# CA UIM

## Worldwide Support Team

## CA UIM Installation Guide
## for
## CABI External (Windows)



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# Overview

There are two deployment options for CA Business Intelligence JasperReports Server (CABI Server). This guide explains how to deploy an external or shared CABI on a Windows system.

Deploying the cabi_external probe in UIM allows a separate CABI Server instance to communicate with CA UIM and allows the instance to be used by other CA Agile Central products. Select this deployment type if you want to use a CABI Server instance that is **NOT** deployed on a CA UIM robot. If you want to share the CABI Server instance with multiple CA Agile Operations products, see Unified Dashboards and Reporting for Infrastructure Management.

## CABI Installation Steps - Summary

1. Install CABI Server (a.k.a. JasperReports Server) if it is not already installed…
2. Deploy and configure the cabi_external probe
3. Configure CABI (JasperReports) Server for use with CA UIM

## Environment

This section describes the installation environment. The install procedure was tested using the software versions listed below. To download the required software, go to http://support.nimsoft.com and login.

- ☐ **CA UIM v8.51** (unless UIM is already installed)
- ☐ **cabi_external** probe (**version 3.30**). Note that the cabi_external probe can be installed on a Windows, Linux, or Solaris system. Check the probe support matrix for supported OSes at:

  https://docops.ca.com/ca-unified-infrastructure-management/8-5-1/en/files/479577188/485688544/6/1537337301663/Platform_Support_Availability.pdf

- ☐ On Windows, for the cabi_external probe to be deployed to the robot/hub the following dependencies/packages must be downloaded/exist in the archive:

    - o **robot** v7.80 or higher
    - o **java_jre** v1.80
    - o **uim_core_dashboards_pack** v2.40
    - o  (Note that ump_cabi 3.30 requires the use of UIM v9.x). ump_cabi 3.20 can be used with UIM v8.5.1
    - o **uim_cabi_health_report_pack** v1.3.0
    - o **uim_unified_reporter_pack** v1.02
    - o **uim_cabi_mcs_dashboards_pack** v1.00
- ☐ **ump_cabi** v3.2
- ☐ **CABI** (JasperReports server v6.43) – downloadable from support.ca.com as described in this document

*Report packages:*

☐ Dashboard packages: uim_<*technology_name*>_dashboards_pack

The dashboard packages are only required if you need to view data for the specific technology. For example, the **uim_aws_dashboards_pack** dashboard package is only required if you must view data for your AWS environment. For a list of available dashboard packages, see CA Business Intelligence with CA UIM

## Hardware Requirements

The CABI Server (CA Business Intelligence JasperReports Server) software must be installed on a system with the following minimum resources:

- CPU: 2.8-GHz quad-core processor
- **Memory: 8GB RAM (On Windows you need more than 8 GB, e.g., 12-16 GB for PostgreSQL),** otherwise the install will hang at 13% and never finish. Note that the defaults for CABI's application and database server are Tomcat and PostgreSQL.
- Disk Size: 100 GB

## Environment Requirements

The process of installing CABI external needs the following environment:

- A server instance with the CA Business Intelligence JasperReports Server for Unified Dashboards and Reporting for Infrastructure Management (CABI Server) software. This instance is **NOT** a CA UIM hub or robot

**Download required CABI Server software**:

https://docops.ca.com/ca-unified-infrastructure-management/8-5-1/en/installing-ca-uim/ca-business-intelligence-with-ca-uim/installing-and-upgrading-ca-business-intelligence-jasperreports-server-with-ca-uim/install-or-upgrade-for-an-external-ca-business-intelligence-jasperreports-server#InstallorUpgradeforanExternalCABusinessIntelligenceJasperReportsServer-SoftwareRequirements

The ISO file for the External CABI installation must be downloaded from http://support.ca.com

-> SignIn and click on -> 'Download  Management' from the CA Support Menu items
- >Then Search for "CA Unified Infrastructure Management On-Premise (Nimsoft / UIM)"
-> Click on "Unified Infrastructure Management"
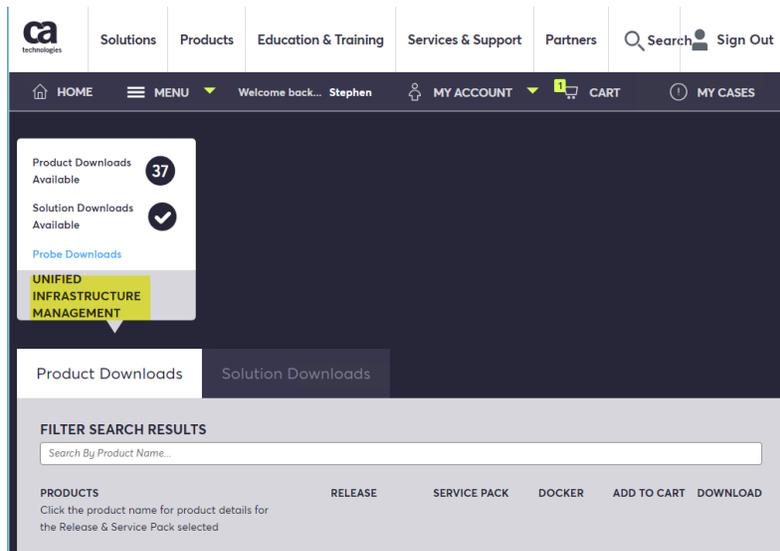
Scroll down and click on the link for:
"CA Unified Infrastructure Management Server Installer for POC MULTI-PLATFORM"
for the appropriate version of UIM, e.g., 8.5.1.

Then choose-> **CA BUSINESS INTELLIGENCE JASPERREPORT SERVER FOR UNIFIED DASHBOARDS AND REPORTING FOR INFRASTRUCTURE MANAGEMENT_WIN.ZIP GEN06095150M.zip**
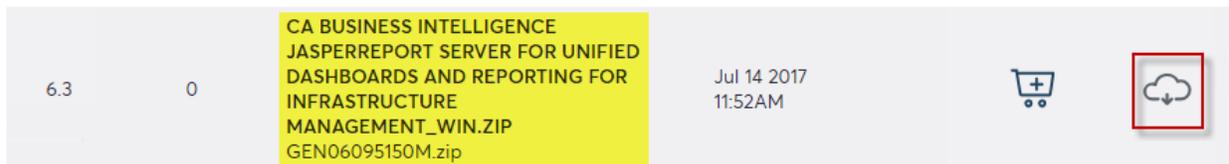


Click on the Cloud icon to download the software.

