

# Kiuru MSSP 6.0 Hardware & Software Requirements v1.1

## MSSP Server Hardware

The following hardware is required for the Kiuru MSSP server recommended deployment:

Server / Virtual	Disk Space Minimum	Memory Minimum	Network Interfaces	Number Of Virtual X86 Cores
Home MSSP + Reporting	130 GB	8 GB	1+	4 cores
RE MSSP	130 GB	4 GB	1+	4 cores
AE MSSP /AFE	130 GB	8 GB	1+	8 cores
ME MSSP	130 GB	8 GB	1	4 cores
Kiuru REST API	130 GB	4 GB	1+	4 core
Kiuru SAM	130 GB	4 GB	1+	4 core
Database	200 GB	16 GB	1+	8 cores

Table 1: Kiuru MSSP Server hardware requirements.

**Note:** It is recommended to share cores between multiple servers

We recommend for all setups of Kiuru Signature solutions:

- At least two bare-metal MSSP servers are needed for active-active, active-passive or single node deployment set-ups
- The remote signing solution (certified set-up) requires also two additional bare-metal servers for the Kiuru SAM
- Having two identical disks with hot-swap capability in RAID-1 (mirror) setup
- Dedicating RAM for all virtual servers does increase the performance more than any other factor. Conversely, if the virtualization platform does get to swap virtual machines out and in, that seriously effects the performance.

For financial constraints, we recommend:

- This solution can be scaled up with multiple bare-metal servers as more active users are brought in the service.
- Mid-tier (mid price range) servers are likely to provide most value for the investment. For example Xeon Silver with at least 10 cores.
- The MSSP scales very well with the number of CPU cores. So core count is typically much more important than actual CPU frequency.

AMD EPYC 7313	39,829	53	33.75	\$1,179.99*
Intel Xeon W-3265M @ 2.70GHz	39,765	54	6.26	\$6,353.00*
AMD Ryzen 9 5900X	39,489	55	87.95	\$448.98
AMD Ryzen 9 3950X	39,161	56	47.35	\$826.99
Intel Core i9-12900	38,723	57	66.76	\$579.99
Intel Xeon Gold 6248R @ 3.00GHz	38,604	58	12.47	\$3,095.00*
AMD EPYC 7313P	38,537	59	42.21	\$913.00*
ARM Neoverse-N1 80 Core 3000 MHz	38,122	60	NA	NA
ARM Neoverse-N1 80 Core 0 MHz	37,809	61	NA	NA
Intel Xeon Gold 6346 @ 3.10GHz	37,609	62	16.32	\$2,304.00
Intel Xeon Platinum 8280 @ 2.70GHz	37,575	63	4.19	\$8,968.01*
Intel Xeon Gold 6238R @ 2.20GHz	37,511	64	13.56	\$2,766.72
Intel Xeon Silver 4316 @ 2.30GHz	37,264	65	30.78	\$1,210.83
Intel Xeon W-3175X @ 3.10GHz	37,167	66	12.10	\$3,071.34
Intel Xeon Gold 6326 @ 2.90GHz	35,860	67	22.61	\$1,585.79

Figure 1: Sample rates of CPUs based on this list: [https://www.cpubenchmark.net/cpu\\_list.php](https://www.cpubenchmark.net/cpu_list.php)

## Load Balancer Hardware

Load balancer	Load Balance	LB High Availability	SSL High Availability	Cluster Support
F5: BIG-IP LTM	Y	Y	Y	Y
Citrix NetScaler	Y	Y	Y	partial
Radware Alteon	Y	Y	Y	Y

Table 2: Kiuru MSSP supported load balancers

Other software based load balancers are listed in the Kiuru MSSP clustering guide.

## Third-Party Software

Third-Party SW	Description
Operating System	Red Hat Enterprise Linux 7.x or CentOS 7.x (64-bit)
Database	PostgreSQL 13+, or Oracle SE 19+ / Oracle RAC
Oracle Java	Latest for Open JDK 8 pre-production and latest JRE for production

Virtualization	VMware vSphere, Kernel-based Virtual Machine (KVM) or Docker
Network Monitoring	Zabbix 3.0+

Table 3: Kiuru MSSP Third-Party Software requirements

### Solution Hardware Set-up

The following solution set-up examples are recommended for remote signing solutions. Set-up 1 use software-HSM. Set-up 1 and 2 are for pre-production and set-up 3 is for the active-active and set-up 4 is for the high-availability and high-performance set-up.

