

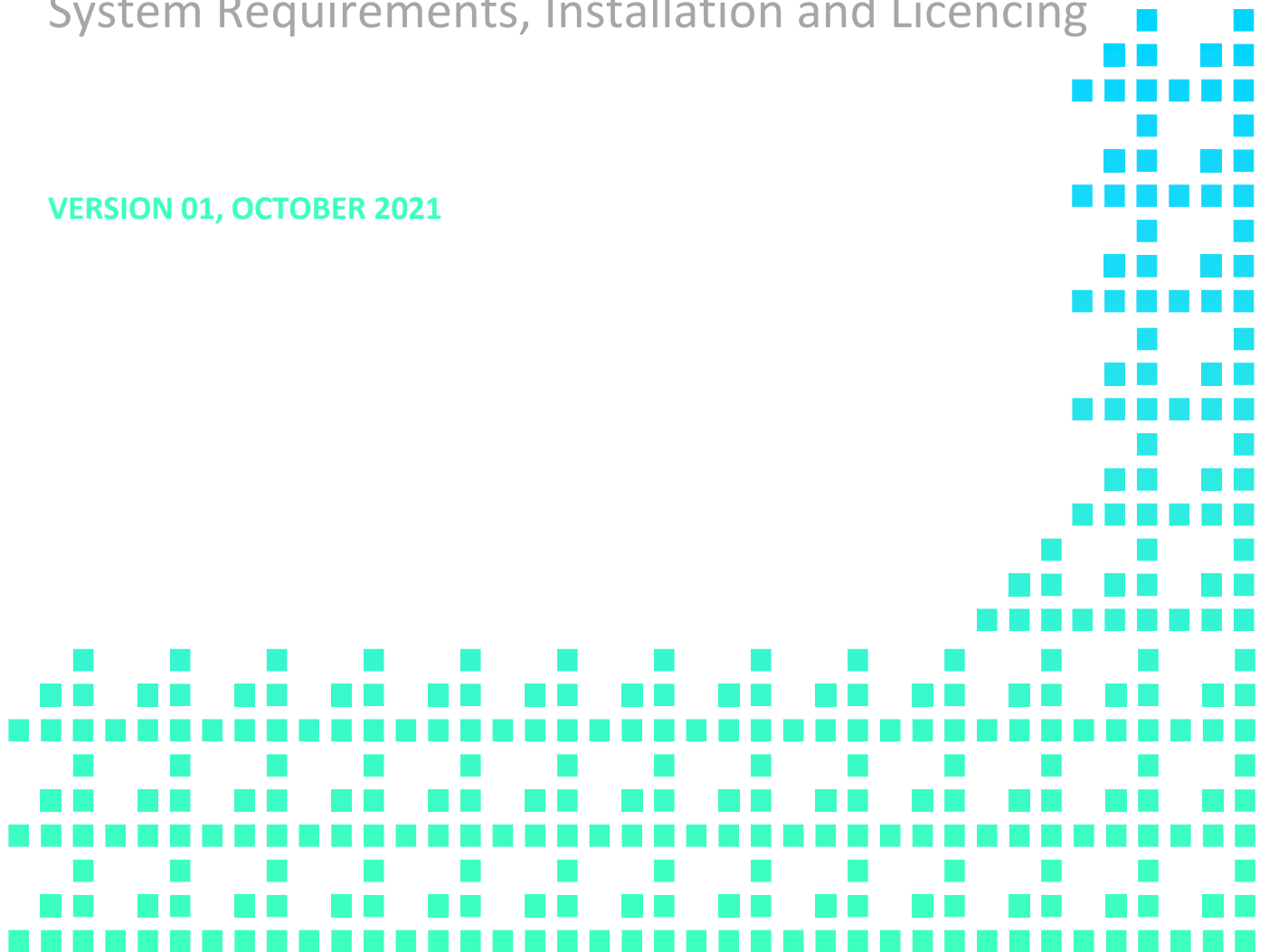


INTEGRATED. INTELLIGENT. INTUITIVE.

Alastri Tactical Scheduler Installation Guide

System Requirements, Installation and Licencing

VERSION 01, OCTOBER 2021



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System Requirements

The following information outlines the minimum and recommended system requirements to run Alastri Tactical Scheduler. As the hardware required depends on the complexity of the mine and the amount of data, meaningful minimum requirements cannot always be listed. Ultimately the only way to know whether specific hardware will work for a specific mine site is to validate the software's performance during the free trial period.

- For large multi-pit mines with raw LIDAR surfaces and block models with 80M blocks the requirements will be at the extreme end.
- The minimum requirements will only support small mines with a small block model and surfaces with low triangle counts.
- Please note that as our software develops over time, these requirements may change, and hardware upgrades may become necessary.

Note: Running Alastri Tactical Scheduler on minimum system requirements may slow the application response, depending on the size of the model. Use recommended requirements for optimal use.

Component	Minimum	Standard	Extreme
Processor	Intel i5	Intel i7	Intel i9
Memory (RAM)	8 Gb	64 Gb	128 Gb
Operating System	Windows 10 x64	Windows 10 x64	Windows 10 x64
Video Memory (GRAM)	2 Gb	8 Gb	12 Gb
Monitor	1920 x 1080	Dual 1920 x 1080	Triple 1920 x 1080
Video Connection	HDMI, DisplayPort, DVI, VGA - <i>USB not supported</i>		
Video Driver	Driver no more than 6 months old (OpenGL 4.6+)		
Hard Drive	Solid State Drive with at least 50 GB Free		
Power Connection	AC Power - <i>Battery power not supported (plug in the laptop)</i>		
Network Connection	Consistent, reliable, high speed (>1 MB/s) connection to the Internet		
Software Prerequisites	.NET 4.7.2 Microsoft Visual Studio 2019 C++ Redistributables (https://aka.ms/vs/16/release/vc_redist.x64.exe) Microsoft Excel		
Input Devices	Keyboard and Mouse with a left mouse button, right mouse button, and middle mouse button/scroll wheel		

"Element Not Found"

Many IT departments block downloads of Microsoft prerequisites, so you may need to download them manually. The installation error "Element Not Found" indicates that you must download and install these manually.

- [Microsoft .NET Framework 4.5.1](#)
- [Microsoft VSTO Runtime for Office 2010](#)

Installation and Setup

Prerequisite

It is important to note that the System Requirements should be met to run the software.

Many IT departments block downloads of Microsoft prerequisites, so you may need to download them manually.

If any error whatsoever occurs on install, ensure that you have downloaded and installed these manually.

- [Microsoft .NET Framework 4.5.1](#)

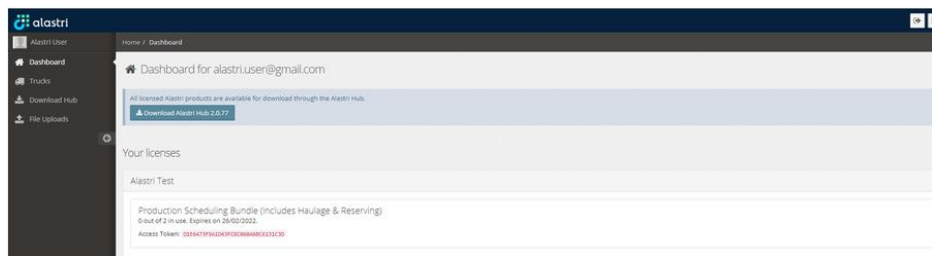
Tactical Scheduler requires Windows 10 or higher (**64 bit only**)

Installation

Follow these steps to get started with Alastri Tactical Scheduler.