If it does not start downloading within 30 seconds, try choosing 'Add to Cart.' You may have to use the 'Checkout' to be able to download the file if there is any problem with the download. You may have to wait a bit until the package is ready to be downloaded. A window should prompt you to Save the file.
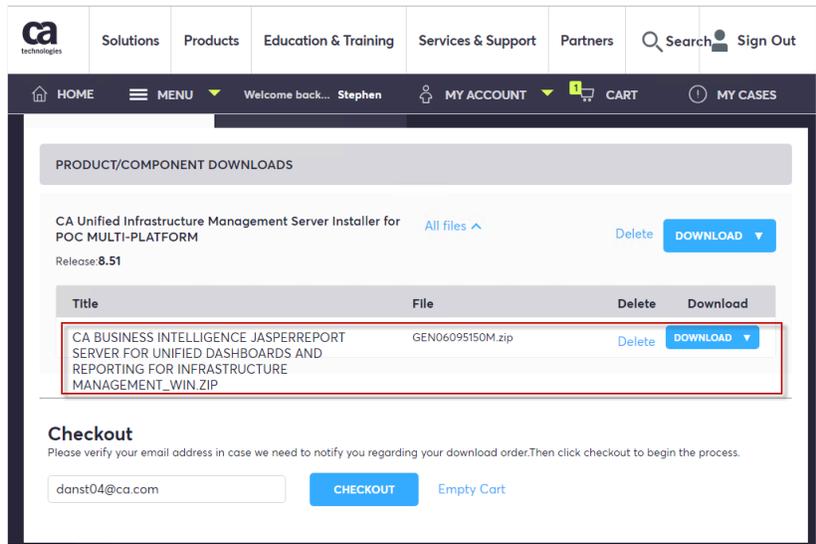
The software package may take some time to process but when it is ready you will see a prompt to Save the file.

Check Cart History:
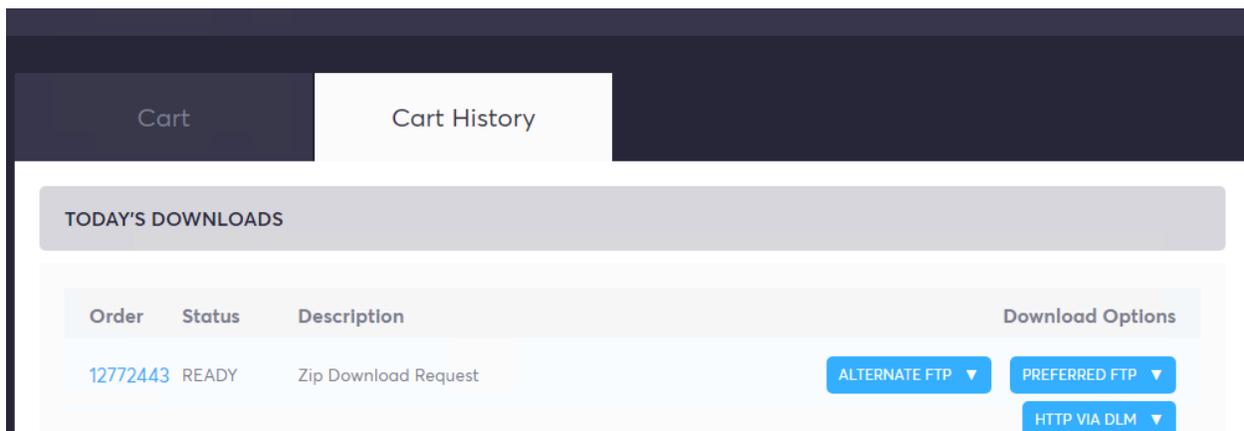


The cabi.zip file should be copied over to the CABI server. UNZIP/extract the files from the CABI.ZIP to a folder.

# CABI EXTERNAL Setup Instructions

## CABI Server installation prerequisites (GUI-based installs)
Before installing, please review the prerequisites at the following url:

## 1. Install the CABI Server (JasperReports server)
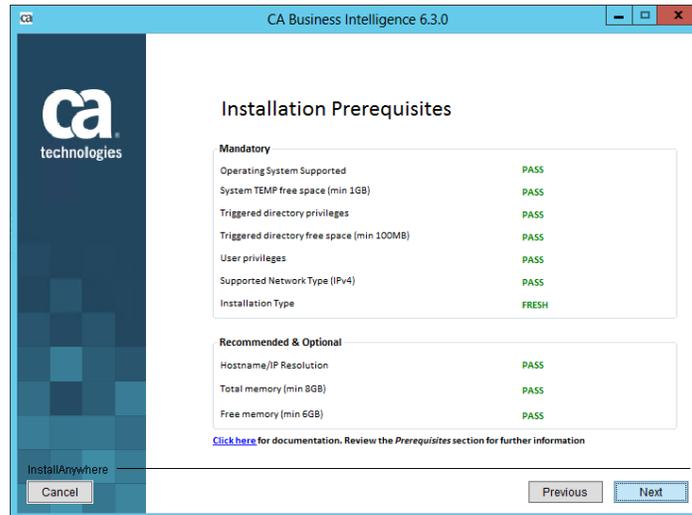


After the files are extracted to a folder, rat-click *setup.bat* and choose 'Run as administrator'
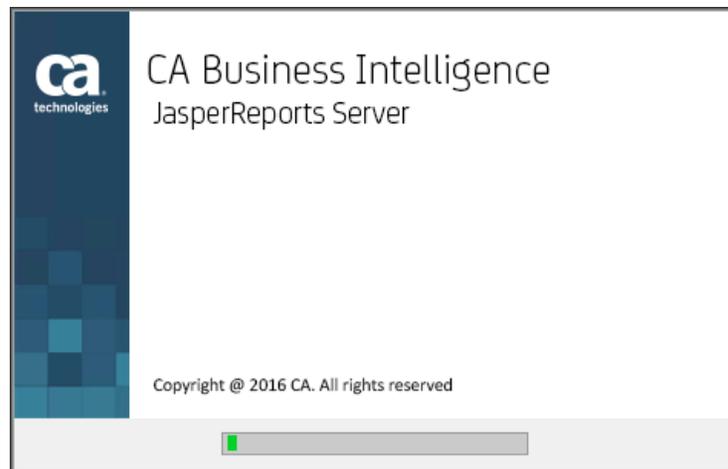


An *InstallAnywhere* window should display. Installation prerequisites will be checked. To avoid any access/permissions issues or exceptions during the install, you should be logged in to the machine and run the install using the built-in Windows Administrator user/account. Note that you may have to disable Windows UAC and reboot if you encounter install problems early in the CABI server install.

