# DGX Firmware & OS Update

## OS Update:

### Local Onsite USB Method (Re-Image):

1. Copy old network information to another machine for reference, for example `/etc/netplan/01-netcfg.yaml`.
2. Download DGX Server ISO.
3. Create Bootable USB.
   a. Instead of creating the boot disk with a GPT partition, use MBR instead.
4. Reimage system from bootable USB.
5. Set up fresh installation of DGX.
6. Re-add networking file in the correct directory. Apply using `sudo netplan apply`.
7. Update hostname in `/etc/hostname` and `/etc/hosts`. Reboot to apply changes.

### Remote Connection Method:

1. Full upgrade instructions here.
2. Verify DGX Server connection to repositories.
   a. On DGX-2 and DGX-1 Systems (DGX OS Version 4.1.0):

```
wget -O f1-changelogs http://changelogs.ubuntu.com/meta-release-lts

wget -O f2-archive http://archive.ubuntu.com/ubuntu/dists/bionic/Release

wget -O f3-usarchive
http://us.archive.ubuntu.com/ubuntu/dists/bionic/Release

wget -O f4-security http://security.ubuntu.com/ubuntu/dists/bionic/Release

wget -O f5-download
http://download.docker.com/linux/ubuntu/dists/bionic/Release

wget -O f6-international
http://international.download.nvidia.com/dgx/repos/bionic/dists/bionic/Release
```

3. Follow instructions for upgrading to current version of OS, depending on which version you're upgrading from.
   a. Updating from 4.0.1 (or later) to 4.1.0:
      i. Update the list of available packages and their versions.
         ```
         sudo apt update
         ```
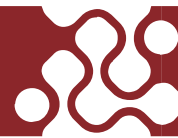
ii.   Install the 4.1.0 components from the repository.
```
sudo apt install -y dgx-bionic-r418+cuda10.1-repo
```
iii.   Update the new list of packages and their versions.
```
sudo apt update
```
iv.   Review the packages that will be updated.
```
sudo apt full-upgrade -s
```
v.   Upgrade to version 4.1.0.
```
sudo apt full-upgrade
```
   a.   **Note:** If a message appears indicating that nvidia-docker.service failed to start, you can disregard it and continue with the next step. The service will start normally at that time.
vi.   Reboot the system.


## Firmware Update:

1. [Download](#) latest DGX System Firmware Container
   a.   Starting in version 19.03.1, there is now a `.run` file.
   b.   As stated in the User Guide, "The `.run` file is a self-extracting package embedding the firmware update container tarball. Using the `.run` file requires DGX OS Server 4.0.5 or later."
   c.   See full entry in User Guide [here](#).
2. Make `.run` file executable with `chmod +x /<run-file-name>.run`.
3. Query current firmware versions and compare against manifest with `sudo ./<run-file-name>.run show_version`.
4. Upgrade out of date firmware with `sudo ./<run-file-name>.run`, which is equivalent to `sudo ./<run-file-name>.run update_fw all`.
5. Reboot to apply changes.