Alastri Login

New users may proceed to the [licensing page](#) and click **Register as a new user**. Please check your inbox for a confirmation email to finalise your account.



Get Licensed

Choose from the following options to license your account with chosen Alastri products.

- Ask your manager to log in as a License Admin and add you to the company license, or
- Email support@alastri.com.au for assistance.

Download the Hub

The Hub manages all Alastri product release versions and licenses. It can be downloaded by logging into the [licensing page](#) and pressing **Download Alastri Hub**.

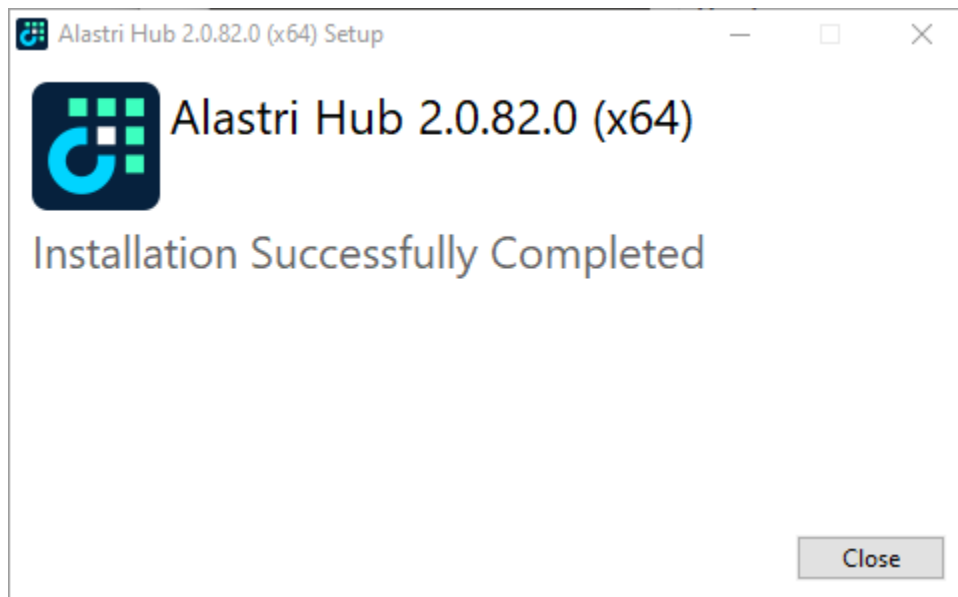
Install the Hub

Once the Hub has finished downloading, run the executable and click **Confirm** on security prompts to continue the install.



Note that Alastri products will always be signed with "Verified Publisher: Alastri Software Pty Ltd".

Wait until the download is complete and click Close.



Even if you have administrative privileges you should install the Hub by right clicking on the Alastri.Hub.2.0.*.exe file and run as administrator.

Login to the Hub

Double click on the Hub shortcut, or click *Start > Alastri Hub*, to open the Hub login form.



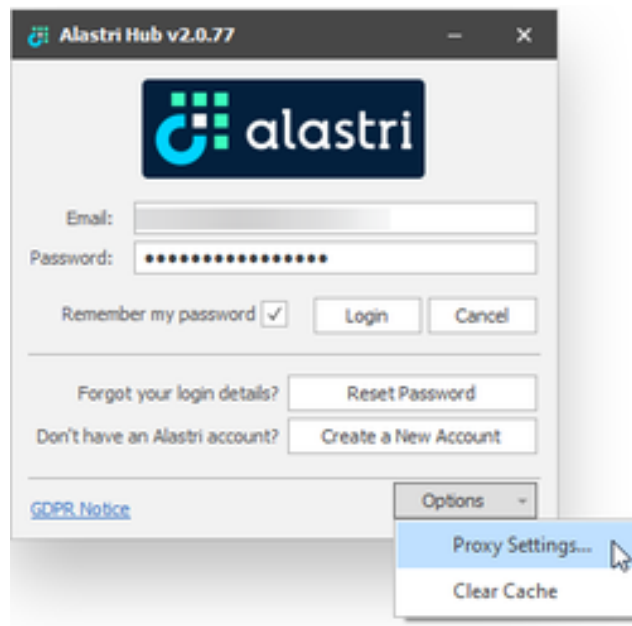
The screenshot shows the Alastri Hub v2.0.77 login window. At the top is the Alastri logo. Below it are two input fields: 'Email' with the text 'alastri.user@gmail.com' and 'Password' with masked characters. There is a 'Remember my password' checkbox which is unchecked. To the right of the password field are 'Login' and 'Cancel' buttons. Below these are two links: 'Forgot your login details?' with a 'Reset Password' button, and 'Don't have an Alastri account?' with a 'Create a New Account' button. At the bottom left is a 'GDPR Notice' link, and at the bottom right is an 'Options' dropdown menu.

Enter your email and password into the login form and press **Login** to continue.

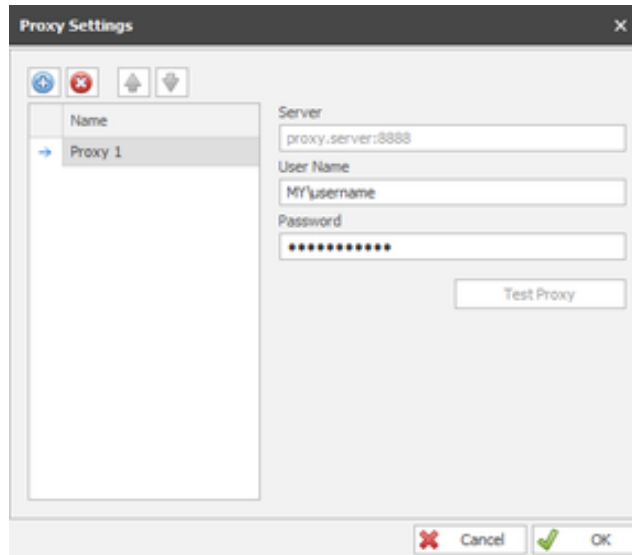
The Hub uses the same password credentials as the licensing website. Passwords can be reset [here](#).

Configure Proxy

If you are connecting through a company proxy, press **Proxy Settings** in the bottom right corner of the login form.



This screenshot is similar to the previous one, but the 'Options' dropdown menu is open. The 'Remember my password' checkbox is now checked. The dropdown menu shows two options: 'Proxy Settings...' and 'Clear Cache'. A mouse cursor is pointing at the 'Proxy Settings...' option.



Contact your IT department to obtain the correct proxy credentials for your organisation.