The software installation includes:

- An embedded Tomcat web server (default/recommended option)
- An embedded PostgreSQL database (default/recommended option)
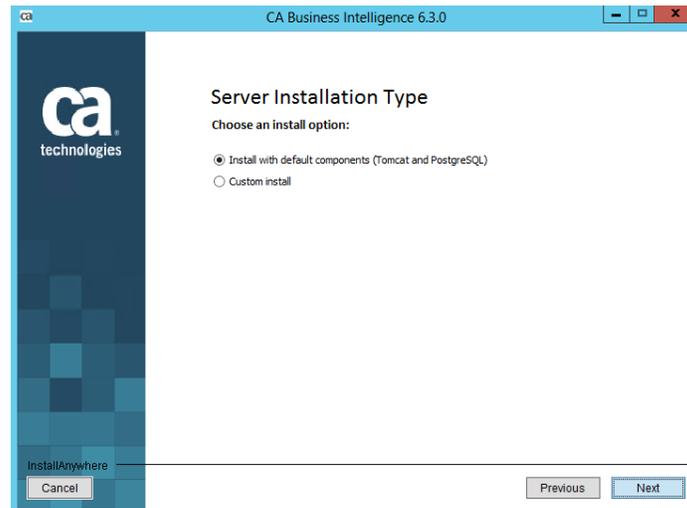


When the installation completes, click Done:
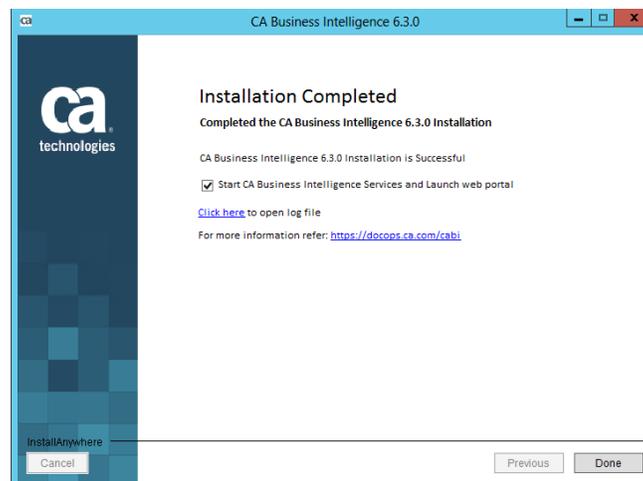


To confirm that the installation was successful, in the
*CABusinessIntelligence_install_<date/time>.log*, you can check the end of the log for the
message, e.g.,

```
Finish:
2018-09-19 11:33:21 DEBUG ReadProperties:64 - Property Value: copying directories
2018-09-19 11:33:21 INFO  ComponentInstall:509 -
C:\Users\Administrator\Desktop\GEN06095150M\ca_install\GUI_Install\Windows\Disk1\InstD
ata\VM\../../../../..
2018-09-19 11:33:21 DEBUG CopyDirectory:51 - Source directory:
C:\Users\Administrator\Desktop\GEN06095150M\ca_install\GUI_Install\Windows\Disk1\InstD
ata\VM\..\..\..\..\..\..\apache-ant
2018-09-19 11:33:21 DEBUG CopyDirectory:52 - Destination directory: C:\Program
Files\CA\SC\CA Business Intelligence\apache-ant
    [echo] Post installation completed successfully
```

**BUILD SUCCESSFUL**

You can verify the installation by hitting the CABI Server URL. For example:

> http://localhost:8080/jasperserver-pro

> or

> http://<cabi_server_hostname>:8080/jasperserver-pro

If the CABI server is not accessible make sure you check and start the PostgreSQL and Tomcat services if they are not started
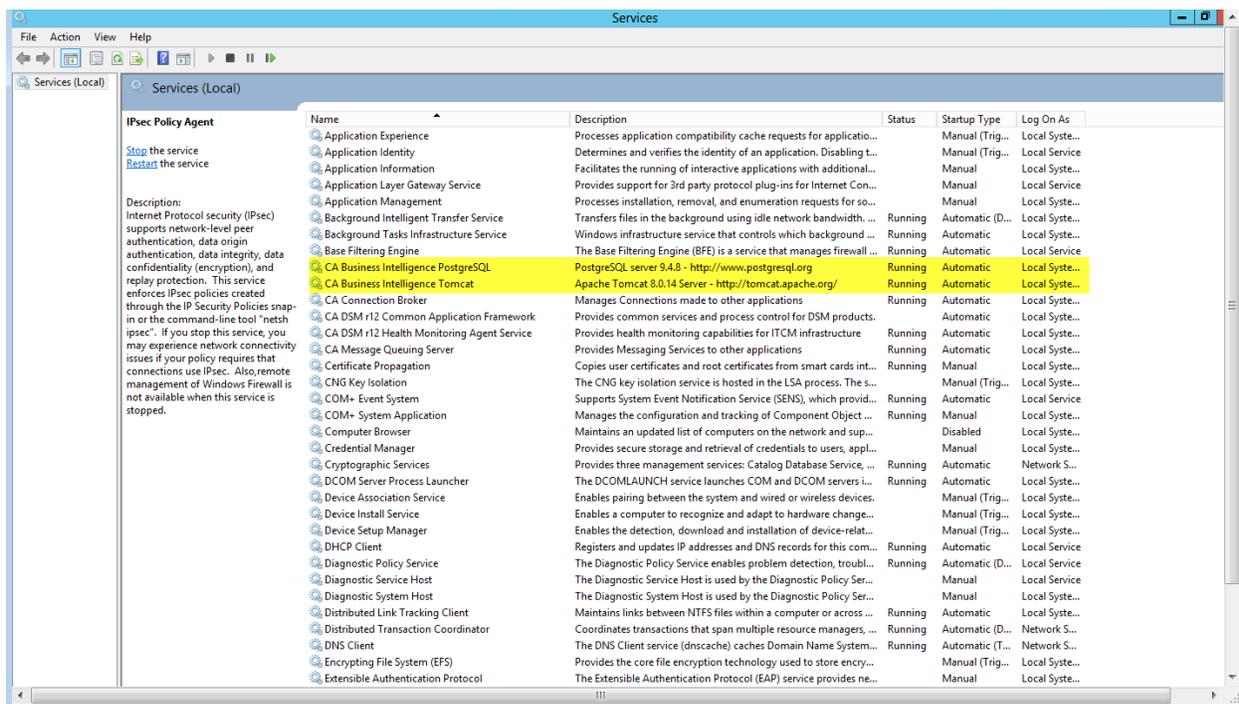
Once the services are started and you hit the url, the browser opens the CABI server page:
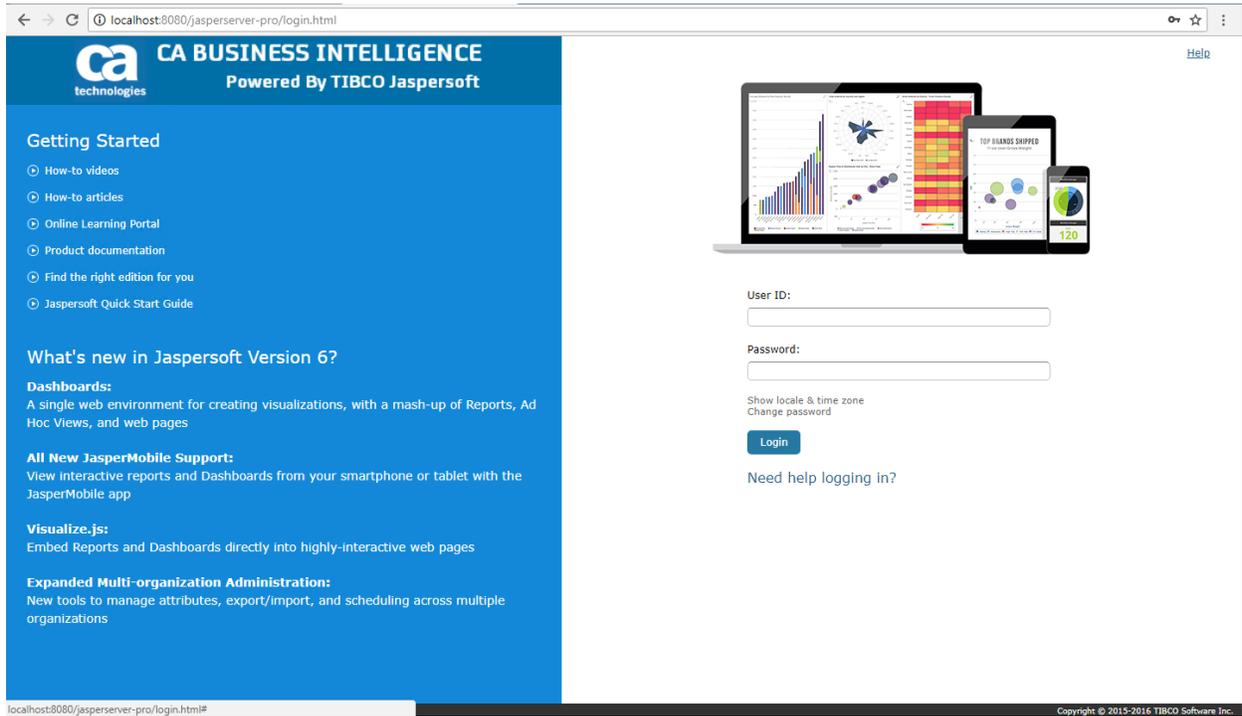


