



# Freeance 7 Installation and Configuration Guide

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# Freeance for Cityworks 7 Installation and Configuration Guide

Freeance 7 Full Install and Upgrade are now available.

## Important Notice

Please ensure you thoroughly review this entire document before proceeding with the installation of Freeance for Cityworks 7 software. Due to various performance enhancements in Freeance 7, there are new mandatory steps in the installation process, including:

- Installation of updated database drivers to improve compatibility with newer database versions.

## 1. Software Requirements

### Required Software

- Cityworks Server version 15.8.7. to 23.11.
- ArcGIS Server version 10.8.1 to 11.4.
- If your Cityworks instance uses Windows Authentication, Anonymous Authentication must also be enabled for your Cityworks instance. Refer to the Cityworks Installation or Update Guide for additional instructions.
- SSO requires Cityworks Server version 15.5 or higher.
- Support for Cityworks 23.1-23.11 must be at Freeance server version 7.5.5 or greater.

### Freeance Server

- Microsoft Windows Server 2010 or higher.
- **Microsoft Visual C++ 2019 Redistributable (x64)** Freeance will NOT run without this installed.
- **IIS 7 or higher with CGI enabled.**
- 4 GB RAM
- 1 GB of available hard drive space
- An installation of Google Chrome to access the Configuration System is recommended.
- Can be installed on your ArcGIS Server or your Cityworks server.

### Compatible Mobile Devices

- Apple iPhone or iPad running iOS 16, 17, 18 or higher
- Android OS compatible device running Android version 13, 14, 15 or higher
- NOTE: Older Phone OS might work but there is no guarantee.

## 2. Database Driver Download & Installation: A Crucial Step Before Freeance Upgrade or New Installation

Freeance Mobile Server software establishes a direct link with your Cityworks database. To ensure a successful connection, it is essential to have Microsoft or Oracle database drivers installed on your Freeance server.

Before proceeding with either upgrading to a newer version of Freeance or performing a fresh installation, it is **absolutely essential** to download and install the necessary database drivers. This step is vital to ensure the proper functioning and compatibility of your system with Freeance.

### Microsoft SQL Server: (versions 2016 through 2022)

- Download and install Microsoft ODBC Driver 17 for SQL Server (x64)  
<https://learn.microsoft.com/en-us/sql/connect/odbc/download-odbc-driver-for-sql-server>.

### Oracle: (version 19c)

1. Download the 19.12 x64 Instant Client (Basic Package).  
<https://www.oracle.com/database/technologies/instant-client/winx64-64-downloads.html>
  - Unzip the packages into a single directory such as C:\oracle\instantclient\_19\_12\_x64
  - Add this directory to the PATH environment variable. If you have multiple versions of Oracle libraries installed, make sure the new directory occurs first in the path.
  - If you plan to use tnsnames.ora file, create a TNS\_ADMIN environment variable and set it to the location of your tnsnames.ora file.
  - Restart your computer.
  - Download and install the Visual Studio 2017 redistributable.

## 3. Freeance Software Download & Installation

To ensure the Freeance application functions as intended, it is essential to update both the server and the device side simultaneously.

### Freeance Server - Full Install

1. Ensure the server on which you are installing Freeance software meets the hardware and software requirements.
2. If you have not done so, **STOP** and ensure the appropriate database drivers are installed (See section #1, Database Driver Download & Installation).

3. Download the Freeance Mobile Server Full Install and save it on your Freeance server- Double-click the file to start the installation process: We recommend running the installation process as administrator.
4. The instance of PHP associated with Freeance was upgraded: Click OK to continue the install. Once completed just hit the close to finish.
5. Enable Database Drivers –go to Windows search menu-type in PHP in the search box and then select Configure Freeance PHP Extensions.

At the bottom of the screen, you'll find an icon labeled "RUN as administrator." Click this icon to proceed. A dialog box will appear, allowing you to select the Freeance Mobile Extension Configuration 2.0.0. To enable support for the database used by your Cityworks installation, check the appropriate box for either **SQL Server** or **Oracle**. Once you've made your selection, click the **SAVE** button to apply the changes.

