BIMcloud and BIM Server
User Guide
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Introduction to BIMcloud/BIM Server

GRAPHISOFT BIMcloud/BIM Server responds to an industry need - allowing remote teams to work together and handle large files. It also allows working offline, and enables working from just about any location, so that team members can log in and work anywhere. Any project data that can be imported into ARCHICAD can be communicated via the GRAPHISOFT BIMcloud/BIM Server.

- When implementing BIM on a larger scale, architects often run into bottlenecks in model accessibility and workflow management. GRAPHISOFT’s BIMcloud/BIM Server is the industry’s pioneering solution for model-based team collaboration for companies who use Teamwork in ARCHICAD.

- The Delta Server™ technology reduces network traffic to a minimum for instant and reliable data-exchange, both within the office and over the Internet. In Teamwork, long waiting times for server synchronization are a thing of the past: team members can collaborate in real-time on BIM models through standard internet connections from virtually anywhere in the world.

- The BIMcloud/BIM Server’s robust system architecture ensures the integrity of the BIM project at all times. Any data errors from malfunctioning components are blocked, preserving the project’s integrity on the network.

- The BIMcloud/BIM Server was designed for Architects, not for IT professionals - so it works in any standard office setup through any standard computer network.

- BIMcloud/BIM Server supports both online and offline work: if ARCHICAD loses the connection to the server, users can continue to work with their already reserved elements. Once the connection is re-established, they will be able to send their changes and receive changes submitted by other users.

- Built-in Teamwork Messaging boosts communication among users by putting the messages into context: simply select any element(s), write a comment and send it to another user for a review. A pop-up notification will inform the other user about the incoming message. After opening the message, he/she can zoom to the element and read the message in context.

- Roles allow an administrator, working in the browser-based Manager, to define different permission sets for Teamwork users and assign them based on their responsibilities. It is very easy to limit the functions available for a specific user to prevent accidental damage or unwanted modifications to the project. Each user can have different Roles for different projects - to fit their responsibilities in that particular project. Even a view-only role can be created, allowing people to Join the project without being able to modify anything.

Starting with ARCHICAD 18, GRAPHISOFT developed this BIM Server technology further: the GRAPHISOFT BIMcloud was developed to meet the needs of large international companies running multiple, complex projects. With its powerful features and sophisticated management tools, the BIMcloud offers much more than the standard BIM Server.

BIMcloud’s additional functions enable the management of a large number of users on a large number of projects in different geographical locations. The administrator can disperse the projects along multiple BIMcloud Server computers while using a single entry point for the whole system.

Topics in this chapter:
- BIM Server and BIMcloud Components
- BIMcloud vs. BIM Server: Feature Differences
- Key Features of BIMcloud/BIM Server
# BIM Server and BIMcloud Components

## The BIM Server consists of:
- BIM Server Manager: Management function of BIM Server
- BIM Server Module: Model handling component of BIM Server. Only one can be installed per BIM Server

## The BIM Cloud consists of:
- BIMcloud Manager: Management function of BIMcloud
- BIMcloud Server: Model handling component of BIMcloud, can be installed to separate computers
- BIMcloud Delta Cache: Model cache

## Upgrading the Components

During an upgrade process:
- BIM Server Manager will be upgraded to a BIMcloud Manager
- BIM Server Module will be upgraded to a BIMcloud Server

## BIMcloud vs. BIM Server: Feature Differences

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This manual is marked with a license limitation mark whenever there is a difference between the functions or the behavior of the two products. E.g.: “Note: Inheritance is not available in BIM Server.”
Key Features of BIMcloud/BIM Server

Teamwork from ARCHICAD

Users working on projects from ARCHICAD will not see a difference between working on a BIMcloud or a BIM Server.

Browser-Based Management

The BIMcloud/BIM Server Manager is a browser-based management interface that controls each aspect of the BIMcloud/BIM Server. This is a zero deployment tool in the hands of server managers: start a web browser on any computer, enter the address of the BIMcloud/BIM Server, and log in with his/her credentials. This solution does not even require a desktop computer or a laptop: any tablets or mobile phones with the Internet access can utilize this interface, on a screen display adjusted to the device’s parameters.

In addition to server managers, regular users can access this interface to review the status of their projects, access the project Activities list, and modify their personal parameters (e.g. password). Of course, they can access only those resources of the BIMcloud/BIM Server where they have adequate permissions.

Folder-based Project Organization

Note: Folder structure is limited to a single level in BIM Server.

The project management interface allows users to create folders for projects and servers.

Large firms with many projects must be able to organize them into a logical hierarchy. The folder logic is up to the company's strategy: set up folders based on studios, offices, project types, owners or architects. The folder organization even allows for setting up several completely different business units on the same BIMcloud. The visibility of these folders can be controlled based on responsibilities.

The folder organization is not limited to projects. Folder hierarchies enable managers to quickly and centrally modify backup strategies and access permissions, because lower-level folders and items in the folder hierarchy inherit these parameters from a higher level. Changing the backup settings for the folder immediately changes the backup settings for all the projects in that folder and all its sub-
folders. If for some reason a particular project requires unique backup settings, these can be easily customized without affecting the whole system inheritance.

**Note:** Inheritance is not available in BIM Server.

Folders can be also useful for organizing the BIMcloud Servers (for example, all BIMcloud Servers located in a particular office can be organized in a single folder). Their settings are inherited within the folder hierarchy, just as for projects.

### Standardized, Secure Communication

All BIMcloud/BIM Server components use the standard http (or https) protocol for communication. The http protocol is a common and accepted protocol in the IT industry; most (if not all) of any company's network infrastructure is already capable of supporting it, and there is no need for further investments.

The https protocol is a trusted and secure communication channel used by all online banking systems and most online email applications. Utilizing the company's existing certificates, ARCHICAD is able to communicate through this secure channel, enabling work on a BIMcloud/BIM Server from a remote location and preventing 3rd parties from accessing sensitive data.

### Multiple BIMcloud Servers

**Note:** Not available in BIM Server.

The BIMcloud is centrally managed through the BIMcloud Manager, whose browser-based interface provides central management of the BIMcloud Servers, BIMcloud Delta Caches and ARCHICAD clients.

- Allows multiple BIMcloud Servers to function within a single BIMcloud
- Keeps track of a project's location
- Maintains a single, integrated list of users with their defined roles

For a Teamwork user, the new solution presents no difference in interaction: he/she joins or opens the desired Teamwork project as usual. The BIMcloud Manager automatically redirects to the correct project on the correct BIMcloud Server and ensures the automatic connection without any user interaction. If a server administrator shifts a project from one BIMcloud Server to another, the user can work without interruption, without needing to sign in to a different BIMcloud.

*See Servers - BIMcloud.*
Streamlined User Management, User Groups

**Note:** Not available in BIM Server.

The BIMcloud integrates user management with the company’s existing corporate user directory, using the worldwide standardized LDAP protocol.

A large company with many employees generally has a User Directory service. The BIMcloud - like other software (e.g. email server, intranet) - can connect to this User Directory, or even to several user directories simultaneously. User directory groups can be replicated on the BIMcloud Manager. Additional and/or ad-hoc user groups can be created if needed.

Users who log in to their office computers use the same login name and password to join a Teamwork project. This can greatly simplify the maintenance of the company user list. See LDAP.

![LDAP connection diagram]

Detailed Management Permissions

**Note:** Not available in BIM Server.

The BIMcloud allows the fine-tuning of user permissions for all resources on the BIMcloud (e.g. users, roles, libraries...).

A large firm with far-flung offices may well have multiple users with different levels of server manager competencies. The BIMcloud allows you to configure this at a very detailed level. For example, each server manager has access only to the users he/she needs to manage. Similarly, a server manager’s right to manage hardware functions (e.g. restart) can be limited to a particular server/module.
If subcontractors are also allowed to work on the BIMcloud, their access can be restricted to their particular project: they will not be able to see any other projects, users or settings of the BIMcloud. See Access Panel.

**Multi-Language Support**

**Note:** Not available in BIM Server.

The language of the BIMcloud Manager interface can be changed on the fly from a language pop-up - located at the top-right corner of the interface.

Companies with multiple offices across multiple continents will probably use the local languages in each office. To avoid enforcing the language of the main office (where the BIMcloud Manager is hosted), users from the local offices logging in to the BIMcloud Manager can change their language to a preferred one. This change has no effect on anyone else in the company, or on the settings and modifications made on the BIMcloud Manager.
**BIMcloud Delta Cache**

*Note: Not available in BIM Server.*

If multiple ARCHICAD clients are working from the same location, while the project is hosted on a remote BIMcloud Server, the same data must be downloaded multiple times - once for each client. This redundancy increases server load and reduces available bandwidth.

The BIMcloud Delta Cache component optimizes data transfer between the ARCHICAD clients and a BIMcloud Server by caching the data on the client side. Once an ARCHICAD client downloads a part of the project, the data will be cached locally by the BIMcloud Delta Cache and offered to the next ARCHICAD client who requests the same data.

**Performance Improvements**

*Note: Not available in BIM Server.*

The BIMcloud Manager can connect to multiple distinct servers via a common interface. By adding these additional server computers, the manager can optimize server performance by load-balancing the projects manually among different computers, without affecting the work of the users.
Getting Started with BIM Server

Hardware/Software Requirements
Hardware/Software requirements are modified from time to time. For up to date information on system requirements, please consult the following link:
http://www.graphisoft.com/support/system_requirements

Compatibility with ARCHICAD Versions
An ARCHICAD client can access only those Teamwork projects which are located on a BIM Server of the same version number as the ARCHICAD client. If the ARCHICAD client’s version number is different from the BIM Server version number, communication can take place only after you install a BIM Server of the same version number as the ARCHICAD client.

Compatibility with Older Versions of BIM Server
BIM Server for ARCHICAD 20 is a completely new installation.
- You cannot automatically migrate your BIM Server data (e.g. users or roles) from earlier BIM Server versions, but you can transfer certain BIM Server data manually, as described below.
- You cannot install BIM Server 20 as an additional module to an earlier version of BIM Server. (You can install it on the same computer, but you must manage it separately with its own BIM Server Manager.)

User Data from BIM Server for ARCHICAD 18 or 19
1. Install BIM Server for ARCHICAD 20.
2. Use the Export and Import commands of the Users and Roles pages of the BIM Server Managers to transfer User and Role data from BIM Server Manager 18/19 to BIM Server Manager 20. Use multi-selection to import/export multiple users and roles.

User Data from BIM Server for ARCHICAD 17 and Earlier
The technology behind BIM Server for ARCHICAD 20 is fundamentally different from that of previous versions (ARCHICAD 17 and before), and you cannot transfer your BIM Server data (e.g. users or roles) from earlier server versions.
Install the new BIM Server and proceed to define users and roles as needed.

Upload BIM Server Libraries
1. In ARCHICAD 18/19:
   Use File > Libraries > Manage BIMcloud/BIM Server Libraries to Extract the project libraries to a new location.
2. In ARCHICAD 20:
   Use File > Libraries > Manage BIMcloud/BIM Server Libraries to Upload the project libraries to BIM Server 20.
Teamwork Project Migration

1. In the older-version of ARCHICAD, use Teamwork > Project > Migrate Project > Prepare for Migration.

2. In ARCHICAD 20, use the Teamwork > Project > Migrate Project > Migrate Prepared Projects.

See the ARCHICAD Reference Guide for details on migrating a Teamwork project.

As part of this step in ARCHICAD 20, enable the optional Migrate ARCHICAD Libraries checkbox. This replaces the project’s currently used ARCHICAD libraries with ARCHICAD Library 20, plus the necessary migration libraries. These libraries will be uploaded to BIM Server 20 if they are not there already.

Related Topics:
Install BIM Server
Licensing and Activation
Upgrade to BIMcloud
Uninstall BIM Server

Install BIM Server

Start installation by clicking Install GRAPHISOFT BIM Server from the start-up menu of the ARCHICAD DVD.

Program Folder Selection

After accepting the license agreement, you must define a location on your computer's hard drive for installing the BIM Server.

Start Menu Location (Windows 7 Only)

Define the Program Folder (default folder: GRAPHISOFT) in which to place the following shortcut commands:
- BIM Server Manager
- Reconfigure BS Manager
- Reconfigure BS Module
- GRAPHISOFT BIMcloud/BIM Server Reference Guide

Installation Process

After viewing the summary of your installation choices, click Install to begin the installation process.

Configure BIM Server

The BIM Server configuration process takes place after the installation.
Click Next or Previous to move among the pages of this wizard.
Page 1: BIM Server Manager Configuration

- **Server Name:** By default, the BIM Server will use the name of your computer. All server pop-ups will identify the BIM Server by this name.
- **Master Administrator password:** Create a secure password for the Master Administrator (masteradmin) user. This Master Administrator will always be able to log in to the BIM Server with full access to all hosted data. In case you forget the password, you must reconfigure your BIM Server and enter a new password.
- **Port:** Select a free port, or use the “Find an available port” command to automatically find one.
- **Data folder:** This is the BIM Server Manager's data storage folder.

  **Note:** Projects will be stored in a different folder - as defined in the next step.

Click **Next**.

Page 2: BIM Server Module Configuration

- **Port:** Select a free port or use the “Find an available port” command to automatically find one.
- **Project data folder:** Enter or Browse the location of the default Project Data Folder. This will be the location of Teamwork Projects on this BIM Server.
- **Library data folder:** Enter or Browse the location of the default Library Data Folder. This will be the location of Teamwork Libraries on this BIM Server. Click **Next**.

Page 3: Continue the Configuration in a Browser

Page 4: Log in to BIM Server

Enter the Master Administrator password to Log in to the BIM Server.

Page 5: Create the First User

Enter data for the first user. This user will be the first Server Administrator on the BIM Server. Fill in all the fields:

- Login name
- Password, Verify password
- Full Name
- Email address

Page 6: Set up Primary Address

The BIM Server’s Primary address will uniquely identify your server, even if ARCHICAD is using a different address to connect.

*See details at Connection Settings.*

If you already set up the server’s address, you can enter it directly in the address field. If you would like to use one of the server’s current addresses, click **Show current addresses** and pick the desired one.

Keep in mind that if you use Dynamic IP Addresses at your office, then this address can easily change day by day. It is recommended to use a fixed IP address, a computer name, or a fully qualified domain name as the primary address.
You can change this address later, on the BIM Server Manager’s Settings panel.

**Page 7: Set Up Mail Server**

Use these fields to define the mail server which will to send information by email from the BIM Server to the users. The mail server definition can be modified later in the browser-based BIM Server Manager interface.

**Note:** Using a mail server is optional. However, if you don't define a mail server here, you won't be able to send emails (e.g. password reminders) to users from the BIM Server.

Click **Continue** to finalize configuration.

**Page 8: Complete Installation**

It is recommended to log out now as the Master Administrator, and then log in as the newly created user. It is not recommended to use the Master Administrator account for everyday tasks.

**Licensing and Activation**

The BIM Server does not require a separate license, but it must be activated before its use. This activation is one time only and requires a GRAPHISOFT ID. If you do not have a GRAPHISOFT ID, the Activation process will help you to create one.

**Upgrade to BIMcloud**

If you would like to extend your BIM Server, or if you would like to connect multiple BIM Servers under the same Management interface, you can upgrade the BIM Server to a BIMcloud.

This upgrade process requires a purchased BIMcloud User License.

The upgrade process is not reversible; it is not possible to downgrade from a BIMcloud to a BIM Server.

Insert the installation material of the desired product, and it will lead you through the upgrade process.

*See Upgrade a BIM Server.*

**Uninstall BIM Server**

To uninstall the GRAPHISOFT BIM Server, you can use the Uninstall BIM Server shortcut located in the BIM Server's installation folder. Double-click this shortcut to begin the uninstall process.

Within the uninstaller, you can choose whether to:

- Completely uninstall the BIM Server (removes the program with the option to remove all user data as well).
- Uninstall BIM Server Manager only (Use this option if you wish to connect your BIM Server to an existing BIMcloud.)

To uninstall the GRAPHISOFT BIM Server from a PC, it is best to use the “Add or Remove Programs” or “Programs and Features” utility, accessible from the Control Panel.
Uninstall BIM Server Completely

Removes all components from your computer; option to also remove all data (users and projects).

Uninstall BIM Server Manager Only

This will remove only the BIM Server Manager component, leaving the BIM Server Module and your projects intact.