You can then login with the default userid and password.

Userid: superuser
Password: superuser
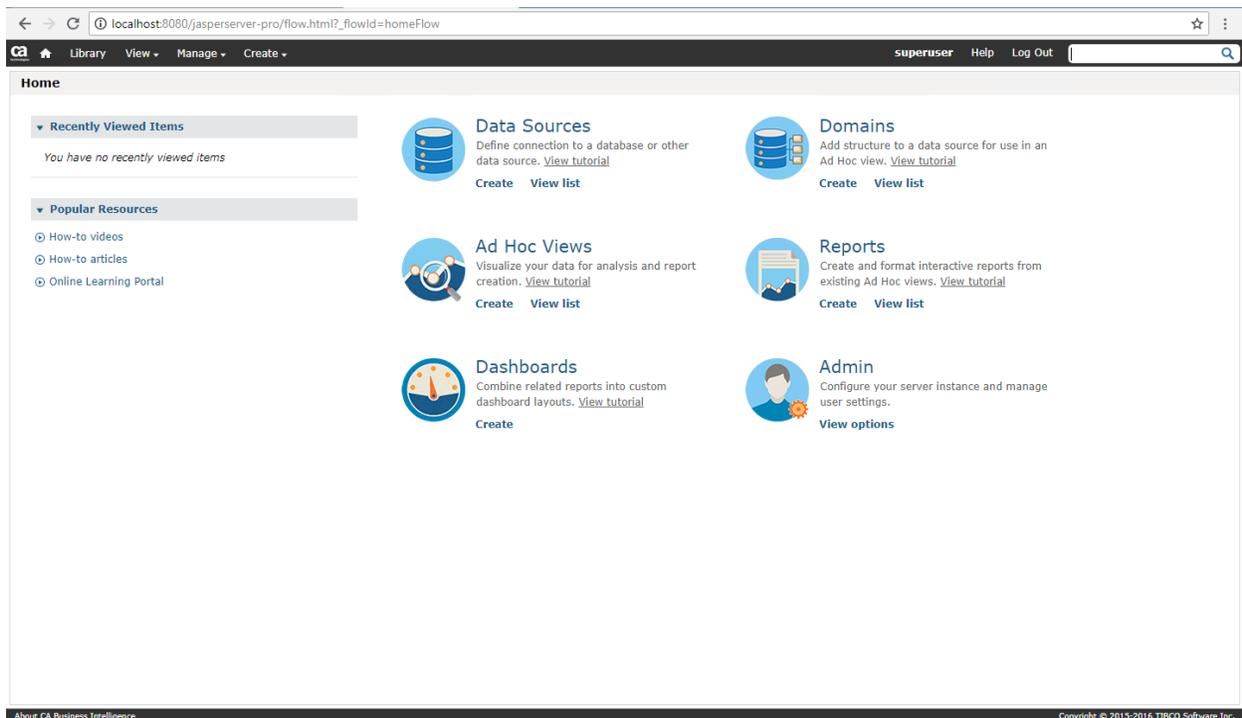
**MySQL for CABI Database Only**

If you are using MySQL for your CABI Server database, you must change the default memory settings. This database is for the CABI users, reports, and dashboards. Change the following settings so that the CA Business Intelligence dashboard deployment is successful:

- Set **max_allowed_packet=32M**
- Set **innodb_log_file_size=356M**
- Set **table_definition_cache=2000**

**Microsoft SQL Server Windows Authentication Only on CA UIM Database**

If you are using Microsoft SQL Server Windows Authentication for your UIM Database (not CABI database), the CABI Server system, cabi or cabi_external probe robot, and UMP robot must have Windows operating systems. No requirements exist for matching operating systems if you are NOT using Microsoft SQL Server Windows Authentication.

For more details regarding the use of Windows Authentication, see:

https://docops.ca.com/ca-unified-infrastructure-management/8-5-1/en/installing-ca-uim/ca-business-intelligence-with-ca-uim/installing-and-upgrading-ca-business-intelligence-jasperreports-server-with-ca-uim/install-or-upgrade-for-an-external-ca-business-intelligence-jasperreports-server#InstallorUpgradeforanExternalCABusinessIntelligenceJasperReportsServer-SoftwareRequirements

## 2. Deploy and configure the cabi_external probe

The cabi probes for bundled or external installs, function as a gateway to the CA Business Intelligence JasperReports Server (CABI Server).

**Note: As of the writing of this document, the latest cabi_external probe GA version is 3.30.**

**Follow these steps:**

1. Verify that the cabi_external probe, uim_core_dashboards_pack, and report packages are in the probe archive
2. Deploy these packages on a UIM robot. For more information about how to deploy a probe package, see the Deploy Packages article. The cabi_external probe will turn **red** in the admin console/IM and a No Restart error appears in the probe log file.

   *Probe 'cabi_external' (command = <startup java>) returns no-restart code (42)*

   This error is <u>expected</u> behavior. Continue with the next step.

