

Troubleshooting

CIVIL CONSTRUCTION

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WorksManager

Project Setup Issues	3
Unable to Add Devices to a WorksManager Project	3
Issues Uploading Boundary File to WorksManager	3
Device Status Message/Map Position Issues	4
No Status Message/Position on Map (Siteworks)	4
No Status Message/Position on Map (Earthworks)	4
No Status Message/Position on Map (GCS900)	5
Device Info Updating for Account but not a Project (All Devices)	6
Issues Syncing Devices/Designs	7
Designs Uploaded to WM Don't Sync to Devices (All Devices)	7
Login/Credentials Error on Device (all devices)	8
Issues Syncing After Adding Device to Another Account (all devices)	9
"Connect to server failed" When Syncing (GCS900)	9
Device Syncs, but Files not Present on Machine (Earthworks)	10
Project Remains on Device After Sync (Earthworks)	11
VCL Design not Published to GCS900 Devices (GCS900)	11
Red Triangle/Exclamation Design Error (VCL designs)	12
Remote Assist Issues with Siteworks	14
Unable to Remote Into Device from WorksManager (Siteworks)	14
Error Code 11 when installing Remote Assist (Siteworks)	17
Error Code 12 when installing Remote Assist (Siteworks)	17
Error Code 17 when installing Remote Assist (Siteworks)	18
Remote Assist not Functioning When Status Icon is Green (Siteworks)	18
Remote Assist Issues with GCS900	20
Unable to Remote Into Device from WorksManager (GCS900)	20
Remote Assist Issues with Earthworks	22

<https://community.trimble.com>

Unable to Remote Into Device from WorksManager (Earthworks)	22
Operator View not Displayed (Earthworks)	22
Remote Into Device Takes a Very Long Time to Load (Earthworks)	23
Able to remote into Earthworks, but WebUI displays "ErrorUnknown"	24
Getting Help and Support	25
Additional Resources	25

Project Setup Issues

Unable to Add Devices to a WorksManager Project

When creating a project and going to add devices, devices are not listed and/or there is not a way to add them.

Cause:

Devices must first be added to the account and claimed before they can be added to projects.

Solution:

1. Add your devices to the account.
2. Enter the credentials on the devices and test the connections to make sure they connect successfully.
3. Open the devices menu in the WorksManager account and if the devices still show as unclaimed, click the "recheck" button to claim them if they haven't automatically claimed yet.
4. These devices can now be added to your project.

Issues Uploading Boundary File to WorksManager

When adding a boundary to a WorksManager project by uploading a DXF file with boundary linework, WorksManager crashes or throws an error message that there are no boundaries in the uploaded file.

Cause:

Boundary lines exported from TBC may not be closed, which prevents WorksManager from accepting them as a valid boundary.

Solution:

Create a polygon or linestring and export that as a DXF rather than using the boundary command in TBC. If that doesn't work, run the 'ConverttoLinestring' command in TBC to convert the polyline/polygon to a linestring, then export that as a DXF.

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3

Device Status Message/Map Position Issues

No Status Message/Position on Map (Siteworks)

A data collector running Siteworks was added and claimed to a WorksManager account/project, but has not reported a status message and its position is not visible on the map in WorksManager.

Cause:

Trimble Identity (TID) switched to version 4 on September 1st, 2021. Older Siteworks versions (1.40 and prior) do not support TIDv4 which is required in order to report a status message and the device position. Siteworks will also not report/send a full status message to WorksManager unless Siteworks has a valid GNSS position within a boundary for a project within the account.

Solution 1:

Update to Siteworks version 1.41 or newer, ensure 'Enable WorksManager' is toggled on under system settings (System Information>About), and verify the device can sync to the account.

Solution 2:

Ensure the device has a valid GNSS position within a WorksManager project boundary. If you don't have a receiver handy, enable emulation by pressing CTRL+O on your keyboard and toggling on emulated devices, then connect to an emulated rover and tap on the plan view to emulate a GNSS rover position. Initiate a sync to WorksManager, and within 5 minutes the last reported time for the device in WorksManager should update.