Install Products

In the main Hub form:

1. Select Tactical Scheduler from the left hand product menu.
2. Select the latest version.
3. Press **Install**.

A screenshot of the Alastra Hub v2.0.82 interface. The left sidebar shows a list of products: Haul Infinity, Production Scheduler, Rapid Reserver, Spatial Conformetrics, and Tactical Scheduler. The Tactical Scheduler product is highlighted with a red box. The main content area displays the Tactical Scheduler product page, which includes the title 'Tactical Scheduler', subtitle 'Mine Scheduling Software for Open-Pit Hard Rock Mines', and a table showing '7 of 10 Seats Available'. The table has columns for 'Current Active Users' and 'Time', with rows for 5h, 4h, and 1h. At the bottom, there is a 'Version: 21.2.981' dropdown menu, a 'Release Notes' link, and an 'Install' button with a green download icon, all highlighted with red boxes.

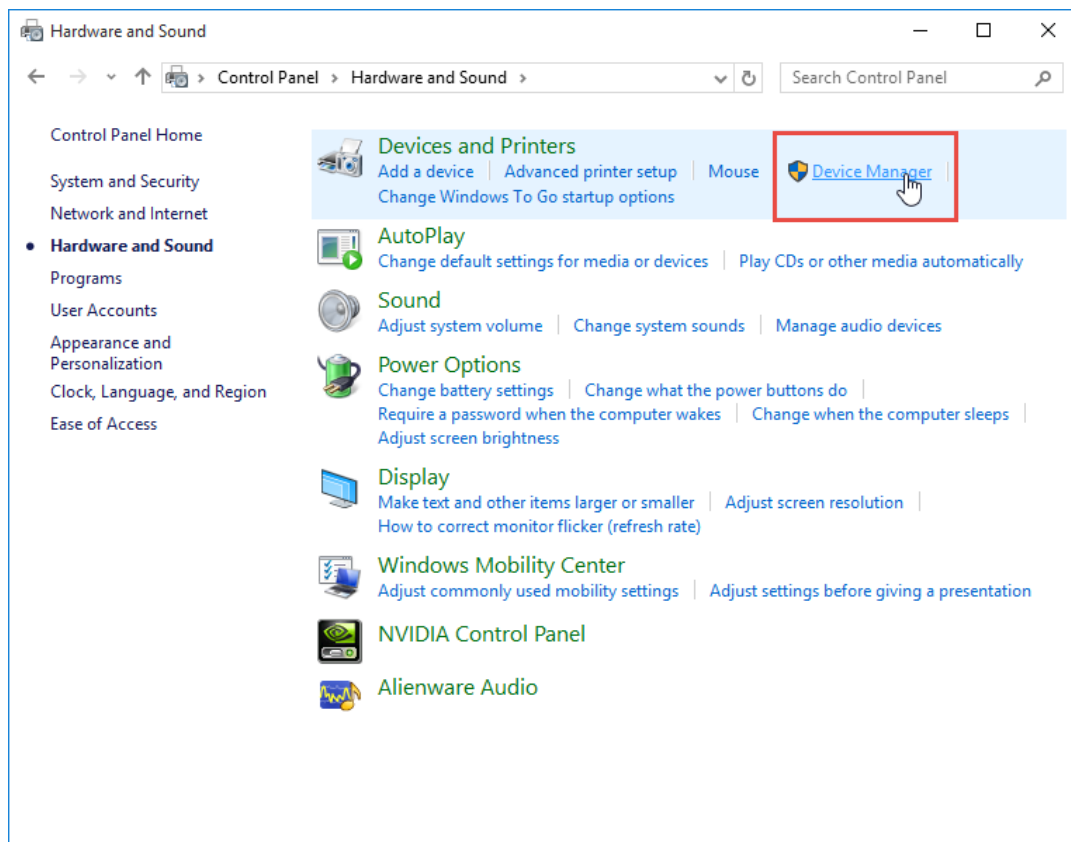
Graphics & Compatibility

Graphics Card Settings

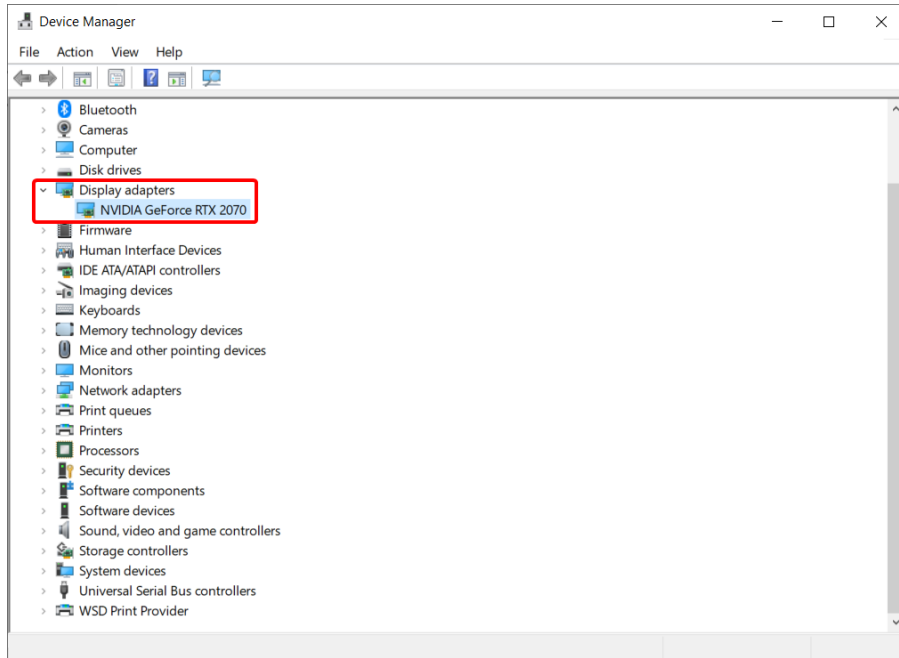
Follow these steps to ensure Tactical Scheduler runs smoothly on your computer. Note that your screen and settings may differ from those shown here.

Check Your Graphics Card

Tactical Scheduler requires a dedicated graphics card by NVidia or ATI to run. To check your graphics card, go to *Windows Start > Control Panel > Hardware and Sound > Device Manager > Display Adapters*.



Open the Control Panel and search for the Device Manager



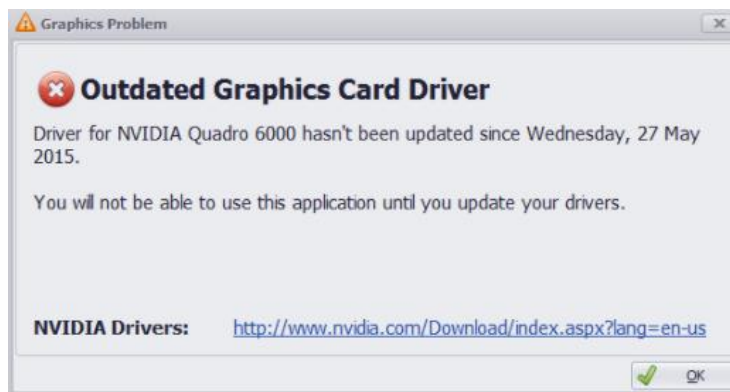
Find the graphics card details listed under the Display Adapters

If you are running a computer without a dedicated graphics card, then you will need to upgrade your computer to run Tactical Scheduler.

If you do have an appropriate dedicated graphics card, then proceed to the next step.

Update Graphics Drivers

Alastri products require the latest graphics card drivers for best performance.



If you see this message, follow these links to download and run the latest graphics card drivers.

