



Polaris Logging System Installation and Operation

Introduction

The system is designed so that the **Polaris Logging System** operates in the background on WSL (Windows Subsystem for Linux) as a server dedicated to MWD survey and logging functions.

The design also consists of a specialized WEB browser, the **Polaris WEB Client**, which provides the user interface to the **Polaris Logging System** server.

It also manages the WSL environment including installing Ubuntu and the Polaris Logging System applications.

There are three steps in the installation process, all of which are very easy to follow:

- Enable the Windows Subsystem for Linux (WSL) features and reboot
- Install the Polaris WEB Client application
- Open the Polaris WEB Client which will then automatically:
 - Install the Ubuntu operating system in the WSL environment
 - Install the Polaris Logging System

The following computer specifications are recommended:

- Intel i7 CPU
- SSD or NVMe storage drive
- 8GB ram memory
- Fully updated Windows 10 64bit

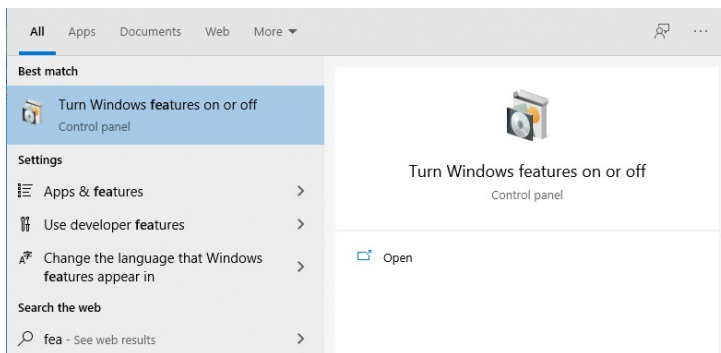
Optionally, the Thunderbird Email application can be installed to work seamlessly with the Polaris Logging System for Email handling.

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Enable hardware virtualization in BIOS

Open the BIOS settings and ensure that hardware virtualization is enabled. Sometimes also labeled “Virtualization Technology” such as HP laptops. To enter the BIOS settings on Dell press the F10 key when you see the Dell logo. On HP laptops press the ESC key repeatedly until the menu is displayed.

Enable Windows Features and Reboot



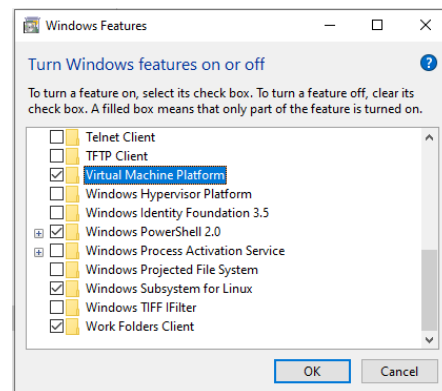
Type the letters “**fea**” in the Windows search box at the lower left then select

Turn Windows Features On or Off

Enable the following:

Virtual Machine Platform
Windows Subsystem for Linux
Windows Hypervisor Platform

Once activated it will prompt the user to reboot the computer



NOTE: There have been cases where Windows Subsystem for Linux (WSL) fails to install. [Use this link to manually install WSL](#) on your computer

– Reboot –

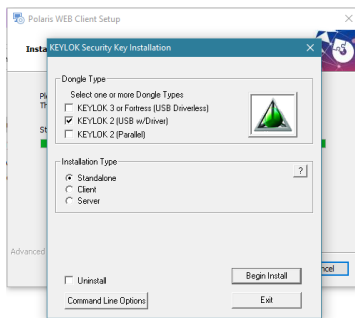


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Install the Polaris WEB Client Application

Open the Polaris Logging System for WSL Installation and install the Polaris WEB Client. This step will also install the device drivers and additional Windows libraries required:

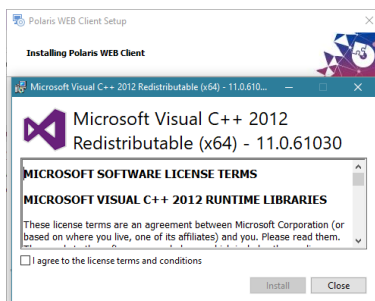
- Microsoft .NET 4.7 (usually already installed)
- Keylok license key driver
- Microsoft Visual C++ 2012 & 2015 Runtime Libraries



The first step will be to install the Keylok license key driver.

Select “**KEYLOK 2 (USB w/Driver)**” then “**Begin Install**”

NOTE: If the Keylok drivers have already been installed from a previous installation then you can skip this step



Next step is to install Microsoft’s runtime libraries

NOTE: If you have already performed these installations previously then you can skip this step

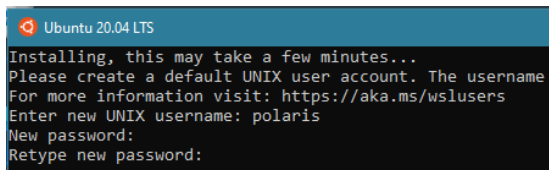


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Open the Polaris WEB Client to let it install Ubuntu and the Polaris Logging System

When the Polaris WEB Client opens it will detect that the Ubuntu operating system is missing. It will automatically begin to install Ubuntu and at the end of the installation will ask for a user name and password.