No Status Message/Position on Map (Earthworks)

An EC520 running Earthworks was added and claimed to a WorksManager account/project, but has not reported a status message and its position is not visible on the map in WorksManager.

Cause:

Earthworks does not report/send a full status message to WorksManager unless it has a valid GNSS position within a boundary for a project within the account.

Solution 1:

In the Earthworks TechUI, ensure 'WorksManager Reporting' is toggled on in the sync settings (Connectivity > Connected Community), and that the device can successfully sync to the account.

Solution 2:

Ensure the device has a valid GNSS position within a WorksManager project boundary. Initiate a sync to WorksManager, and within 5 minutes the last reported time for the device in WorksManager should update.

No Status Message/Position on Map (GCS900)

A machine running GCS900 was added and claimed to a WorksManager account/project, but has not reported a status message and its position is not visible on the map in WorksManager.

Cause:

This can be caused by the device not uploading .tag files to TCC, or by the .tag files not reporting a position within a WorksManager project boundary. WorksManager processes status and position information from .tag files for GCS900 instead of receiving status messages directly, so without .tag files it will not be able to provide that information.

Solution 1:

- 1.) Put the CB460 in Manager Mode by pressing OK and power at the same time and holding OK until the splash screen appears.
- 2.) Go to Configuration>Mapping/Recording Settings.
- 3.) The 'Data recording for office' setting should be located within this settings menu. Ensure this is set to 'Yes'. If it is set to 'Yes when mapping', then WorksManager will only update the device status and position when the machine meets the mapping requirements. If set to 'Yes', then the machine will update its status even when not actively mapping.

Solution 2:

If the mapping/data recording settings are correct and the status continues to not update, ensure the machine has a position within the WorksManager project boundary, is connected to the internet, and can synchronize .tag files to TCC successfully without errors.

Device Info Updating for Account but not a Project (All Devices)

The device icon, active design, and/or last reported time for a device is not updating within a project despite already having updated when viewing from the account devices screen.

Cause:

This will happen if the last reported position by the device was outside the project boundary; when looking at a device within an individual project, WorksManager will not update all the information pulled from a status message if the position of the machine or data collector is not within the boundary. The device icon, active design, and last reported time for a device will only update within a project from status messages that are uploaded while the device is within the boundary, even if WorksManager has already processed this information in the accounts screen.

Solution:

Obtain a position within the project boundary while connected to the internet for the status to update. For Siteworks devices, an emulated GNSS position within the boundary will function as a workaround if the device cannot be on site. For GCS900 devices, a sync will need to be initiated if auto sync is not turned on.

Issues Syncing Devices/Designs

Designs Uploaded to WM Don't Sync to Devices (All Devices)

A design (VCL or otherwise) was created in TBC and published to WorksManager using the built in workflow to publish VCL designs, however devices are not able to sync the design.

Cause:

This can be caused by the design not being published to those devices in WM, the device not being in the WM project group in TCC, or the files not being successfully pushed to TCC from WorksManager after the design was uploaded/converted.

Solution 1:

Check the design in WorksManager and make sure the published devices list includes the device not getting the design.

Solution 2:

Ensure the device name on the device itself exactly matches the name which was set for it in WorksManager, otherwise you may have two separate folders for the device in TCC; one folder created by the device, and one created by WorksManager. This will cause the device to look for data in the wrong folder which can prevent it from seeing any designs from WorksManager even if there is not an issue with WM pushing the data to TCC.

Note: WorksManager will look for an "Asset Nickname" field in the status message for Earthworks and GCS900, this field is generated using the machine name set on the device itself. If the machine name reported in the status message is different from the name set in WorksManager, WorksManager will update the device name to match. WorksManager does not allow users to manually add multiple devices with the same name, however this process can cause there to be multiple devices with the same name in an account/project, which for GCS900 can cause synchronization issues and may result in a "Internal System Error" message when WorksManager attempts to send design data to TCC. Because of this, always make sure that the machine name set on the control box matches what you want it to be in WorksManager, otherwise it may change once the machine uploads a status.

