

Session Management

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This page covers the basics on using the Posit Workbench home page to work in a multi-session environment.

Accessing the home page

After logging in, Workbench will redirect users to the Workbench home page. It consists of three sections:

1. **Sessions:** manage sessions and create new ones.
2. **Projects:** create sessions for recently used/shared projects.
3. **Recently Published:** create sessions for recently published projects.

To help you keep track of your running sessions, Posit Workbench comes with a home page that allows users to:

- View the status of all running sessions: pending, idle, active, shut down, or suspended.
- Gracefully or forcefully exit a running session.
- View recently accessed projects.
- View recently published projects.
- Participate in one or more shared projects.
- Run multiple analyses in parallel.

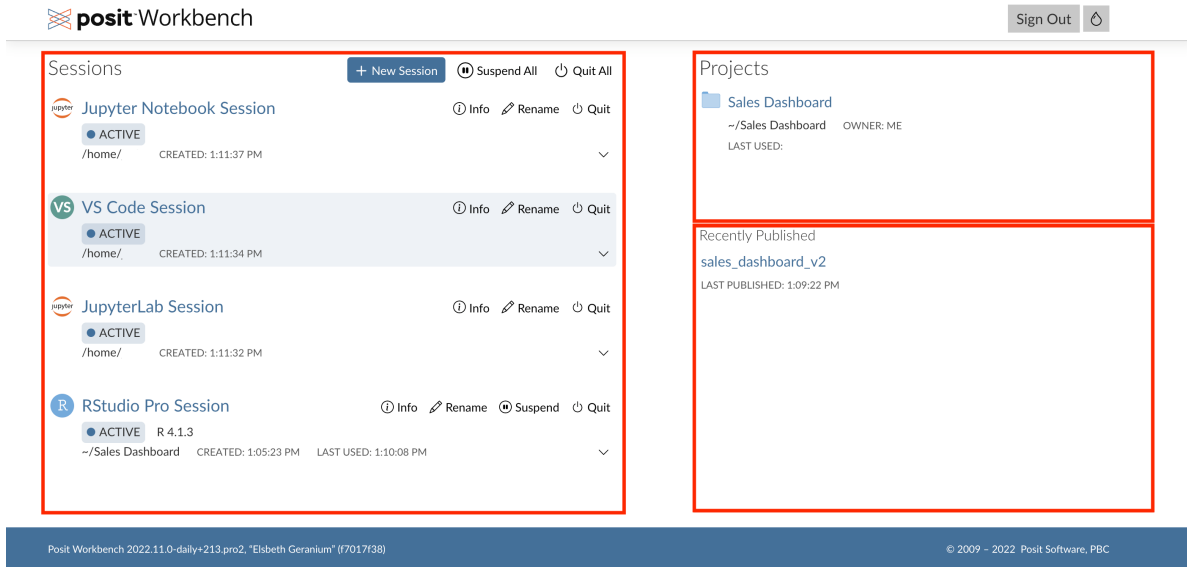


Figure 1: Accessing the Workbench home page

Session states

Sessions are long-running tasks that continue to be available until you explicitly quit them. This means that you can kick off a long-running job in one session and switch to another to continue working.

Sessions may be in one of the following states:

- **Active:** The session is running, and there has been recent user interaction or processing.
- **Idle:** The session is running, and there has been no recent user interaction or processing.
- **Suspended:** The session is not currently running as it has been suspended. Session information has been saved for future restoration. The session is restored when clicked on the home page with all active work preserved.
- **Pending:** The session is in the process of being made available to the user.
- **Shutting Down:** The session has been exited, and any unsaved work will be lost. This is done through quitting or force quitting the session.

When sessions have been idle (no processing or user interaction) for a specified period, 2 hours by default, they are suspended to free up server resources. When you next interact with that session, it is restored with all active work preserved, and you can resume work from where you had last left off. To change the session idle configuration, refer your server administrator to the [Session Timeout section of the Admin Guide](#).

As a general rule, the larger the objects are, the longer it will take to resume a session that was suspended.

i Note

Only objects that have been allocated within R's memory are written to disk and may be restored later. Generally, this means that any object that could be saved as a .rds file will be safely suspended and restored later. Any R objects that cannot be saved to .rds, such as objects requiring deserialization or relying on external pointers, may experience unexpected behavior when suspending and could be inaccessible upon restoration. Currently, only sessions using RStudio Pro have the capability to be suspended and later restored.

