TEAM Software
by **WORKWAVE**

Overview and Configuration

TEMPLACMS – MOBILE GATEWAY

Version: 17 (CMS 6.1.0)
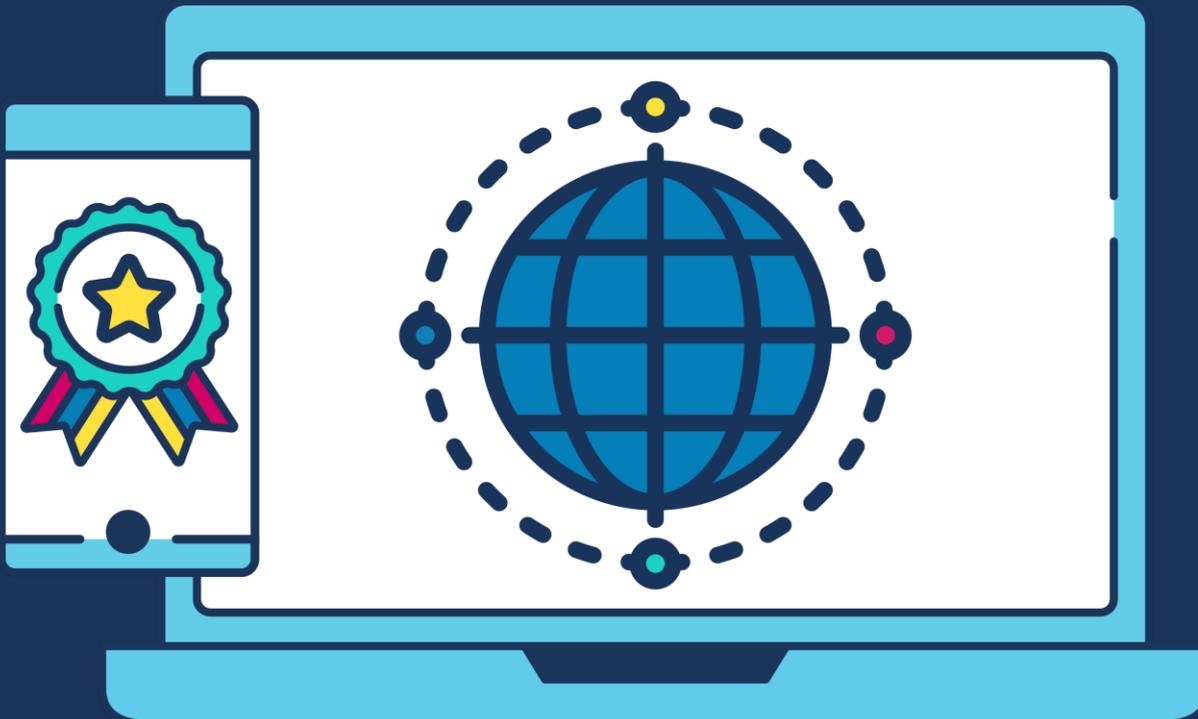
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INTRODUCTION

The **TemplaCMS Mobile Gateway** (TCMS-MG) operates alongside the server-based **TemplaCMS** application and the mobile device based **TemplaCMS Mobile Suite**.

TCMS-MG acts as the communications conduit through which all data is passed between the server and mobile devices. It is a 'web services' application that must be visible both to the server and any mobile devices requiring its use. It can be installed within a client's network or as a hosted service provided by Templa, in which case service charges would apply to the client.

The setting up of a secure connection via HTTPS (with a SSL certificate) and port forwarding is the responsibility of the client's IT department or their external IT support company.

.Net Framework 3.5 should also be installed on the server.

The TCP port will also need to be opened up to allow the mobile devices to communicate to the TCMS-MG from outside your network, this will also be the responsibility of your own IT department.

TCMS-MG is a message relaying application, where messages fall into 3 main categories:

- Registration of devices
- Data messages from the server to a mobile device
- Data messages from a mobile device to a server

Data messages are held on the TCMS-MG server in secured folders as text files, meaning there is no need for MS/SQLServer to be installed. Once a message is confirmed as received by the target mobile device or server, the message will be removed from TCMS-MG. As such the volume of data held within TCMS-MG at any given time will be relatively small. Due to its transitory nature, no data will exist within TCMS-MG that cannot be re-created if necessary, however, a scheduled file system backup should be implemented. This will back up any pending messages that are waiting to be sent to the server or mobile(s), as well as the file structure and therefore the device configuration details.