6. After the installer completes, license the software by following the steps in section #4 "Freeance Software Licensing"

### Freeance Server - Upgrade

1. Ensure the server on which you are installing Freeance software meets the hardware and software requirements. (See section Software Requirements).
2. **Important Reminder: Ensure database driver installation.** If you haven't already completed this step, **STOP** immediately and verify that the appropriate database drivers are installed. For guidance, refer to section #2, "Database Driver Download & Installation."
3. Close any open instances of the Freeance Configuration Systems
4. Download the Freeance Mobile Server Upgrade and save it on your Freeance server.
5. Double-click the file to start the upgrade process. We recommend that you run the upgrade as administrator.
6. After upgrading a Freeance Server, it is good practice to do the following:
7. Clear the cache of the browser used to access the Freeance Configuration System
8. Re-save any active Cityworks App Configs
9. Update the mobile device apps

## 4. Freeance Software Licensing

To operate Freeance Mobile Server software, a license file is necessary. License files are typically processed during business hours, from 8:00 AM to 5:00 PM EST. If you anticipate needing an upgrade beyond these hours or during the weekend and require a license file beforehand, please reach out to us. We are happy to arrange a convenient time that accommodates your schedule.

### Request a License File

- Log into the Freeance Mobile Configuration System by opening a browser and going to <http://localhost/FreeanceMobile/config>  
Click on the Freeance Logo in the middle of the screen to take you to the page to request the license file.

If you want to VIEW the license file info select email option to VIEW only.

- Click the “*Request license file via the internet*” link ONLY use this option to request license file.
- Fill in your Last Name, your Email and click Submit. This will be sent to our support system for license creation.

### License Freeance Server

- Save the license file received from TDC to any location on your Freeance server. Log into the Freeance Mobile Configuration System by opening a browser and going to <http://localhost/FreeanceMobile/config>
- Click the “*License Product*” link
- Click the “Choose File” button.
- Use the Windows File Explorer window to locate and select your license file.
- If the license file was selected, “freeanceserver.lic.txt” should display next to the Choose File button.
- Click the “Submit License File” button
- If the licensing was successful, the login page for the Freeance Mobile Configuration System will display. You may close this window.

## 5. Configuring Freeance

### Configuration System Links

Freeance Mobile Configuration System (6.x): <http://localhost/FreeanceMobile/config>

When configuring a Cityworks 7 app, the 6.x configuration is ONLY accessed once for the following:

1. License the Freeance Mobile Server software
2. Freeance admins manage user and machine access to the configuration systems
3. When Creating or Editing Database Resources make sure to hit the connect button to make sure your database successfully connects.

The 6.x Configuration System functionality will be merged into a single Configuration System in the near future.

Use the 7 Configuration System for all other actions needed to create Freeance for Cityworks 7 apps.

Freeance Mobile Configuration System (7): <https://localhost/FreeanceMobile/cityworksconfig>

## 6. New Feature Configuration & Usage

Certain new features might remain inaccessible until they are set up within the Freeance for Cityworks Configuration System. **Reminder:** If you haven't already, please clear your browser cache within the configuration system to ensure optimal performance.

### **[MOB-2725] Ability to Update a Work Order's Location by Geocoding its Address**

Field users may now set a workorder location (x and y fields) by geocoding the work orders address.

Configuration:

1. Log into the Freeance Mobile for Cityworks Configuration System (7).
2. If you do not already have a geocode service configured, go to the GIS Resources index page and create a new geocode service resource.
3. After creating a new geocode resource, go to the "App Configs" index page and select
4. Under the General tab, locate the Geocode Service setting and select the geocode service created as described in step #2.
5. Click the Save button to save your configuration.

On the Device:

1. Go to the details page of a new or existing work order
2. Click the menu button and select "Geocode X/Y from Address"
3. Select an address from the list to set the work order's location or select the back button to cancel

### **[MOB-2740] Added Config Setting to Prevent Field Users from Downloading Video Attachments**

A new setting was added to the Freeance Cityworks app config that lets the Freeance admin determine if field users can download video attachments.