Managing sessions

Starting new sessions

To start a new session, from the **Sessions** section click the **+ New Session** button.

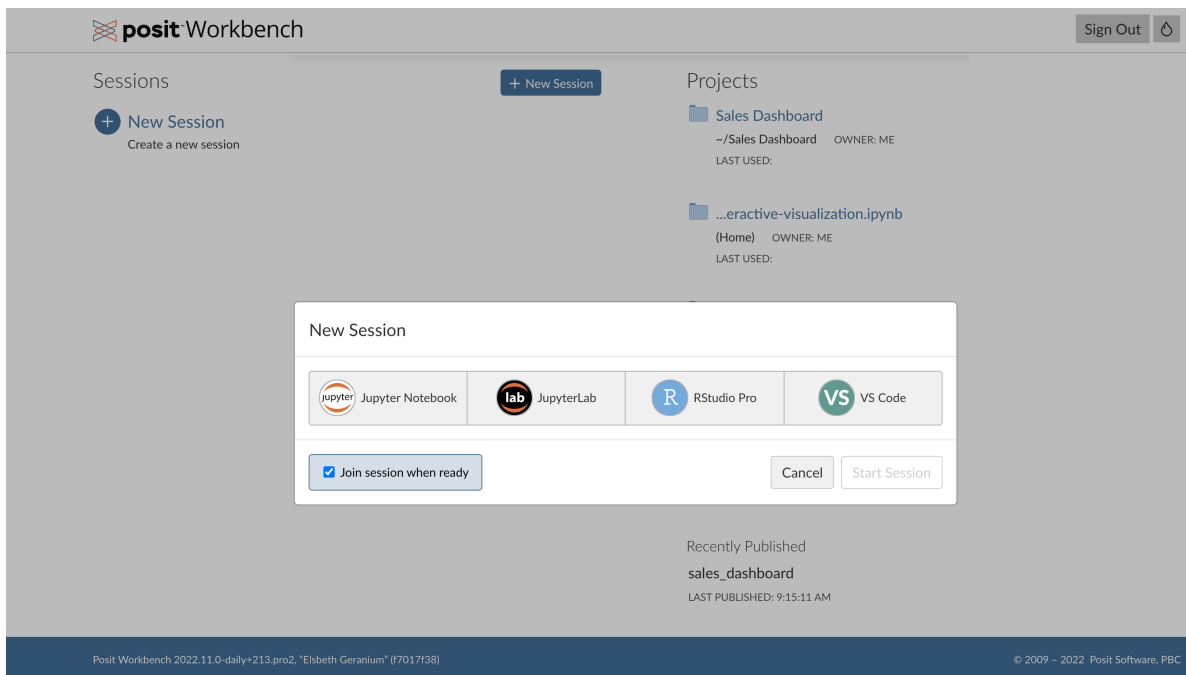


Figure 2: Creating a new session in Workbench

When creating a new session, you may choose from the different editor options that have been [configured by your administrator](#), including RStudio Pro, VS Code, JupyterLab, and Jupyter Notebook.

i Note

Depending on how your server administrator has configured your Workbench deployment, you will see different settings under the **OPTIONS** section of the **New Session** modal. For example, Workbench can also be configured to launch jobs into IT-managed computing resources in Kubernetes or Slurm clusters, which may give additional options during new session creation such as **CPUs** and **Memory**.

Opening existing sessions and sessions from projects

You can open existing sessions by clicking the session name.

The screenshot displays the Posit Workbench interface. At the top, the logo and name 'posit Workbench' are visible on the left, and 'Sign Out' and a user profile icon are on the right. The main content area is divided into two columns: 'Sessions' on the left and 'Projects' on the right. The 'Sessions' column contains four active sessions, each with a red box highlighting its name and 'ACTIVE' status: 'Jupyter Notebook Session', 'JupyterLab Session', 'VS Code Session', and 'RStudio Pro Session'. Each session entry includes a 'Created' timestamp and a dropdown menu. The 'Projects' column lists several projects, including 'Sales Dashboard', '...eractive-visualization.ipynb', 'arrow_testing', and 'Untitled.ipynb', each with a 'Last Used' timestamp. At the bottom of the 'Projects' column, there is a 'Recently Published' section showing 'sales_dashboard' with its 'Last Published' timestamp. A dark blue footer bar at the very bottom contains version and copyright information.

Figure 3: Opening an existing session in Workbench

You can open an existing or shared project in a new session by clicking:

- on a project under the **Projects** pane *or*
- a recently published project under the **Recently Published** pane.