The remaining BIM Server Module can now be used as a BIMcloud Server, if you pair it with a BIMcloud that has been installed on a separate machine.

See Pair BIMcloud Server.
Getting Started with BIMcloud

The GRAPHISOFT BIMcloud is a multi-component server application used to support Teamwork, a client-server technology that enables fast, simultaneous access to projects for multiple clients. The BIMcloud is connected through the network to several ARCHICADs, which are the clients in this system. The BIMcloud enables efficient management of multiple, large-scale Teamwork projects and is therefore optimal for large company operations. It addresses fundamental issues related to hosting a large number of projects on several server computers - including

- centralized, web-based remote control and management of projects;
- a comprehensive approach to user and permissions management to meet the needs of highly structured companies.

An ARCHICAD client can access only those Teamwork projects which are located on a BIMcloud Server of the same version number as the ARCHICAD client. If the ARCHICAD client’s version number is different from the BIMcloud Server version number, communication can take place only after you install a BIMcloud Server of the same version number as the ARCHICAD client.

However, ARCHICAD can access all BIMcloud Managers whose version number is equal or greater than ARCHICAD version number.

Hardware/Software Requirements

Hardware/Software requirements are modified from time to time. For up to date information on system requirements, please consult the following link:

http://www.graphisoft.com/support/system_requirements

Related Topics:

Install and Configure BIMcloud
BIMcloud Licensing
Uninstall BIMcloud

Install and Configure BIMcloud

Installation options will vary depending on whether your computer already contains any BIMcloud components:

New BIMcloud Installation

Use this option if you would like to set up a completely new BIMcloud. It will set up a BIMcloud Manager and optionally a BIMcloud Server on the computer.

Extend an Existing BIMcloud

Use this option if you already have a BIMcloud in your office and would like to extend its resources with an additional BIMcloud Server or BIMcloud Delta Cache. The installer will guide you through the possible installation options.

Upgrade a BIM Server

Use this option if you already have a BIM Server and would like to upgrade it to a BIMcloud.
If you already have a BIMcloud and would like to connect an existing BIM Server to it: see Uninstall BIM Server Manager Only.

Choose an option to begin Configuration.

**Configure BIMcloud Manager**

**Page 1: BIMcloud Manager Configuration**

- **Server Name**: By default, the BIMcloud will use the name of your computer. All server pop-ups will identify the BIMcloud by this name.
- **Master Administrator password**: Create a secure password for the Master Administrator (masteradmin) user. This Master Administrator will always be able to log in with full access to all hosted data. In case you forget the password, you must reconfigure your BIMcloud and enter a new password.
- **Port**: Select a free port, or use the Pick free port command to automatically find one.
- **Data folder**: This is the BIMcloud Manager's data storage folder.  
  Note: Projects will be stored in a different folder - as defined in the BIMcloud Server configuration wizard.

Click **Next** to go to the next configuration page.

**Page 2: Public Key**

You can find the Public Key of the BIMcloud Manager here. The install process automatically generates a new one (no need to generate a new one). Click **Start BIMcloud Manager** to start your server. After a successful start, the Configuration Wizard will continue in a browser. (If your browser does not open automatically, then use the following URL: `http://localhost:PORT`, where PORT is the port you entered on the first page.)

**Page 3: Continue the Configuration in a Browser**

**Page 4: Log In to BIMcloud Manager**

Enter the Master Administrator password to Log in to the BIMcloud Manager.

**Page 5: Create the First User**

Enter data for the first user. This user will be the first Server Administrator on the BIMcloud Manager. Fill in all the fields:

- Login name
- Password, Verify password
- Full Name
- Email address

**Page 6: Set up Primary Address**

The BIMcloud’s Primary address will uniquely identify your server, even if ARCHICAD is using a different address to connect.

*See details at Connection Settings.*
If you already set up the server’s address, you can enter it directly in the address field. If you would like to use one of the server’s current addresses, click **Show current addresses** and pick the desired one.

Keep in mind that if you use Dynamic IP Addresses at your office, then this address can easily change day by day. It is recommended to use a fixed IP address, a computer name, or a fully qualified domain name as the primary address.

You can change this address later, on the BIMcloud Manager’s Settings panel.

**Page 7: Set Up Mail Server**

Use these fields to define the mail which will send information by email from the BIMcloud to the users. The mail server definition can be modified later in the browser-based BIMcloud Manager interface.

*Note:* Using a mail server is optional. However, if you don’t define a mail server here, you won’t be able to send emails (e.g. password reminders) to users from the BIMcloud.

Click **Continue** to finalize configuration.

**Page 8: Complete Installation**

It is recommended to log out now as the Master Administrator, and then log in as the newly created user. It is not recommended to use the Master Administrator account for everyday tasks. If a BIMcloud Server is already installed on the computer then the install process will automatically pair the new BIMcloud Manager with the existing BIMcloud Server.

**Configure BIMcloud Server**

**Page 1: BIMcloud Server Configuration**

- **Port:** Select a free port or use the “Find an available port” command to automatically find one.
- **Project data folder:** Enter or Browse the location of the default Project Data Folder. This will be the location of Teamwork Projects on this BIMcloud Server.
- **Library data folder:** Enter or Browse the location of the default Library Data Folder. This will be the location of Teamwork Libraries on this BIMcloud Server.

Click **Next** to go to the next configuration page.

**Page 2: Public Key**

The BIMcloud Server needs a BIMcloud Manager to operate. If the computer already has a BIMcloud Manager installed, then the Pairing process will be automatic, and you do not have to do it manually. This screen displays (automatically filled out in the field) the Public Key of the BIMcloud Manager. Click **Start BIMcloud Server** to complete the install process.

If the computer does not have a BIMcloud Manager installed, then you will have to manually pair the BIMcloud Manager and the BIMcloud Server.

*See Pair BIMcloud Server.*
Configure BIMcloud Delta Cache

Note: In BIMcloud 18, this component was called BIMcloud Proxy. Its new name is BIMcloud Delta Cache.

The BIMcloud Delta Cache configuration process takes place after you install a new BIMcloud Delta Cache. Use this process to define basic properties of how the BIMcloud Delta Cache works. Later, you can change BIMcloud Delta Cache settings using the Reconfigure Delta Cache shortcut.

On this page, enter the following parameters:

- **Cache folder:** The BIMcloud Delta Cache will store temporarily cached data in this folder. Enter its path or click Browse.
- **Maximum Cache Size:** Enter the maximum size for the cached data. The more space you allocate, the more effectively the BIMcloud Delta Cache will operate.
- **Port:** Select a free port or use the “Pick free port” command to automatically find one.

Click **Start BIMcloud Delta Cache** to complete the operation.

Enter the BIMcloud Delta Cache’s address in ARCHICAD to start using the BIMcloud Delta Cache.

BIMcloud Licensing

Topics in this section:

- The BIMcloud User License
- Using the Hardware License Key
- Using a CodeMeter Server

The BIMcloud User License

Each user joining a project on the BIMcloud requires a BIMcloud User License. The license is automatically reserved for the user when he/she opens a Teamwork project in ARCHICAD.

A single reserved User License allows the user to join any number of projects on the same BIMcloud from ARCHICAD and/or BIMx. (If the user joins a project from both applications, then a single BIMcloud User License is sufficient; no additional license is required.)

If a user works on multiple projects that are located on more than one BIMcloud, then each BIMcloud will reserve an additional license for that user.

A BIMcloud User License remains reserved until the user leaves his/her last project on the BIMcloud, or until it is manually revoked.

Once he/she joins again: if the user’s license is missing (e.g. there are no more available BIMcloud User Licenses), then the user will be forced offline.

It is possible to permanently assign a BIMcloud User License to a particular user (see **BIMcloud Manager - Licenses Panel**). A permanently assigned BIMcloud User License will not be automatically revoked even after the user leaves all projects on the BIMcloud.

The BIMcloud Manager component handles all license management tasks centrally. (Of course, ARCHICADs still need access to the ARCHICAD protection keys.)
To view detailed information about the currently available/used licenses, open the BIMcloud Manager and navigate to the **Servers > BIMcloud Manager > Licenses** panel. (The BIMcloud Manager can be used without reserving a license.)

**Using the Hardware License Key**

After installing BIMcloud Manager, you should restart your computer before setting up the protection key. The hardware key must be accessible by the BIMcloud Manager. To ensure this, use one of the following methods:

- Connect the key to the BIMcloud Manager computer’s USB port.
- Connect the key to a different computer and install a CodeMeter Server on it, which will provide access to the license for the BIMcloud Manager computer.

  **Note:** This CodeMeter Server can be the same one already used by the other GRAPHISOFT products in the office.

**Programming the Hardware License Key**


If you have recently purchased the GRAPHISOFT BIMcloud Solution, you will receive an empty CodeMeter key that you must “load” through the licensing site.

**Using a CodeMeter Server**

**System Requirements for a CodeMeter Server**

The CodeMeter server is part of the CodeMeter driver, so you only need to select a computer on your network that will act as a CodeMeter server. To set up a CodeMeter server as a network license server, you will need the following:

- A computer with network connection (should be running during work hours).
- The computer must have at least three free USB ports.
- CodeMeter driver must be installed. Click on **Tools and Utilities** from the start-up screen, or browse your DVD directory for the CODEMETER folder.

  **Note:** There is no need for a server-level operating system for the CodeMeter server. You can use one of the workstations as a CodeMeter server; you must keep it running during work hours.

**Set Up the Server**

After you have your server running and the CodeMeter driver is installed, start the server as described below:

All CodeMeter settings can be managed in CodeMeter WebAdmin. To start it: Open CodeMeter Center (from Applications or using the Start menu) and click on WebAdmin or simply open localhost:22350 on your browser.

To enable the CodeMeter server:

1. Go to Configuration/Network tab.
2. Check Run Network Server checkbox.
3. Do not forget to Apply the changes.
From that point, the server runs and shares licenses on the local network.

Client Side Settings
All clients on the local network should find the server automatically. In case this does not work (e.g. your server is in a different subnet, or you are connecting remotely through the Internet), then you may need to specify the server's hostname IP address. On the client:
1. Open WebAdmin.
2. Configuration/Network.
3. Add the server to the Server Search List.
This field can have multiple entries; the client searches for available licenses in the specified order and only on the specified servers. Only when the list is empty does the client search for other available servers.

Access Control
With the default settings, all computers on the same local network (same subnet) can use a license from the server.
To restrict access:
• Open WebAdmin.
• Go to Configuration/Access Control.
If the Clients' list is empty, anyone on the local network can use a license. If at least one entry is listed here, only the listed entries can request a license.

Note: If the server is public on the Internet, or no one is allowed to use a license, make sure that this list is filled out correctly to avoid unwanted license usage.

You may want to check who is using a license:
1. Open WebAdmin on the server computer.
2. Go to Server/User tab.
Here you can see a list of active clients and clients who have borrowed licenses.

Uninstall BIMcloud
Each BIMcloud component can be uninstalled independently.
However, if you uninstall the BIMcloud Manager, then you will not be able to work on any of the previously connected BIMcloud Servers unless you reconnect them to a different BIMcloud Manager.
To uninstall a BIMcloud component, you can use the Uninstall shortcut located in the component's install folder. Double-click this shortcut to begin the uninstall process.
To uninstall a BIMcloud Component from a PC, it is best to use the “Add or Remove Programs” or “Programs and Features” utility, accessible from the Control Panel.
BIMcloud/BIM Server Manager

Manager Web Interface
Projects
Users
Roles
Libraries
Servers - BIMcloud
Modules - BIM Server
Hosted Projects/Libraries Panel
Access Panel
Activities Panel
Connection Settings
Tray application

Manager Web Interface

This web interface is the main control center of your BIMcloud/BIM Server. It is designed to help you fulfill all management tasks related to the BIMcloud/BIM Server. Also, it is a flexible tool in the hand of all users to review their own settings and get information about the projects they are currently working on.

You can open the BIMcloud/BIM Server Manager web interface from any computer which has network access to the BIMcloud/BIM Server. Use the same URL in your browser as you use in ARCHICAD.

The initial server administrator signs on as the Master Administrator (masteradmin), and has full access to all controls. He/she then proceeds to add users and assigns them roles and permissions as appropriate.

See Troubleshooting: Permissions Deadlock.

The management interface for the BIMcloud and the BIM Server products are very similar to each other but due to the difference in features some controls and functions will not be available in BIM Server.

See BIMcloud vs. BIM Server: Feature Differences.

The most significant difference is that the BIM Server is not expandable like the BIMcloud, it is not possible to Pair it with additional BIMcloud Servers. It is limited to a single Module. To represent this limitation, the Servers content type is called Modules in BIM Server.

This manual inserts a Note whenever there is a difference between the functions or the behavior of the products. E.g.: “Not available in BIM Server”.

Components of the Manager Web Interface are described below:

Home Screen
Content Types
Header
Home Screen

The Home Screen is the main landing page of the BIMcloud Manager web interface. This will automatically open after a successful login. You can return to this page at any time by clicking the Home button from the breadcrumbs.

This page gives you a summary about your current activities on the BIMcloud (Joined projects) and provides shortcuts to the different content types.

Note: The number of available shortcuts depends on your permissions on the server.

The Home page contains the server’s address, which can be used from ARCHICAD to connect to this server.

Content Types

There are five different content types on the BIMcloud/BIM Server, each with its own properties and functions. The content types are separated from each other in the web interface, but their interrelationships are reflected in a number of logical weblinks between the content types.

Content types:

- Projects
- Users (and Groups)
- Roles
- Libraries
- Servers (Modules for BIM Server)

Click on the link you wish to view.
Although there are many different content types, their basic behavior is similar no matter what you are viewing or editing. For each content type, the web page interface is divided into four parts:

- **Header**
- **Navigator**
- **Summary**
- **Settings/Details**

**Header**

The header contains notifications about the BIMcloud/BIM Server and shortcuts for different settings.

Next to the name of the BIMcloud/BIM Server is a pop-up with the following information:

- Currently running job(s)
- Warning(s) and information about the BIMcloud
- Shortcut to the BIMcloud/BIM Server Manager settings

*Note:* The content of this pop-up changes depending on your permissions.

On the right side of the header is your avatar and name. The pop-up next to your name contains the following items:

- **User settings** takes you to your own user page.
- **Language** allows you to change the language of the web interface. (This language change does not affect the other users; it is your personal setting.)
- **Log out** gets you out of the BIMcloud/BIM Server Manager web interface.

The Help link on the far right side opens the BIMcloud help.

*Note:* Changing Language is not available in BIM Server.

The breadcrumbs show your currently open page. Use the pop-up in the breadcrumb to quickly switch between the different content types.

If you create a Bookmark in your browser, then it will always return you to the page represented by your breadcrumb (including the currently active panel and even search results).
Navigator

The Navigator lists all elements of the currently selected content type. Each Content type has a Root item (which acts as a folder) shown in the Navigator.

Click an element to select it and display further information about it.

**Note:** Depending on your permissions, the elements you see here, and the information displayed, can vary.

New Item Function

The Root items of the Navigator contain a + button, which is a shortcut to create new items.

The new item will be created in the currently selected level of the hierarchy. (If the content type does not have a hierarchy in the Navigator, then it will be created in the Root folder).

**Note:** Depending on your permissions, the create function might not be available for you.

Navigator Layouts

The Navigator can switch between three different layouts:

- Single Column
- Hidden
- Expanded

Switch between the layouts using the arrows on the right side of the Navigator.
Single Column Layout
Only the name and path of the item is visible.

Click the slide arrows on the right side to expand or collapse the layout.

Hidden Layout
The Navigator is not visible. Click the arrow on the side of the screen or swipe from left to right to open it.

Expanded Layout
When the expanded layout is active, only the summary is visible; the content panels for the selected item are hidden. More detailed information is available in a table format. You can sort the columns to find the information you are looking for.

Layout Limitations for Small Screen Devices
- Expanded layout is not available due to the lack of horizontal space
- The Navigator automatically hides itself after a successful item selection
Navigator View Type

The Navigator can display items in two different styles:

- Tree view
- Flat list

Tree View

On the Projects and Servers pages, all items can be displayed in a tree style view according to their position in the hierarchy. Open/close the tree branches by clicking the arrow on the left side of the folders.

**Note:** The User/group, Roles and Libraries content types have no tree view, because those content types use no hierarchy.

Flat List

Items are displayed in a flat list regardless of their position in the hierarchy. However, the item’s path in the hierarchy is displayed in a second line.
Search results are always displayed in a flat list. Cancel Search to return to the tree view.