Interaction between the TemplaCMS server and TCMS-MG will be handled via the TemplaCMS Gateway (an integral component of TemplaCMS), and as such will be automatically triggered as and when necessary. Interaction between the mobile device and TCMS-MG will be handled by the device user deliberately requesting 'synchronisation'. In this way, unnecessary mobile data usage will be avoided, as will potential conflicts where a user is in the process of updating data.

SCHEMATIC
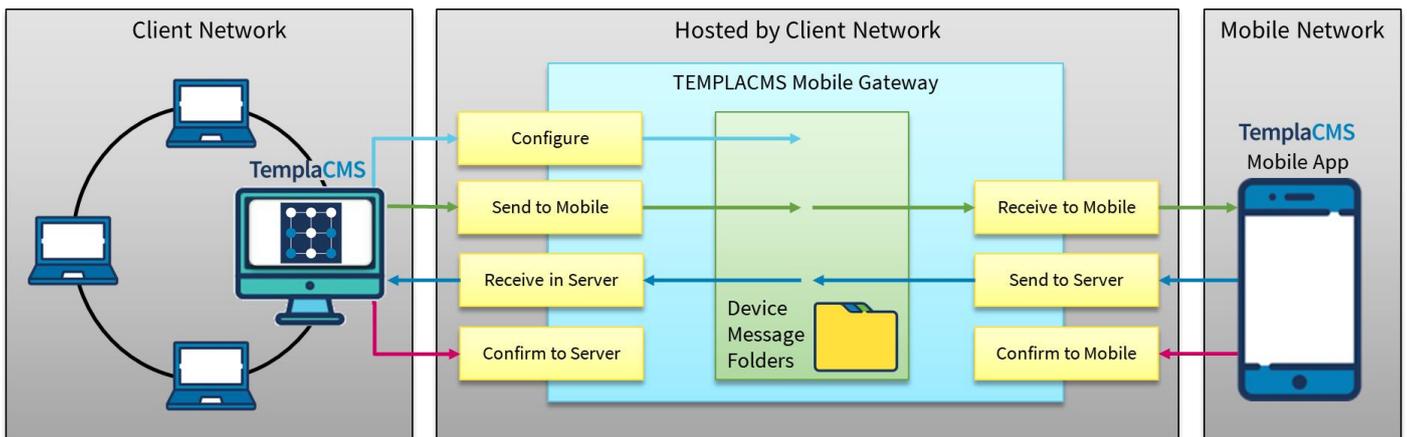
MOBILE DEVICES

When purchasing mobile devices, the following denote the minimum specification:

Apple

iPad 2 or above

Android

Android V6.0 ('Marshmallow') or above, e.g. Samsung Galaxy Tablet

It should be noted that:

- Mobile devices running Android versions before V4.4.2 may still work but it is the client's IT department's responsibility or their external IT support company to subject any such mobile device to pre-trials at the clients' expense
- Mobile devices running their own manufacturer's proprietary version of a web browser should also still work but it is the client's IT department's responsibility or their external IT support company to subject any such mobile device to pre-trials at the clients' expense, e.g. some ASUS mobile devices

Windows

Windows 10 tablets and PC's

IIS CONFIGURATION

For the setup of the TemplaCMS Mobile Gateway you will need to have IIS (Internet Information Services) installed on your chosen server then take the following steps.