Configuration:

1. Log into the Freeance Mobile for Cityworks Configuration System (7).
2. Go to the "App Configs" index page and select an existing app configuration or create a new one.
3. Under the General Tab, locate the Allow Video Attachment Downloads setting.
4. Enable the setting to allow video downloads. Disable the setting to prevent video downloads.

### **Explanation of Disabled Setting for Video Attachments**

When this setting is turned off, field users accessing the attachments page for a Cityworks record containing a video attachment will still see thumbnails for any attached video files.

However, if they try to play the video, a message will appear indicating that the video is disabled.

### **[MOB-2742] Attach Assets and Related Objects (i.e., Vertical Assets) via a Barcode Scan**

Field users can now easily attach assets and related objects by simply scanning a bar code. To use this feature, ensure that each asset is equipped with a bar code containing its Entity UID.

Configuration:

1. Log into the Freeance Mobile for Cityworks Configuration System (7).
2. Go to the *App Configs* index page and select an existing app configuration or create a new one.
3. Under the *Work Order* tab, locate the *Add Assets by UID* setting.
4. Enable the setting to let field users attach assets to work order by manually typing in its ID or scanning the assets barcode.
5. To enable this setting for Inspections, enable the setting under the Inspections tab.

On the Device:

1. Go to the update page for a work order or inspection.
2. Go to the Assets setting and tap the [+] button.
3. Tap By Asset ID in the menu.
4. Set the desired values for the Entity Group, Entity Table Type and Entity Type dropdowns.
5. Tap the barcode button [|||] to bring up the camera interface.
6. Point the camera at the assets barcode.
7. When the barcode is recognized, the camera interface will disappear and the Asset ID box will contain the scanned Entity UID value.
8. If the asset is located, its attributes will display in the Attributes section.
9. Click the save button (checkmark) to attach the entity to the Cityworks record and return to the update page.

## 7. New Improvements and Usage

### **[MOB-2718] Ability to Open Unrecognized Cityworks Record Attachments in Other Apps**

Freeance Mobile for Cityworks 7 introduces the capability to handle Cityworks attachments of unknown types. If a Cityworks attachment cannot be displayed directly within Freeance Mobile, the app provides the option to open the file using another application on your device. Additionally, it offers the convenience of saving the file directly to your device.

Configuration: N/A

**On the Device Instructions:**

1. Go to the attachments page for a Cityworks record that contains an attachment that can't be viewed natively, such as a Word document or spreadsheet.
2. Select the attachment to view it
3. In the dialog that appears, use the options available to choose view or save the file.  
Note: the dialog that appears in this step may differ based on your mobile device platform and the version of its OS.

**[MOB-2727] Add Compatibility for Hyperlinks that Require Windows Authentication**

In the past, users encountered difficulties accessing content protected by Windows Authentication within our app. They were unable to view the content because there was no option to enter their username and password. Now, with the updated Freeance Mobile for Cityworks, users are prompted to provide their credentials, enabling them to access and view the protected content seamlessly.

Configuration: N/A

**On the Device Instructions:**

1. Go to any area in the app where you can follow a hyperlink, such as the comments section of a Cityworks record or an attribute display template.
2. Click the hyperlink in order to view its contents
3. If the hyperlink requires Windows Authentication, the app will display a prompt that allows the user to enter their credentials

**[MOB-2730] Hyperlinks in Cityworks Record Comments are Now Clickable**

Field users now have the ability to click and view the contents of hyperlinks that appear in Cityworks record comments.

Configuration System: N/A

**[MOB-2788] Added Support for Cityworks Oauth2/SSO Logins**

Users can now sign into Freeance Mobile for Cityworks using any Oauth2 clients configured in Cityworks. This feature requires Cityworks Server version 15.5 or later.

- If your Cityworks instance uses Windows Authentication, Anonymous Authentication must also be enabled for your Cityworks instance. Refer to the Cityworks Installation or Update Guide for additional instructions.

ESRI ArcGIS Online or Portal login with Windows Authentication is supported in Freeance 7. An authentication Matrix is available at <https://www.freeance.com/wp-content/uploads/2023/12/Freeance-Cityworks-Auth-Matrix-Nov-2023.pdf>

A separate Freeance SSO manual is available.