3. Open the cabi_external probe via Raw Configure
4. Select the *setup* section
5. Change the cabi url key value, which is empty by default, to the URL for the CABI Server where the Jaspersoft server is installed. The format is:

http://<cabi_server_name_or_IP>:<port>/<webapp>
where <webapp> is usually jasperserver-pro.

You can test the url first to make sure you reach the CABI server, and then proceed to edit the key.

6. Choose one of the following steps:

   o If the default superuser account is still in use on the CABI Server, no additional configuration is required
   o If you modified the default superuser account, perform the following steps:
      1. Enter the username as the value for the key *cabi_rest_user*.
      2. Create the key *cabi_rest_password_cleartext*

         Then enter the password for the user account as the key value. When the cabi probe restarts, this password is encrypted and the *cabi_rest_password_cleartext* key is removed.
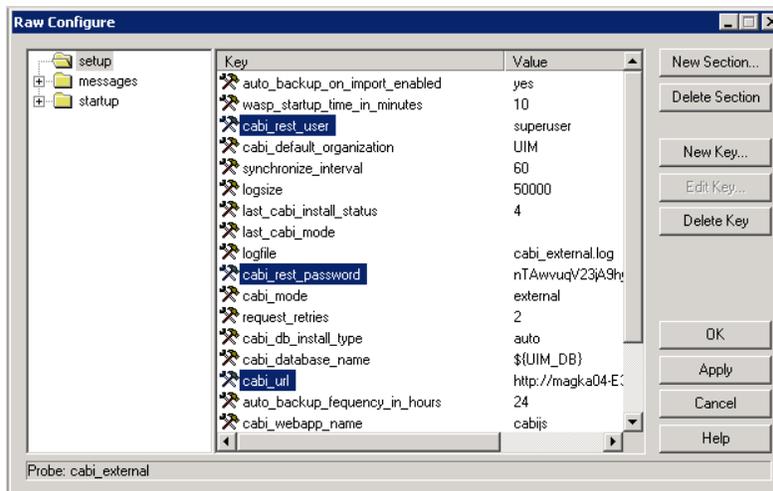


      3. Click Ok to save your changes
      4. Cold start the cabi_external probe (Deactivate-Activate)
      5. Verify that the installation is complete

The cabi_external probe might be active, but the install process may not have completed yet. To confirm, go to the cabi_external probe log and look for the following messages:

*Sep 19 12:36:23:166 [main, cabi_external]* **cabi installed successfully.**

*...*

*Sep 19 12:36:40:625 [UserSynchronizationThread, cabi_external]* **Finished synchronizing users between UIM and CABI**

The cabi probe should be green and have a port and a PID.

## 3.  Configure CABI (JasperReports) Server for use with CA UIM

Additional installation steps are required to configure the CABI Server to work with a UIM instance.

1.  Go to the filesystem of the robot where the cabi_external probe was deployed
2.  Navigate to …\Program Files (x86)\Nimsoft\probes\service\cabi_external\config\bin
3.  Copy the file-> **uim-cabi-overlay-installer.jar**
    o  Add the file to the CABI Server root installation directory. Use the appropriate path for your operating system, e.g., …\Program Files\CA\SC\CA Business Intelligence
4.  cd to <CABI_SERVER_Installation_DIR> like the path example above.
5.  Run the installer on the CABI Server:

    jre\bin\java -jar uim-cabi-overlay-installer.jar

    Here is an example of the output from the installer:

```
C:\Program Files\CA\SC\CA Business Intelligence>jre\bin\java –jar uim-cabi-
overlay-installer.jar
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : ***************** [Starting]
UIM
Cabi Overlay installer *****************
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : 3.3.0
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : verifying cabi buildomatic
settings ...
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : verifying cabi application
server environment ...
INFO  com.ca.cabi4uim.common.Cabi4uimUtils : overlaying uim configuration
changes ...
INFO  com.ca.cabi4uim.MergeFileVisitorOperation : no operation registered
for merging file extension=jsp so just replacing the files: src=C:\Program
Files\CA\SC\CA Business Intelligence\uim-cabi-overlay-installer-
backup\temp5880302741731852865\all_versions\WEB-
INF\decorators\minimalDecorator.jsp, tgt=C:\Program Files\CA\SC\CA Business
Intelligence\apache-tomcat\webapps\jasperserver-pro\WEB-INF\dec
orators\minimalDecorator.jsp
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : backing up the default
master properties file ...
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : running jasper server
command=js-ant refresh-config ...
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : jasper server command
completed with exit code 0
INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : Successfully installed UIM
Cabi Overlay changes. Please restart the CABI application server to realize
changes.

INFO  com.ca.cabi4uim.UimCabiOverlayInstaller : *************** [Stopped]
UIM Cabi Overlay installer *****************
```

6.  Access Windows Services and restart the CA Business Intelligence Tomcat Service

    For more information, see CA Business Intelligence JasperReports Server.

**Note:** New packages for predefined reports and dashboards are released periodically. For more information about adding updates to your dashboards, see  Add Predefined CA Business Intelligence Dashboard Content.

# View Dashboards

## View dashboards that exist on the CABI Server

Enter in a browser: **http://<CABI_Server_IP or hostname>:<port>/<web_app>**
Where **<port>** is the port for the CABI Server Apache Tomcat server instance, and **<web_app>** is the CABI Server web application name. The default port value is 8080 and the default web application name is jasperserver-pro. An example of such a URL is, http://localhost:8080/jasperserver-pro

Enter the username and password to login.

## View CABI dashboards in UIM (UMP)

Use this procedure to view the predefined CABI dashboards for CA UIM in UMP. On the robot running UMP complete the following steps:

