

## 1 LUN Count Maximums

There are a number of factors that lead to LUN count maximums. The device itself can have limitations, the adapter/driver pair can have limitations and the Server itself can have limitations. There are tested limits, theoretical limits and physical limits. The numbers stated in the chart below deal with the device limits and the driver/adapter limits. The HP-UX Operating System supports 1024 active hardware paths concurrently (i.e. LUNs that are opened). The non-active hardware paths are not counted (i.e. alternate paths are not counted regardless of the number of alternate paths). If you need to configure more LUNs than stated here, contact the ATC at T-785-2500 or email to *ESBU,ATC (HP-Roseville,gen3*. Make sure that you consider all of the possible limitations across the device, driver/adapter and the system in your calculation of the maximum LUN count. The hardware paths to LUNs per HBA on the systems is 512 for a non-HA environment and 320 for a HA environment (MC-SG, SG-OPS).

You may configure a system with as many LUNs as defined by the maximum LUN count per either the systems limit, the device limit or the driver/adapter limit. If the maximum number of LUNs needed exceeds the maximum LUNs calculated, you must contact the ATC for consultation. If the maximum number of LUNs does not exceed this number, you may quote and deliver the configuration.

Note: For Autopath LUN limitations, see Autopath streams

### 1.1 XP1024/XP128 LUN Count Maximums

Storage Device	HP-UX 10.20 /11.0/11.11/11.23		HP-NT EE/SE/WTS 4.0 SP6 and W2K	
	Non-HA	HA	Non-MSCS	MSCS
XP1024/128 FC: LUNS per FC port	512 total LUNs (256 total LUN's w/o LUN security enabled. LUN security plus two or more WWN's required for 512 LUN's)	512 total LUNs (Same rules as Non-HA)	256 total LUNs <sup>1</sup>	16 LUNs per cluster <sup>2</sup>
XP1024/128 Controller Frame	XP1024: 8192 LUNs(LDEVs) maximum XP128: 4096 LUNs(LDEVs) maximum	4096 LUNs (LDEVs) max	XP1024: 8192 LUNs maximum XP128: 4096 LUNs maximum	4096 LUNs (LDEVs) max

### 1.2 XP48/XP512 LUN Count Maximums

Storage Device	HP-UX 10.20 /11.0/11.11/11.23		HP-NT EE/SE/WTS 4.0 SP6 and W2K	
	Non-HA	HA	Non-MSCS	MSCS
XP48/XP512 FC: LUNS per FC port on the XP48/XP512	256 total LUNs	256 total LUNs	256 total LUNs <sup>1</sup>	16 LUNs per cluster <sup>2</sup>
XP48/XP512 FC with SCSI to FC Bridge: LUNS per host SCSI bus	120 total LUNs (8 LUNs per target) * (15 targets per bus) * (1 Bridge bus) <sup>5</sup>	N/A	64 total LUNs (8 LUNs per target) * (8 targets per bus) * (1 Bridge bus)	Not Supported
XP48/XP512 Controller Frame	4096 LUNs(LDEVs) maximum	4096 LUNs (LDEVs) max	4096 LUNs (LDEVs) max	4096 LUNs (LDEVs) max

### 1.3 XP256 LUN Count Maximums

Storage Device	HP-UX 10.20 /11.0/11.11		HP-NT EE/SE/WTS 4.0 SP4, SP5 and W2K	
	Non-HA	HA	Non-MSCS	MSCS
XP256 FC LUNS per FC port on the XP256	120 total LUNs	120 total LUNs	120 total LUNs <sup>1</sup>	8 LUNs per cluster <sup>2</sup>
XP256 SCSI + Bridge LUNS per Bridge <sup>3</sup>	480 total LUNs (8 LUNs per target) * (15 targets per bus) * (4 busses on Bridge)	480 total LUNs	256 total LUNs (8 LUNs per target) * (8 targets per	Not Supported

			bus) * (4 busses on Bridge)	
XP256 SCSI/Ultra SCSI Port LUNS per SCSI port on the XP 256	120 total LUNs	120 total LUNs	120 total LUNs	8 LUNs per cluster <sup>2</sup>
XP256 Controller Frame <sup>4</sup>	1024 LUNs(LDEVs) maximum <sup>4</sup>	1024 LUNs (LDEVs) max <sup>4</sup>	1024 LUNs (LDEVs) max <sup>4</sup>	1024 LUNs (LDEVs) max <sup>4</sup>

- Notes:**
1. The XP256 supports 120 LUNs but the NT servers can ONLY support a maximum of 26 drive letters.
  2. Now, clustered NT servers support 16 shared LUNs per cluster.
  3. If you are replacing the Bridge (480 LUNS) with the FC interface (120 LUNS) the system layout will need to be re-evaluated.
  4. There are a maximum of 1024 LUNs (LDEV's) per frame (see Configuration Guide for further explanation of LDEV's) that can use 2048 SCSI paths (mappings of LUNs to front end HBAs) to the 16 potential ports on the XP256. Four of the 1024 LUNs (LDEVs) are used for Control Unit Numbers.
  5. The SCSI to FC Bridge uses SCSI II.
  6. A maximum of 15 targets/LUN based on HBA/driver/LUN limits.