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7

Login/Credentials Error on Device (all devices)

An error message appears after entering and saving or testing the credentials in the Connected Community settings in the Earthworks WebUI or the WorksManager settings in Siteworks on a data collector, indicating that the login credentials are incorrect.

Cause:

This can be the result of either the device being added to WM or TCC incorrectly, or the organization and/or password being entered incorrectly on the device.

Solution 1:

Make sure the device name (Machine ID if using Earthworks) matches between the device and WorksManager, and that there are no spaces before or after the device name.

Solution 2:

Make sure the device password set when adding the device in WorksManager (not your personal login password) is being entered properly on the device and there are no leading or trailing spaces. You can also try changing the device password in WorksManager or TCC and entering the updated password on the device to verify it is correct.

Solution 3:

1. Check that the organization has been entered correctly: the account name in WM is not always the same as the organization name which needs to be entered on the machine.
2. Go to the WorksManager account, and use the "Short Organization" name listed under account details rather than the WorksManager account name. This is the same as the organization name in TCC.
3. Check that there are no spaces before or after the organization when entering it onto the device.

Solution 4:

Check that the serial number in WorksManager matches the device serial number (the numbers after EC520 or EC520-W next to device ID in the Connected Community settings of the Earthworks WebUI, or the string below "Device ID" after the device type identifier (Tablet, TSC3, Mobile, etc.) in Siteworks).

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Solution 5:

Make sure WorksManager is enabled - in Siteworks this can be done by going to Settings > System Info > About, and making sure the "Enable WorksManager" toggle is checked.

Solution 6:

Earthworks only: There is a bug in the UI which causes the password field to be cleared out if credentials are tested before the save button is pressed. If everything has been entered correctly and you have ruled out other issues, re-enter your credentials then press "Save" *before* testing the connection.

Issues Syncing After Adding Device to Another Account (all devices)

A device was already added and claimed in a WorksManager account, however after adding the device to another account it was no longer able to sync to the old account.

Cause:

Devices can only be added to one WorksManager account at a time. The device is likely not syncing because it automatically switches to an unlicensed status if added and claimed on a different account.

Solution:

1. Remove the device(s) from the second account.
2. Change the device status in the original WorksManager account to Licensed.
3. Re-enter the original account credentials on the device.
4. Sync the device and reclaim it.

"Connect to server failed" When Syncing (GCS900)

The following message appears when attempting to sync a GCS900 control box to WorksManager or TCC: "Connect to server failed"

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Cause:

Usually this is caused by GCS900 getting hung up on one file, which causes the entire sync to fail though some data may still sync before the failure. GCS900 will display the file names as they are being synced and the last file that GCS is trying to sync prior to the sync failing is generally the problem file.

Solution 1:

1. Identify the problem file by noting down the last file displayed before sync failure.
2. Delete the file from the control box.
3. The sync should now work.
4. If it doesn't work, delete the file from both the CB4x0 and TCC then try again.

Solution 2:

If solution 1 does not work or the problem file cannot be identified:

1. Back up the control box.
2. Delete all the designs on the machine.
3. Reload each design onto the machine one by one, resyncing each time to check that it works.
4. If a specific design causes the issue after reloading it onto the CB4x0, delete or rename it.

Device Syncs, but Files not Present on Machine (Earthworks)

There is not a credentials error and the projects are shown for selection in the WebUI, but after syncing the designs/projects are not present in Earthworks for selection.

Cause:

In EW 2.4 and older: when the connection drops during a sync, the sync does not resume when the connection is restored and instead fails. This can often be caused by a subpar internet connection.

Solution 1:

Try lowering the amount of data in a sync by deleting unnecessary data from the device and TCC/WM, and try syncing projects one by one rather than all at once.

Solution 2:

Upgrade to Earthworks 2.5 or newer; In EW 2.5 this should be fixed so that the sync resumes as expected when interrupted. Unless otherwise guided not to do so we strongly recommend upgrading to the latest available version.

Project Remains on Device After Sync (Earthworks)

An Earthworks device was removed from a project, however after syncing the project remains on the device.

