

Weka Server Prep Requirements

BIOS settings:

- ❑ <http://github.com/weka/tools> has a tool for making these settings (bios_tool) It is recommended to use the tool for this.
- ❑ HyperThreading/HT (Intel) or Simultaneous MultiThreading/SMT (AMD) turned OFF
- ❑ Set Max Performance bias (should include C-states off, P-states off, max power, etc)
- ❑ IOMMU – off (REQUIRED for weka servers, not clients)
- ❑ (AMD) LLC as NUMA (aka L3 Cache as NUMA or SubNuma) – off
- ❑ If using Intel NICs, SRIOV enabled

Recommended Mellanox NIC FW settings:

- ❑ <http://github.com/weka/tools> has a tool for making these settings (mellanox_fw.sh) It is recommended to use the tool for this.
- ❑ Reset FW to default settings
- ❑ Set port type (ETH/IB)
- ❑ Set `PCI_WR_ORDERING=1 ADVANCED_PCI_SETTINGS=1`

General and OS Settings:

1. All Weka servers should be configured identically
 - ❑ Identical boot drive configurations
 - ❑ Identical software versions
 - ❑ The only difference should be ip addresses and hostnames
2. IP Addresses
 - ❑ Dataplane IPs **MUST** be static ips (DHCP not supported)
 - ❑ IP addresses for management ports (contiguous range is preferred)
 - ❑ IP addresses for iLO ports (contiguous range preferred)
 - ❑ IP addresses for dataplane network (contiguous ranges preferred)
 - 1 per port
 - ❑ **Must** be a Jumbo Frame network (4k frames for IB, mtu 9000 for ETH)
3. DNS

DNS is not strictly required, but highly desirable. A complete /etc/hosts file is an acceptable alternative.

If DNS is being used:

- All weka host network interfaces in DNS
 - Management and dataplane both preferred
- All weka hosts must be able to query DNS, ie: DNS server information (/etc/resolv.conf) configured
- /etc/hosts is populated and to be used

4. Internet Access

In order for Cloud Monitoring to function, the weka servers need access to the internet. NAT gateway or proxy is fine, please provide proxy information prior to installation.

- If using a proxy, the weka servers will send/receive to <https://api.home.weka.io>
- If this cannot be provided, a Weka Home instance must be provided for.
- Weka-home instances can be VMs or physical machines running Linux, Docker and Docker-compose that have in or out of band network access to all the weka server nodes.
 - Internet access via the management ports is sufficient (no dataplane access needed)

5. Timeservers

- Weka **requires** time synchronization
- Chrony or ntpd installed and configured
- Local timeservers are suggested, but internet timeservers can be used if internet access is provided

6. Passwordless ssh is required for installation

- May be removed after install
- Root passwordless ssh preferred, but a regular user with passwordless ssh and passwordless sudo privileges is sufficient for installation

7. SELINUX should be disabled, if allowed

- If SELINUX is required, MLS is not supported

8. Any firewalls must have ports 14000-14100 open between the weka nodes, and between the weka nodes and clients

- NFS, SMB, and S3 ports open if serving these optional services

9. NUMA Balancing should be disabled on all Weka Server Hosts

- NUMA Balancing disabled

10. If enabling NetworkManager (which is default for more recent Linux versions), be sure to configure the network via nmcli. If manually configuring the network, be sure to disable NetworkManager, as it often interferes with the manual configuration.

- Acknowledged

11. Local repos (including epel) and/or internet access is required to install additional packages that are not included by default in the base OS images
 - ☐ Access to repo provided
12. /opt/weka partition on boot drives or other drives not intended for Weka Data drives
 - ☐ 316GB required for Weka servers with 24+ cores
 - ☐ 66+GB recommended for clients
 - ☐ For servers with 2 boot devices (such as M.2 drives), it is recommended that one is used for the OS and the other for /opt/weka.
13. Mellanox OFED required if using Mellanox NICs
 - ☐ See <https://docs.weka.io/support/prerequisites-and-compatibility> for a full list of supported versions
 - ☐ The latest supported OFED version is suggested.
14. VLAN tagging is not supported on Dataplane networks.
 - ☐ No VLAN tagging configured
15. Routing configured as per Weka documentation (for redundant network configurations)
 - ☐ See <https://docs.weka.io/install/bare-metal/setting-up-the-hosts#ha-networking-configuration>
16. **Recommended** Linux packages that should be installed: (Will vary slightly based on distribution/release, this listing is for CentOS7)

epel-release
sysstat
strace
libssh
libssh2
ipmitool
tcpdump
telnet
nmap
net-tools
dstat
numactl
numactl-devel
python
python3
automake
libaio
libaio-devel

perl
lshw
hwloc
pciutils
lsof
wget
bind-utils
vim-enhanced
nvme-cli
nfs-utils
initscripts
screen
tmux
git
sshpass
python-pip
python3-pip
lldpd
bmon
nload
pssh
pdsh
iperf
fio
htop
elfutils-libelf-devel
glibc
glibc-headers
glibc-devel
gcc
make
perl
rpcbind