Managing List items in the Navigator

**Select** an element by clicking on it.

- **Multi-select**: Activate multi selection by clicking the checkmark icon on the top left of the list
- Select an item from the **Filter** pop-up to narrow down the displayed items. The available quick filters depend on the currently selected content type.

- **Search**: Click the Search icon to open the search field and type your search term. The list will display the search matches. Click the x icon in the Search field to cancel the search and display all elements again.
Summary

The Summary, displayed to the right of the Navigator, provides key functions and a quick overview about the selected item.

You cannot edit its values in the Summary. (When the Navigator is in an expanded layout, the Content area is hidden, and the Summary is the only visible information source.)

The Summary has four sections:

- **Name**
- **Functions**
- **Quick information**: Displayed in multiple rows. Most of the rows also act as a link to a page, where further information is available. If you do not have permission to view further details about a linked item, then the link is blocked.

**Summary Sections: Name - Functions - Quick Info - Joined Projects or Users**

- Name
- Functions
- Quick information: Displayed in multiple rows. Most of the rows also act as a link to a page, where further information is available. If you do not have permission to view further details about a linked item, then the link is blocked.
• Joined users/projects:
  • For a selected User (Users page only): the projects the user has joined.
  • For a selected Project (Projects page only): the users who have joined this project.

Panels
Displays and allows editing of all the parameters and properties of the selected item(s).

Information in each panel may be organized into several sections. Click the Edit button on the section header to edit its content. Click Save or Cancel to complete editing.

**Note:** Only one section can be edited at a time. If you try to edit a different section or navigate away from the current page a warning will remind you to store your settings first.

In some cases, the Edit command opens an additional Details panel, with additional editing options. Close this temporary panel by clicking the X icon on its tab.

Background Jobs
Most functions will complete instantly when they are clicked, but some take longer. In these cases, the process will turn into a background job; the user can keep working.

Multiple background jobs can run at the same time. Typically you will only see the background jobs started by you.
You will receive a notification if a clicked function has become a background job. While the job is running, you will see a progress indicator progress in the BIMcloud/BIM Server Manager header pop-up.

You are also notified once the background job is complete, with information on whether the job was completed successfully or encountered errors.

**Settings Inheritance**

*Note:* Not available in BIM Server.

The BIMcloud allows you to set up generic rules for a group of items by arranging them into a hierarchy and applying the settings at a higher level: that is, items at a lower hierarchical level inherit settings from those at a higher level. Settings for the Root element of the content type will be inherited by all items of that content type.

*Note:* Not all content types can be organized into a hierarchy. In those cases (e.g. Users, Roles), the only hierarchy is between the Root item and all the others. For these content types, too, settings applied to the Root will be inherited by all child items.

The inherited settings can be overridden at lower levels, if you have the necessary permissions.

*See Inheritance of Access Rights.*
Projects

The Projects page lists the projects, organized into folders, to which you have access. You can use folders to organize these projects in any way you like.

Permissions for projects, project folder(s) and project root contain ARCHICAD level permissions as well. If a user Joins a project from ARCHICAD, then the permissions granted on the project's access panel will control what he/she can do in ARCHICAD. Permissions are inherited: a permission granted at a higher level will apply at all lower levels unless it is specifically withdrawn in a custom role.

**Required permissions to view projects/folders:**
- Simplified management: **Project/Server administrator**
- Detailed management: **View item permission** (Traversing applies)

**Required permissions to Join a project using ARCHICAD:**
- Simplified management:
  - Project/Server Administrator management role or
  - Any user who has been added to the project’s Access list (even without any further permissions)
- Detailed management:
  - Any user who has View item permission for the project. (Traversing applies)

**Required permissions to work from ARCHICAD:**
- Use the ARCHICAD permissions to control what each individual user can do in ARCHICAD (see [Permissions and Dependence](#))

Topics in this section:

Navigator
Functions
Summary
Panels
Project Backup and Restore
**Navigator**

**Note:** Folder hierarchy is limited to a single level in **BIM Server**.

The Projects page lists the projects, organized into folders, to which you have access. You can use folders to organize these projects in any way you like, e.g. all projects belonging to a studio go into one folder.

On the Projects page, the Navigator has two view options:

- **Tree view:** Hierarchy is displayed
- **List view:** All projects/folders are displayed in a list. Their location in the hierarchy is displayed in the second line of each item. This view type is easier to sort, because it omits the folder hierarchy.

**Filters**

The following filters are available to narrow down the items displayed in the Navigator:

- **All:** all projects and folders
- **Projects:** only projects
- **Folders:** only folders
- **Joined:** projects You've Joined

You can Focus on folders to limit the number of displayed items to its child elements only.
In a focused view, the items in the Filter pop-up will change and the filters will only apply to the focused branch of the hierarchy.

Quit from focused view by selecting the Show All filter or clicking the **Focus** button on the focused item.

**Expanded View**

In the expanded view, the following columns are available:

- Number of Joined users
- Project version
- Project size (Total size for folders)
- Last backup
- Modified date
- Host server

Use these columns to quickly sort among your project. Switch to flat list view to sort globally (otherwise it sorts within folders only).

**Functions**

Available functions vary depending on what you have selected in the Navigator: Root, Folder or Project.
Each function is described in the following sections:

**Create Folder**

**Project Status**

**Duplicate Project or Folder**

**Move Project or Folder**

**Change project’s host server**

**Export Project or Folder**

**Import Project**

**Delete Project/Folder**

### Create Folder

**Note:** Folder hierarchy is limited to a single level in BIM Server.

Creates a folder inside the currently selected folder. This function is available if the Projects root folder or any other project folder is selected.

Click **Create Folder** and enter the new folder name in the appearing dialog. Make sure the new folder name is unique within this folder.

**Required permissions to create folders:**

- Simplified management: Project/Server administrator
- Detailed management:
  - Modify folder content for the parent folder (or root)
Project Status

Projects are accessible by default. If you lock a project, Joined users will not be able to send changes.

Users can continue to work in the project on their computer and send in changes after it is accessible again. A locked project also gets a badge on the navigator for easier visual identification:

The project status combines multiple information:

- Project’s host server/module is running and accessible, or not
- Project’s data is available on the host server or not
- Project is locked or not

The popup contains different commands for the different statuses:

- Lock / Unlock depending on its lock status.
- Link to...: If the project’s data is not found on the host server/module, then it can be re-linked to a different, currently unused project.

See Hosted Projects/Libraries Panel.

If the project is locked or its data is not found on the host module/server, it will get a red mark in the navigator.

Required permissions:

- Simplified management: Server/Project administrator
- Detailed management: Lock/Unlock project

Duplicate Project or Folder

Use this if you want to create a project/folder with settings and content similar to those of an existing one. If a folder is duplicated, then all its child items will be duplicated. All locally added accesses will be duplicated during the process. Select the existing item, then click Duplicate from
the Summary panel. Give the duplicate item a new name. Then adjust its settings in the Settings panel.

**Required permissions:**
- Simplified management: Server/Project administrator
- Detailed management:
  - **Modify folder content** for the parent folder (or root)

## Move Project or Folder

Moves the selected item(s) to a new folder. The function is available for all items. This will also move the child item(s) of the selected folder.

Click the function and pick a folder to which to move the elements.

**Note:** The folder picker will contain all the folders you can see in the Navigator. To select a folder as a destination, you must have permission to modify its content.

**Required permissions:**
- Simplified management: Server/Project Administrator
- Detailed management:
  - **Delete/Remove folder content** for the parent of the selected item
  - **Modify folder content** for the target folder

## Change project’s host server

**Note:** Not available in BIM Server.

Use this function to move a project’s data from one host server to another. The process will put the project into an offline state for the Joined users, but once it completes, the project will be online again and they can send in their changes.

**Required permissions:**
- Simplified management: Server Administrator
• Detailed management:
  - Modify hosted content for the Source and Target host servers

Export Project or Folder

Use this function if you want to save the project as a file (.BIMProject20).

Click Export. A job is begun, which packages the file. Once this is complete, the Save dialog appears. If needed, check the option to include backups in the exported file. Browse for the file destination if your browser requires it. Otherwise it will be downloaded into your default download folder.

Import Project

Use this function to import a project file (extension .bimproject) into the selected folder.

1. Click Import.
2. Browse for the project file (.bimproject) you wish to import.
3. A server pop-up appears (if your permissions allow): choose a Host Server for the imported project.

The project is imported.

Required permissions:
• Simplified management: Server administrator
• Detailed management:
  - Modify folder content
  - Modify details

Delete Project/Folder

Deletes the selected project or folder. If a folder is selected, all of its contents will be deleted along with the folder!

Required permissions:
• Simplified management: Project/Server administrator
• Detailed management: Delete/Remove folder content for Parent folder and all of its subfolders
Summary

Summary information is shown for each selected item from the Navigator (Root, Folder, or Project):

<table>
<thead>
<tr>
<th></th>
<th>Root</th>
<th>Folder</th>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>ARCHICAD program version</td>
</tr>
<tr>
<td>Size</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>Size of selected project; or Total size of all projects (viewable by me) in the selected folder</td>
</tr>
<tr>
<td>Modified</td>
<td>☒</td>
<td>☒</td>
<td>☒</td>
<td>Date/time of last modification</td>
</tr>
<tr>
<td>Last BIMProject Backup</td>
<td>☒</td>
<td></td>
<td></td>
<td>Date of last BIMProject backup (also shows “Up to date” if project has not been modified since)</td>
</tr>
<tr>
<td>Last PLN Backup</td>
<td>☒</td>
<td></td>
<td></td>
<td>Date of last PLN backup (also shows “Up to date” if project has not been modified since)</td>
</tr>
<tr>
<td>Host Module/Server</td>
<td>☒</td>
<td></td>
<td></td>
<td>Name of BIMcloud Server hosting this project</td>
</tr>
<tr>
<td>Joined users list</td>
<td>☒</td>
<td></td>
<td></td>
<td>The users who have joined this project</td>
</tr>
</tbody>
</table>

Joined Users

The users listed in this section are currently Joined to the project. The color of the dot next to their name indicates their online/offline status:

- **Online**: Blue
- **Offline**: Gray

Joined Users: 3

- Kovacs-Paliko Gabor
  - For Leave
- Trom Peter
  - For Leave
- Néda Luci
  - For Leave
If at least one user has joined to the project using the BIMx PRO application, then small icons will appear next to everyone’s name indicating which client he/she is currently using.

**Force Leave**

The Force Leave button next to each user in the Joined user(s) lists enables you to force the user to leave the project.

**Note:** Force Leaving a user is immediate; the user will not be able to send in his/her changes. A Force Leaved user can re-join the project immediately without further restrictions. If you would like to prevent the user from re-joining the project, revoke his/her permissions on the project’s access panel.

*Required permissions to force leave a user from a project:*
- Simplified management: Project or Server administrator
- Detailed management: Modify access for the project

**Panels**

The number of available Panels and their content vary depending on what is selected in the Navigator:
- **Project Root**
- **Folder**
- **Project**

**Project Root**

The Project root acts as a folder.
Settings

Default Host Servers: This is the default host server for projects created in this folder. Different host servers must be set up for the different ARCHICAD versions.

Note: Default host server settings are not available in BIM Server.

When a user shares a project from ARCHICAD and places it in the currently selected folder, the project will be automatically hosted by the BIMcloud Server chosen here. Change this default by choosing from the pop-up list of available BIMcloud Servers.

Click Select to modify the default and select the desired host server from the pop-up dialog.

Click Select, then Save, to store your settings.

> Required permissions to edit settings:
  - Simplified management: Server administrator
  - Detailed management:
    - Modify details for the selected item
    - Only those BIMcloud Servers appear in the default host server pop-up for which the current user has Modify hosted data permission

Backups

Note: Backups settings for Project root or Project folders are not available in BIM Server.

Click Edit on this panel to schedule project backups.

A backup can be of two kinds: BIM Project backups and PLN Project backups. Both types of project backups can be either automatically scheduled, or created manually at any time - for example, whenever the project reaches particular milestones.

See also Project Backup and Restore on how to use backups.
Define Backup Schedule

The Backup Schedule defined here is applied to all the subfolders and projects of this Projects Root.

Use the pop-ups to choose a schedule for PLN backups and/or BIMProject backups:

- **Don't Create**: This backup type will not be created
- **Hourly**: The backup will be created hourly, based on the below settings
- **Daily**: The backup will be created at a set time each day

Enter the number of automatic backups to keep. (You must keep at least one copy.) With each additional automatic backup, the oldest stored backup will be deleted. Click **Save** to save changes.

Backup settings for Project root are inherited by all child folders and projects. If you wish to override the default settings, define a local backup schedule for the selected item.

**Note**: Defining backup settings for a project root will not back up the contents of that folder. The only purpose of defining backup settings for a folder is to apply these backup settings to its child folders and to the projects they contain.

**Note**: Inheritance is not available in **BIM Server**.

**Required permissions:**
- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item

Activities

Activities will show all activities of all users across all projects.

*See Activities Panel.*

Access

*See Access Panel.*

**Note**: Access panel for Project root are not available in **BIM Server**.
Folder

**Settings**

**Name:** Name of the selected folder

**Default Host Server:** This is the default host server for projects created in this folder. Different host servers must be set up for the different ARCHICAD versions.

**Note:** Default host server settings is not available in BIM Server.

When a user shares a project from ARCHICAD and places it in the currently selected folder, the project will be automatically hosted by the BIMcloud Server chosen here. Change this default by choosing from the pop-up list of available BIMcloud Servers.

By default, the Default Host server Settings pop-up inherits its value from its parent folders (or root). You can override these settings at this level or you can reset it to the default location while editing this section.

- **Select:** Select the default host servers from the pop-up
- **Inherit:** Use the host servers of the parent folder

**Required permissions to Edit settings:**

- Simplified management: Server administrator
- Detailed management:
  - Modify details for the selected item
  - Only those BIMcloud Servers appear in the default host server pop-up for which the current user has Modify hosted data permission
## Backups

By default, the Backup schedule inherits its values from its parent folders (or root). You can override these settings at this level or you can reset it to the default settings while editing this section.

Click **Edit** on this panel to schedule backups for projects in this folder.  
*See also Project Backup and Restore on how to use backups.*

Backup schedule types:
- **Inherited**: use the settings of the parent folder.
- **Defined locally**: override the default settings

**Note**: Defining backup settings for a folder will not back up the contents of that folder. The only purpose of defining backup settings for a folder is to apply these backup settings to its child folders and to the projects they contain. Backups will be executed on the projects.

**Note**: Inheritance is not available in BIM Server.

### Required permissions:
- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item

## Activities

Activities will show all activities of all users across all projects located in the selected folder.  
*See Activities Panel.*

## Access

**Note**: Access panel for Project folder(s) are not available in BIM Server.  
*See Access Panel.*
Project

Settings

Name: Name of the selected project

Note: Use a different name for each project. Do not use the same name as that of an existing project, even if the letter cases are different (e.g. ParkingGarage and PARKINGGARAGE). If you do, users may not be able to Open or Join the project they need.

Required permissions to Edit settings:

- Simplified management: Server administrator
- Detailed management: Modify details for the selected item

Backups

Use the controls on this panel to schedule, create and manage project backups.

A backup can be of two kinds: BIM Project backups and PLN Project backups. Both types of project backups can be either automatically scheduled, or created manually at any time - for example, whenever the project reaches particular milestones.

See also Project Backup and Restore on how to use backups.
Backup Schedule Section

Click **Edit** to choose a schedule for PLN backups and/or BIMProject backups:

- **Don't Create**: This backup type will not be created
- **Hourly**: The backup will be created hourly, based on the below settings
- **Daily**: The backup will be created at a set time each day

Enter the number of automatic backups to keep. (You must keep at least one copy.) With each additional automatic backup, the oldest stored backup will be deleted. Click **Save** to save changes.

*p Required permissions to modify schedule:*
- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item

Backups Section
Create Backup

Use this command to create a manual backup of the currently selected project. From the Create pop-up, choose the type of backup you want:

- A **BIMProject backup** starts immediately as a background job, and you will receive a notification after it completes. *(See Background Jobs.)* The new backup is listed in the Backups list (as well as on the Activities panel).
- For a **PLN Project backup**: The process is the same as for an automatically scheduled PLN backup. All clients are informed (via an icon in the Teamwork Palette) that a backup is pending. The backup will be created when a client clicks Create backup during a Send and Receive.