Cause:

When a device is removed from a project in WorksManager, Office Data will be removed from the EC520 on the next sync but Field Data on the EC520 will remain. These remnants can cause Earthworks to retain the project in the Projects list in both the WebUI and Operator UI.

Solution:

Delete the project from the Earthworks WebUI under Operation>File Management>Projects

VCL Design not Published to GCS900 Devices (GCS900)

A VCL design was published to WorksManager and can be pushed to other devices, however the design does not migrate to TCC for GCS900 devices and thus cannot be synced down by machines running GCS.

Cause:

This can happen if the design contains an alignment and the user is using TBC 5.21. When a VCL is published from this older TBC version, WorksManager has an issue which prevents it from creating an SVD/SVL. It can also happen on newer versions of TBC if the model types 'None' or 'Alignment' are used when creating the design in TBC. A user-defined model type can also fail if no surface is included.

Solution 1:

Update to the newest possible version of TBC, and republish the design from the newer TBC version with either a 'Surface', 'Road Surface', '3D Linework', 'Material Layer', or 'User-Defined' model type.

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11

Make sure a surface is included in the model - selecting a road surface model while no surface is in the TBC project will cause the design conversion to fail even if an alignment is selected.

Solution 2:

Upload a separate version of the design to WorksManager manually using an SVD & SVL just for the GCS devices.

Solution 3:

Remove the alignment from the design if it is not needed, or publish a separate copy for the GCS devices without an alignment included if they do not require it.

Red Triangle/Exclamation Design Error (VCL designs)

A VCL design was published to WorksManager and displayed the error message “Publish to devices failed. Error: Conversion error. Design conversion from vcl to native device format failed. Reach out to support.”

Cause:

When converting VCL designs to legacy file types, WorksManager uses a server based instance of TBC to handle the conversion. This process utilizes essentially the same code as the ‘WM Field Data to USB Drive’ command in TBC, so any errors seen when using this command in a local instance of the latest version of TBC would also occur during the design conversion process in WorksManager. When converting design files, WorksManager is attempting to convert the design for all device types, so even if a certain device type is not present in the WM project the design conversion can still fail for other device types and cause the design to not be published to any devices.

Solution 1:

Run the “Project Cleanup” command in TBC, this can sometimes resolve data errors which prevent TBC from successfully converting designs.

Solution 2:

Try turning on/off the “VCL Cleanup” setting in TBC (found in the properties pane when the project is selected in project explorer) before publishing the design to rule it out as a potential contributor to the issue.

Solution 3:

If the design does not need to be published to GCS900 devices and there is no surface in the design, try changing the model type to one not supported by GCS900 (for example, setting the model type to “None” then adding the design data to the design map). As long as the conversion isn’t failing for other device types as well, the error message in WorksManager will change to “Publish to devices failed for GCS devices” however it should now successfully push design files to other device types.

Solution 4:

If you cannot resolve the design conversion error and do not specifically require a VCL, export the design data in legacy file formats and upload them to WorksManager from the browser as a workaround.

Remote Assist Issues with Siteworks

Unable to Remote Into Device from WorksManager (Siteworks)

When attempting to remote into a device, the remote assist button does not work, with the icon either grey or yellow.

Cause:

This can be caused by the remote assist service not being installed on the device, the device not being registered with the remote.it service (this will typically result in a yellow icon), a firewall or antivirus interfering with the connection, the device having a poor internet connection/not being connected to the internet, or by the device not starting its remote assist services successfully.

Solution 1:

Open Trimble Installation Manager on the device, and under Controller>Siteworks, ensure "Trimble Remote Assist" is checked under "Tools", then click or tap "Install" to install the remote assist service.

Solution 2:

It is possible the device is not registered with the Remote.it service. This registration process occurs during the installation of Remote Assist from TIM, the following can be done to attempt to register the device properly in case this registration process failed during the initial installation:

1. Uninstall "Trimble Remote Assist" and "TightVNC" through Windows Settings>Apps & Features.
2. Delete the following folders:
 - a. C:\Program Files\remoteit-bin
 - b. C:\Program Files\Trimble Remote Assist
3. Connect to a mobile hotspot from a cellular device or use the built-in cellular capabilities of the controller if available.
4. Reinstall Remote Assist using Trimble Installation Manager while connected to the hotspot.
5. Reboot the device, and reconnect to the cellular network once the device has booted.
6. You may need to wait several minutes for WorksManager to update the first time you check, especially if a new registration was created. In rare cases this can take an hour or two, but typically it should update after just a few minutes.