- [NVidia Driver Downloads](#)
- [ATI Driver Downloads](#)
- [Intel Driver Downloads](#)

Change the Default Graphics Processor

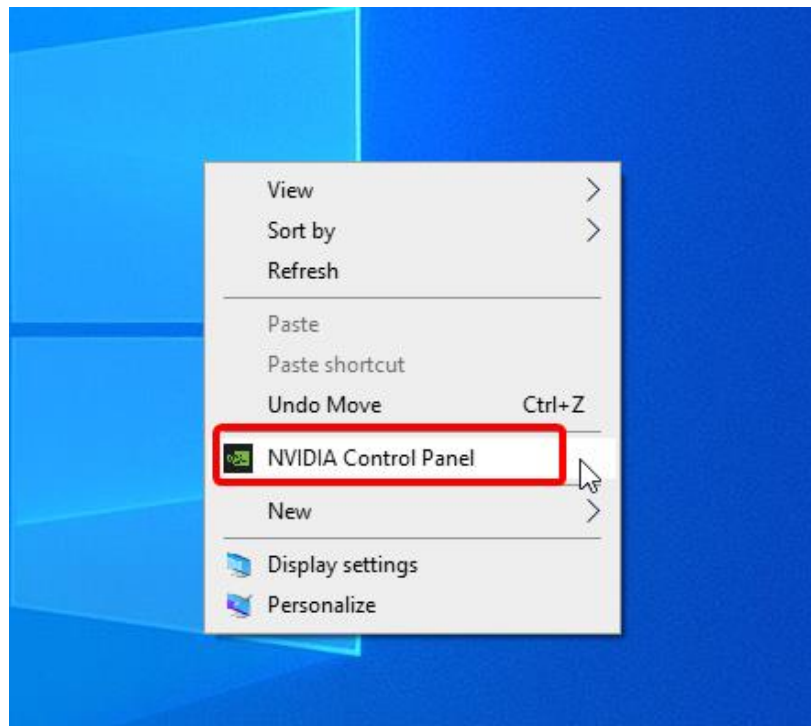
If any graphics related issues arise, navigate to the graphics card control panel and set Alastri products to run in high-performance mode.

NVidia Graphics Cards

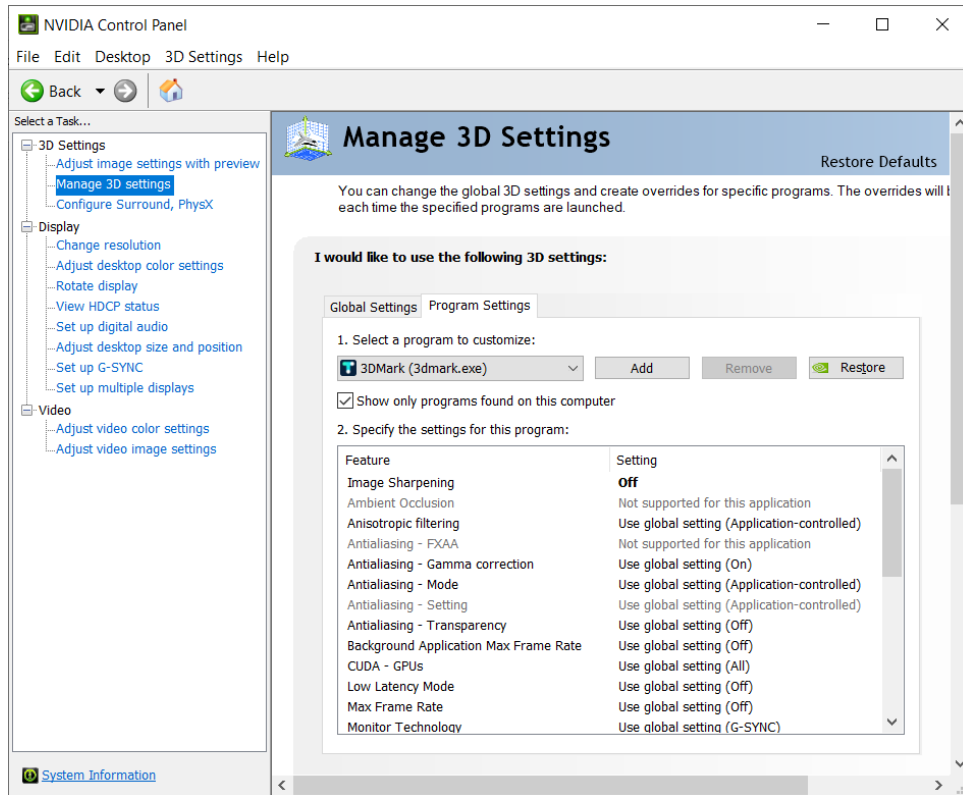
If you have an NVidia graphics card, it may be defaulting to the integrated graphics card instead of the higher performance NVidia graphics card.

To change the default video card for Tactical Scheduler:

1. Right click on your desktop and select "NVidia Control Panel".



2. Select "Manage 3D settings".
3. Select "Program Settings".



4. Choose "Tactical Scheduler" from the dropdown menu.
 - Or navigate to `%localAppData%\Alastri Hub\Programs\PROGRAM\VERSION\3DMARK.exe`.
5. Select your NVidia graphics card under "preferred graphics processor".

ATI Graphics Cards

If you are using an ATI graphics card, it may be defaulting to the integrated graphics card instead of the higher performance ATI graphics card.

To change the default video card to Tactical Scheduler:

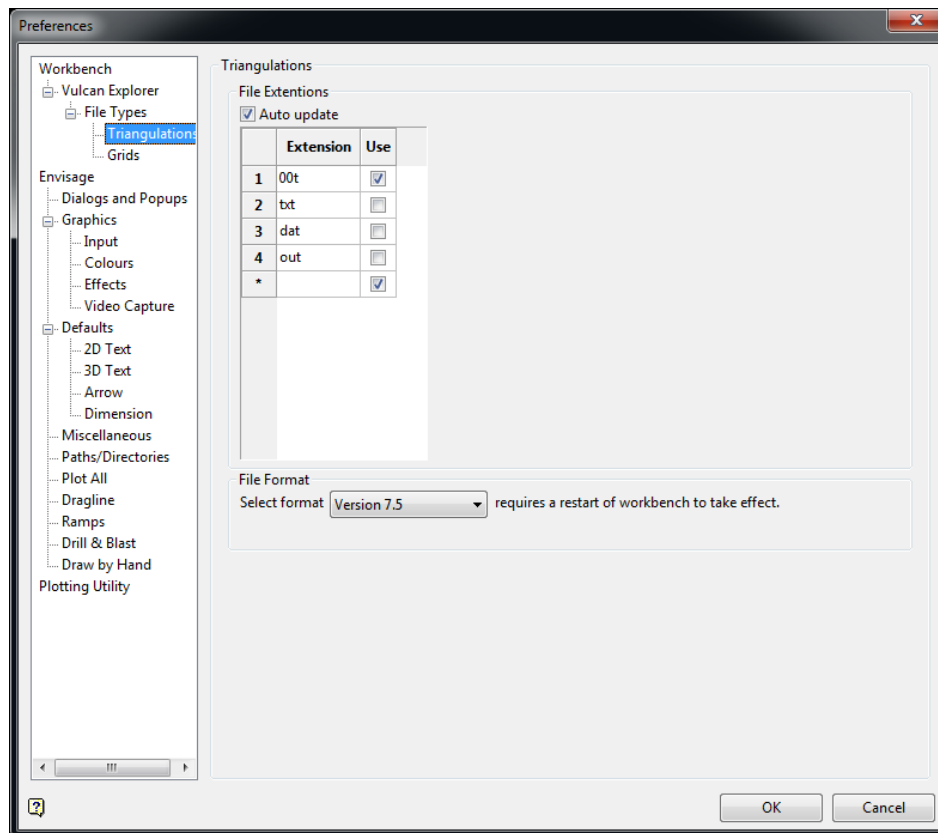
1. Right click on the desktop and open Catalyst Control Center.
2. Select "Power" from the left hand menu.
3. Select "Switchable Graphics" from the list.
4. Browse the list of programs and find AlastriTacticalScheduler.exe (or `C:\Program Files\Alastri Software\AlastriTacticalScheduler v21.2.981\AlastriTacticalScheduler.exe`).
5. Set RapidReserver.exe to "High Performance".
6. Apply changes and restart your computer.