Choose a name for the backup file. If a backup of the chosen type is already in progress or pending, you cannot create another one until the first one is complete. Select one or more backup(s) from the list of existing backups to access the following functions:

**Download Backup File**

Click **Download**, then browse for the file destination.

**Delete Backup**

Click to delete the selected backup file. If the selected file is a pending PLN Backup, it is deleted from the list, and the backup will not take place.

**Keep Backup**

Available only if the selected file is an automatic backup. Click **Keep** to retain this automatic backup even after it would otherwise be scheduled to be deleted.

After you click Keep, the automatic backup becomes a Manual Backup, with an editable Name, and will henceforth be listed as a Manual Backup.

**Rollback**

Available only if the selected file is a BIMProject backup.

Use Rollback to either replace the current selected project version with the backup file or to create a new project.

Click **Rollback**, then choose an option:

- **Overwrite this Project**: The selected BIM Project backup copy will overwrite and replace the current project.

As a result, all users are notified of a “Terminated Session”: they must re-join the new version of the project. (Users must discard any unsent changes, or save the version they currently have as a solo project, but they can no longer send any unsent modifications to a project that has been overwritten.)
- **Create New Project from Backup**: The selected BIM Project backup file will be created as a new, separate project on the server.

**Required permissions to work with existing backups:**
- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item

**Activities**

Activities will show all activities of all users in the selected project.
*See Activities Panel.*

**Access**

*See Access Panel.*

**Project Backup and Restore**

Schedule a backup on the Backups panel, available for Project Root, Folders, and Projects.

**PLN Project Backups**

PLN Project Backups contain your model data only, and can be used to reopen the project in solo ARCHICAD mode. The PLN Backup process utilizes a client’s computer and requires client confirmation before the backup can be created.

**Note**: PLN backups will only be run on the computers of those users whose role includes the following permission: “PLN Backup - Use computer for creating”.

When it is time for a scheduled PLN backup, all clients (whose role includes the permission entitled “PLN Backup - Use computer for creating”) will notice a “pending backup” icon in the Teamwork Palette accompanying the Send & Receive commands.

This means that - once the time comes for a scheduled PLN backup - if a user issues any of these commands (Send & Receive, Send Changes, Receive Changes, or Send Changes & Comment), he/she will be informed that a PLN backup is pending, and that a full Send & Receive is necessary to carry this out.

The two options:

1. Click **Continue**. A Send & Receive will occur, followed by the PLN backup process.

2. Click the other button (its text varies depending on the command issued). The original command will be carried out (e.g. Send & Receive), but no backup will take place.

Although any number of online users may be alerted to and asked to perform a pending PLN backup, only one of them needs to click **Continue** to carry it out. (At this point, the “pending” icon disappears from the Teamwork Palette.) The rest of the users can work as usual. While the PLN backup is in progress, the confirming user cannot work in ARCHICAD.

If **none** of the users clicks **Continue**, and **all** of them choose to skip the Backup process, the PLN project backup cannot be created. The “pending backup” icon remains visible on the Teamwork Palette, until one user agrees to do a full Send & Receive followed by the backup.
BIMproject Backups

BIMproject Backups contain model data, plus all BIMcloud/BIM Server related information, such as user data and roles. A BIMproject backup will be created automatically in the background according to the schedule set in the Project Backup Schedule dialog box.

In case a BIMproject backup creation was started manually, then a backup job will appear at the top-right of the Manager interface to show its progress. Once the backup is completed it will appear in the list of backups.

No user interaction is needed to complete the backup.

Where are the Backup Files Located?

Backup files of both kinds (BIMproject backups and PLN backups) are saved to the Projects > Backups folder, at the location where you installed the BIMcloud Server/BIM Server.

As long as the BIMcloud/BIM Server is running, you can download these backup files to any other location of your choice, using the Download button in the Backups panel of the Projects page of the Manager interface.

How do I Restore the Backup Files?

BIMproject backups can be restored to a running BIMcloud/BIM Server. See these sections:

Rollback BIMproject Backup on Same BIMcloud/BIM Server.
Download BIMproject Backup File, then Import to any BIMcloud/BIM Server.

PLN backups can only be opened as solo ARCHICAD projects, then re-shared. See this section:

Download PLN Project Backup, then Open as Solo Project and Re-Share.

Rollback BIMproject Backup on Same BIMcloud/BIM Server

If the original BIMcloud/BIM Server is running: you can use Rollback to either replace the current Teamwork project version with the backup file or to create a new project.

1. Select a BIMproject backup in the Project backups panel.
2. Click Rollback.
3. Choose a Rollback Option:
   - Overwrite this Project: The selected BIMproject backup copy will overwrite and replace the current project.
     As a result, all users are notified of a “Terminated Session:” they must re-join the new version of the project. (Users must discard any unsent changes, or save the version they currently have as a solo project, but they can no longer send any unsent modifications to a project that has been overwritten.)
   - Create New Project from Backup: The selected BIMproject backup file will be created as a new, separate project.
4. Click Rollback, then OK.

The BIMproject is now available from the Manager’s Project list.
Download BIMproject Backup File, then Import to any BIMcloud/BIM Server

If you want to work on the project using a different, functioning BIMcloud/BIM Server: download the backup file, then import this file to a different BIMcloud/BIM Server.

1. From the Backups list select any BIMproject backup.
2. Click **Download**.
3. Choose a folder to which to save the backup file.
4. Import this backup file to any functioning BIMcloud/BIM Server, using the Manager interface.
   
   **Note:** Since the BIMproject backup contains all user data and roles, you can resume working right away - no need to re-add users or re-define roles.

Download PLN Project Backup, then Open as Solo Project and Re-Share

**PLN backups** can only be opened as solo ARCHICAD projects. You can use any version of ARCHICAD to open them. As soon as you gain access to a functioning BIMcloud/BIM Server, re-share this project and continue in Teamwork.

1. From the Backups list select any PLN backup.
2. Click **Download**.
3. Choose a folder to which to save the backup file.
4. Open this PLN file as a solo project, using any current or future version of ARCHICAD.
5. As soon a BIMcloud/BIM Server is running again, re-share the project and continue working in Teamwork.
Users

Users represent the people in your company. They work on projects on the BIMcloud/BIM Server. Use the users page to manage your users, organize them into groups.

Use the **Access panel** of the BIMcloud/BIM Server items to grant a permission set (**Role**) to someone (**User or Group**) for a certain item (the one currently selected in the Navigator.)

**Required permissions to view users/groups:**
- Simplified management: Project or Server administrator
- Detailed management: View item permission (Traversing applies)

Topics in this section:
- Navigator
- Functions
- Summary
- Panels

**Navigator**

The Navigator list view displays the Users root, and the users and user groups that it contains.

**Note:** **User groups** and all their related features are not available in **BIM Server**.

There is no “tree view” option on the Users page, just a list. This is because one user can be a member of multiple groups; this type of hierarchy cannot be represented by a simple tree. A user can be part of any number of groups.

A group can contain other groups. (In such a hierarchy, the containing group is called a parent group.) In the user list, a selected user or group name is followed by the name of any parent group(s) in the line below.
Note: Circular membership references are not allowed. E.g. if Group A is a member of Group B, then Group B cannot be a member of Group A.

Filters
The user List displays all users and all groups by default. As needed, use the filter to limit the list:

- **All**: all users and groups.
- **Users**: only users.
- **Groups**: only groups.
- **Using BIMcloud User license**: users who are currently using a BIMcloud User License (automatic or assigned).
- **Using automatic BIMcloud User license**: users who are currently using automatically reserved BIMcloud User License.

- **Using assigned BIMcloud User license**: users who are currently using manually assigned BIMcloud User License.
- **Joined to project(s)**: users currently Joined to at least one project.

If you have selected a group, you can further focus on the displayed contents of that group: to show all items within that group, or just its users, just its groups, or just holders of particular license types.

In a focused view the items in the Filter pop-up will change and the filters will only apply to the focused branch of the hierarchy.

Quit from focused view by selecting the Show All filter or clicking the Focus button on the focused item.
Expanded View

In the expanded view, the following columns are available:

- Number of Joined projects
- Default role
- LDAP
- Last active
- License(s)
- Color

Use these columns to quickly sort among your users. Switch to flat list view to sort globally (otherwise it sorts within folders only).

Functions

Available functions vary depending on what you have selected in the Navigator: Users Root, Group, or User.

<table>
<thead>
<tr>
<th>Function</th>
<th>Root</th>
<th>Group</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create User</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create Group</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Duplicate</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Export</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Import</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Each function is described in the following sections:

- Create User
- Create Group
- Enable/Disable User
- Duplicate User/Group
Export Users
Import Users
Delete User(s)/Group(s)

Create User

Click the plus-sign pop-up and choose **Create User**. (If the Users root is selected, you can also choose the command from the Summary panel).

Enter the name of your user along with his/her new password.

Click **Next** and enter the remaining parameters in the User's settings panel.  
*See Settings.*

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Modify folder content for User root**
Create Group

**Note:** Create Group is not available in BIM Server.

Click the plus-sign pop-up and choose Create Group. (If the Users root is selected, you can also choose the command from the Summary panel.)

Enter the name of the group in the dialog and click Create.

The Group settings panel will open; you can start to add members to your new group.

*Required permissions:*
- Simplified management: Server administrator
- Detailed management: Modify folder content for User root

Enable/Disable User

Users are enabled by default. If you disable a user, this temporarily revokes his/her access to all projects and management resources.

A disabled user can continue to work on his/her already joined projects offline and send in changes after he is enabled again.

A disabled user also gets a badge on the navigator for easier visual identification:
**Duplicate User/Group**

Use this if you want to create a user with settings similar to those of an existing user/group.

Select the existing user, then click **Duplicate** from the Summary panel. Give the duplicate user a new name. Then adjust its settings in the Settings panel.

**Required permissions:**
- Simplified management: Server administrator
- Detailed management: Enable/Disable User

---

**Export Users**

Use this function if you want to transfer users to a different BIMcloud/BIM Server, or to store user data for backup purposes. Select the user(s) you wish to export:

- To export all users, click on the Users root folder.
- To export all users from a particular user group, focus on the group and select all its users.
- To export a single or multiple users/groups, select them in the Navigator.

Click **Export**. Data for all the users you are exporting will be placed into a single file and downloaded into your browser’s download folder, with extension `.BIMUsers`.

---

**Import Users**

Click the **Plus** button on the User root, or select the User root and click **Import** from the available functions. Browse for a file containing the users to import (with extension `.bimusers`). The user file is imported to the BIMcloud Manager. If the BIMcloud Manager already contains a user with the same name as an imported user, the imported user is renamed with a suffix (the existing user will not be overwritten).
A dialog box informs you of the number of users imported, as well as the number of any imported users that were renamed.

A new group will be created with the date and time of the import, and all newly imported users and groups will be added as members. To see the import result, click the **Focus** button on the new group to view its contents.

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Modify folder content** for User root

**Delete User(s)/Group(s)**

Select one or more users or user groups to delete. Confirm the Delete process in the upcoming dialog box.

You cannot delete users or groups that originate from an LDAP directory service.

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Delete/Remove content** for User root

**Summary**
Summary information is shown for each selected item from the Navigator (Root, Group, or User):

<table>
<thead>
<tr>
<th>User</th>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>License(s) (not in BIM Server)</td>
<td>X</td>
<td>Indicates whether user has a BIMcloud User License.</td>
</tr>
<tr>
<td>Members (not in BIM Server)</td>
<td>X</td>
<td>Number of members and groups within the selected group.</td>
</tr>
<tr>
<td>Directory service (not in BIM Server)</td>
<td>X</td>
<td>Indicates whether the selected Group or User was imported through a Directory Service. (<a href="#">See BIMcloud Manager - LDAP Panel.</a>)</td>
</tr>
<tr>
<td>Default role</td>
<td>X</td>
<td>User’s Default role, if assigned.</td>
</tr>
<tr>
<td>Management role</td>
<td>X</td>
<td>In case Simplified Management is in use. (<a href="#">See Permission Management: Simplified and Detailed.</a>)</td>
</tr>
<tr>
<td>Last active</td>
<td>X</td>
<td>The last time the User interacted with the server.</td>
</tr>
<tr>
<td>Joined projects</td>
<td>X</td>
<td>List of projects the user is currently joined into.</td>
</tr>
</tbody>
</table>

### Joined Projects

The projects listed in this section are currently Joined by the selected user. The color of the dot next to the name indicates his/her online/offline status:

- **Online**: Blue
- **Offline**: Gray
- **Joined icon**: If at least one user has joined the project using the BIMx PRO application, then small icons will appear next to everyone’s name indicating which device he/she is currently using.

### Force Leave

The **Force Leave** button next to each project in the Joined projects lists enables you to force the user to leave that project.

**Note**: Force Leaving a user is immediate; the user will not be able to send in his/her changes. A Force Leaved user can re-join the project immediately without further restrictions. If you would like to prevent the user from re-joining the project, revoke his/her permissions on the project’s access panel.

**Required permissions to force leave a user from a project:**

- Simplified management: **Project or Server administrator**
- Detailed management: **Modify access for the project**
Panels

The number of available Panels and their content vary depending on what is selected in the Navigator:

**Users Root**

**User**

**User Group**

Users Root

![User Root Panel](image)

Settings

User root has no settings, this panel is empty.

Activities

Activities will show activities of all users across all projects.

*See Activities Panel.*

Access

*See Access Panel.*

Access panel is not available while using the Simplified management mode.

**Note:** BIM Server allows only **Simplified management**, thus the **Access** panel is never available.
Settings

Note: You cannot edit certain parameters of users that originate from an LDAP directory service. These parameters are marked with an LDAP tag.

Click Edit to modify the fields in any of the sections of User Settings.

Licenses Section

Note: Licenses section is not available in BIM Server.

Each user working on the BIMcloud requires one BIMcloud User License, regardless of how many projects the user is joined into. The license is automatically reserved for each user when he/she opens a Teamwork project in ARCHICAD.

The BIMcloud User License remains assigned until the user leaves his/her last project on the BIMcloud.

It is possible to assign a license to the user permanently: click Assign.
Revoke the license with the **Revoke** button.

For general information, see *The BIMcloud User License*.

The icon shows the following:
- Gray: Not using a license
- Black, empty in the middle: Automatically reserved license
- Black, dot (pin) in the middle: Permanently assigned license

**Required permissions:**
- Simplified management: Server administrator
- Detailed management: Manage licenses for the selected user

**Personal Settings Section**
- **Photo:** Click to browse for an image-format file to use as a user photo, with a maximum file size of 2MB.

- **Color:** Click the color picker to assign a user color.
- **Login Name:** Enter the login name of the User. Do not use spaces or special characters (e.g., "/", "..."). This field cannot be left empty.
- **Full Name:** Full name of the user. This name will appear in the header, and will be the name seen by other users in ARCHICAD. This field cannot be left empty.
- **Email address:** Email address of the user. This field cannot be left empty.
- **Default Role:** Choose a role from the pop-up. If you do not wish to assign a Default Role, then select “Not set” from the pop-up.
- **Management role:** If the Simplified management mode is used, then you can assign the Management role for the user from this pop-up.

*See Permission Management: Simplified and Detailed.*
- If **custom fields** have been defined, they will also appear in the personal settings section. All custom fields are optional.
Parameters imported from LDAP servers are marked with an LDAP tag. Those parameters cannot be modified here.

**Required permissions:**

- Each user is allowed to modify his own Photo, Color, Full name and Email address (unless those are imported from an LDAP server)
- Simplified management: **Server administrator**
- Detailed management: **Modify details** for the user

**Parent Groups Section**

Note: Parent groups section is not available in **BIM Server**.

Displays the parent group(s) to which the user belongs.

Click **Edit** to modify the user or group’s parent group(s).

**Add Parent Group**

To add the currently selected item (user or group) as a member to another group, start typing the desired group name in the Add group field, and choose the group name when it appears. Only those groups can be selected for which you have Modify details permission.

**Delete Parent Group**

If a current parent group can be deleted for the currently selected item (user/group), that parent group is shown with an X button. Click the X to delete a parent group. (The selected item is no longer a member in that group.) Only those groups can be deleted for which you have Modify details permission.

**Note**: If the parent group membership stems from an LDAP database, this is also indicated with a label. You cannot modify a user's parent group(s) if it comes from an LDAP database.