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14

7. If it does not, repeat the prior steps exactly but include deletion of the following folder when completing step 2: C:\ProgramData\remoteit

Solution 3:

Run the following commands in order using command prompt (run as administrator) and provide screenshots of the results (this will check for connection issues to Remote.it):

1. `cd C:\Program Files\remoteit-bin`
2. `connectd.exe -n`

Below is an example of the result given when UDP connections to the internet are **working properly**:

```
C:\Program Files\remoteit\bin>connectd.exe -n
Connectd built Apr 20 2019 at 16:38:16 Now Starting Up
Version 4.6 - (c)2019 remot3.it, Inc. All Rights Reserved
Built with NATPMP BCASTER MALLOC_POOL RESOLVE BIGBUF pool=524288
WIN32 Version
alloc pool

Running Network Diagnostics
-----
Checking if DNS works ... .[OK]
Checking TCP connectivity to remote.it...<oip=10.0.0.172> [OK]
Checking UDP connectivity to remote.it...
Send to 69.64.90.20:5959 [] [mip=71.193.149.125] [oport=59612
mport=59612] [preserve port]
Send to 69.64.90.20:5960 [] [mip=71.193.149.125] [oport=59612
mport=59612] [no remap] [preserve port]
Send to 69.64.90.128:5961 [] [mip=71.193.149.125] [oport=59612
mport=59612] [no remap] [preserve port different IP] [OK]
Checking if NAT-PMP Router is found...[NOT FOUND]

This router preserves ports, this is optimal.
```

```
This router doesn't remap new connections to new ports.  
Static Pool Free  
Endian : Little  
SHA1 test:  
  passed.  
RC4 test:  
  passed  
XXTEA test:  
  passed.  
Looks compatible.
```

Below is an example of a result given when UDP connections to the internet are **not working**:

```
Running Network Diagnostics  
-----  
Checking if DNS works ... .[OK]  
Checking TCP connectivity to remote.it...<oip=10.7.64.248> [OK]  
Checking UDP connectivity to remote.it...  
Send to 69.64.90.20:5959 []  
Send to 69.64.90.20:5959 [] [no response rc=0] [FAIL]
```

Remote.it needs UDP connectivity to work. Possible causes of this problem:

- a.) UDP is firewalled, check your firewall configuration.
- b.) It is possible that your location only allows TCP connections via a proxy, remote.it will not currently work in these cases.
- c.) UDP is blocked, contact the network provider.

Other useful troubleshooting commands:

First: CD C:\Program Files\Trimble Remote Assist

After the above is entered, you can get more information using the following commands:

Remoteit status (shows the status of the remoteit services)

Remoteit netdiag (similar to the connectd.exe -n command but less detailed)

Remoteit info (general installation info)

Remoteit check (checks installation integrity, should show "OK")

Remoteit scan (shows open ports)

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Error Code 11 when installing Remote Assist (Siteworks)

When attempting to install Remote Assist via TIM, an error message “The tunnel service hasn't been configured properly. Error Code=11” is thrown and the install fails to complete.

Cause:

This is caused by a bug in the installer causing the remote assist agent (remoteit.exe) to not be started properly, the Siteworks team will be updating the installer to fix it. This typically occurs when attempting to upgrade an existing remote assist installation.

Solution:

Until the installer is updated to fix this error, you can resolve the issue using the following steps:

1. Open the start menu, type in CMD to navigate to the command prompt, and run it as administrator.
2. Paste the following: `CD C:\Program Files\Trimble Remote Assist`
3. Press enter
4. Paste the following: `remoteit agent uninstall`
5. Press enter
6. Paste the following: `remoteit agent install`
7. Press enter
8. Attempt to install Remote Assist from TIM again

Error Code 12 when installing Remote Assist (Siteworks)

When attempting to install Remote Assist via TIM, an error message “The tunnel service hasn't been configured properly. Error Code=12” is thrown and the install fails to complete.