1. We now need to move the mobile gateway files to a folder on your server, you will have been sent a folder that contains the 'TemplaCMS Mobile Gateway' web service, locate your 'inetpub' folder (which should have already been setup on your server), add a new folder called 'TemplaCMSMobileGateway' in this folder, then extract all of the 'TemplaCMSMobileGateway' files that have been sent to you into this new folder. Then:
   a. Create a folder name 'TemplaCMSMobileGatewayServers', this can be created anywhere on your server.
   b. Check the 'web.config' (within the mobile gateway files provided) and amend the 'web.config' as necessary to match the new folder path to 'TemplaCMSMobileGatewayServers'.
   c. There may be some issues with permissions when sending out messages to the 'TemplaCMSMobile Gateway' initially; if so, right-click on the newly created 'TemplaCMSMobileGatewayServers' folder and click **Properties**, then select the 'Security' tab and click the **Edit** button, you need to add a new user, so click **Add**, in the next form type in 'NETWORK SERVICE' and click **OK** then on the next screen **Apply**.
2. Open IIS:
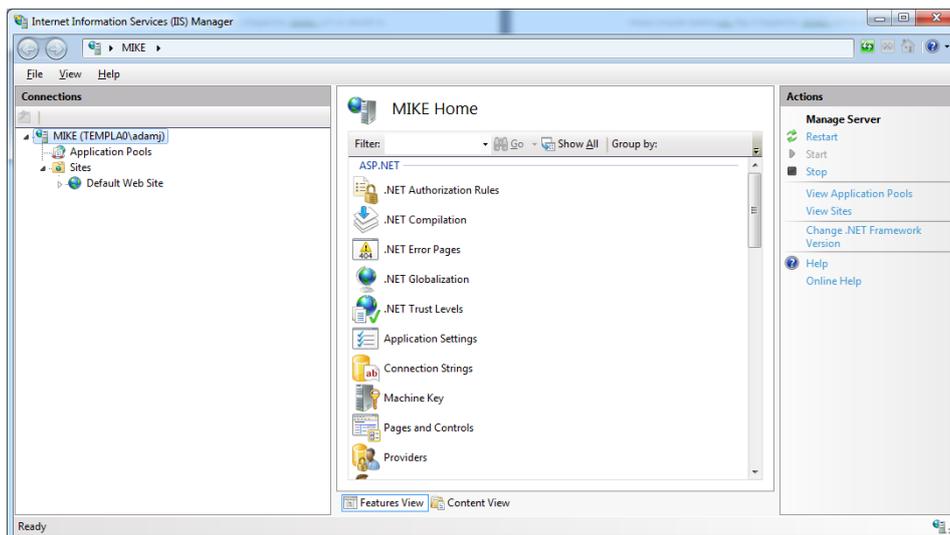
3. Right-click the 'Sites' folder and click 'Add Web Site'
4. You should now set the 'Site name' to 'TemplaCMSMobileGateway', Set the 'Application pool' to 'DefaultAppPool' use the select button to do this.

   The physical path needs to be set to the folder you created in step 1.