**Required permissions to add or delete parent groups:**

- Simplified management: **Server administrator**
- Detailed management:
  - **Modify details** for the currently selected user
  - **Modify details** for the selected parent group
Password Section

For your own account: click Change Password.
For another user: click Request password change via email.

The user will receive an email informing him/her of the password change request, with a link to the password change page. The user then changes the password and returns to the Login page.

If the BIMcloud Manager is not able to send the email, then it will provide the link where the password can be changed. Send this link to the user to reset his/her password.

**Required permissions to request password change from other user(s):**
- Simplified management: Server administrator
- Detailed management:
  - Modify details

This function is not available for users imported from an LDAP server.

**Required permissions:**
- Each user is able to change his/her own password
- Simplified management: Server administrator
- Detailed management: Modify details for the project

Activities

Activities will show all activities of the selected user across all projects.

See Activities Panel.

Access

See Access Panel.

Access panel is not available while using the Simplified management mode.

Note: BIM Server allows only Simplified management, thus the Access panel is never available.
User Group

**Note:** Groups are not available in BIM Server.

A group is a collection of users. One user can be member of any number of groups. A group can be a member of another group as well.

Settings

Settings Section
Name of the Group.

Parent Groups Section

Displays the parent group(s) to which the user/group belongs.
Click **Edit** to modify the user or group's parent group(s).

*Required permissions to add or delete parent groups:*
- Simplified management: Server administrator
- Detailed management:
  - Modify details for the currently selected user
  - Modify details for the selected parent group
Members Section

This section lists the members (users and groups) of the current group. Click the filter to display all members, or just users or just groups which are members.

Load more/Load all: If the group contains too many members to display at once, use the Load more or Load all buttons at the bottom to expand the list. Click Edit to add or delete members to/from the selected group.

Add Member to Group

Start typing the desired member name in the Add member field, and choose the name when it appears.

Delete Member from Group

From the Users list, select a user to delete and click the X.

To delete multiple users: Click the checkmark to display a checkbox next to every user. Check the boxes of each user to be deleted, then click Remove.

_required permissions to add or delete parent groups:

- Simplified management: Server administrator
- Detailed management:
  - Modify details for the currently selected user
Activities
Activities will show activities of all group members (and members of its child groups) across all projects.

See Activities Panel.

Access

See Access Panel.

Access panel is not available while using the Simplified management mode.

Note: BIM Server allows only Simplified management, thus the Access panel is never available.
Roles

Roles are a set of permissions, which describe what the owner of the role can do for specific element types or data types, both on the BIMcloud Manager or in ARCHICAD Teamwork projects. Thus, you can set up generic Roles and use them for any content type. Use the Access panel of the BIMcloud/BIM Server items to grant a permission set (Role) to someone (User or Group) for a certain item (the one currently selected in the Navigator.) Use the Roles page to view and modify roles and their permissions.

Required permissions to view roles:
- Simplified management: Project or Server administrator
- Detailed management: View item permission (Traversing applies)

Topics in this section:
- Navigator
- Functions
- Summary
- Panels
Navigator

The Navigator list view displays the Role root and the roles that it contains. The roles are shown in list view only. There are no additional columns in expanded view.

Functions

Available functions vary depending on what you have selected in the Navigator: Root or Role.

<table>
<thead>
<tr>
<th>Functions</th>
<th>Root</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Role</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Duplicate</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Export</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Import</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Each function is described below.

Topics in this section:

- Create Role
- Duplicate Role
- Export Roles
- Import Roles
- Delete Roles
Create Role

Click **Create Role** from the plus sign next to the Roles root, or from the Root Summary. Enter a role Name.

Define its permissions by editing the checkboxes in the Settings panel.

- **Required permissions:**
  - Simplified management: **Server administrator**
  - Detailed management: **Modify folder content** for Role root

Duplicate Role

Use this if you want to create a user with settings similar to those of an existing role.

Select the existing role, then click **Duplicate** from the Summary panel. Give the duplicate role a new name. Then adjust its settings in the Settings panel.

- **Required permissions:**
  - Simplified management: **Server administrator**
  - Detailed management: **Modify folder content** for Role root

Export Roles

Use this function if you want to transfer roles to a different BIMcloud/BIM Server, or to store user data for backup purposes. Select the role(s) you wish to export:

- To export all roles, click on the Roles root folder.
- To export a single or multiple users/groups, select them in the Navigator. Click **Export**.

Data for all the roles you are exporting will be placed into a single file and downloaded into your browser’s download folder, with extension `.bimroles`.

Import Roles
Click the **Plus** button on the Role root, or select the Role root and click **Import** from the available functions. Browse for a file containing the roles to import (with extension `.bimroles`). The role file is imported to the BIMcloud Manager. If the BIMcloud Manager already contains a role with the same name as an imported role, the imported role is renamed with a suffix (the existing role will not be overwritten).

A dialog box informs you of the number of roles imported, as well as the number of any imported roles that were renamed.

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Modify folder content** for Role root

### Delete Roles

Select one or more roles to delete. Confirm the Delete process in the upcoming dialog box.

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Delete/Remove content** for User root

### Summary

On the Role page, the Summary shows the name of the Role only.

### Panels

The available Panels and their content vary depending on what is selected in the Navigator:

- **Roles Root**
- **Role**

### Roles Root

![Roles Root Panel](image)
Settings
Role root has no settings, this panel is empty.

Access
See Access Panel.
Access panel is not available while using the Simplified management mode.

Note: BIM Server allows only Simplified management, thus the Access panel is never available.

Role

Settings

Name of the role.

Permissions Section

Required permission:
- Simplified management: Server administrator
- Detailed management: Modify details

Management permissions are not available while using Simplified Management.
Permissions are divided into seven categories. Click the category headers to expand/minimize the lists in each.

See Management Related Permissions and ARCHICAD Related Permissions for details.

The checkboxes next to the category headers shows the status of the included elements:

- **Empty**: no permissions are selected from that category
- **Gray** checkmark: some permissions are selected from that category
- **Black** checkmark: all permissions are selected from that category

Click the **Edit** button to edit permissions for the current role.

Check/uncheck a box to add or remove permission from the role. Check/uncheck the column header to add/remove all permissions of a category at once.

**Edit Multiple Roles**

To edit the permissions in multiple roles simultaneously, select the roles, then click **Edit permissions**.

The permissions of all selected roles can now be edited side by side (provided that you have the necessary Modify details permission for each selected role).

The role name, for multi-selected roles, is not editable.

**Required permissions:**
- Simplified management: **Server administrator**
- Detailed management: **Modify details**
Access

*See Access Panel.*

Access panel is not available while using the Simplified management mode.

**Note:** BIM Server allows only *Simplified management*, thus the **Access** panel is never available.
Libraries

BIMcloud/BIM Server libraries can be linked from an ARCHICAD project.
Use the Libraries page of BIMcloud/BIM Server Manager to view your libraries.

**Required permissions to view libraries:**
- Simplified management: Project or Server administrator
- Detailed management: View item permission (Traversing applies)

However, to manage these libraries, you must use ARCHICAD’s Manage BIMcloud/BIM Server Libraries function (File > Libraries and Objects > Manage BIMcloud/BIM Server Libraries).

Topics in this section:
- Navigator
- Functions
- Summary
- Panels

**Navigator**

The Navigator list view displays the Libraries root and the libraries that it contains.
The libraries are shown in list view only.
Expanded View

In the expanded view the following columns are available:

- Size
- Modified
- Host server

Use these columns to quickly sort among your libraries.

Functions

Import Library

Available from Library Root Folder.

Export Library

Available from Library.

Change library’s host server

Note: Not available in BIM Server.

Use this function to move a library from one host server to another.

⚠ Required permissions:
- Simplified management: Server Administrator
- Detailed management:
  - Modify hosted content for the Source and Target host servers

Other Library Management Functions

You cannot manage libraries on this interface. Use ARCHICAD’s Manage BIMcloud/BIM Server libraries function to manage libraries on this server.

Upload Library

Use the Manage BIMcloud/BIM Server Libraries dialog in ARCHICAD.

⚠ Required permissions:
- Simplified management: Project or Server administrator
- Detailed management:
  - Modify folder content for Libraries root
  - Modify details for Libraries root
Update Library from...

Use the Manage BIMcloud/BIM Server Libraries dialog in ARCHICAD.

**Required permissions:**
- Simplified management: Project or Server administrator
- Detailed management: Modify details permission

Download Library

Use the Manage BIMcloud/BIM Server Libraries dialog in ARCHICAD.

**Required permissions:**
- Simplified management: Project or Server administrator
- Detailed management: Modify details permission

Delete Library

Use the Manage BIMcloud/BIM Server Libraries dialog in ARCHICAD.

**Required permissions:**
- Simplified management: Project or Server administrator
- Detailed management: Delete folder content for Libraries root
- Modify details for Libraries root

### Summary

Summary information is shown for each selected item from the Navigator (Root or Library).

<table>
<thead>
<tr>
<th></th>
<th>Root</th>
<th>Library</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>X</td>
<td>X</td>
<td>Size of the selected library</td>
</tr>
<tr>
<td>Modified</td>
<td>X</td>
<td>X</td>
<td>Date/time of last modification</td>
</tr>
<tr>
<td>Source folder</td>
<td></td>
<td>X</td>
<td>The source folder of the library (from where it was originally uploaded)</td>
</tr>
<tr>
<td>Host server</td>
<td></td>
<td>X</td>
<td>Name of the BIMcloud Server hosting this library</td>
</tr>
</tbody>
</table>

**Note:** This information not displayed starting with ARCHICAD 20.

### Panels

The available Panels and their content vary depending on what is selected in the Navigator:

**Libraries Root**

**Library**
Libraries Root

Settings

**Default Host Server:** This is the default host server for uploaded libraries.

*Note:* Default host server settings not available in BIM Server.

When a user uploads a library from ARCHICAD, the library will be automatically hosted by the BIMcloud Server chosen here. Change this default by choosing from the pop-up list of available BIMcloud Servers.

Click the **Select** button to modify the default and select the desired host server from the pop-up dialog.

Click **Select**, then **Save** to store your settings.

Backups

Set up or edit a Backup schedule for all of the Libraries on the BIMcloud. (You can later apply this schedule to any or all of the libraries individually, if needed.)
Access

*See Access Panel.*

Access panel is not available while using the Simplified management mode.

**Notes:**
- Not available in Simplified Management mode.
- Not available in BIM Server.

Library

Settings

A selected Library has no settings, this panel is empty.

Backups

**Backup Schedule section**

Set up or edit a Backup schedule for this library:

- If you choose the “Inherited” option, then the Backup Schedule set in the Libraries Root Backups panel will be used for this library.
- If you choose “Defined Locally”, then the locally defined schedule will be used to backup this library only.
  - **Don't Create:** This backup type will not be created
  - **Hourly:** The backup will be created hourly, based on the below settings
  - **Daily:** The backup will be created at a set time each day

Enter the number of automatic backups to keep. (You must keep at least one copy.) With each additional automatic backup, the oldest stored backup will be deleted. Click **Save** to save changes.

**Required permissions:**
- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item
Backups Section

Use the commands to manage a selected backup copy of a library. These commands work like those for Project Backups.

*See the description under Projects, at Backups Section.*

*Required permissions to work with existing backups:*

- Simplified management: Project or Server administrator
- Detailed management: Modify details for the selected item

Access

*See Access Panel.*

Notes:

- Not available in Simplified Management mode.
- Not available in BIM Server.
Servers - BIMcloud

**Note:** BIMcloud only. *(BIM Server users see Modules - BIM Server).*

Servers are the hardware components of a BIMcloud. Multiple servers will act together as a single BIMcloud from ARCHICAD’s point of view.

Use the Servers page to view and modify servers and folders.

![Servers page screenshot](image)

**Required permissions to view servers and folders:**
- Simplified management: Server administrator
- Detailed management: View item permission (Traversing applies)

Topics in this section:
- Navigator
- Functions
- Summary
- Panels

**Navigator**

The Servers page lists the servers, organized into folders, to which you have access. It contains two server types:
- BIMcloud Manager (only one instance is possible)
- BIMcloud Server. Multiple BIMcloud Servers may be present.

You can use folders to organize these servers in any way you like, e.g. all servers located in the same office go into one folder.
View options

On the Servers page, the Navigator has two view options:

- **Tree view:** Hierarchy is displayed

- **List view:** All servers/folders are displayed in a list. Their location in the hierarchy is displayed in the second line of each item. This view type is easier to sort, because it omits the folder hierarchy.

Filters

The following filters are available to narrow down the items displayed in the Navigator:

- **All:** Display everything
- **Servers:** Display only the servers without the folders in a flat list
- **Folders:** Show only the folders
- **Running:** Show the currently running servers only
- **Stopped:** Show the currently stopped servers only

You can Focus on folders to limit the number of displayed items to its child elements only.

In a focused view, the items in the Filter pop-up will change and the filters will only apply to the focused branch of the hierarchy. Quit from focused view by selecting the Show All filter or clicking the **Focus** button on the focused item.
**Expanded View**

In expanded view, the following columns are available:

- Version
- Status
- Free space
- Last activity
- Active users

Use these columns to quickly sort among your servers. Switch to flat list view to sort globally (otherwise it sorts within folders only).

**Functions**

Available functions vary depending on what you have selected in the Navigator: the Servers Root, Folder, BIMcloud Manager, or a BIMcloud Server.

<table>
<thead>
<tr>
<th></th>
<th>Root</th>
<th>Folder</th>
<th>BIMcloud Manager</th>
<th>BIMcloud Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Folder</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Pair</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Move</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Disconnect</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Delete</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Each function is described below.
Create Folder

Creates a folder inside the currently selected folder. This function is available for the Server Root folder and any of the server folders.

Click Create Folder and enter the new folder name in the appearing dialog. Make sure the new folder name is unique within this folder.

The new folder will be automatically selected after creation.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management:
  - Modify folder content
  - Modify details

Pair BIMcloud Server

Pairs the BIMcloud Manager with a newly installed BIMcloud Server. This function is available in the Server Root folder and any of the server folders.

**Note:** The BIMcloud Server can also be a BIM Server Module on a BIM Server machine, from which you have uninstalled the BIM Server Manager.
The pairing process will make sure that you are in full control of both computers. Steps:

1. Go to the BIMcloud Server computer.
2. Open the BIMcloud Manager web interface in a browser window.
3. Select the folder where you wish to place the paired server.
4. Click the **Pair** command.
5. In the appearing dialog, select the BIMcloud Server’s Public key, and copy this information to the clipboard.
6. From the Start menu, start the **Reconfigure BIMcloud Server** program.
7. The BIMcloud Server configuration interface appears. Click **Next**.
8. Paste the previously copied public key into the Public Key input field and restart the server.
9. Click next on the web interface.
10. Enter the URL of the BIMcloud Server (including the http:// or https:// prefix and the port number e.g.: `http://computer.com:1228`).
11. Fix the error if the URL is not working, then click Next.
12. Add a name to your server. This name will be displayed in the Navigator and used in ARCHICAD when referring to it as a host server.

The BIMcloud Server will automatically appear in the Navigator after a successful pairing.

**Troubleshooting:**

- Make sure the BIMcloud Server was successfully restarted
- Make sure you Copy/Pasted the correct public keys
- Make sure the BIMcloud Server’s URL you’ve entered is accessible from the BIMcloud Manager computer

**Required permissions:**

- Simple management: **Server Administrator**
- Detailed management:
  - Modify folder content
  - Modify details

**Start/Stop/Rstart Server**

Shows the current running status of the selected Server. This control allows you to start/stop and restart the server. The function is available for the BIMcloud Manager and any of the BIMcloud Servers.
The start and stop process might take some time, because first the Server will make sure all open connections are closed. The process will start when you click the function; you will be notified when the process is complete.

See Background Jobs.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management: Start/Stop server

### Move Server/Folder

Moves the selected item(s) to a new folder. The function is available for all items. This will also move the child item(s) of the selected folder. Click the function and pick a folder where to move the elements.

**Note:** The folder picker will contain all the folders you can see in the Navigator, but to select a folder as a destination, you must have permission to modify its content.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management:
  - Delete/Remove folder content for the parent of the selected item
  - Modify folder content for the target folder
  - Modify details for the target folder

### Disconnect BIMcloud Server

Disconnects the selected BIMcloud Server. This function is only available for BIMcloud Servers. Click the function, confirm your decision. The BIMcloud Server will be disconnected. If you decide to reconnect it later, repeat the Pairing process.