Vulcan User Settings

These notes apply if you are importing surfaces from Maptek Vulcan. Tactical Scheduler requires Vulcan surfaces to be in file format version 7.5 or earlier in order to import and use them.

In Vulcan, go to *Tools > Preferences > File Types > Triangulations* and change the file format to Version 7.5. Vulcan requires a restart for the changes to take effect.

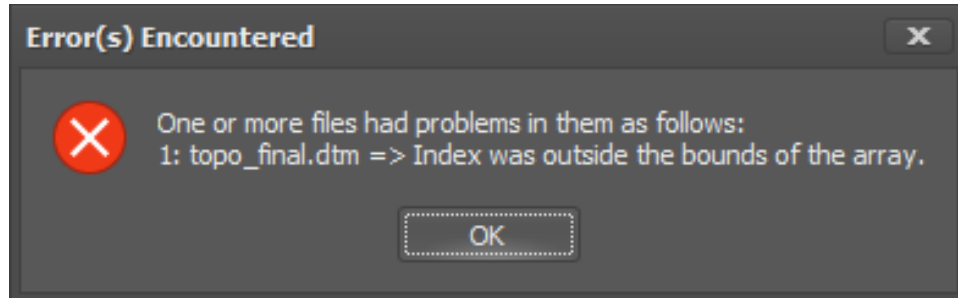
If you do not want to change Vulcan's formatting, use *File > Export to DXF* and import to Tactical Scheduler as a DXF file.



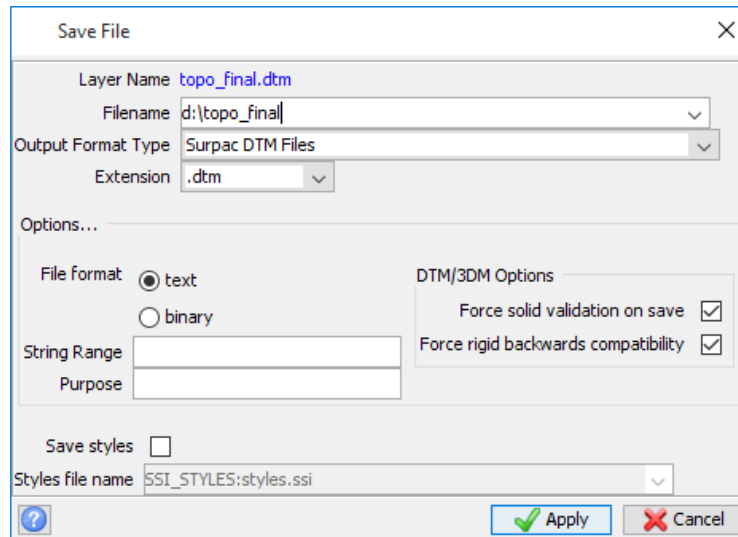
Tactical Scheduler requires Vulcan triangulations to be version 7.5

Surpac User Settings

These notes apply if you are importing surfaces from Geovia Surpac. Tactical Scheduler requires Surpac surfaces to be saved in text format in order to import and use them.



This error message is caused by trying to import a Surpac DTM in binary format



When saving surfaces in Surpac, set file format to text

Battery Power Settings

To prevent laptops from switching back to Intel graphics on lower power mode, go to *Power Options > High Performance > Advanced Power Settings* and change all options to maximum performance.

Work Locally

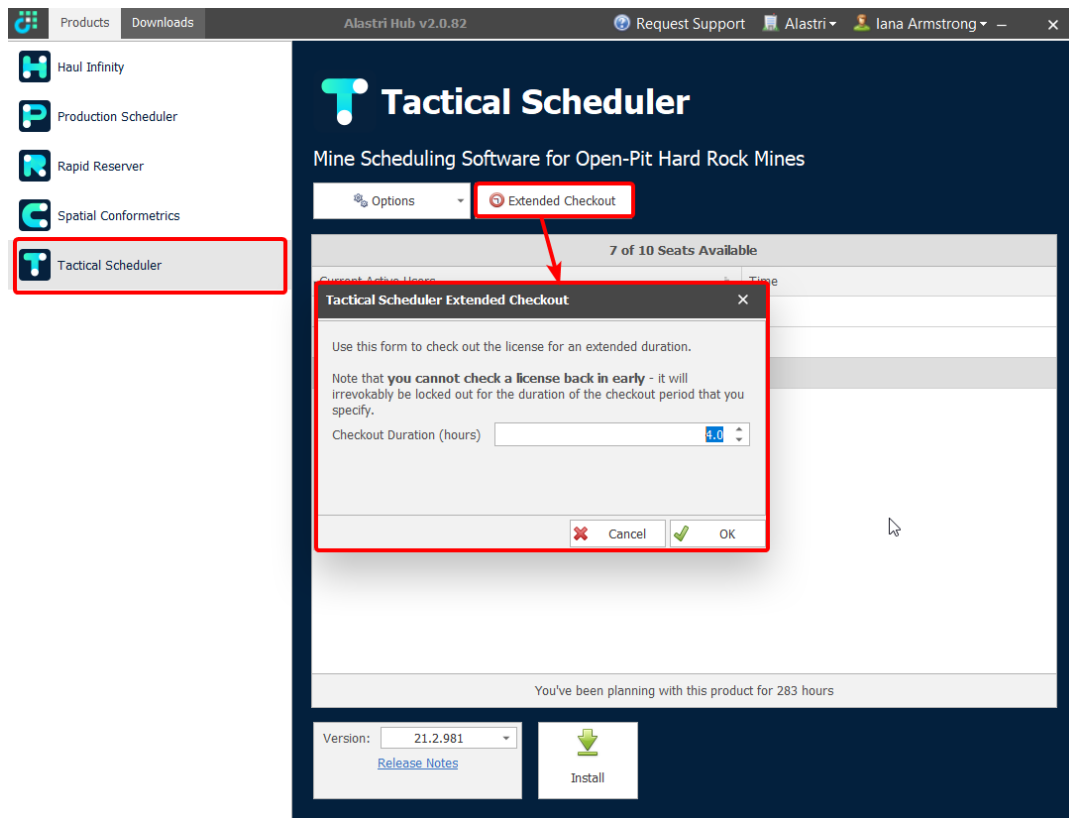
Alastri recommends saving all project files and data on the local hard drive before transferring to the network. This avoids issues with saving over interrupted connections or reading from a slow connection.