We have set up our binding to http port 99 for demonstration purposes, we cannot advise what port should be or support the set up of https connection this is the responsibility of the client's IT department or their external IT support company.
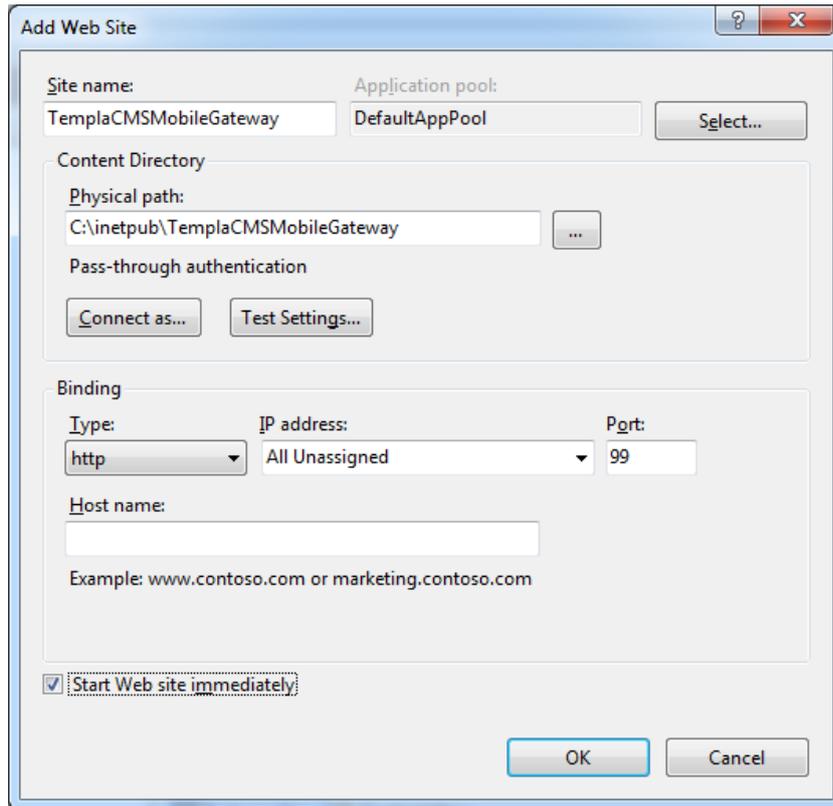
5. Please click 'OK' to complete the setup.
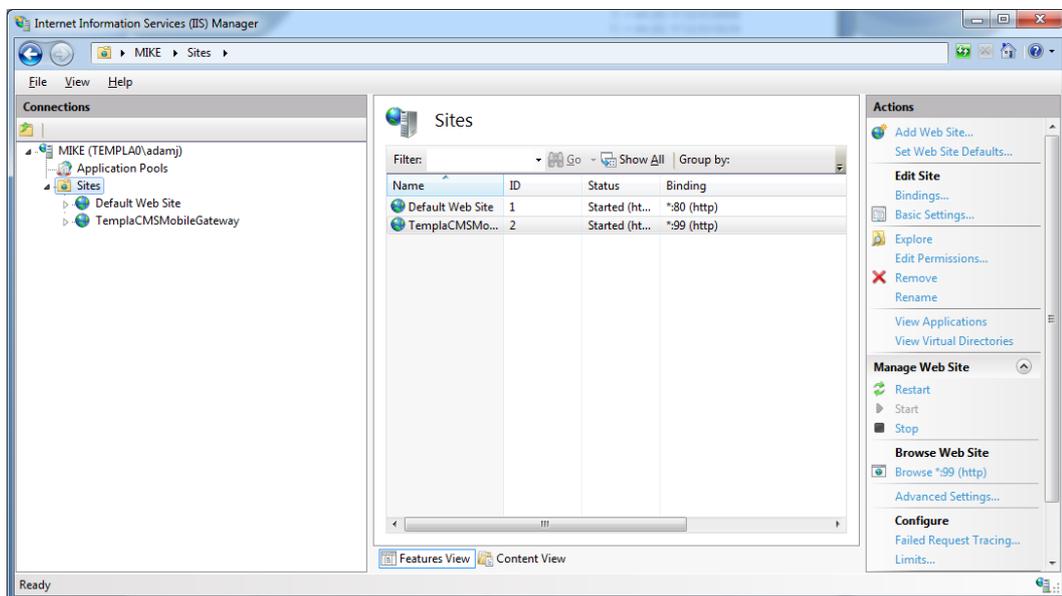
6. To check the setup has worked correctly, highlight your new website in IIS and on the right-hand side of IIS, click 'Browse'.

    The URL is as follows please change it to match your port number http://localhost:99/Service/Receive.asmx
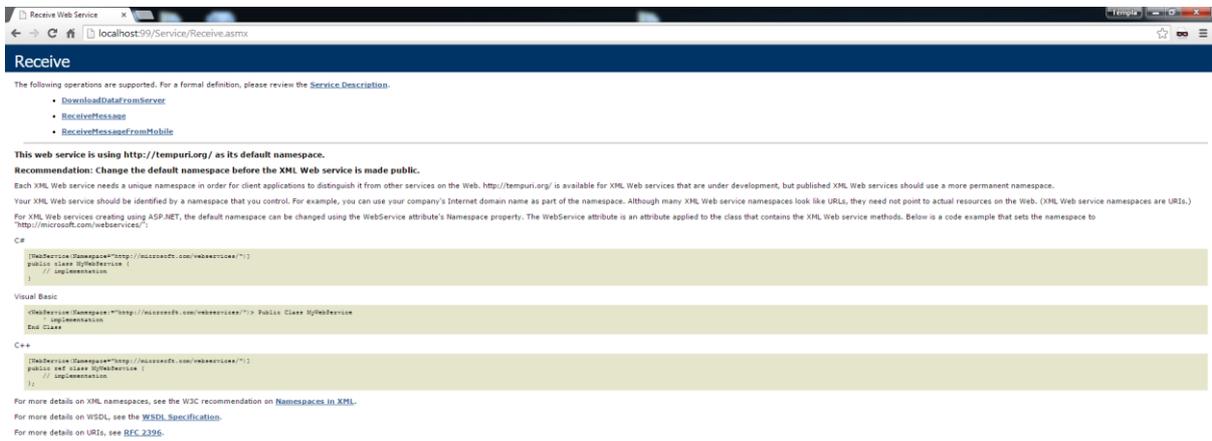
This screen should appear if all is set up correctly.