**Important:** You must remove all hosted projects and libraries from the BIMcloud Server prior to disconnecting it.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management: Delete/Remove folder content for the parent folder

### Delete Folder

Deletes the selected folder. This function is only available for folders. Click the command and confirm your decision.

**Important:** Only empty folders can be deleted.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management: Delete/Remove folder content for the parent folder
Summary

The summary section lists the most relevant information about the item(s) selected in the Navigator.

Some list items also function as a link to a page with more detailed information. The available information varies depending on what is selected: The Servers root folder; other server folder; the BIMcloud Manager; and/or a BIMcloud Server.

<table>
<thead>
<tr>
<th></th>
<th>Root</th>
<th>Folder</th>
<th>BIMcloud Manager</th>
<th>BIMcloud Server</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Server’s program version</td>
</tr>
<tr>
<td>Status</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Server’s status (running or stopped)</td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>Server’s URL address</td>
</tr>
<tr>
<td>Servers</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Number of servers</td>
</tr>
<tr>
<td>Projects</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Number of projects on this server, and their sizes</td>
</tr>
<tr>
<td>Libraries</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Number of libraries on this server, and their sizes</td>
</tr>
<tr>
<td>Free project space</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>Free space in the default project location of this server</td>
</tr>
<tr>
<td>Free library space</td>
<td></td>
<td></td>
<td>X</td>
<td></td>
<td>Free space in the default library location of this server</td>
</tr>
<tr>
<td>Last active</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Time of the last action taken on this server</td>
</tr>
<tr>
<td>Active users</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Number of users currently online on this server (each user is only counted once)</td>
</tr>
<tr>
<td>Active Projects</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>Number of active projects</td>
</tr>
</tbody>
</table>
Panels

The available Panels and their content vary depending on what is selected in the Navigator:

- **Server Root**
- **Server Folder**
- **BIMcloud Manager - Settings Panel**
- **BIMcloud Server**

**Server Root**

The Server root acts as a folder.

**Settings**

The Server root has no special settings. This panel is empty.

**Activities**

Activities will show activities of all users on all projects.

*See Activities Panel.*

**Access**

*See Access Panel.*

Access panel is not available while using the Simplified management mode.
Server Folder

Settings

Settings Section

Name of the BIMcloud Server.

Required permissions:
- Simplified management: Server Administrator
- Detailed management: Modify details

Hosted Projects

This panel displays all the projects hosted on all the BIMcloud Servers contained in this folder.

See Hosted Projects/Libraries Panel for available functions.
Hosted Libraries

This panel displays all the libraries hosted on all the BIMcloud Servers contained in this folder.

See Hosted Projects/Libraries Panel for available functions.

Activities

Activities will show activities of all users on the projects hosted on servers below the selected folder.

See Activities Panel.

Access

See Access Panel.

Access panel is not available while using the Simplified management mode.
BIMcloud Manager - Settings Panel

Status Section

**Version**: program version of the BIMcloud Manager  
**Warnings** related to the BIMcloud Manager

General Settings Section

- **BIMcloud Name** of the BIMcloud. You will see this name in the top-left corner of the web interface. ARCHICAD users will see this name in the BIMcloud Server pop-ups.
Note: You cannot change the name of the BIMcloud Manager server item; it is fixed, to ensure easier identification.

- **Public Key:** The BIMcloud Manager’s public key. The public key cannot be modified here. To modify it, you have to execute the **Reconfigure BIMcloud Manager** application on the BIMcloud Manager computer: use the command from its Start menu.

- **Management policy** *(See Permission Management: Simplified and Detailed):*
  - Simplified
  - Detailed

**Required permissions:**
- Simplified management: **Server Administrator**
- Detailed management: **Modify details**

**Connection Settings**
Configure the addresses ARCHICAD can use to connect to the Server.

- **Primary address** *(required):* This address uniquely identifies the server
- **Alternative addresses and lookup order** *(optional):* ARCHICAD will select the most suitable one to connect

*See Connection Settings to learn more about how to set up connections.*

BIMcloud Manager automatically tests the addresses while entering them and provides feedback about the result.

You can also enter a non-working address, because it might work from a different location.

Changes cannot be saved if one of the entered addresses points to a different BIMcloud/BIM Server.

If you want to add the server computer’s current IP address or computer name to the list, click **Show current addresses** and pick one of the addresses.

Adjust the lookup order of the addresses using the up/down arrows. Use the delete icon to remove an address or the refresh icon to test it again.

**Required permissions:**
- Simplified management: **Server Administrator**
- Detailed management: **Modify details**
Email Preferences

Configure the email server which will allow you to send notifications and password reminders.

- **SMTP server**: address of your SMTP server
- **SMTP server port**
- **Connection Security**: Select the security level your server requires
- **From address**: Emails will be sent using this email address
- **Server requires authentication**: Check if a username and password are necessary to access the server
- **User**: Authenticate as this user
- **Password**: Use this password for the above user

**Required permissions:**
- Simplified management: **Server Administrator**
- Detailed management: **Modify details**

Custom User Fields Section

- **Add new**: Click this button to add a new field and enter its name
  Fields entered here will be available on all users’ settings to enter additional, server-wide information. (E.g. Skype address, Office where the user is located.)
- **Remove**: Removes the field from here and from all users’ settings panels. Data entered into this field by users will be lost.
BIMcloud/BIM Server Manager

- **Required permissions:**
  - Simplified management: Server Administrator
  - Detailed management: Modify details

### BIMcloud Manager - LDAP Panel

The BIMcloud Manager is able to connect to one or more Directory Services and import users/groups from that server - all of them, or just a selection.

To keep the user/group information up to date, it is possible to set up regular and automatic synchronization with the Directory Services.

The LDAP Panel contains a list of the currently connected Directory Services. Use this panel to add/remove Directory Services, or to modify the settings and imported data for already existing ones.

#### Create Connection

Click **Connect to new service** to bring up the Details Panel. Steps to set up a connection:

1. Create connection.
2. Set up the parameter mapping.
3. Filter the users and groups to be imported.
4. Modify the synchronization schedule.

- **Required permissions:**
  - Simplified management: Server administrator
  - Detailed management: Modify details

Each step is detailed below.
Step 1: Create Connection

This step will establish the connection to the directory service. Enter the following parameters (all parameters are required unless marked as optional):

- **Name**: Enter a name for this directory service for easier identification. You will see this name in the list of the directory services, and users/groups will reference the directory service by this name.
- **Server address**: The address of the directory service
- **Use SSL Connection**:
- **Port**: Port of the directory service.
- **User (optional)**: Authenticate with this user during connection. No authentication is used when left empty.
- **Password (optional)**: Use this password for authentication.
- **Base DN (optional)**: An LDAP search criterion used to narrow down the imported users/groups.

After you have entered the parameters, push the **Test connection** button. If you get any error message, correct the parameters and/or make sure the server address is accessible from the BIMcloud Manager computer.

Step 2: Set Up Parameter Mapping

```plaintext
Parameter mapping

Directory type:
- User query:
  - dn: (uid=CaptionUser,ou=Users,dc=nbu,dc=gov)
  - cn: (uid=CaptionUser,ou=Users,dc=nbu,dc=gov)

Group query:
- group: (memberOf=CN=CaptionUser,OU=Groups,DC=nbu,DC=gov)

Parameter mapping:
- Group ID:
- Group name:
- Member:
- User ID:
- Login name:
- Parent:
- Full name:
- Email address:
```
The directory service will contain a large number of objects and parameters, so it is important to narrow down the imported elements. Because of the various setup options, even those directory services can be configured in different ways which use the same service engine.

We provide two built-in configuration schemes, which will work with the default settings, but it is likely that you will have to fine-tune their mapping parameters:

- Active Directory
- Open LDAP

Use the Directory type pop-up to enter the basic values of the selected service type (either Active Directory or Open LDAP).

Click the Preview button to see the result of the mapping and import. If you do not see the expected entries, then you must fine-tune the queries and mapping options.

Queries: the LDAP objects passing these queries will be handled as users and groups:

- **User query**: All items which will pass through this LDAP query will be handled as users
- **Group query**: All items which will pass through this LDAP query will be handled as groups. Enter the names of the LDAP parameters to map them to the BIMcloud’s user parameters. All parameters are required unless marked as optional.

Mapping: select the parameters of the objects passing the queries and map them to BIMcloud user parameters:

- **Group ID**: unique ID for groups
- **Group name**: Name of group
- **Members**: comma-separated list of group members
- **User ID**: unique ID for users
- **Login name**: login name for the user
- **Parents**: comma-separated list of parents
- **Full name**: you can combine two LDAP parameters into a single user name (the second field is optional)
• **Email address:** email address of user

• **Prefix for user/group names** (optional): Prefix the name of all imported users and groups to avoid duplicate names

Click the **Preview** button to open a list and see the result of the Parameter mapping. If there is an error in the mapping process and some of the required fields remain empty, then those entries can’t be imported to the BIMcloud Manager. The rest of the items will be automatically imported during the first Synchronization.

Click **Save** to finalize the Directory Service connection settings.

**Step 3: Filter Users and Groups to be Imported**

If you do not wish to import all the users and groups who pass through the connection filter, then you can fine-tune the import process and select them individually or based on groups.

In the Filter users section, click **Edit**, and switch the Filter to “Import selected users and groups.”

Click the **Select users and groups** button and mark the users and groups you wish to import.

**Note:** Only those users are listed here for which the parameter mapping created a valid result.

Click **OK** to close the selection dialog.

If you wish to automatically import all members of the selected groups (rather than selecting them one by one), activate the “Automatically include group members” checkbox.

Click **Save** to store your changes.

**Step 4: Synchronization**

**Manual Synchronization**
Click the **Sync** button in the Filter users section to synchronize the directory service for the first time.

The synchronization process will start in the background. You can review the process status on the Server Messages dropdown at the top-left of the page.

You will be notified once the process is complete.

### Set Up Regular Synchronization

It is a good practice to set up regular synchronization for the directory service to make sure all settings are always up to date: new users added and obsolete users removed from the BIMcloud.

In the Filter users section, activate the checkbox “Regularly sync with Directory service”, then enter the interval in minutes. Click **Save** to store your changes.

### Review Synchronization Results

The result of the automatic synchronization is logged. To review this log, select the directory service from the list and click the **Details** button. You will find the Sync history in the bottom section of the panel.

### Modify a Directory Service Connection

If something changes in the connection settings or you modify the filtering, select the directory service from the list and click the **Details** button.

Edit the required section and click **Save** again.

If the number of the imported users changes and some of them are removed because of the modifications, a confirmation dialog will pop up about how to handle removed users. You can decide between two options:

- **Remove them from BIMcloud**: Removed users will be forced to leave their existing projects and all their unsent changes will be lost. (They can still save a Solo PLN from their local data folder on their local computer.)
  
  See [Force Leave](#)

- **Keep them as BIMcloud users**: Removed users will be kept on the user list.
Disconnect from a Directory Service

Select the Directory service from the list and click **Disconnect**. The above described confirmation dialog will appear again.

Troubleshoot Connection

If there is an error in the synchronization, the process stops automatically and logs the error event into the sync history. The sync history also lists the errors that must be fixed in order to sync again. Users with View Item permission for the BIMcloud Manager will receive a warning about the synchronization error when they Log in to BIMcloud Manager.

**Required permissions for all Directory Service functions:**
- Simplified management: Server Administrator
- Detailed management: Modify details for BIMcloud manager

BIMcloud Manager - Licenses Panel

The Licenses panel gives an overview about the currently used, available and missing BIMcloud User Licenses.

*See The BIMcloud User License for more information*

Each user working on the BIMcloud requires one BIMcloud User License, regardless of how many projects the user is working on. A license is automatically assigned to the user when he/she joins a Teamwork project in ARCHICAD. A BIMcloud User License remains reserved until the user leaves his/her last project on the BIMcloud, or until it is manually revoked.

Once he/she joins again: if the user’s license is missing (e.g. there are no more available BIMcloud User Licenses), then the user will be forced offline.

The list shows how these Licenses are currently used. Select a user to manage his/her licenses. The following functions are available:

**Assign license(s)**

Assigns a license to the user permanently. If the user already has an automatically reserved license, then it will be permanently assigned to him/her.
Required permissions:
• Simplified management: Server Administrator
• Detailed management: Manage licenses

Revoke license(s)
Select the user in the list and click the Revoke button to revoke his/her license. This will force the user to leave all his/her joined projects, and will be forced offline.

Required permissions:
• Simplified management: Server Administrator
• Detailed management: Manage licenses

Access
See Access Panel.
Access panel is not available while using the Simplified management mode.

BIMcloud Server

Settings
The settings panel contains the most basic settings of the selected element.
Status Section

Indicates the current status of the BIMcloud Server:
- Running (Everything is OK)
- Stopped (The server is accessible, but the service is not running)
- Not Accessible (The server is not accessible)

Server-related **Warnings** are displayed here, as well as the BIMcloud Server’s program **Version**.

**Required permissions to start/stop server:**
- Simplified management: **Server Administrator**
- Detailed management: **Start/Stop server**

General Settings Section

**Name** of the BIMcloud Server.

**Required permissions:**
- Simplified management: **Server Administrator**
- Detailed management: **Modify details**

Connection settings

Configure the addresses ARCHICAD can use to connect to the Server.
- **Primary address** (required): This address uniquely identifies the server.
- **Alternative addresses and lookup order** (optional): ARCHICAD will select the most suitable one to connect to.

*See Connection Settings to learn more about how to set up connections.*

BIMcloud Manager automatically tests the addresses while entering them and provides feedback about the result.
You can also enter a non-working address, because it might work from a different location.
Changes cannot be saved if one of the entered addresses points to a different BIMcloud/BIM Server.
In case you wish to add the server computer’s current IP address or computer name to the list, click **Show current addresses** and pick one of the addresses.
Adjust the lookup order of the addresses using the up/down arrows. Use the delete icon to remove an address or the refresh icon to test it again.

**Required permissions:**
- Simplified management: Server Administrator
- Detailed management: Modify details

### Hosted Projects

This panel displays all the projects hosted on the currently selected BIMcloud Server.

*See Hosted Projects/Libraries Panel for available functions.*

### Hosted Libraries

This panel displays all the libraries hosted on the currently selected BIMcloud Server.

*See Hosted Projects/Libraries Panel for available functions.*

### Activities

Activities will show activities of all users on projects hosted by the selected BIMcloud Server.

*See Activities Panel.*

### Access

*See Access Panel.*

Access panel is not available while using the Simplified management mode.
Modules - BIM Server

Note: BIM Server only (BIMcloud users see Servers - BIMcloud).

Required Management role to view modules:
• Server administrator

Topics in this section:
Navigator
Functions
Summary
Panels

Navigator

The Modules page shows the two modules of a BIM Server:
• BIM Server Manager
• v20 Module

Functions

The Start/Stop Module function is available only if you have selected the V20 Module in the Navigator:

<table>
<thead>
<tr>
<th>Start/Stop</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root</td>
</tr>
<tr>
<td>BIM Server Manager</td>
</tr>
<tr>
<td>V20 Module</td>
</tr>
<tr>
<td>X</td>
</tr>
</tbody>
</table>

Start/Stop Module

Shows the current running status of the selected module. This control allows you to start/stop and restart the module.

The start and stop process might take some time, because first the Module will make sure all open connections are closed. The process will start when you click the function; you will be notified when the process is complete.

See Background Jobs.

Required management role:
• Server Administrator
Summary

The summary section lists the most relevant information about the item(s) selected in the Navigator.

Some list items also function as a link to a page with more detailed information.

The available information varies depending on what is selected: The Modules root folder; the BIM Server Manager; and/or the v20 Module.