Work Offline

Licenses may be used offline by using the Extended Checkout feature in the Hub.

In the main Hub form:

1. Select an item from the left hand product menu.
2. Press **Extended Checkout**.
3. Enter the hours to checkout the license.
4. Press OK



- ✓ This will lock the license to your machine (online and offline) for the duration of the checkout.

Note that license cannot be checked back in until the timer runs out.

Permissions

Users may encounter the "Access is denied" error message when attempting to open a project file via the Hub or from Windows Explorer.

Stack Trace: System.ComponentModel.Win32Exception (0x80004005): Access is denied

This error occurs when the helper process "PolygonicaService.exe" is blocked from running by a virus scanner, group policy, or Windows compatibility profiles.

Virus Scanner

Virus scanners may block PolygonicaService.exe, or prevent it from launching. Adding a whitelist / exception for this process can help avoid "Access Denied" errors.

The Alastri Hub installs products into the following location: %localappdata%\Alastri Hub\Programs.

Group Policy

Occasionally group policy configuration may prevent applications from being launched from AppData\Local on machines.

Your IT administrators may need to provide an exception for Tactical Scheduler to allow it to operate correctly.

Program Compatibility Assistant

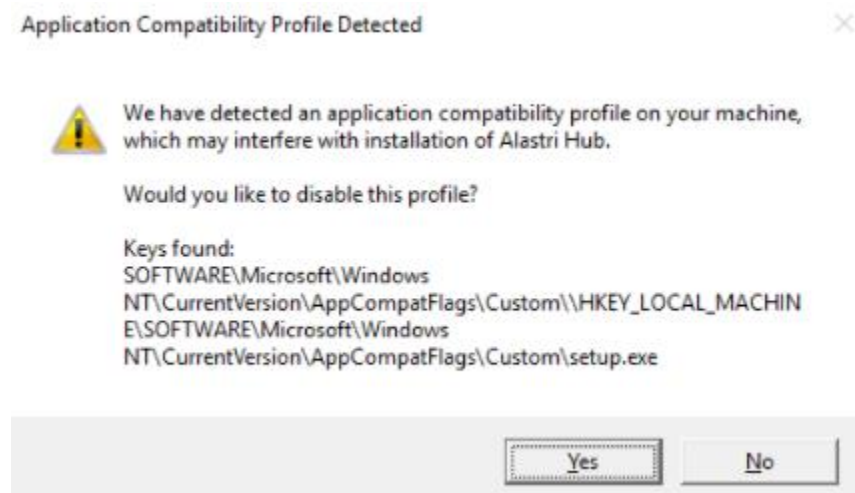
In order to allow legacy software to work on your system, your IT department may have created a program compatibility profile which causes Windows to run applications with non-standard behaviour. This can affect Tactical Scheduler's ability to track instances of PolygonicaService.exe and make sure they are cleanly shutdown with the application.

Your IT administrators may need to modify the application compatibility profile to avoid affecting Tactical Scheduler.

Warnings

Users may encounter the "Application Compatibility Profile" warning when attempting to install the Hub.

"We have detected an application compatibility profile on your machine, which may interfere with installation of Alastri Hub"



Serious problems might occur if you modify the registry incorrectly. Contact your IT department to resolve this issue.

✓ **If you are a competent IT professional:**

This issue may be resolved via the following steps:

1. Click on Start, type in "regedit" and run the command.
2. Browse to Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\AppCompatFlags\Custom.
3. Rename setup.exe to _setup.exe.

Project Files

When Tactical Scheduler is saved, multiple different files will appear in the save location.

.inf	Tactical Scheduler project file
.lock	Locks out a file to one user at a time
.old	If the main project files are corrupted for any reason, the ".old" files can be restored as functional project files by removing ".old" from the file name
.resultCache	Reduces scheduling time by saving results of previous runs
.layers	Saves triangulations external to the main project. Deleting the ".layers" file is the same as deleting all layers from the project
.drapelImages	Saves draped images external to the main project. Deleting the ".drapelImages" file is the same as deleting all draped images from the project

Internet License FAQ

Do I need an internet license?

Alastri software uses standard Internet-based authorisation. If you are in a remote location with a poor connection, or no internet connection at all, then you may wish to enquire about dongle based authorisation.

How does my internet license work?

The internet license authenticates your purchase key, name and email against your details on the Alastri server.

Does the internet license require any special software?

The license does not require any special software to be installed.

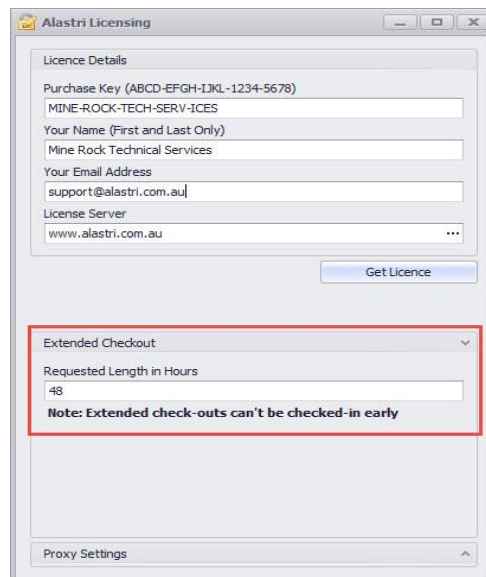
How do I know if the license is working?

The licensing dialog will inform you of any authentication errors.

Can I check out my internet license overnight?

You can use the Extended Checkout feature to hold licenses offline for a number of hours. Normally the maximum checkout time for licenses is seven days.

Checked out licenses cannot be released before their expiry date.



The screenshot shows a window titled "Alastri Licensing" with a "Licence Details" section containing the following fields:

- Purchase Key (ABCD-EFGH-IJKL-1234-5678): MINE-ROCK-TECH-SERV-ICES
- Your Name (First and Last Only): Mine Rock Technical Services
- Your Email Address: support@alastri.com.au
- License Server: www.alastri.com.au

A "Get Licence" button is located below these fields. Below the button is an "Extended Checkout" section, which is highlighted with a red border. It contains a "Requested Length in Hours" field with the value "48" and a note: "Note: Extended check-outs can't be checked-in early". At the bottom of the dialog is a "Proxy Settings" section.

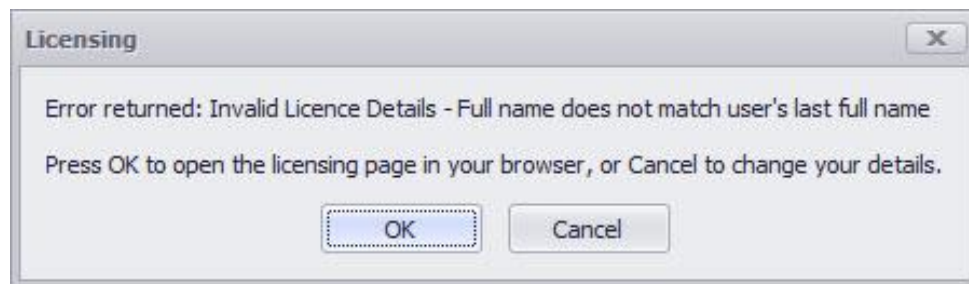
Internet License Troubleshooting

Why is my license asking for browser authentication?