PLEASE NOTE: the setting up of HTTPS (with a SSL certificate) and port forwarding is the responsibility of the client's IT department or their external IT support company.

TEMPLACMS CONFIGURATION

Configuration of TCMS-MG will be handled from within TemplaCMS. A single TemplaCMS installation can be configured to talk to a single TCMS-MG server.

External Systems

An 'external system' must be defined in order to communicate with TCMS-MG, with the following settings:
- *File format* – this should be set to TemplaCMS-MG
- *Tolerance* – this is not available at this version
- *Transfer type* – this should be set to Web Service
- *Queue number* – the gateway queue that will be used to process mobile information

NB: All other fields can be left blank on the external system for the mobile gateway.

These details, including the required user and password for the web services is usually setup by Templa:
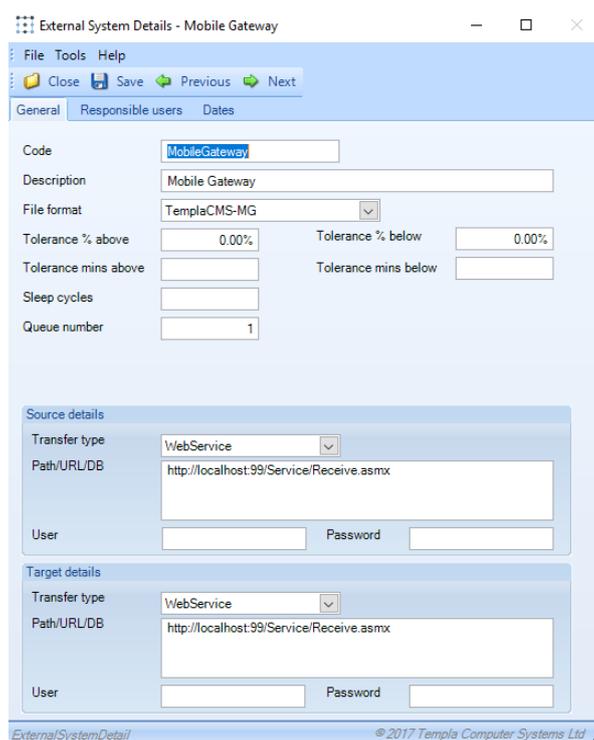
Device Registration

The TemplaCMS Mobile Gateway operates on a principle of relaying messages between registered devices, where a device can be either a mobile or a server. The device registration list allows the user to add a **single** server, and any number of mobiles, where each entry has the following details:

- Code
- Description
- Type, i.e. server or mobile (see below)
- Globally unique identifier (GUID)
- *V1 and V2 – version of the mobile app being used*

The setup of each device type will now be considered.

SERVER DEVICE

The initial configuration and therefore creation of the 'server' device will be carried out by Templa, as the server GUID will need to be specifically accepted into TCMS-MG before any messages can be relayed.

MOBILE DEVICE

Once a server device has been accepted, any number of 'mobile' devices can be added up to the mobile device licence count limit; these can be created by Templa staff or the client. Field staff that use mobile devices are charged a TemplaCMS 'LITE' licence and this count goes towards the overall concurrent user licensing count and control for the whole of TemplaCMS. However, where mobile devices are in use, 'LITE' user licensing must be based on the actual user count. To that end, the agreed 'LITE' user licence count will be separately controlled against a 'Mobile Device' licence count and checked for breach at mobile device configuration time.

When adding a new device, the GUID is generated to uniquely identify it. Both the server and mobile device GUIDs must be manually entered onto the mobile device, as they are used in all communications.