This causes a prompt to display to create a session with that project already loaded for you using your preferred editor.

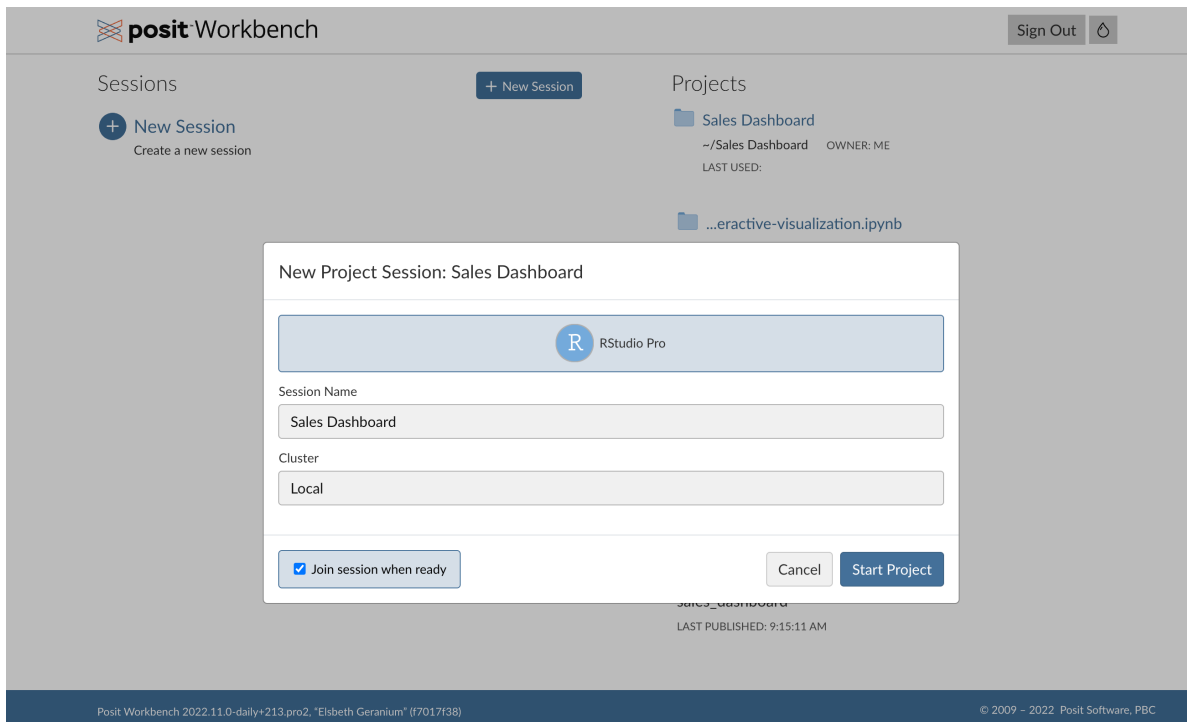


Figure 4: Opening a project in Workbench

i Note

When opening a project under the **Projects** and **Recently Published** columns on the right side, Workbench attempts to match with the appropriate editor based on the project type. R Projects will be prompted with the RStudio IDE as the preferred editor and Jupyter Notebooks will be prompted with the choice between JupyterLab and JupyterNotebook. At this time, projects will not be matched with the VS Code editor.

Ending sessions

Closing a browser window does not end a session, therefore, it is a good practice to routinely go through and clean up the sessions you aren't using. This gives the compute resources back to the server to be available for other users.

To quit a session:

- To the right of the session that you wish to force quit, click the **Quit** button.
- Click the **Quit Session** button.

You can quit all open sessions with the **Quit All** button located at the top right of the **Sessions** section. Any unsaved work will be lost, so be sure to save work to your version control system of choice, or locally, before quitting.