Cause:

This is caused by TightVNC already being installed on the machine before Trimble Remote Assist is installed, and that version being newer than what the Trimble Remote assist package uses. This can also be caused even after a successful installation of Trimble Remote Assist if another software package installs TightVNC and overwrites the existing TightVNC installation from Remote Assist.

Solution:

Uninstall Trimble Remote Assist, uninstall all installed versions of TightVNC, and reinstall Remote Assist.

Error Code 17 when installing Remote Assist (Siteworks)

When attempting to install Remote Assist via TIM, an error message “The installation has encountered an error. ErrorCode=17” is thrown and the install fails to complete.

Cause:

This can be caused by a corrupted registration file.

Solution:

1. Uninstall “Trimble Remote Assist” and “TightVNC” through Windows Settings>Apps & Features.
2. Delete the following folders:
 - a. C:\Program Files\remoteit-bin
 - b. C:\Program Files\Trimble Remote Assist
 - c. C:\ProgramData\remoteit
3. Connect to a mobile hotspot from a cellular device or use the built-in cellular capabilities of the controller if available.
4. Reinstall Remote Assist using Trimble Installation Manager while connected to cellular.

Remote Assist not Functioning When Status Icon is Green (Siteworks)

When attempting to remote into a device, the remote assist button is green and the device shows as active, however remote assist does not function and clicking the icon either does nothing, or it throws an error when opening the remote window.

Cause:

This can be caused by the remoteit daemon on the device not sending its status to the server; For example, the device status can take up to 17 minutes to switch from online to offline if the device shuts down unexpectedly or suddenly loses power; the device sends a message that it is going offline when it is shut down or restarted in software and an unexpected power loss or different shutdown mechanism will prevent this message from being sent out.

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18

Solution:

Newer versions of the Trimble Remote Assist installation package have updated executables which should reduce active/inactive reporting latency, though there may still be up to a 5 minute delay in some cases.

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19

Remote Assist Issues with GCS900

Unable to Remote Into Device from WorksManager (GCS900)

When attempting to remote into a GCS900 machine, the remote assist button does not work even though the machine is running and connected to the internet.

Cause:

Remote assist is only supported on machines with GCS900 firmware v13.17 or newer, which have SNM941 modems running firmware v1.11.1 or newer. When running supported hardware, remote connection failures are often the result of the service not being started or being started improperly from the control box. A Cat Network Manager can also interfere with remote assist.

Solution 1:

Update GCS900 to 13.17 or newer if you haven't already, and make sure the machine is using an SNM941; an SNM940 will not function properly with Remote Assist.

Solution 2:

Check that the SNM941 modem is on firmware version 1.11.1 or newer and if it isn't, make sure to update to the latest firmware.

Solution 3:

Ensure you do not have a Cat Network Manager between GCS900 and the modem.

Solution 4:

You must restart the remote assistant feature after every session.

1. Once you have connected to the CB4x0 and disconnected the operator must press the stop button in the remote assistant.
2. Close and reopen the remote assistant screen on the CB460.
3. A few seconds later press the start button on the remote assistant screen.
4. It can take up to 5 minutes for the remote access status to change after you have pressed the start button.

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20

Note:

If this is the first RA session, the device must remain on and connected to the internet for ~15 minutes after pressing start in order to successfully register.

Note:

Do not go into the Remote Assistant menu on the control box until the Cell Icon is displayed on the status bar. Some information is sent when you enter the Remote Assist menu, not just when the Start Button is pressed, and entering the Remote Assist menu without an internet connection will prevent this information from being sent properly.

Remote Assist Issues with Earthworks

Unable to Remote Into Device from WorksManager (Earthworks)

When attempting to remote into a device, the remote assist button is greyed out.

Cause:

This can be caused by the Remote Access toggle being disabled in the Connected Community settings in the WebUI, the device not being registered with the remote.it service, the device having a poor internet connection/not being connected to the internet, or the device being unable to contact the remoteit service.