## Update the ump_cabi portlet

When this probe is deployed, <u>confirm</u> the deployment via the robot controller Status window->Installed packages. For example,
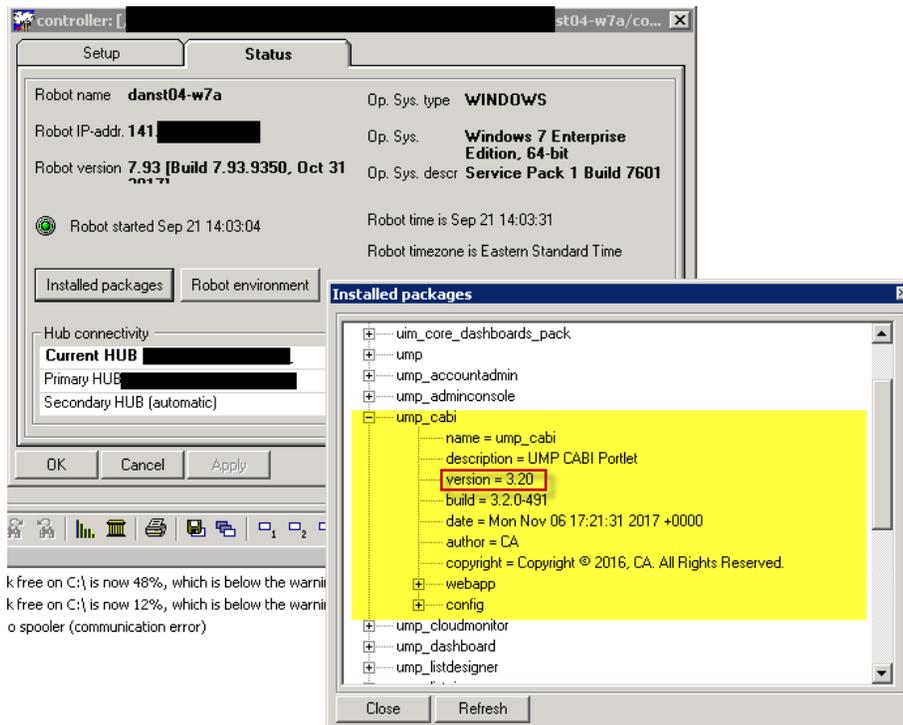
## Update the uim_core_dashboards_pack

When this probe is deployed, <u>confirm</u> the deployment via the robot controller->Status window->Installed packages
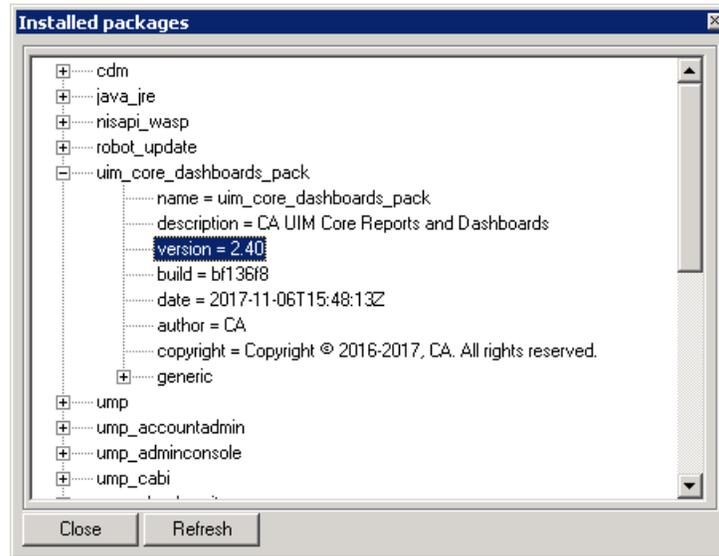


Verify that you can view the predefined dashboards as shown below:

Go to the **Unified Dashboards** menu in UMP and select a CA Business Intelligence dashboard. For example, **Unified Dashboards->CA Business Intelligence Dashboard->Summary Dashboard**.
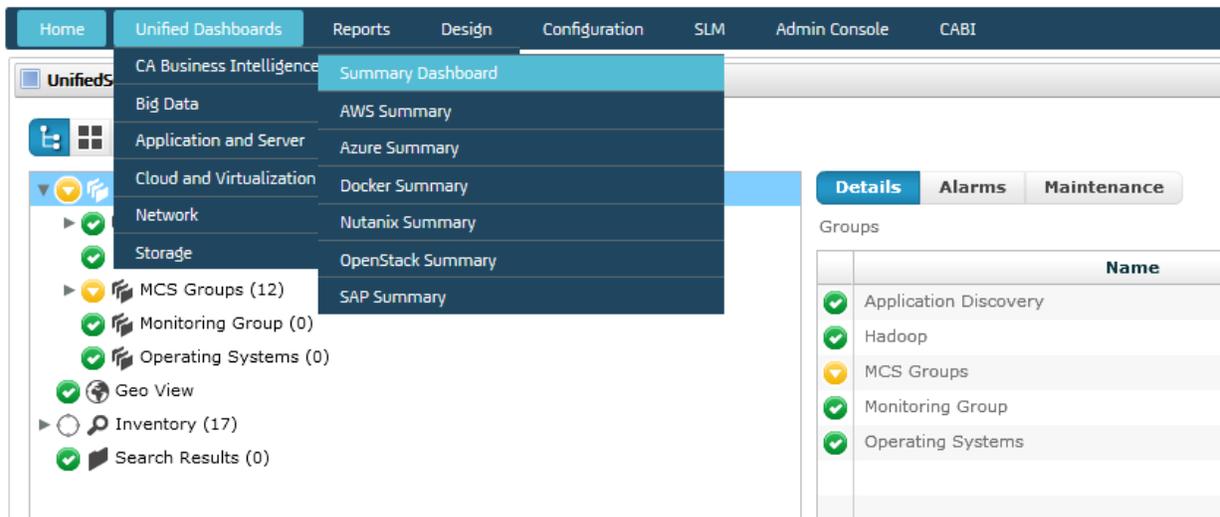
## Update the Unified Dashboards Menu

The Liferay Archive (LAR) files that generate the Unified Dashboard menu items in UMP are not updated. This process preserves any customizations that you have made to your LAR files. Use this procedure to update the Unified Dashboards menu for a user or a user group whenever there is a *new* release of UMP.

**Follow these steps:**

1. Download the cabi.lar file to your local system. Obtain the current LAR file from the UMP robot filesystem at:
   *<UIM_installation>*/probes/service/wasp/webapps/cabi/lar/cabi.lar
2. Log in to UMP as an administrator
3. Click **Go to, Control Panel** on the menu bar
4. Click **My Pages**, and then click **Private Pages**
5. Click **Import** and select the LAR file
6. Expand the Unified Dashboards node in the Private Pages tree and verify that the list contains CA Business Intelligence Dashboards
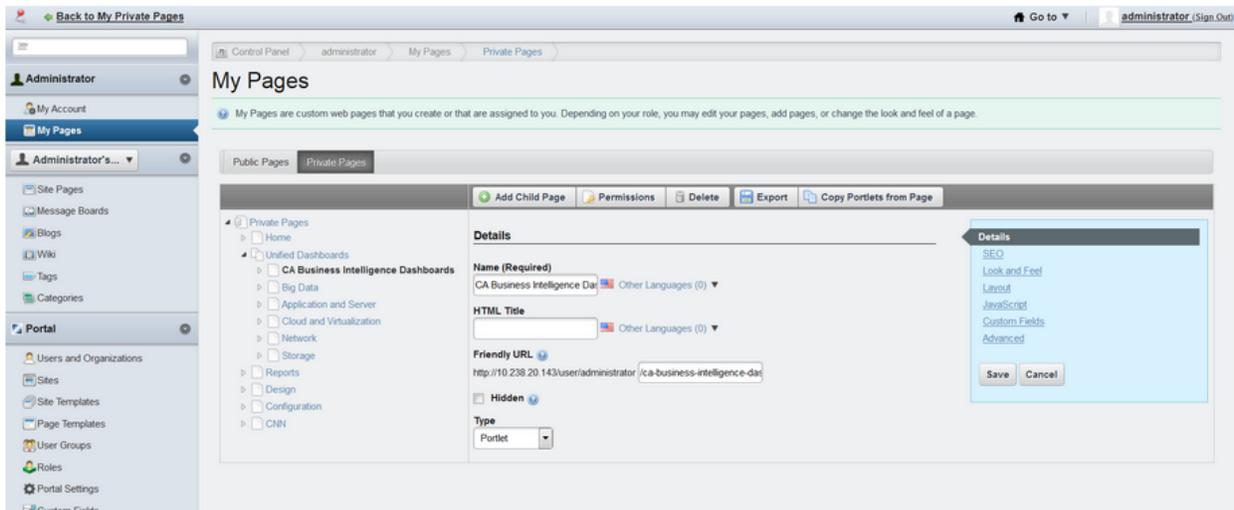