Your IT department may be restricting applications from connecting to the internet. In this case, Alastri connects through a browser instead. Talk to your IT department about network permissions for Alastri products.

Why is my name not found?

The internet license authenticates your purchase key, name and email against your details on the Alastri server. Check for spelling errors in your name; if problem persists then contact Alastri support.



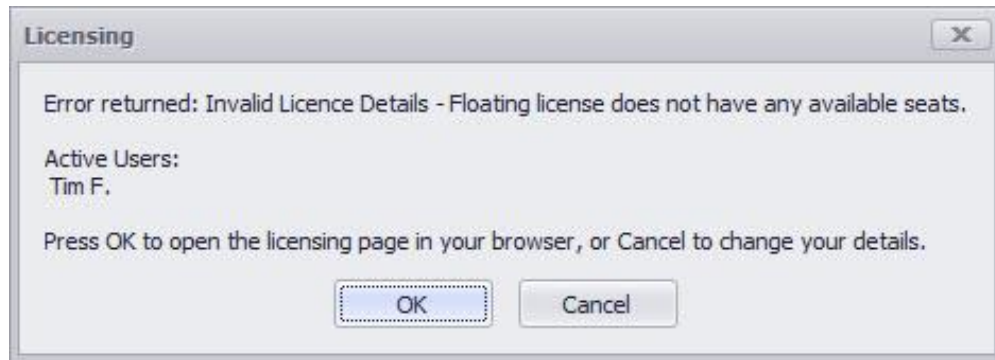
Why is my email not found?

The internet license authenticates your purchase key, name, and email against your details on the Alastri server. Check for spelling errors in your email, if problem persists then contact Alastri support.



Why are there no available seats on the license?

Each Alastri license can be shared between a number of users. Ask your colleague if they can release the license for your use.



What is "License tampering detected" and how can I fix it?

The internet licensing system checks to make sure that the computer's date and time is correct, to ensure that checked out licenses expire properly. If you see this message, make sure that your computer's date and time is updated.

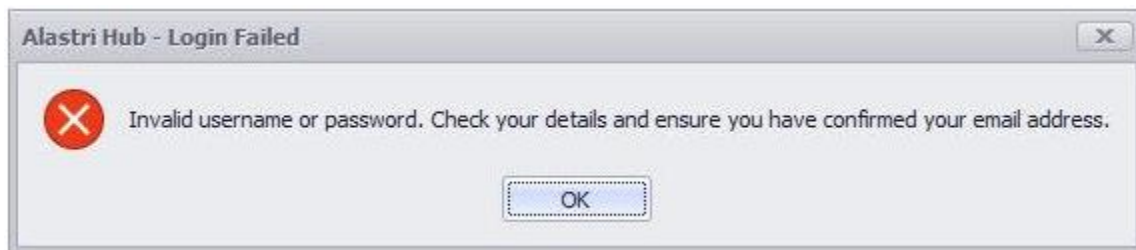
What do I do if my license has expired?

Save and close your project and talk to your supervisor about renewing your license.

Hub Login Failure

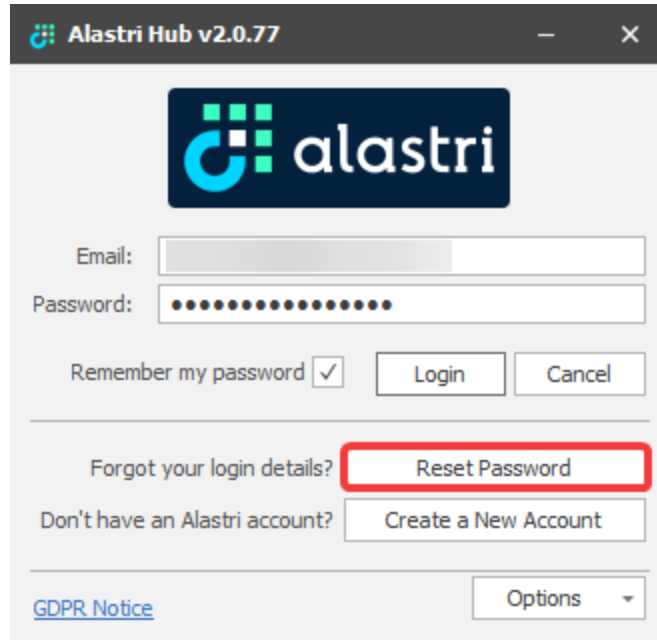
Invalid Username or Password Entered

If the user encounters the Login Failed form, please re-enter your correct username and password.

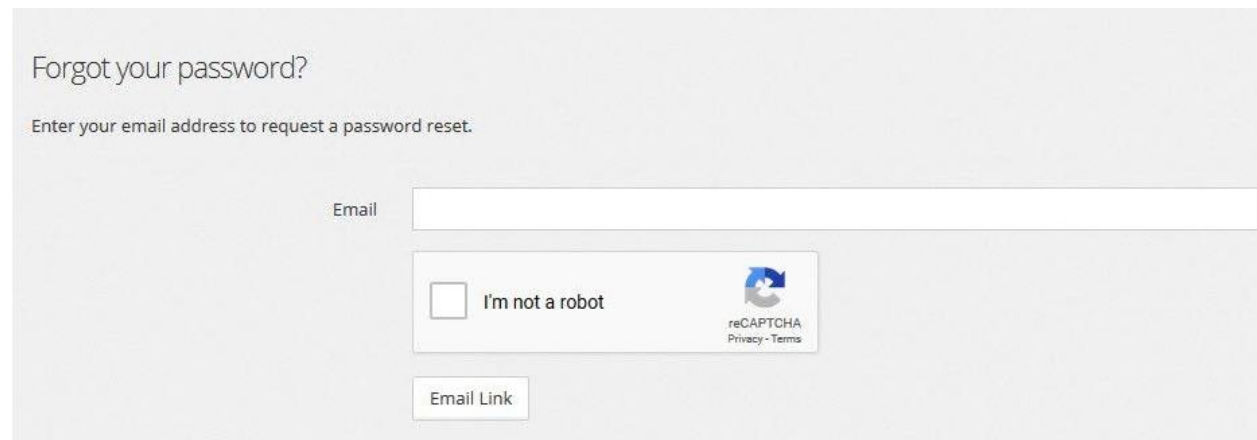


Forgotten Password and Reset

Should the user forget their password, the Hub login form features the option for the user to Reset the password (**Reset Password** button). This will take them to the Alastri website where the user can enter their email address. An email will be sent to the entered email address with a password reset link.



The screenshot shows the Alastri Hub v2.0.77 login interface. At the top is the Alastri logo. Below it are input fields for 'Email:' and 'Password:'. The password field is masked with dots. There is a 'Remember my password' checkbox which is checked. To the right of the password field are 'Login' and 'Cancel' buttons. Below these is a link for 'Forgot your login details?' with a 'Reset Password' button next to it, which is highlighted with a red border. Below that is a link for 'Don't have an Alastri account?' with a 'Create a New Account' button. At the bottom left is a link for 'GDPR Notice' and at the bottom right is an 'Options' dropdown menu.