<table>
<thead>
<tr>
<th>Root</th>
<th>BIM Server Manager</th>
<th>V20 Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>X</td>
<td>X</td>
<td>Module’s program version</td>
</tr>
<tr>
<td>Status</td>
<td>X</td>
<td>X</td>
<td>Module’s status (running or stopped)</td>
</tr>
<tr>
<td>Projects</td>
<td>X</td>
<td>X</td>
<td>Number of projects on this module, and their sizes</td>
</tr>
<tr>
<td>Libraries</td>
<td>X</td>
<td>X</td>
<td>Number of libraries on this module, and their sizes</td>
</tr>
<tr>
<td>Free project space</td>
<td>X</td>
<td></td>
<td>Free space in the default project location of this module</td>
</tr>
<tr>
<td>Free library space</td>
<td>X</td>
<td></td>
<td>Free space in the default library location of this module</td>
</tr>
<tr>
<td>Last active</td>
<td>X</td>
<td>X</td>
<td>Time of the last action taken on this module</td>
</tr>
<tr>
<td>Active users</td>
<td>X</td>
<td>X</td>
<td>Number of users currently online on this module (each user is only counted once)</td>
</tr>
<tr>
<td>Active projects</td>
<td>X</td>
<td>X</td>
<td>Number of active projects</td>
</tr>
</tbody>
</table>
Panels

The number of available Panels and their content vary depending on what is selected in the Navigator:

**Modules Root**

**BIM Server Manager Module**

**v20 Module**

**Modules Root**

The Modules root acts as a folder.

**Settings**

The Modules root has no special settings. This panel is empty.

**Hosted Projects**

This panel displays all the projects hosted on the currently selected module.

See **Hosted Projects/Libraries Panel** chapter for available functions.

**Hosted Libraries**

This panel displays all the libraries hosted on the currently selected module.

See **Hosted Projects/Libraries Panel** chapter for available functions.

**Activities**

See **Activities Panel.**
BIM Server Manager Module

Settings

Required permissions:
- Simplified management: Server Administrator

Status Section

Version: program version of the BIM Server Manager
Warnings related to the BIM Server Manager

General Settings Section

Name of the BIM Server. You will see this name in the top-left corner of the web interface. ARCHICAD users will see this name in the BIMcloud/BIM Server pop-ups.

Note: You cannot change the name of the BIM Server Manager module; it is fixed to ensure easier identification.
Connections Section

Configure the addresses ARCHICAD can use to connect to the Server.

- **Primary address** (required): This address uniquely identifies the server
- **Alternative addresses and lookup order** (optional): ARCHICAD will select the most suitable one to connect

*See Connection Settings to learn more about how to set up connections.*

BIM Server Manager automatically tests the addresses while entering them and provides feedback about the result.

You can also enter a non-working address, because it might work from a different location.

Changes cannot be saved if one of the entered addresses points to a different BIMcloud/BIM Server.

If you want to add the server computer’s current IP address or computer name to the list, click **Show current addresses** and pick one of the addresses.

Adjust the lookup order of the addresses using the up/down arrows. Use the delete icon to remove an address or the refresh icon to test it again.

Email Preferences Section

Configure the email server which will allow sending notifications and password reminders.

- **SMTP server**: address of your SMTP server
- SMTP server port
- **Connection Security**: Select the security level your server requires
- **From address**: Emails will be sent using this email address
- **Server requires authentication**: Check if a username and password are necessary to access the server
- **User**: Authenticate as this user
- **Password**: Use this password for the above user
Custom User Fields Section

- **Add new**: Click this button to add a new field and enter its name. Fields entered here will be available on all users' settings to enter additional, server-wide information (e.g. Skype address, Office where the user is located).

- **Remove**: Removes the field from here and from all users' settings panels. Data entered into this field by users will be lost.

Licenses Panel

Activate BIM Server

License is free, must be activated with a GRAPHISOFT ID.

- **Required management role to activate BIM Server:**
  - Server Administrator

v20 Module

The v20 Module stores the projects. It interacts with ARCHICAD during Join, Leave, Send and Receive operations.

Settings

The Settings panel contains the most basic settings of the selected element.
Indicates the current status of the v20 Module:

- Running (Everything is OK)
- Stopped (The server is accessible, but the service is not running)
- Not Accessible (The server is not accessible)

Server-related **Warnings** are displayed here, as well as the Module's **Version**.

**Required management role to start/stop server:**
- Server Administrator

**General Settings Section**

**Name** of the BIM Server.

**Required management role:**
- Server Administrator

**Folders Section**

The BIM Server will use these folders to store its data. The server must have read and write permission to all these folders. All paths must be local paths on the server. Always click the **Check folder** button when modifying these folders to ensure flawless operation.

- **Project default:** Newly shared projects will be stored in this folder. Projects shared previously will remain in their original folder.
- **Library default:** Newly uploaded Libraries will be stored in this folder. Libraries uploaded previously will remain in their original folder.

**Required management role:**
- Server Administrator

**Activities**

*See Activities Panel.*
Hosted Projects/Libraries Panel

The BIMcloud/BIM Server Manager and the BIMcloud Server/BIM Server Module are separate programs. A project/library that is listed in the Navigator of the BIMcloud/BIM Server Manager must have a linked project or library data available on the Server/Module as well. Also, the reverse is also true: data hosted on the Server/Module must be linked to a project/library entity on the Manager.

Sometimes the two components will become out of sync (e.g. one of the components was restored from a backup).

Depending on which component was rolled back, two kind of errors are possible:

- **Missing project/library**: A project/library exists on the BIMcloud/BIM Server Manager (it is visible in the Project Navigator), but the data it refers to on the host Server/Module is missing
- **Unused project/library**: project/library data exists on the Server/Module, but the BIMcloud/BIM Server Manager does not know about it and does not have a matching entry in the project/library Navigator

**Missing projects/libraries section**

![](image)

If the BIMcloud/BIM Server Manager refers to a project on a Server/Module, but it is not there, then the project/library is listed in the Missing projects or Missing libraries section.

If there are no projects or libraries missing from the selected Server/Module, then this section is not visible at all.

Columns in expanded layout:

- **Name**: Name and path of the project/library. If the data is unused, then it displays the last known name and path of the data
- **Last active**: Last time the data was accessed
- **Joined users**: Number of currently joined users in a project

Available functions:

- **Delete**: Removes the project from the BIMcloud/BIM Server Manager
- **Link to hosted project**: The project/library can be re-linked to an Unused project/library hosted on the current or any other Server/Module
Hosted projects/libraries section

All projects/libraries hosted by the current Server/Module are listed in this table, even if they are not used by the Manager. The status column shows whether the hosted data is linked and actively used by the Manager. If the Status is Unused, then the Manager does not have any project/library which uses this data.

Columns in Expanded Layout:
- **Status**: OK / Unused, depending on whether the project/library is linked by the Manager
- **Name**: Name and path of the project/library. If the data is unused, then it displays the last known name and path of the data
- **Size**: Size of the data
- **Folder path**: The data folder on the disk where the listed item is stored
- **Last active**: Last time the data was accessed
- **Joined users**: Number of currently joined users in a project

Available functions:
- **Delete**: Deletes the project/library
- **Load as new project/library**: Only available for Unused projects/libraries. Creates a new project/library on the Manager from the hosted data.
- **Link to existing project/library**: Only available for Unused projects/libraries. Links the data to a Missing project/library.
Access Panel

Use the Access panels to provide users with access to data in the BIMcloud/BIM Server Manager and in ARCHICAD Teamwork projects. Depending on the selected Management mode, panels might appear on all or only selected content items in the BIMcloud/BIM Server Manager. The list of available permissions may also vary.

Notes:
- On BIM Server, only Simplified management is available. Permissions are not inherited.
- On BIM Server, the Access panels are available only for Projects.

Users can view or modify content items only if they have previously received permissions to do so. Users are granted permissions via the Access panel of any content item or the Management role pop-up at their personal settings.

See Management Related Permissions and ARCHICAD Related Permissions for more information.

Required permissions to view Access panels:
- Simplified management:
  - Servers, Users, Roles, Libraries: Server Administrator
  - Projects: Project or Server administrator
- Detailed management: View access for the selected item

Required permissions to modify data on Access panels:
- Simplified management:
  - Servers, Users, Roles, Libraries: Server Administrator
  - Projects: Project or Server administrator
- Detailed management: Modify access for the selected item

Topics in this section:
- Access Panel View Modes
- Granting Access
- Users Without Access
- Revoke Access
- Permission Management: Simplified and Detailed
- Troubleshooting: Permissions Deadlock
- List of Permissions

Access Panel View Modes

The Access panel has three view modes:
- Compact View
- Summarize by Users
- Permissions View (Details)
Compact View

To switch between Compact View and Summarize by Users, use the View pop-up above the list.

Compact view lists the granted accesses as they were defined. The list is divided into two parts: the upper part shows the access definitions created locally, while the bottom part shows the access definitions inherited from parent elements. (The bottom part of the list is visible only when there are inherited access definitions.)

Columns

- User/group name
- Assigned role(s)
  - If a role is an inherited role, then you can hover the cursor over it to see the source of the inherited role.

Select an item from the list and click Details to see and/or customize the included permissions. See Permissions View (Details).

Summarize by Users

To switch between Compact View and Summarize by Users, use the View pop-up above the list.
Permissions might be granted to users and groups on many different levels. This makes it difficult to understand a user’s permissions set for the selected content item. In this case, use the **Summarize by Users** view to unfold all the groups and summarize all permissions at all levels.

In this view, all groups are unfolded: only the users are listed together with their role (or roles). Hover over a specific role to see where it has been inherited from.

**Columns**

- User name
- Assigned role(s)
  - If a role is an inherited role, then you can hover the cursor over it to see where the role was granted.

Select an item from the list and click Details to see and/or customize the included permissions. *See Permissions View (Details).*

**Permissions View (Details)**

Switch to Permissions view in the Access panel by selecting an item in the list and clicking Details (or the Info icon).
This view unfolds the roles and summarizes the permissions granted to the clicked user or group.

Permissions allow the user to perform a specific operation. Permissions can have three statuses:

- Not granted: Empty checkbox
- Granted: Checked checkbox
- Granted, but revoked: Checkbox with red X mark

The permissions are listed in rows; and the roles are shown in columns. The column headers indicate where and how that role was assigned to the selected user/group.

Any Custom role has its own column.

The Summary column shows the aggregated permission set for the selected user/group.

Click **Edit** on the header to make the Custom role editable. (The Custom role column is the only place where you can revoke a permission.)

- Click once in the checkbox to **activate the permission** (with a checkmark)
- Click a second time in the checkbox to **revoke the permission** (with a red X).

The result of the editing is immediately shown in the Summary column. Click **Save** to store your changes.

Related topic:

**Revoke Access**

## Granting Access

An access definition has three elements:

- **Which** item is accessible by
- **Whom**, and
- **What** can he/she do with it
**Note:** This kind of access definition, known as ACL (Access Control List), is widely used in the IT industry. ACL specifies which users are granted access to content items, as well as which permissions are allowed for a given content item.

Thus, to grant access to content items on the BIMcloud, follow these three steps:

1. Select the item in the Navigator.
2. Open the Access panel and start to type the name of who can access it. A pop-up will help to pick an existing user or group. If you would like to grant access to all users, then use the special Everyone group.

3. Choose a role for the selected user or group – this defines what role he/she will have for the selected item. Each role includes a set of permissions.

*For more information, see [Roles Available when Granting Access](#).*

If multiple content items are selected in the Navigator, then the Access panel will not list the already existing access definitions to these items. You can still grant new accesses: they will be applied to all of the selected content items for which you have Modify Access permission.

You can modify a user’s permission for a specific content item by defining a Custom role for that particular item.

*See Permissions View (Details).*

Related Topics:

- [Roles Available when Granting Access](#)
- [Inheritance of Access Rights](#)
Traversing
Permissions and Dependence
Revoke Access

Roles Available when Granting Access

Default Role

Each user can have a default role defined in their user settings. (A default role is optional.)

When defining access, if you choose the user’s default role (which is the automatically selected option), then this access will change along with the default role of the user: that is, if someone modifies the default role of the user, this access definition will automatically be modified accordingly.

If you choose “Default role” for the user, but the user does not actually have any default role set, then that user has no permissions and cannot do anything with this access. Once the user is assigned the default role, the associated permissions will be activated.

If a group is granted access using the default role, then each group member brings his/her own default role.
Generic Roles

Generic roles are listed on the Roles page. They can be used anywhere for any content items. If a generic role changes, then all accesses granted using this role will be updated, and the permissions change accordingly.

![Generic Role Example](image)

Custom Role

Sometimes it is easier to grant certain permissions locally to someone for a content item, without saving this permission set as a new generic role. In this case, when granting Access, select Custom from the pop-up, then click **Save**.

![Custom Role Example](image)

The permissions page will automatically open and you will be able to pick the necessary permissions as part of a custom role for the selected user/group. Click **Save** to store your changes.

![Permissions View](image)

See Permissions View (Details).
Inheritance of Access Rights

An important feature of the Access definition is its inheritance: Access granted at a higher level of the folder hierarchy is **inherited downwards by all of its child elements**.

The final permission set for a user for the content item is an aggregate of all roles which have been assigned to him/her (or to a group in which he is a member). If a permission has been revoked, then it cannot be re-granted again at a lower level in a hierarchy.

**Traversing**

If a user’s role includes **View item** permission for a content item, then he/she must be able to find this content item in the Navigator in order to work with it - even if the user does not have View item permission for the parent folders (including the Root folder) of the content item.

Traversing ensures that users will be always able to access all content items for which they have View item permission - even if they do not have permission to access the parent folders.

In this case, the parent folders, including the Root (which would otherwise be hidden from the user) will be visible in the Navigator and the user can traverse through them, but no additional information will be displayed about that parent folder even if the user selects it.

If access to the content item is revoked from the user, these traversed parent folders will automatically disappear too.

**Note:** Traversing works for all content types, even those without multi-level hierarchies (roles, Libraries and users).

**Example:**

- **Hierarchy in Navigator:**
  - Folder A
  - Project A
- **User A** has been granted View item permission for **Project A**, but does not have any permission for **Folder A**.
- **Folder A** will be still visible in the Navigator for **User A** to allow traversing through it, but no additional information will be displayed about **Folder A**.
Permissions and Dependence

Some permissions apply only to a very specific content type on the BIMcloud (e.g. Start/Stop Server is only applicable to the Servers/Modules content type). If a specific permission does not make sense for a content type where it has been granted, then it simply has no effect.

Certain permissions will only be effective if another permission is also granted.

Examples:
- View item permission is superior to all other permissions. If a user does not have View item permissions, then the other permissions related to that item will not be effective, since the user cannot find the item in the BIMcloud Manager.
- View access permission is superior to the Modify access permission. The Access panel of an item will only appear if the View access permission is also granted. Without seeing the Access panel, it is not possible to edit anything on it.

Users Without Access

If a requested page is not accessible to the user, a warning message appears. (For example, if the user receives an URL for a project, but he does not have access to that project.)

Internal links between content items (e.g. a link from a user's page to a project he is currently joined in to) are only active if the user has access to that Project as well. Otherwise the link will not work and a warning pop-up will appear.

Revoke Access

To revoke a user’s access to content item from a user, open the content item’s Access panel, pick the user you would like to remove, and click Delete.

However, if the user has been granted access as a member of a group, then it is not possible to revoke the individual user’s access. The solution is to assign the user a Custom role, and then revoke specific permissions:

1. Start to type the name of the user and pick the name from the pop-up list.
2. Select **Custom role** from the Role pop-up.

3. Click **Save**.

The permissions view for the selected user will open immediately: revoke any permissions by clicking in the box to create a red X.

**Important hint:** To revoke all permissions, it is enough to uncheck the **View item** permission box in the Custom column. From that point on, the user will not be able to see the current content item at all. Consequently, the user cannot exercise any other existing permissions either.

*See Permissions and Dependence.*

Similarly, if access has been granted to a user on a content item at a higher level in the hierarchy, then it can be revoked at a lower level only by assigning a Custom role to the user.

**Note:** You can revoke a specific permission only if you can do so at the level that the permission was first granted. That is, if a permission was granted to a user as a result of inheritance from a higher level, you cannot revoke that permission unless you can also access and modify the higher level.

**Example:**

- **Hierarchy in Navigator:**
  - Folder A
  - Folder B
- **Access granted to Folder A:**
  - User A – full access
  - User B – no access
- **User A grants User B full access to Folder B**

If **User B** would like to revoke **User A**’s access to **Folder B**, he cannot do so, because he has no permissions to **Folder A**, where **User A**’s access was original granted. Thus, **User B** cannot block **User A** from **Folder B**.