7. Save your changes
8. Clear your browser cache
   The Unified Dashboard menu contains a section for the CA Business Intelligence dashboards

9. Go to the **Unified Dashboards** menu and select a CA Business Intelligence dashboard. For example, **Unified Dashboards, CA Business Intelligence, Summary Dashboard**

# External CABI Server Firewall Rules

## External CABI Server Firewall Rules

The following table defines the ports and directions that must be open through a firewall for an external configuration. For additional information, see Firewall Port Reference.

| Communication Required | Ports | Direction | Firewall Rules | Details |
|---|---|---|---|---|
| cabi (version 3.0) or cabi_external (version 3.2) probe to CABI Server | 80 or 443; configurable | Outbound | Allow outbound to CABI Server. | Port 80 by default or port 443 for HTTPS. You can use another configured port value for HTTP or HTTPS. The value depends on your choice during the cabi or cabi_external probe installation. The configurable range of ports is 1 through 65535. |
| cabi (version 3.0) or cabi_external (version 3.2) probe to UIM Database | 1433 (Microsoft SQL Server); 1521 (Oracle); 3306 (MySQL) | Outbound | Allow outbound on respective port for UIM database. | The port depends on the database type and configuration. |
| External CABI Server | 80 or 443; configurable | Inbound | Allow inbound from cabi or cabi_external probe. | Port 80 by default or port 443 for HTTPS. You can use another configured port value for HTTP or HTTPS. The value depends on your choice during the CABI Server installation. The configurable range of ports is 1 through 65535. |
| UIM Database to cabi (version 3.0) or cabi_external (version 3.2) probe | 1433 (Microsoft SQL Server); 1521 (Oracle); 3306 (MySQL) | Inbound | Allow inbound from cabi or cabi_external probe on respective port for UIM database. | The port depends on the database type and configuration. |

# External CABI – Simplified Architecture Overview Diagram
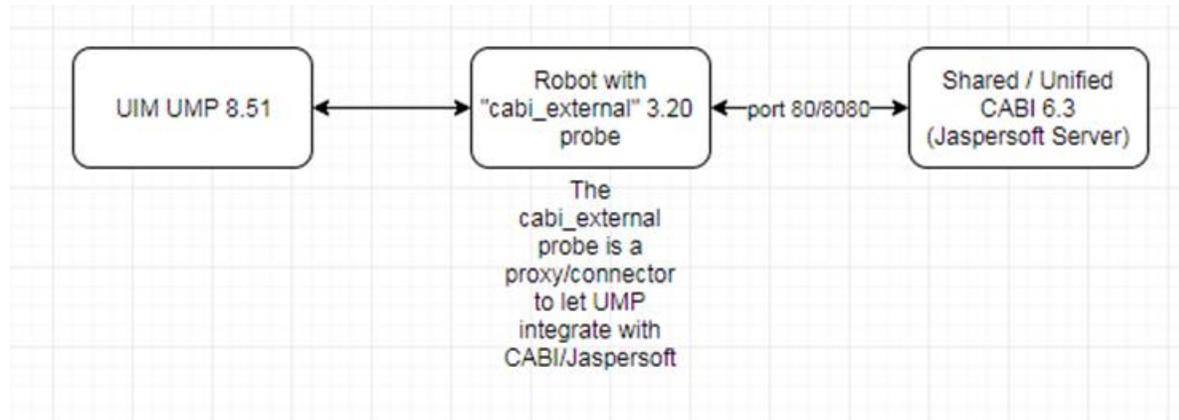


## Uninstallation

Note that if you are trying to install CABI external after a failed installation or a failure when trying to switch from CABI-bundled in UIM to CABI external for shared use, you should uninstall CABI and remove any previous failed installation files/probes and the JasperReports Server.

Uninstall External CA Business Intelligence JasperReports Server from CA UIM

## CABI (Jasperserver-pro) Installation Troubleshooting

### PostgreSQL installation hangs on Windows

If you tried to install on Windows and the Jasperserver installation hung at 13% and did not progress any further, it is due to the fact that PostgreSQL actually requires more than 8 GB RAM for the install process, it requires 12 GB of free memory or higher. If this occurs, do the following:

- Using Task Manager, kill the CABI Server install process
- **IMPORTANT**: Search for *postgres* and stop **ALL** PostgreSQL, tomcat and java processes related to PostgreSQL before you try to delete the installation files in the directory listed below. Delete any leftover Postgres, Tomcat, or JAVA (java.exe) related processes
- Additionally, the installation directory, e.g., C:\Program Files\CA\SC\CA Business Intelligence must be empty before you try to install fresh again.

### Triggered Directory Path error

If you encounter this error during installation when installing CABI on Windows:
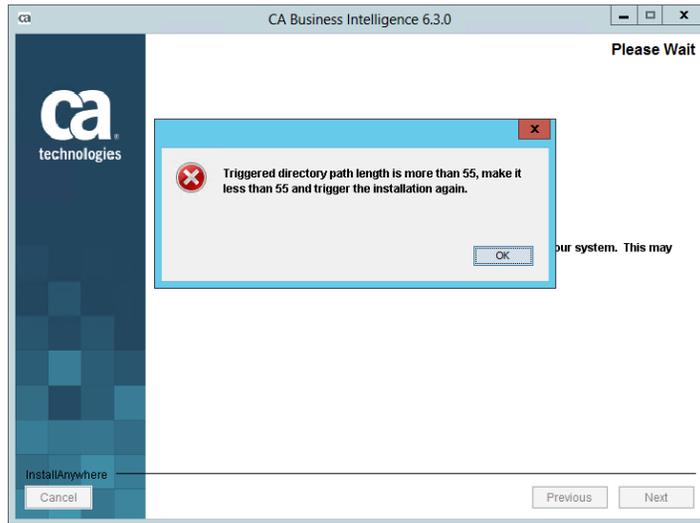


Try copying the CABI installation folder you created where you extracted the files, to another location, e.g., the Desktop and run it again and it should avert the error.