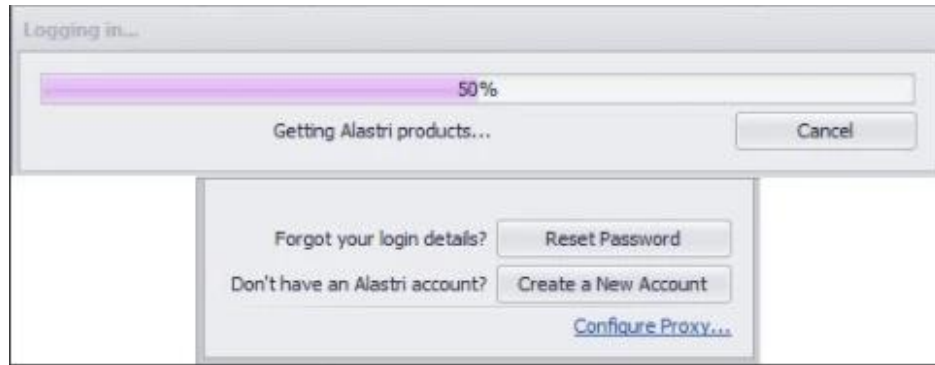


The screenshot shows the 'Forgot your password?' form. The title is 'Forgot your password?'. Below it is the instruction 'Enter your email address to request a password reset.' There is an 'Email' input field. Below the input field is a reCAPTCHA section with the text 'I'm not a robot' and a checkbox. To the right of the checkbox is the reCAPTCHA logo and the text 'reCAPTCHA Privacy - Terms'. Below the reCAPTCHA section is an 'Email Link' button.

Unable to Connect

If the user is unable to connect to the Hub due to connection loss, several steps can be taken to try and rectify this.

If the user is presented with a Hub login screen that doesn't complete and seems to freeze, or a message communicating **No Connection**, then most often the problem is on the user end with permissions blocking access to the required files and web addresses.



Please try the following in order:

1. Open up a file explorer.
2. In the file path, type the following "%localappdata%".
3. Go into the **Alastri Hub** Folder.
4. Go into the **Cache** folder.
5. Delete the contents inside.
6. Restart the Hub.

If still unable to connect this usually indicates that your connection is blocked and will require intervention by IT.

1. To try and resolve this you will need to get IT to add <https://alastribuild.azureedge.net/> to the whitelist.
2. Virus scanners will also need to allow Alastri access to the following address:
C:\Users\username\AppData\Local\Alastri Hub.
3. Try access the following link <https://alastribuild.azureedge.net/media/rr/background.jpg>. You should see an image of an open pit operation.
4. Repeat Steps 1-6.

If still unable to access the Hub, try the following steps:

1. If you use a proxy you will need to enter the details.
2. Repeat steps 1-6.
3. If your IT team tell you they have an auto proxy and you still can't login, tell them to try specific proxy for your machine.
4. Repeat Steps 1-6.
5. Contact Alastri.

Dongle License FAQ

Do I need a dongle?

Alastri software uses standard Internet-based authorisation. If you are in a remote location with a poor connection, or no internet connection at all, then dongle authorisation may be the best solution for your needs.

How do I obtain a dongle for my license?

Please contact Alastri Support to discuss your requirements.

How do I use the dongle?

The dongle does not require any special configuration to use. Simply insert the dongle into a USB port on the computer and use the application as normal. In a normal state after the dongle is attached to the computer the LED will be on all the time.

Do I still need to enter my purchase key?

Yes, every login requires authentication of your purchase key, name, and email address.

Does the dongle require any special software?

The dongle does not require any special software to be installed.

How many dongles do I require?

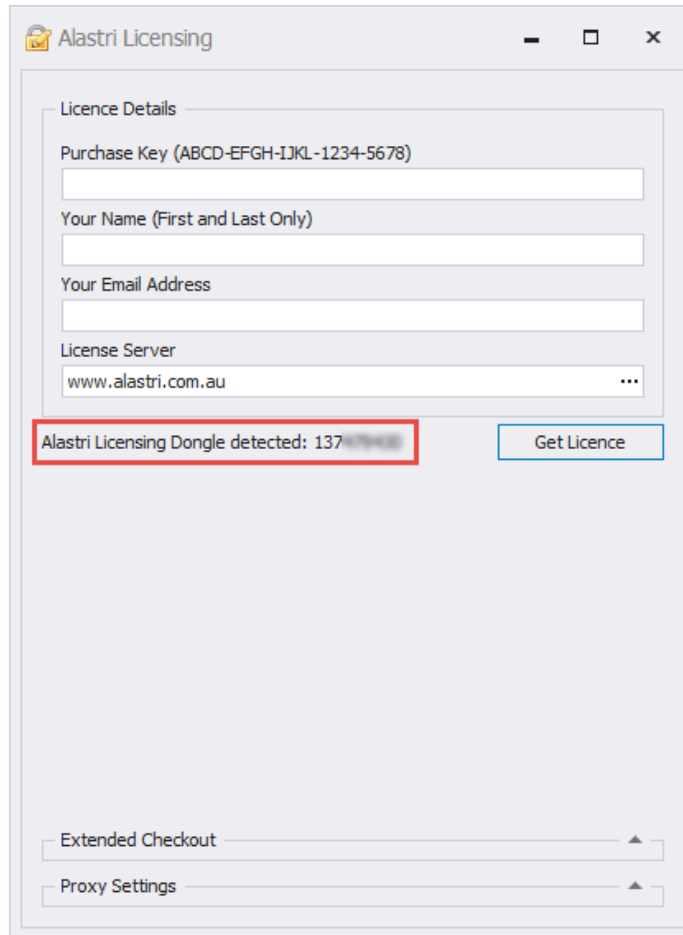
A single dongle is required per computer per license key. It is possible to share one license across multiple dongles. Contact Alastri Support to discuss your requirements.

What do I do if I have lost my dongle?

Contact Alastri Support to discuss replacing your dongle.

How do I know the dongle is working?

Once a dongle is recognised by the computer, the dongle ID will show in the licensing dialog.



When can I pull out my dongle?

You should only pull out the dongle once the software has been shut down.

If unplugged while writing/reading, your unsaved data may be lost.

Dongle License Troubleshooting

There are times when dongles are not immediately recognised by the software or the computer. Take these steps to check and resume the USB connection

Why is my dongle is flashing?

The dongle LED indicates the status of the dongle. In a normal state after the dongle is attached to the computer the LED will be on all the time. If the LED blinks it indicates that the driver is not installed. Other LED responses indicate hardware failure.

Why is my dongle recognised as an Unknown Device?

This problem occurs occasionally. Generally, your device is not attached properly to the computer, or some interference exists. Remove your dongle and try to attach it again through a different USB port.

My computer recognises the dongle, but the application is still asking me to insert a dongle. What do I do?

1. With the dongle inserted, exit, and restart the application.
2. Insert the dongle into a different USB port and restart the application.
3. With the dongle inserted, reboot your computer, and restart the application.
4. Insert a different dongle, then switch back.
5. Contact Alastri Support to exchange your dongle.