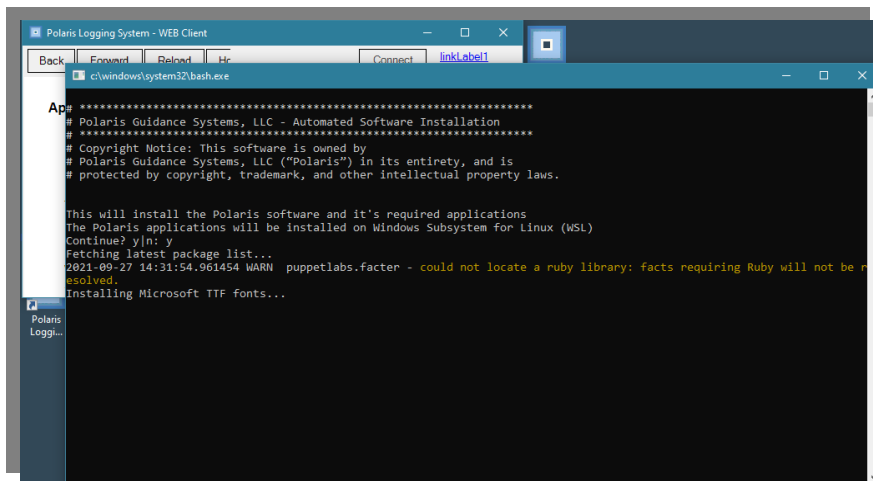
It is very important that the user name and password are set to: (all lower case)



```
Ubuntu 20.04 LTS
Installing, this may take a few minutes...
Please create a default UNIX user account. The username
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: polaris
New password:
Retype new password:
```

Username: **polaris**

Password: **polaris**



Once Ubuntu is installed the Polaris WEB Client will automatically install the Polaris Logging System into the WSL environment.

After everything has been installed the Polaris WEB Client will connect to the background Polaris Logging System's main dashboard.



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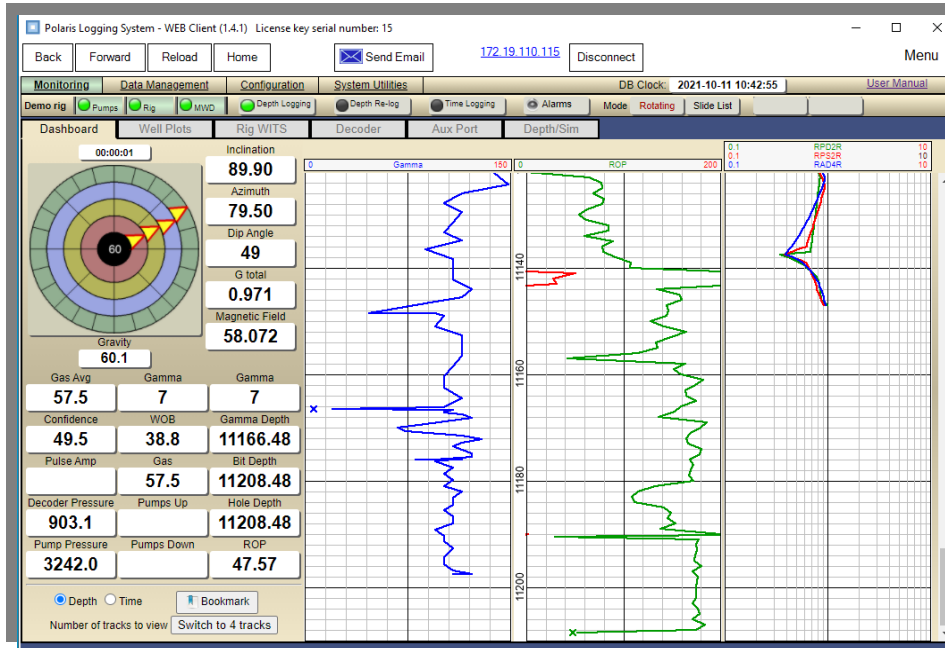
End of installation



Polaris Logging System Installation and Operation

Operation

Once the server has started the WEB client will automatically begin communicating with the server. When connected you will find the familiar real-time display and browser navigation buttons.



Configure which serial ports to use for the Rig EDR and MWD logging systems

The ports include WITS over TCP/IP client/server connections

If you have Polaris depth tracking equipment the serial port configuration requires 2 serial ports. Otherwise just leave blank



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Technical Information

Windows Sleep and Reboot disabled:

Windows power management should be totally disabled when running the system. Do not let Windows perform an automatic update while running.

Shared Folder:

When the Polaris WEB Client is installed a shared folder will be created to exchange files with the Polaris Linux applications. This folder location is:

"C:\Program Files\Polaris Guidance Systems\Polaris WEB Client\Shared".

Uses for this directory are:

- Automatic backups are stored in the **"Backups"** subdirectory. Backups are generated every 30 minutes and the system keeps 20 backup files available in rotation
- When generating Email, all attachment files will be placed here. Thunderbird for Windows will then attach these files to it's Email composer automatically
- Automatic discovery of Polaris' IP address is performed by reading the **"polaris.ini"** file located in the shared directory

Updating the Polaris applications:

- To update the **Polaris Logging System** open the **Menu - Logging System (WSL) – Update Software**
- To update the **Polaris WEB Client** application simply execute the downloaded installation file

Removing the Polaris Logging System:

- Navigate to the **C:\Program Files\Polaris Guidance Systems\Polaris WEB Client** directory and use the **UninstallUbuntu.bat** file to remove Ubuntu
- Open the Windows' **Add or Remove Programs** and remove the **Polaris WEB Client**

Re-installing Ubuntu:

- To update the **Polaris Logging System** open the **Menu - Logging System (WSL) – Reinstall Ubuntu (WSL)**

How to restart the Polaris Logging System without rebooting:

- Navigate to the **C:\Program Files\Polaris Guidance Systems\Polaris WEB Client** directory and use the **StopWSL.bat** file to shutdown all of the Linux applications currently running.
- Use the **StartWSL.bat** file to start the Linux applications up and running in the background