## Error: Could not find cabi probe.

If you encounter this error in UMP when trying to access the Summary Dashboard->

**Unified Dashboards->CA Business Intelligence Dashboard->Summary Dashboard**
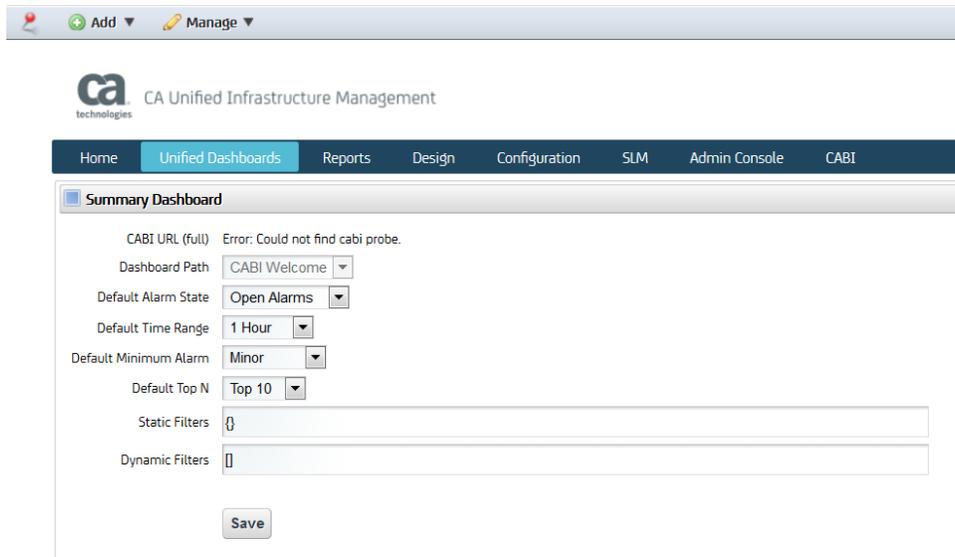
Open the wasp probe and add a key name *cabi* and the value should be set as the NimBUS address of the cabi_external probe, e.g., /<domain>/<hub>/<robot>/cabi_external

## UMP CABI Summary Dashboard is not Loading
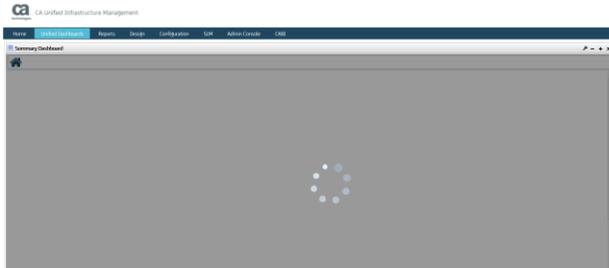


Make sure the correct version of ump_cabi, e.g., ump_cabi v3.20, not 3.30, has been deployed to the UMP robot.

## UMP Summary Dashboard remains in a loading state and throws an error

*No dashboard found with path: /public/ca/UIM/dashboards/common/uim_summary*

*Click Edit Dashboard button to create dashboard or click Options -> Preferences to update path*

Notice the UIM is in uppercase, this is a known case-sensitivity issue, the path to the dashboard as shipped out of the box contains /public/ca/UIM and should be /public/ca/uim. Select the CABI portlet preferences -> Wait for the Dashboard Path drop-down to be available -> Open the drop-down menu and select: UIM Summary (/public/ca/uim/dashboards/common/uim_summary). Save the changes and retest the issue.

Once you Save the change (once its successful), and Return to the full page, it will display the dashboard.
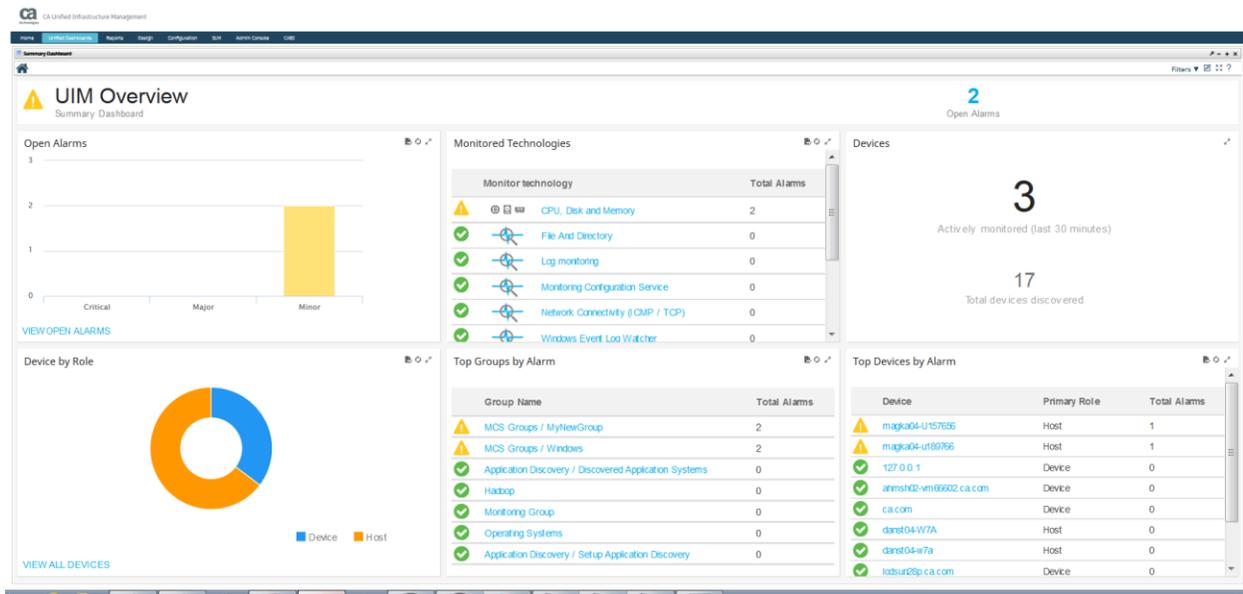


Alternatively, if the above solution does not work:

https://comm.support.ca.com/kb/all-users-are-unable-to-display-the-cabi-summary-dashboards/kb000075088

The uim.jks java keystore was out of sync between the cabi probe and Tomcat. Copy the cabi probes' version and overwrite the apache-tomcat's version and cycle CABI (Stop/Start CABI).

## CABI Technical Document Index (CA Business Intelligence for CA UIM)

An index of several CABI Technical documents (Knowledge Base Articles), can be found at the link below.

https://comm.support.ca.com/kb/cabi-technical-document-index-ca-business-intelligence-for-ca-uim/KB000107623


For other information and details on installation and/or upgrading CABI, or installing CABI as a non-administrative user, please refer to this url:


https://docops.ca.com/ca-business-intelligence/6-4-3/en/installing-ca-business-intelligence-jasperreports-server