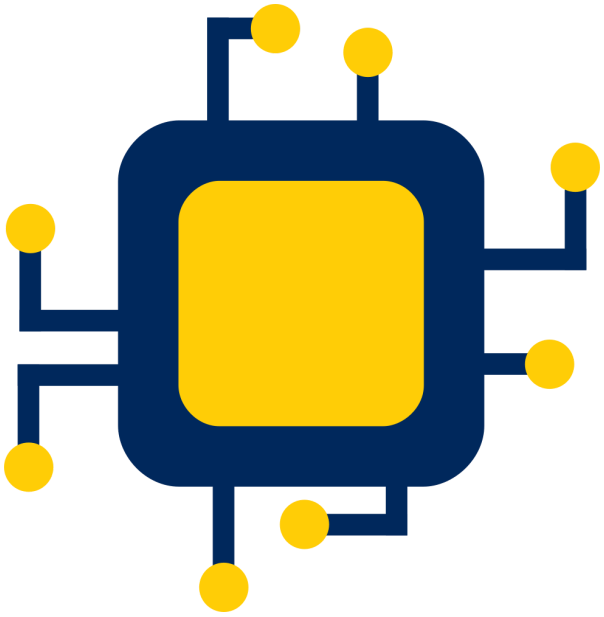
BOINCOS-Minimal User Manual Alpha v1.0



Contents:

Installation:

BOINCOS is packaged into a raw disk image format and it must be noted that the size of the uncompressed image is 4GB.

Requirements for installation:

- A 4GB USB or greater
- A computer with a functioning operating system
- Disk imaging software (such as Rufus or Etcher)
- An archival program that can extract .zip archives
- Optional: Program that can perform file hashes

Steps:

1. Download the compressed image from the official website or repository
2. Decompress the image file **(This file will decompress to 4GB)**
3. Optional: Perform a checksum on the decompressed file and compare with the provided hashes (bundled in the repository release)
4. Execute the chosen imaging software and write the decompressed image to the USB medium

Getting Started:

Hardware Setup and Requirements:

The USB or hard drive flashed with BOINCOS should be connected to a computer which is configured according to these specifications:

- Is in UEFI boot mode
- Contains an Intel or AMD 64-bit CPU
- Has ethernet capabilities

Be sure to set your BIOS to boot via USB devices, else open the boot menu during the boot process and select to boot from the USB device which may appear as “BOINCOS” in the boot options.

Grub Boot Options:

When the OS is booted, the user will be presented with two boot options presented in a grub screen:

1. BOINCOS
2. BOINCOS - KMS failure fallback

Option 1:
Default boot options.

Option 2:
Optional boot parameters in the event that the OS is booted to a black screen and fails to perform Kernel Mode-Setting of the GPU drivers. (Includes the nomodeset kernel argument)

Logging In:

The OS will boot into a text-based console and prompt for a login. Type the username "boincuser", press enter and then type the password "boincos".

Networking:

There are currently no userspace tools that can be used to configure networking. Connect ethernet to the computer before it boots in order to ensure a connection.

Accessing BOINC:

Locally, the user is able to access boinc via the console interface by typing **`boinctui`**.

Remotely, the default port for BOINC RPC is open and a user is able to connect via their external BOINC manager by clicking **`file > select computer...`** and entering the IP address of the BOINCOS machine and its BOINC client password. The IP address can be obtained by running **`ip addr show`** in the terminal.

The password for the BOINC client is located at **`/var/lib/boinc/gui_rpc_auth.cfg`** and can be edited by using **`nano`** (**`nano /var/lib/boinc/gui_rpc_auth.cfg`**). Changes to the password will take effect upon reboot.

SSH:

Secure SHell (SSH) can be used to access the OS in the event that a video output is inaccessible. It allows a remote terminal interface to be established with BOINCOS and requires the IP address of the system running it, and the set password of the system.

- Linux/Unix and Mac/OSX: Open terminal and type **`ssh boincuser@[IP address]`**
- Windows: Download Putty at http://www.putty.org

References:

- SSH Arch Linux wiki article: https://wiki.archlinux.org/index.php/Secure_Shell

Troubleshooting, Maintenance and Performance:

Changing User Password:

Within the system terminal, type **`passwd`** and follow all prompts.

Firewall Configuration:

The OS packages ufw as it's firewall program. The user has full privileges to modify the firewall in any way if so inclined. Else there is a bundled tool (**`fwset`**) that can be used to activate the firewall and necessary entries as well as deactivating it when needed:

- **`fwset on`** : Applies preset rules for BOINC RPC and SSH and enables the firewall.
- **`fwset off`** : Disables the firewall.

References:

- ufw Arch Linux wiki article: https://wiki.archlinux.org/index.php/Uncomplicated_Firewall

Updating the System:

This step is unnecessary in the context of the system and may even break it, but under any circumstance in which the user wishes to update the system, they can do so by typing **`sudo pacman -Syu`** in the system terminal.

References:

- Pacman (PACkage MANager) wiki: https://wiki.archlinux.org/index.php/Pacman

Reporting Issues:

In both methods of reporting it is recommended to include as much information as possible to describe the issue including:

- The full set of specifications of the computer BOINCOS is being run on.
- Steps that were taken before the issue occurred and a description of how it can be reproduced.
- Any logs that are associated with the issue.

Email a Developer:

It is advised to contact a developer if you think that the issue is trivial, you do not have enough information to back it up and require help in accessing the required information to create an issue in the GitHub repository or if the issue is major. Ie, releasing the information to the public may affect the security of the system or reveal critical flaws in the design.

Developer emails:

- boincosdelta@gmail.com - Founder and main developer

Make a Github Issue:

It is advised to make a GitHub issue on the official BOINCOS repository if the issue has information backing it or is a request for functionality and support that is not planned within the milestones of the project.

The official BOINCOS GitHub repository can be found here.