If a permission has been revoked, then it cannot be re-granted again at a lower level in a hierarchy. *(Revoking is final.)*
Permission Management: Simplified and Detailed

**Note:** BIM Server allows only Simplified management.

BIMcloud offers two different permission management modes:

- Simplified management
- Detailed management

Switch between these modes at Servers, on the BIMcloud Manager's Settings panel:

![BIMcloud Manager Settings](image)

**Simplified Management**

Simplified management divides all users into three groups. These groups are (in order of the role’s superiority):

- Server Administrator
- Project Administrator
- Not set

In this management mode, the user’s personal settings contain a Management role pop-up, where the management role is selected.
Based on what is selected here, the user will be granted access to items on the BIMcloud according to the following rules:

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Server Administrator</th>
<th>Project Administrator</th>
<th>Not set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects</td>
<td>Full access</td>
<td>Full access</td>
<td>View all projects for which he/she has been added to the Access panel, with any Role</td>
</tr>
<tr>
<td>Libraries</td>
<td>Full access</td>
<td>Full access</td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>Full access</td>
<td>View only</td>
<td></td>
</tr>
<tr>
<td>Roles</td>
<td>Full access</td>
<td>View only</td>
<td></td>
</tr>
<tr>
<td>Servers</td>
<td>Full access</td>
<td>View only</td>
<td></td>
</tr>
<tr>
<td>ARCHICAD projects</td>
<td>According to granted permissions</td>
<td>According to granted permissions</td>
<td>According to granted permissions</td>
</tr>
</tbody>
</table>

**Detailed Management**

Each content item on the BIMcloud has its own Access panel. Users can view/modify the selected item according to the permissions they were granted on these panels.

**What Happens When You Change to Detailed Mode?**

All existing access permissions will be retained; all users can continue work without further interruption.

Two new Groups will appear and the existing Project and Server Administrators will be added to them according to their original Management Role. These groups will be:

- Project Administrators
- Server Administrators

Two new roles will be created:

- Full access (Contains all permissions)
- View only (Contains View item permission only)

The following accesses will be automatically granted to these two new groups on the root level of all content types:

<table>
<thead>
<tr>
<th>Access Type</th>
<th>Server Administrator</th>
<th>Project Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projects root</td>
<td>Full access</td>
<td>Full access</td>
</tr>
<tr>
<td>Libraries root</td>
<td>Full access</td>
<td>Full access</td>
</tr>
<tr>
<td>Users root</td>
<td>Full access</td>
<td>View only</td>
</tr>
<tr>
<td>Roles root</td>
<td>Full access</td>
<td>View only</td>
</tr>
<tr>
<td>Servers root</td>
<td>Full access</td>
<td>View only</td>
</tr>
</tbody>
</table>

Due to the inheritance of the permissions, these new permissions will apply to all items under the root. You will be able to fine-tune all permissions from now on, for each and every content item.
What Happens When You Change to Simplified Mode?

All existing management permissions will be revoked from all users, but users from ARCHICAD will be able to continue their work without interruption. After the change, you will become the first Server Administrator. You will have to set the Management roles for additional users. Until then, you will be the only user with management permissions.

Troubleshooting: Permissions Deadlock

In case of a system deadlock (e.g. permissions were revoked from all managers and no one is able to control the server), use the Master Administrator user to solve the problem.

The Master Administrator user is a built-in user. It is not possible to delete it, and it always has full access to the whole server. The Master Administrator does not appear on the user lists.

The login name for the Master Administrator is: masteradmin. The password was defined during the server installation in the BIMcloud Manager configurator. If you have forgotten the password, then re-run the BIMcloud Manager Configurator and define a new password.

Note: it is not recommended to use the Master Administrator user for everyday management tasks. Use it only in case of emergency.

List of Permissions

Topics in this section:

Management Related Permissions
ARCHICAD Related Permissions

Management Related Permissions

These permissions enable a user to view or modify data on the BIMcloud Manager while using the Detailed management mode.

Note: BIM Server allows only Simplified management without inheritance, thus these permissions are not available.

View Item

- User can view all settings related to the item (except Access settings - which also requires the View Access permission)
• If the item is a Project, a user with View Item permission can Open or Join the project from ARCHICAD

Modify details
• User can modify all settings related to this item (except Access settings)
• User must also have View item permission in order to carry out modifications

View Access
• User can view the item’s Access settings
• User must also have View item permission in order to view its Access settings

Modify Access
• User can modify all Access settings related to the item
• User must also have View Access (and View item) permissions in order to carry out modifications

Modify Folder Content (Applicable to All Folders, Including All Root Folders)
• User can create new folders within the folder. (Modify Details permission for the folder is also required)
• User can assign a new BIMcloud Server to the folder (using the Pair process)
• User can Share a project that is inside the folder
• User must also have View item permission for the folder in order to carry out the above functions

Delete/Remove Folder Content (Applicable to All Folders, Including All Root Folders)
• User can delete items (folders, projects, users, groups, roles) within the folder
• User can disconnect BIMcloud Server located within the folder
• User must also have View item permission for the folder in order to carry out the above functions

Enable/Disable User (Applicable to Users)
• User can enable or disable a user
• User must also have View item permission in order to carry out the above functions

Lock/Unlock Project (Applicable to a Particular Project)
• User can lock or unlock the project
• User must also have View item permission for the project in order to carry out the above functions
Start/Stop Server (Applicable to a Particular Server)

- User can start or stop the server
- User must also have View item permission for the server in order to carry out the above functions

Modify Hosted Data on BIMcloud Server (Applicable to a Particular BIMcloud Server)

- User can assign this BIMcloud Server as the default server of a Project folder
  See Settings for a selected Project folder.
- User must also have View item permission for this server in order to carry out the above functions

Manage Licenses

Applicable to a particular user and to the BIMcloud Manager's Licenses panel.

- User can assign or revoke Licenses for the user
- User can modify the settings (add/revoke/upgrade) of the BIMcloud Manager's Licenses panel
- User must also have View item permission for the user or server in order to carry out the above functions

ARCHICAD Related Permissions

These permissions enable an ARCHICAD user to create, delete/modify, and/or manage particular data types in Teamwork projects using ARCHICAD.

The following are the predefined permissions for Teamwork projects. Most are self-explanatory. In this table, we have added a brief explanation where warranted.

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<td>Enables user to reserve and modify data (project, building, site, IfcGroup, IfcZone properties) in the IFC Manager dialog box (File &gt; File Special &gt; IFC Manager). Element-level Ifc Properties can be edited in IFC Manager only for elements which are not reserved by another user. <strong>Note:</strong> No permission is needed to edit IFC properties of elements in their Settings dialog box, if you have reserved the elements.</td>
</tr>
<tr>
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<td>Libraries - Add/Remove: Enables user to add BIM Server Libraries to the project using the Library Manager. (Does not enable user to manage server libraries - that requires permissions on the BIMcloud Manager.)</td>
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Activities Panel

The Activities panel shows an automatically generated list of the users’ activities on the BIMcloud. The Activities panel is available for:

- Projects, Project folders
- Users, Groups
- Servers, Server folders

The available filters and columns vary depending on the content type.

- **Activity Type**: Choose a single activity type to display those only. (Or choose All types.) If there was a comment attached to the activity, then it will be displayed in the second line of this column.
- **Size**: Filter the activities by the size of the data event. (Or choose All sizes.)
- **User**: Choose a user from the list to display his/her activities only. (Or choose All users.)
- **Project**: Choose a project from the list to display related activities only. (Or choose All projects.)
- **Range**: Limit the displayed activities to the Last 50; or to activities in the last day or last hour only.
  - Use From/To dates to narrow the display of events by date.
- **Search**: Type any text to search for.

The filter pop-ups will have all the relevant options from the lists. If a filter changes, the list will update automatically and show the filtered result.

**Load more/Load all**: If the list does not contain all the possible elements, use the Load more or Load all buttons at the bottom to expand the list.

Active filters are highlighted with blue color for easier identification. To cancel a filter, select All from its options again.

Click the **Export activities** button to download all displayed entries in CSV format into your browser’s download folder.

**Required permissions to view Activities panels:**

- **Simplified management:**
  - Servers: **Server Administrator**
  - Users, Projects: **Project or Server administrator**
- **Detailed management**: **View item**
Connection Settings

BIMcloud/BIM Server offers a very flexible method to set up and establish the connection between the different components. The identification of the BIMcloud/BIM Server component, and the address used to access it, are completely separated. This allows the users to use different addresses to connect to the same server and at the same time maintain the internal project links (even if it was added using a different address).

It is possible to prepare the server for all possible connections in advance and set up the different addresses centrally. This ensures that ARCHICAD users will not have to worry about how to connect, because the Server Administrator has set up everything. If the connection was not configured in all details on the server in advance, then the users are also able to add alternative addresses and connect using a custom address.

Terms

- **Primary address**: This is the unique identification of the server, set up by the person installing the BIMcloud/BIM Server.
- **Alternative addresses**: Predefined alternative addresses defined on the server, which can be used to connect to this server as well.
- **Local addresses**: Alternative address entered by the user in ARCHICAD.
- **Automatic address**: Automatic addresses are generated automatically based on the active address.
- **Fallback**: ARCHICAD is not able to communicate with the BIMcloud Server, so it uses the BIMcloud/BIM Server Manager as a bridge to connect.
- **Lookup order**: Priority-based list of all available addresses. ARCHICAD picks the active address from this list.
- **Active address**: The address currently used by ARCHICAD to connect to the BIMcloud Manager.
- **Automatic/Manual address selection**: The method ARCHICAD uses to pick the Active address.

Primary address

This is the unique identification of the server, set up by the person installing the BIMcloud/BIM Server. There is only one primary address for each BIMcloud/BIM Server component.

ARCHICAD uses this address to uniquely identify the server – even if it is communicating using a different address at the moment. This addresses is also used when placing references to the server (e.g. placing a hotlinked module from a Teamwork project).
When ARCHICAD opens a project which contains a reference to a BIMcloud not yet known by ARCHICAD, then ARCHICAD will use the primary address stored in the hotlink reference to find the server:

- If the address is working, then ARCHICAD will download all the alternative addresses and pick the most suitable one based on priorities.
- If the address is not working, then it will prompt the user to enter a currently working address to the new server. Once a working address is entered, ARCHICAD will download the list of alternative addresses based on the pre-defined priorities.

Set up the Primary address on the Settings panel of each BIMcloud/BIM Server component.

It is recommended not to change the Primary address of the BIMcloud/BIM Server. In case it must be changed, it is a good practice to add the old Primary address to the list of alternative addresses— even if it is not working any more. This ensures that ARCHICAD will be able to identify links placed by the old Primary address and keep the references alive in projects.

**Alternative addresses**

The list of alternative addresses is a ‘menu’ for ARCHICAD. It will go through this list in a certain order (see Lookup order) and connect to the server using the first functioning one.

Alternative addresses can be pre-set on the BIMcloud/BIM Server Manager for every server/module component.

![Connection settings](image)

**Automatic address**

Automatic addresses are available for BIMcloud Servers and Modules. Automatic addresses are not absolute addresses, but rather relative addresses. They are able to dynamically create an address based on the currently used address of the BIMcloud/BIM Server Manager. An example:

- ARCHICAD uses the [http://server-computer:1228](http://server-computer:1228) address to connect to the server

  The Automatic address is $protocol://$host:1229

  ARCHICAD will automatically use [http://server-computer:1229](http://server-computer:1229) to connect to the Server/Module.

  The user goes home and uses a different address to connect to the server through the internet: [https://bimcloud.company.com:1228](https://bimcloud.company.com:1228)

  ARCHICAD will automatically use [https://bimcloud.company.com:1229](https://bimcloud.company.com:1229) to connect to the Server/Module.

  There are two automatic fields to generate automatic addresses:

- ‘$protocol’: the protocol part of the url; in the above example, this is ‘http’ and ‘https’
• ‘$host’: the address part of the url without the protocol and the port. In the above example, this is: ‘server-computer’ and ‘bimcloud.company.com’

**Fallback**

In case ARCHICAD is not able to directly communicate with a BIMcloud Server or a BIM Server Module, yet the BIMcloud/BIM Server Manager is accessible, then it will use the BIMcloud Manager as a ‘bridge’ to the BIMcloud Server and send all traffic through it. (Keep in mind that this kind of communication can affect the overall performance of BIMcloud, depending on the locations of the different components.)

Fallback communication might be a good choice when accessing the BIMcloud/BIM Server from outside the office, because it requires the IT administrator to open only one port on the company firewall.

**Lookup order**

When ARCHICAD tries to connect to a BIMcloud/BIM Server, it will go through the addresses in a certain order. This order can be set on the BIMcloud/BIM Server Manager. Alternative addresses added locally from ARCHICAD will always be at the end of the lookup order.

**Automatic / Manual address selection**

It is possible to override the address selected automatically by ARCHICAD, and force it to use a specific address instead. Use ARCHICAD’s Network Diagnostic tool to override the automatically selected address. Keep in mind that manually selecting an address might force ARCHICAD into an offline state even if there is a different – currently working – alternative address available.

**Connection steps**

ARCHICAD goes through the following steps when it connects to a BIMcloud/BIM Server.

**Adding a new BIMcloud BIM Server**

When the user adds a new server to the server list, ARCHICAD asks for an address, a username and a matching password.

ARCHICAD connects to the BIMcloud/BIM Server Manager using the entered address and:

- Downloads its primary address and stores it as a unique identifier for this new server
- Downloads the list of alternative addresses and the lookup order
- Automatically selects the most suitable address based on the lookup order

**Re-connect to a currently offline server**

When ARCHICAD detects that the selected server is offline, the user will be able to start ARCHICAD’s Network Diagnostic tool and enter a new alternative address for the server. *(See the Network Diagnostic section in the Collaboration chapter of the ARCHICAD Reference Guide.)*

ARCHICAD will remember this alternative address in the future and use it in the lookup order when trying to connect to this server.
Connect to an unknown server referenced from a hotlink module or a library

Hotlink modules and Linked libraries contain the Primary address of their server in the reference. When ARCHICAD is about to check their status, it will use this Primary Address to identify the server.

• If this server is already known by ARCHICAD (it is available on its server list), then it will go through the regular connection process and pick the most suitable address automatically.
• If the server is not known yet, but the stored Primary Address is working, then it will automatically download the additional connection details and pick the most suitable address automatically.
• If the server is not known yet and the link does not work either, then ARCHICAD will prompt the user to enter a working alternative address to the server. Once a working address is entered, it will download the additional connection details and pick the most suitable address automatically.

Best Practice

Setting up multiple alternative addresses on the BIMcloud/BIM Server ensures that:

• ARCHICAD users will not have to worry about how the ARCHICAD connects to the BIMcloud/BIM Server; the IT administrator sets everything up
• The connection will always be optimal

Direct connection between the components is always the most effective way of communication. Any extra routes or processing will only increase the transfer time:

• http proxy servers: data is always tunneled through a common server and then forwarded to the relevant component
• https security: data is always encoded and decoded
• fallback communication: data is tunneled through BIMcloud/BIM Server Manager

The best practice for setting up addresses and the lookup order is to start with the most effective way of communication and then add the less effective ones:

1. Direct connection with an IP address: http://192.168.1.101:1228
2. Direct connection with a computer name: http://server-computer:1228
3. Connection with a fully qualified address: http://bimcloud.company.com:1228
4. Connection through a secure connection: https://bimcloud.company.com:1228

ARCHICAD will automatically select the following addresses from the above list depending on its location:

• From the office it will pick either #1 or #2, because the computers are on the same LAN.
• From a branch office it will pick either #1, #2 or #3, depending on how the two LANs are connected.
• From a remote location with a simple internet connection it will always choose #4. It is the least effective method, but it automatically provides the highest level of security.
Troubleshooting

Use ARCHICAD’s built in Network Diagnostic tool to find and fix connection related errors.

*See the Network Diagnostic section in the Collaboration chapter of the ARCHICAD Reference Guide.*
Tray application

The BIMcloud/BIM Server tray application will be automatically installed on the server computer(s); it is always automatically executed at system start. This application is the control center of all installed components. It provides quick info/access to:

- Status of the component(s)
- Shortcut to open the BIMcloud/BIM Server Manager (if installed)
- Shortcut to re-configure the components
- Quick Start/Stop/Rstart functions

**Note:** If a server module has been manually stopped in the BIM Server Manager, the tray will still indicate that the server connection is OK.

The tray application’s color gives quick feedback about the health of the components:

- Black and white: All components are running
- Yellow highlight: One or more components are not running properly
- Red: None of the components is running

If multiple BIM Servers are installed on the same computer, then each BIM Server will have its own Tray icon and controls.
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