Associated user – this needs to be a valid TemplaCMS user

Note: one mobile device needs to be linked to one TemplaCMS user and thus a mobile device cannot be shared by more than one person.

Enabled – this needs to be checked before the first synchronisation – see below

Include data – these checkboxes control how much data is to be sent to the device:

- *Contract* – contract data is sent to the device, including site information
- *QA* – Quality Audits are sent to the device
- *Workbil* –workbills are sent to the device
- *Stores order requests* – stores orders are sent to the device
- *Staff training* – staff training forms are sent to the device
- *Equipment audit* – equipment audits are sent to the device
- *Service requests* – service requests are sent to the device
- *Data form*–data forms are sent to the device
- *Active HS routes* – HS routes are sent to the device

NB: apart from TemplaCMS contract-level functions (e.g. view budgets, view billing, etc.), TemplaCMS functions are not used on the CMS mobile devices, so the control of what appears is restricted to the associated user's restricted analysis and the above checkboxes.

History weeks – the number of past weeks of information to be kept on the CMS mobile device for each of the data items included.

NB: data sent from the TemplaCMS server will always overwrite data held on a mobile device. Any changes made on the mobile that had not yet been returned to the server would therefore be lost in this process.

Show Stores Order Requests budget comparison? – if 'Stores Order Requests' has been ticked, plus one stores budget has been flagged on System Control for inclusion on the mobile devices, then this can be triggered to be displayed here, plus a further control optionally added to 'Allow Stores Order Request budgets to be exceeded?'

HS: *Allow partial HS route synchronization* – if 'Active HS Routes' is ticked, part completed HS routes can be synced from the device.

Workbills: if 'Workbills' has been ticked, then:

- Pay – this control whether mobile device users can confirm the hours or the 'hours and pay' for employees completing non-subcontractor work bills
- Only my team – this controls whether the mobile device user sees all work bills for all sites that he is authorized too or only those work bills for their team, as would likely be required for mobile teams that use the mobile device

NB: licenses are counted based on the number of distinct associated users, e.g. a user with two device registrations entries (i.e. iPhone and iPad) would only take one license.

MOBILE DEVICE – TEMPLATES

Within various areas of the mobile application, existing forms can be **copied** to create new forms, e.g. QA forms, SO requests, Data forms, Staff Training forms.

However, if a mobile device user needs to be able to generate a form for a site then the relevant templates need to be defined here (or via User Maintenance) against the relevant tabs, e.g. QA templates, etc.

NB: when templates are defined against a mobile device definition, the mobile device definition **must** also be flagged to show "Contracts" as otherwise, the mobile application will not be able to build a list of sites/contracts for selection when a new form is required.

MOBILE DEVICE – OPTIONS
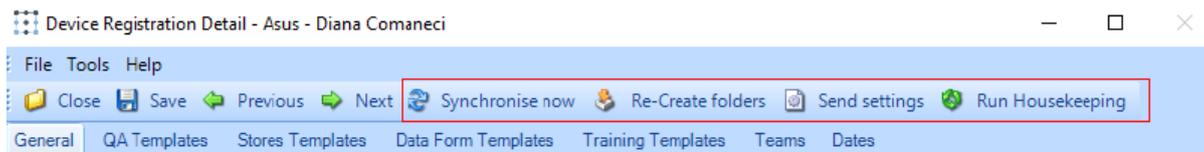
Synchronise now – this should only be used as advised by Templa support, as it will send out a full set of files to the mobile device

Re-Create folders – this should only be used as advised by Templa support, as it will recreate the sub-folders for this mobile device within the TemplaCMS Mobile Gateway

Send settings – this should only be used if the device's settings (outlined above) have been changed but have not been reflected on the mobile device after the device has been synced

Run Housekeeping – an overnight job runs that actions this housekeeping for all mobile devices but this button can be used to send out a list of items that should be on a particular device so that once the device has been synced, any items not on the list will be removed by the mobile application, i.e. this is often used to remove sites or QA's that are no longer assigned to a manager.