Configuration System Setup: N/A.

### **[MOB-2783] Material Transfer to Actual UI/Cancel Button**

Improved UI action sheet menu option responsible for transferring the estimated material cost to an actual material cost is now labeled “Transfer to Actual Cost”.

Added a cancel button so the user does not have to close the App in order to cancel the material transfer.

### **[MOB-2724] Work Order Line Items Do Not Default to the Work Order’s Set Contract**

When adding line items to a work order, the 'Contract' field now automatically set its value to match the contract that is associated with the entire work order record

On the Device Instructions:

1. Go to the Comments section of a Cityworks record
2. Click a hyperlink in the comments
3. The content reference by the hyperlink displays in the apps browser

### **[MOB-2776] Support for Standard Inspections**

The Freeance for Cityworks Standard Inspection feature allows field users to create, view, and update four different standard inspection templates from the Cityworks environment. Standard inspection template support includes Hydrant, Hydrant Flow Test, Manhole, and Valve standard inspections. Like the Cityworks AMS application, standard inspections can only be created from one or more assets attached to a work order record, and existing standard inspection records can only be found as related records to a work order.

Once a Hydrant, Hydrant Flow Test, Manhole, or Valve standard inspection template has been configured for use in the Cityworks Designer application, these standard inspection types and templates will appear in the Freeance for Cityworks app. There are two standard inspection features that require some additional setup in order to enable: manhole standard inspection attachments and manhole pipe SOE field population. *We have an easy setup manual for this feature. Please contact us and we will send you what you need to get started.*

### **[MOB-2786] NASSCO Condition Rating for Manholes**

We’ve added support for NASSCO Condition Rating for Manholes. Major elements are:

Use of NASSCO Pipeline Assessment Values for manholes directly from Cityworks AMS.

Drop down values of NASSCO Pipeline Assessment Values for manholes can be used for input on mobile devices in the field.

Automated calculations of manhole conditions including the Manhole Rating Index (MRI) based on input values.

Results for the MRI are displayable on mobile devices.

No configuration in the Freeance Mobile Configuration System is required to start using the Freeance for Cityworks NASSCO feature. Instead, Freeance for Cityworks has created a SQL script that can be run against your Cityworks database to automatically setup the NASSCO custom field data in a designated Cityworks environment. The Cityworks database should be backed up prior to running this SQL script, and can be executed against a Cityworks database with the help of your Cityworks database system admin. *Please contact us if you would like to setup this feature. We will need to send you the script with instructions.*

### **[MOB-2847] Child Inspection from an Inspection**

Freeance Mobile for Cityworks 7.6 adds support for adding child inspections from an inspection record.

Configuration: N/A

On the Device Instructions:

1. Navigate to an existing inspection.
2. Tap on the chevron button on the "Related Records" row.
3. Tap on the "+" on the right side of the page header and select the "New Inspection" menu option.
4. Finish creating the child inspection record.

### **[MOB-2856] Support for Cityworks Queries**

In addition to supporting Cityworks Saved Searches, Cityworks Queries are now also supported alongside Saved Searches. If a Cityworks user has permissions to view a Cityworks Query, it will appear on the Inspections, Service Requests, Work Orders, or Inbox page in Freeance for Cityworks.

Configuration: N/A

On the Device Instructions:

1. Using a Cityworks user that has view permissions for one or more Cityworks Queries, and with Cityworks Queries that enable for use on Mobile in the Query Manager in Cityworks Respond, navigate to the Inspections, Service Request, Work Orders, or Inbox page.No
2. If using the Inbox, use the "Inbox - Configure" page to enable one of the Cityworks Queries available to the user.
3. Tap on the Cityworks Query under the "Saved Searches" section on one of the above-mentioned pages to execute the Cityworks Query.

4. From the "Results" page of the Cityworks Query, a preview of each resulting record is shown, each record can be navigated to, and you are able to plot the results using the "Plot" button just as you can with Saved Searches.