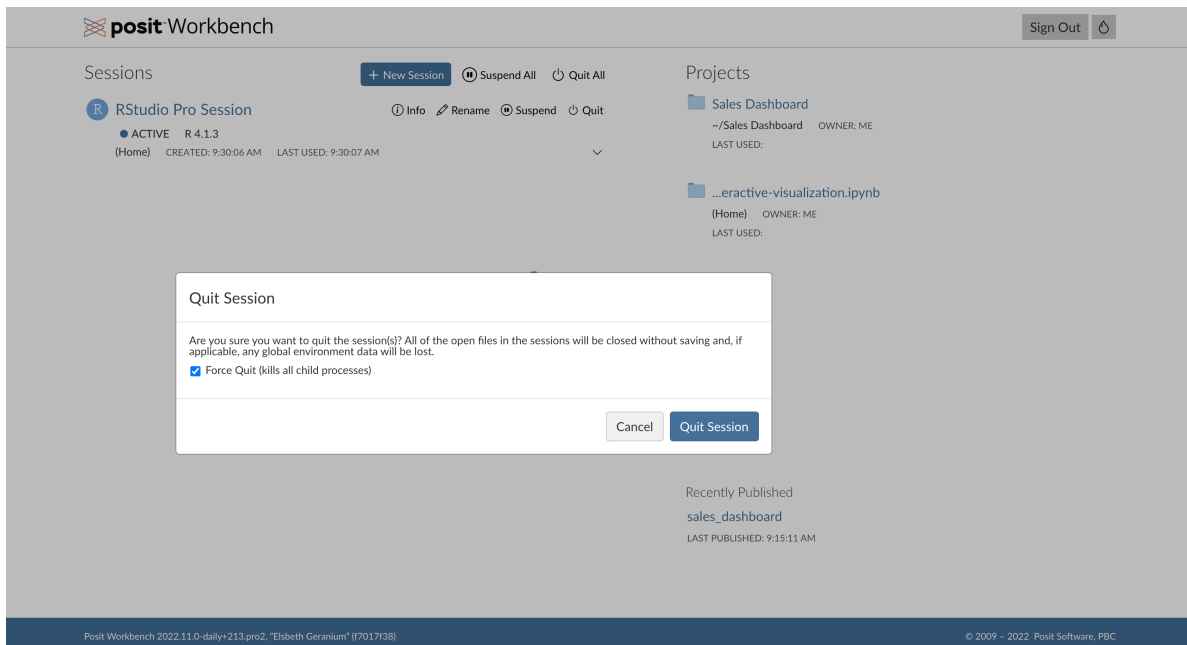


Figure 5: Quitting sessions in Workbench

In some rare cases, it might be necessary to force quit sessions. Typically, this is done when a session is not responding to inputs and may be part of a larger troubleshooting effort. To forcefully quit your session:

- Click the **Quit** button located to the right of the session you wish to force quit.
- Select the optional check box to enable **Force Quit (kills all child processes)**.
- Click the **Quit Session** button.

This will forcefully stop your process and all of its descendant processes. Force quitting does not allow them to attempt to gracefully quit on their own. Consider using this option only as a last resort.

i Note

Automatic cleanup of forgotten, long-running jobs is an optional setting, disabled by default, that may be configured by your server administrator. It is used to automatically reclaim temporary disk space used by a long-running session without user input **regardless of computation status** and to stop its processes and children.

If you are encountering unexpected session behavior that you suspect is due to this setting, refer your Workbench administrator to the [Session Timeout Kill section of the Admin Guide](#).

Troubleshooting

Find session diagnostics for started sessions

To find a started session's diagnostics:

- Navigate to the Workbench home page.

Sessions



+ New Session

RStudio Pro Session **Info** 

● ACTIVE R 4.2.0
(Home) CREATED: 12:12:27 PM LAST USED:

RStudio Session  Info 

● SUSPENDED (6 MB) R 4.0.3
(Home) CREATED: 11/9/2020 LAST USED:

 Info 

● SUSPENDED (19 MB) R 4.0.3
(Home) CREATED: 8/13/2020 LAST USED:

- Locate the session that you wish to view diagnostics for and click **Info**.
- From the RStudio Pro Session window, click the **Launcher Diagnostics** tab.

RStudio Pro Session

Session

Launcher Diagnostics

Session 1dc3dcfc78a3194dac9b0 (ashley) - RStudio Pro Session

RUNNING

[Details](#) 

CLUSTER Kubernetes

STATUS ● **RUNNING**


IMAGE 075258722956.dkr.ecr.us-east-1.amazonaws.com/sol-eng-demo-server:2022.12.0-353.pro20-202210

SUBMITTED 5/4/2023, 12:16:21 PM

EXECUTABLE `/usr/lib/rstudio-server/bin/rserver-launcher`

ARGUMENTS

```
--server-user rstudio-server --server-project-sharing 0 --server-shared-storage-path /usr/home/rstudio-storage/ --pam-sessions-enabled 1 --pam-profile su --pam-sessions-close 0 --pam-sessions-require-password-prompt 1 --stdin --rserver-address http://rstudio-workbench.rstudio.svc.cluster.local:80 --rserver-tcp-port 8787 --rserver-verify-ssl-certs 1 --rserver-connection-timeout 10 --session-use-file-storage 1 --log-stderr --create-container-user 1 --container-user-uid 200020221 --container-user-gid 1694303610 --container-user-home-dir /usr/home/ashley --container-user-shell /bin/bash --forward-environment 1
```