Functions

The above 'device registration' options control which areas within the mobile application a mobile device user can access. In addition, mobile device users will only see those sites to which they are authorized via their TemplaCMS user's restricted analysis. However, the TemplaCMS function groups (and thus functions) to which the user is assigned to control their access within TemplaCMS are not used within the mobile application, except for the following functions:

- Contract.TaskView / Contract.TaskAmend
- Contract.BudgetVew / Contract.BudgetAmend
- Contract.WorkbillView / Contract.WorkbillAmend
- Contract.BillingView / Contract.BillingAmend
- Contract.QAView / Contract.QAAmend
- Contract.StoresView / Contract.StoresAmend
- Contract.PropertyView / Contract.PropertyAmend

- Contract.PayrollView / Contract.PayrollAmend
- Employee.Personal

Note: the **Contract.PayrollView** is required for employees to appear on the Mobile device.

Synchronise

Once new devices have been set up, they need to be synchronised. To do this, highlight one or more mobile devices and press the **Synchronise now** button (top-right) as shown below. This will force an initial download (or complete refresh) of the relevant data to be sent to the mobile device via TCMS-MG.

Note: both **Batch** and **Gateway** applications need to be running, as the synchronise process will first use **Batch** to extract the data, then use **Gateway** to forward the data to the **TCMS-MG**; the **Synchronise** button on the mobile device then needs to be used to download these details to the device – see below.

TEMPLACMS MOBILE APPLICATION

Download

The CMS mobile v2 application needs to be downloaded to the mobile device, e.g.:

- Apple – on the iPad access the App Store for Templa Mobile, i.e.:
  https://itunes.apple.com/gb/app/templa-mobile/id1085040956?mt=8
- Androids – on the Android device access the Google Play Store for Templa Mobile, i.e.:
  https://play.google.com/store/apps/details?id=com.TemplaComputerSystems.TemplaMobile
- Windows – on Windows devices go to the Microsoft Store for Templa Mobile, i.e.:
  https://www.microsoft.com/en-gb/p/templa-mobile/9n4x30crk1f2#activetab=pivot:overviewtab

NB: the above links are for version 2

The CMS mobile v3 application needs to be downloaded to the mobile device, e.g.:

- Apple – on the iPad access the App Store for Templa Mobile, i.e.:
  https://apps.apple.com/gb/app/templa-mobile-3/id1474962550
- Androids – on the Android device access the Google Play Store for Templa Mobile, i.e.:
  https://play.google.com/store/apps/details?id=com.TemplaComputerSystems.TemplaMobileV3
- Windows – this version is not currently available from the Microsoft Store

NB: the above links are for version 3

Configuration

When logging on to the TemplaCMS application, when prompted with the question "All data will be deleted from the database, are you sure you wish to continue?" select "Yes" as this will delete the test data downloaded with the application. Then select the 'cog' (top-left) to access the settings screen:

Enter the following values:

- *Server GUID* – as defined in **Device Registration** > **Server Device** (see section 4.2.1)
- *Device GUID* – as defined for this device in **Device Registration** > **Mobile Device** (see section 4.2.2)
- *Service URL* – as defined in **External Systems** (see section 4.1) but suffixed with /ReceiveMessageFromMobile

Note: Templa will normally setup TemplaCMS and provide the necessary GUID's & URL for all devices – these values will need to be emailed to each device so that they can be copied & pasted into the TemplaCMS mobile application rather than manually entered

Detached from TemplaCMS server – if ticked, the test data will be loaded; this needs to be un-ticked in order to allow the allow URL and GUID's to be entered

Image quality – this should be set appropriately as if the quality is set too high, the resulting image file sizes could start taking up too much space on the mobile device

Note: as noted above, one mobile device needs to be linked to one TemplaCMS server, i.e. the same device cannot be linked to a TEST and LIVE (without being re-configured).

Synchronise

Once the device has been setup:

- If not already done (see section 4.3 above) on the main TemplaCMS system, use the 'Device Registration' list on the **System Admin > Gateway** menu, highlight the relevant mobile device and then hit **Synchronise now**
    - **NB:** this only needs to occur once on setting up a new mobile device and a few minutes should be left between this step and the following one
- On the mobile device, the **Synchronise** button at the bottom left (after sliding screen from left to right) needs to be used to download the details to the device
    - **NB:** this needs to occur every time data needs to be synchronized with the main TemplaCMS system, i.e. to download /upload the latest details

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