alias

4. Conclude the configuration and plan a deployment for it in the “Deployments” submodule.
5. Reboot the device to apply the new configuration.



6. FAQ

Q: Do I need a special license to license the "Generic" device with MCL-Client v4?

A: No, any standard MCL-License V4 or Subscription for the MCL-Mobility Platform will allow you to activate the "Generic" MCL-Client v4.

Q: : If MCL Technologies is bringing a qualified MCL-Client v4 for my device currently installed with the "Generic" MCL-Client v4 can I upgrade my device?

A: Yes, you can upgrade your device with a qualified MCL-Client v4.

Q: Do I need to modify anything in my MCL apps when deploying onto devices installed with "Generic" MCL-Client v4?

A: No, there is no need to modify your MCL apps. However, some settings to the device you want to run the MCL apps on, like Barcode Scanner settings, enabling *Datawedge/Scanwedge*, might be required.

Q: In my qualified MCL setup my users never have to agree/grant the installation of MCL-Agent or MCL-Client v4. Why am I being asked to proceed with the "Generic" MCL-Agent and MCL-Client v4?

A: In the "Generic" MCL software we are not including any manufacturer specific SDK's and we are also not granted access to apply silent install of software, typically provided by manufacturer software signature. In our fully qualified solution there is no need to acknowledge software installation.