 1dc3dcfc78a3194dac9b0

 1dc3dcfc78a31

 94dac9b0

 rstudio-r-session

Close

RStudio Pro Session

Session	Launcher Diagnostics
Session 1dc3dcfc78a3194dac9b0 (ashley) - RStudio Pro Session	
CLUSTER	Kubernetes
STATUS	● RUNNING
IMAGE	075258722956.dkr.ecr.us-east-1.amazonaws.com/sol-eng-demo-server:2022.1353.pro20-202210
SUBMITTED	5/4/2023, 12:16:21 PM
EXECUTABLE	/usr/lib/rstudio-server/bin/rserver-launcher
ARGUMENTS	<pre>--server-user rstudio-server --server-project-sharing 0 --server-shared-storage-path /usr/home/rstudio-storage/ --pam-sessions-enabled 1 --pam-profile su --pam-sessions-close 0 --pam-sessions-require-password-prompt 1 --stdin --rserver-address http://rstudio-workbench.rstudio.svc.cluster.local:80 --rserver-tcp-port 8787 --rserver-verify-ssl-certs 1 --rserver-connection-timeout 10 --session-file-storage 1 --log-stderr --create-container-user 1 --container-user-uid 200020221 --container-user-gid 1694303610 --container-user-home-dir /usr/home/ashley --container-user-shell /bin/bash --forward-environment 1</pre>
🔍 1dc3dcfc78a3194dac9b0 🔍 1dc3dcfc78a31 🔍 94dac9b0 🔍 rstudio-r-session	

- Under the Running status icon, click **Details**.

Below is an example of a session's diagnostics:

Session 1dc3dcfc78a3194dac9b0 (ashley) - RStudio Pro Session

RUNNING

CLUSTER Kubernetes

STATUS ● RUNNING

IMAGE 075258722956.dkr.ecr.us-east-1.amazonaws.com/sol-eng-demo-server:2022.12.0-353.pro20-202210

SUBMITTED 5/4/2023, 12:16:21 PM

EXECUTABLE /usr/lib/rstudio-server/bin/rsrserver-launcher

ARGUMENTS --server-user rstudio-server --server-project-sharing 0 --server-shared-storage-path /usr/home/rstudio-storage/ --pam-sessions-enabled 1 --pam-profile su --pam-sessions-close 0 --pam-sessions-require-password-prompt 1 --stdin --rsrserver-address http://rstudio-workbench.rstudio.svc.cluster.local:80 --rsrserver-top-port 8787 --rsrserver-verify-ssl-certs 1 --rsrserver-connection-timeout 10 --session-use-file-storage 1 --log-stderr --create-container-user 1 --container-user-uid 200020221 --container-user-gid 1694303610 --container-user-home-dir /usr/home/ashley --container-user-shell /bin/bash --forward-environment 1

TAGS

1dc3dcfc78a3194dac9b0 1dc3dcfc78a31 94dac9b0 rstudio-r-session rstudio-r-session-name:RStudio Pro Session
rstudio-r-session-id:1dc3dcfc78a3194dac9b0

LIMITS

cpuCount: 1 memory: 2048

OUTPUT

CPU — MEM —

```
2023-05-04T16:16:26.315033Z [rsession-ashley] ERROR pref_error error 1 (Error occurred while loading preferences.); OCCURRED AT
rstudio::core::Error rstudio::session::prefs::PrefLayer::loadPrefsFromFile(const rstudio::core::FilePath&, const
rstudio::core::FilePath&) src/cpp/session/prefs/PrefLayer.cpp:143; CAUSED BY: json-parse error 1 (An error occurred while
parsing json. Offset: 0); OCCURRED AT virtual rstudio::core::Error rstudio::core::json::Value::parse(const char*)
src/cpp/shared_core/json/json.cpp:669; LOGGED FROM: rstudio::core::Error rstudio::session::prefs::Preferences::readLayers()
src/cpp/session/prefs/Preferences.cpp:65
Listener bound to address 0.0.0.0 port 8788 https
Session proxy listening on 8789 https
```

Figure 6: Example diagnostics