Solution 1:

1. Open the Earthworks WebUI.
2. Navigate to Connectivity>Connected Community
3. Ensure the device is able to sync to TCC/WM.
4. Make sure the 'Remote Access' toggle is turned on/green.

Solution 2:

Update Earthworks to the latest available version, and ensure your modem is on the latest available firmware. There was a common library issue which prevented some machines from contacting the remoteit service, if your machine is on an older version of Earthworks and remote assist never becomes available despite the device actively reporting to WM, upgrading to EW 2.6 or newer will likely fix this.

Operator View not Displayed (Earthworks)

When remotated into an Earthworks device, nothing is displayed after selecting the operator view.

Cause:

Remote Assist with Earthworks does not display the operator view by default, instead it must be started from within the TechUI after remotating in. When a technician attempts to connect to the operator view, the machine operator receives a prompt on the Earthworks display in the cab requesting access. The operator must accept this prompt in order for the operator view to be

displayed remotely. If the prompt is rejected or ignored, the operator view will not be displayed.

Solution 1:

Inform the operator of this prompt and the need for them to accept it, then attempt to connect to the operator view again. If frequent remote access to the operator view is required and the technician cannot rely on the operator to accept the prompt, have the machine operator select the "don't show again" checkbox in the access request prompt. Once this is checked, the operator will no longer have to accept the prompt with future connection attempts.

Remote Into Device Takes a Very Long Time to Load (Earthworks)

When attempting to remote into an Earthworks or CAT Grade device, the EC520 remote connection screen displays a loading icon for several minutes (up to 10 or 15 minutes in some cases) before displaying the WebUI login screen. Other issues may be experienced as well such as dropped remote sessions and slow design downloads.

Cause:

When a CAT Network Manager is installed on a CAT machine and SNM941 cell traffic is routed through it, that can often cause this issue even when the cell connection is otherwise good. Data speeds will be limited to 1/10 the typical speed for EMI mitigation purposes which will result in a relatively slow maximum level of performance and interfere in any bandwidth heavy applications.

Solution:

From Trimble's side, the Earthworks WebUI web app is downloaded over the cell connection every time a remote session is started which can exacerbate remote assist login slowness over poor cell connections; there are plans to have the web app downloaded from a separate CDN in the future to speed up this process.

A change was made in SNM941 firmware version 2.1.0 which should allow the modem to work with the Network manager at full speed, so upgrading to the latest available firmware version if on a version older than 2.1.0 may improve this.

Able to remote into Earthworks, but WebUI displays “ErrorUnknown”

When remoting into an Earthworks machine, the WebUI login screen displays

*TODO*Generic_Message_ErrorUnknown

*TODO*OnboardDevices_Messages_RestartRequired

*TODO*MeasureUp_Button_Restart

Cause

This can be caused by the machine running an SNM940 modem with outdated firmware.

Solution:

If running an SNM940, the minimum compatible firmware is 7.3.2.

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24

Getting Help and Support

If issues are still present after following this guide, please gather and provide the following information (where applicable) before contacting support:

- A detailed description of the problem, with screenshots.
- The WorksManager Account/Organization Name.
- The names of the affected projects, designs, and other data.
- The serial number of any individually affected/problem devices.
- A zsnap from any affected machines.
- The full SCS900 Data and Diagnostic Data folders from any affected data collectors.
- If the issue relates to remote assist with Siteworks, the following additional information may be helpful:
 1. A copy of the following folder:
C:\Users\<username>\AppData\Local\TrimbleRemoteAssist\Diagnostics
 2. A copy of the following folder:
C:\ProgramData\remoteit
 3. Run the following commands in order using command prompt and provide screenshots of the results for steps b and c:
 - a. a.) cd C:\Program files\remoteit-bin
 - b. b.) connectd.exe -n
 - c. c.) demuxer.exe -n

Additional Resources

- [WorksManager Community Page](#)
- [WorksManager Help](#)
- [TBC Field Data Exchange Community Page](#)
- [Additional WM & TBC>WM Training Content](#)
- [VCL Design Best Practices & Troubleshooting](#)

<https://community.trimble.com>