### **[MOB-2862] Hide the Entity Group, Category, Entity Table Type, Entity Type and Template Fields**

Within the Freeance Configuration System, a Freeance Admin is able to hide the "Entity Group", "Category", "Entity Table Type", "Entity Type", and "Template" fields from the "Update Work Order" page in Freeance for Cityworks.

Configuration:

1. Navigate to "App Configurations" by clicking the "App Configs" menu button on the left side of the Freeance Configuration System.
2. Navigate to an existing app config in the "App Configurations" list, or begin creating a new app configuration.
3. Click on the "Work Order" tab while editing the app config.
4. Scroll until the "Update Form" section is visible on the page.
5. Click on the checkbox on the "Entity Group", "Category", "Entity Table Type", "Entity Type", and/or "Template" rows to select this field to be hidden on the "Update Work Order" page in Freeance for Cityworks.
6. Save your changes to the app configuration.

On the Device Instructions: N/A

### **[MOB-2863] Enable entity related fields on the Create WO page to auto-populate based on the selected asset**

Assets attached on the "Create Work Order" page will result in some fields on the page attempting to auto-populate based on the attached asset's entity type. This includes the "Entity Group", "Entity Type", "Template", "Address", and "Location" fields

Configuration: N/A

On the Device Instructions:

1. Tap on the "Work Orders" button from the main menu.
2. Tap on the "+" on the right side of the page header to navigate to the "Create Work Order" page.
3. Scroll until the "Assets" section is visible on the page.
4. Tap on the "+" on the "Assets" section header, and select and attach an asset from the map.
5. Examine fields on the page to see that they were auto-populated based on the entity type of the attached asset.

**[MOB-2864] Add a barcode scan button on the map that would allow a map feature to be selected via barcode scan, and then be attached to a new or existing work order.**

On the map toolbar, a barcode button has been added that allows for performing a map feature selection with a barcode. The barcode value must match the entity UID of the map feature for it to be selected successfully.

Configuration: N/A

On the Device Instructions:

1. Navigate to the Freeance for Cityworks map.
2. Tap on the barcode scan button in the map toolbar.
3. Scan a barcode that matches the Entity UID of a map feature available to the GIS resource configured in the Freeance Configuration System.

**[MOB-2905] Mobile support for the Esri Utility Network Data Model.**

Freeance 7.6 comes with out-of-the-box mobile support for Esri Utility Network Model data.

## 8. Troubleshooting

Below is a list of common issue you may run into directly after a Freeance Mobile Server upgrade.

**“I do not see the new feature settings in the configuration system.”**

- Clear the cache of the browser used to access the Configuration System, then reload the Configuration System. In most Windows browser, including chrome, you can access the browser’s clear cache settings with the shortcut *control-shift-del*.

**“My database connections no longer work.”**

- Ensure the correct version of the new drivers are present on your system.
- Ensure the database extension is enabled in Freeance by running the Configure Freeance PHP Extensions utility  
(c:\FreeanceMobileHome\Util\ExtConfig\FreeanceMobileExtConfig.exe)

**“I cannot log into the Freeance Configuration System.”**

- Log into the 6.x Configuration System to ensure the Freeance Server software is properly licensed.

**“My mobile app times out or does not connect to the Freeance server when trying to get list of configurations on the Options page.”**

- Log into the 6.x Configuration System to ensure the Freeance Server software is properly licensed.

**“I cannot log into the Freeance Mobile for Cityworks mobile app.”**

- Ensure you can use AMS via a browser on a desktop to log into Cityworks without error.
- Log into the 6.x Configuration System to ensure the Freeance Server software is properly licensed.
- Ensure your Cityworks Database Resource works properly.
  1. Log into the 7 Configuration System
  2. Go to “Cityworks Resources” and view the properties of the Cityworks resource used by your app config.
  3. Note the name of the Database Resource.
  4. Log into the 6.x Configuration System, go to “Database Resources” and view the properties for the Database Resource noted in step #3.
  5. Test the connection.
  6. If the connection worked before upgrading but fails now, see *Troubleshooting: My database connections no longer work after upgrading*.

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