

## Tiering Matrix for Operations Center Products

For HP and Partner use

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Updated: 11 April 2014

For products not moved to Instance Based Licensing and contracts based on the Tier Based Licensing

### Change Summary

a) This document supersedes all previous Tier Matrix Documents.

b) New systems have been added.

## Usage Notes

### General

1. This matrix is a tool for identifying what tier a system is in. NOT ALL of the listed products are supported on all systems in this matrix. Please read this introduction carefully and also look at the footnotes on each page provided for special cases.
2. The tiering below is valid for all systems running AIX, HP-UX, Linux, Sun Solaris, Microsoft Windows.
3. Servers marked in **blue-grey** have not changed. Servers added new to the matrix are marked in **red**.
4. Glance Pak includes Glance and the new instance based Performance Agent.
5. This matrix is subject to change. Your right to use HP Software is limited to the tier you paid for. You may not run the software on systems in higher tiers than the one you paid for without first contacting HP. Upgrading systems may result in additional license and support fees. Contact HP for more information.
6. The Password delivery center is located at (<https://webware.hp.com/welcome.asp>)
7. This document should not be shared with customers and should not be included in any contract with a customer as it represents an internal planning document

### Advanced Topics

8. Multicore and Hyperthreading:

We treat multicore CPUs as "multiple CPUs", means that each core counts as a CPU. This has large impacts, for example, for UltraSparc T1 based system (Sun Fire T1000, T2000), as they can have up to eight cores in a single housing.

Hyperthreading is not considered to fall into this category, so that each CPU/core with hyperthreading just counts as one CPU. Again, take the UltraSparc T1 as our example. I may execute four threads per core, but the chip is still rated "8-core".

9. Multiple Partitions (Virtual Servers):

For the purposes of this document the phrase "hosted system" will be used to refer to virtualized / partitioned / zoned architectures (virtual systems) where multiple operating system instances or environments are sharing the hardware of a single physical server. Examples include (but are not limited to) IBM Lpars, Solaris Zones, VMware, Microsoft Hyper-V, and Citrix Xen. The physical server will be referred to as the "host system".

- a. For Glance and Smart Plug-ins that have not moved to the Instance Based License Model, this section applies:

- i. If a product is being ordered for a host system, which has one or more hosted systems then HP will allow customers to gain access to additional license keys for the product such that the product can be run on the hosted systems on that specific licensed host system. In order for customers to gain access to the license keys, so that they can demonstrate license compliance, a „password request form“ specifying the number of hosted systems and the IP of the host system has to be completed and sent to the password delivery center (PDC).

- ii. For RISC or Itanium based:

- There is one license required based upon the tiering of the host system and (n-1) promotional Tier 1 license keys for the additional hosted systems.
- One suitable Tier license for the host system plus (N-1) promotional Tier 1 license keys for the hosted systems

- iii. For INTEL / AMD based:

- The host system requires a license as per the Intel based classification (see page 6) for the base system. For each hosted system a promotional Tier 0 license key must be requested.
- i.e. One appropriate Tiers based license for the host system plus (N-1) promotional Tier 0 license keys for the each hosted system

- iv. Special Notes:

- There is a maximum number of promotional hosted system licenses available with the purchase of a Tier License Entitlement
- If the number of Promotion Licenses are not enough for the number of partitions on the server:
  - For RISC or Itanium, the customer must purchase additional tier 1 licenses to be compliant
  - For Intel/AMD, the customer must purchase additional tier 0 licenses to be compliant
  - **This promotion can be revoked at any time**
  - The password delivery Center will validate the request and then supply valid passwords

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- v. Calculations for the promotional license keys:  
Number of Promotional Licenses =
- For RISC / Itanium: List Price of Tier n Server License divided by List Price of a Tier 1 license
  - For Intel / AMD: List Price of Tier n Server License divided by List Price of a Tier 0 license
- b. For Glance Pak, this section applies:
- i. Promotional LTU□s for hosted systems will no longer be available for Glance Pak Customers
  - ii. Customers with hosted system Licensing requirements must purchase Glance (for the hosting system Tier) and request promotional licenses for hosted systems as outlined in 9.a and, for each hosted system purchase an appropriate instance based license (as below) based on requirements.  
Either  
    HP Operations OS Inst Performance LTU TB675AA  
    HP Operations OS Inst Performance ELTU TB675AAE  
Or  
    HP Operations OS Inst Adv SW LTU TB056AA  
    HP Operations OS Inst Adv SW E-LTU TB056AAE
- Operations OS Instance Advance includes Operations and Performance Components
10. Blade Servers:  
For blade servers each blade in an enclosure is considered to be a separate system. A customer having an hp *bh7800* enclosure containing 16 *bc1100* server blades would require 16 licenses. Note, that each blade is rated individually.
- a. RISC based
- i. The rating of such blades can be found in the regular RISC section of the tiering matrix.
  - ii. For HP-UX the rating of such blades is determined by CPU (core) count with the tier boundaries given in the respective section of the tiering matrix.
- b. INTEL / AMD or Itanium based  
The rating of such blades is determined by CPU (core) count with the tier boundaries given in the respective section of the tiering matrix.
11. CPU Assignments  
Note that the number of CPUs always indicates the maximum possible, not the currently equipped sockets / boards

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## RISC Systems

Hardware	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
<b>Bull</b>		<b>Bull – Escala:</b> D201, D401, E230, E250, E604e, E620, EPC400, EPC430, EPC440, EPC450, D104, M101, M104, M201, <b>PL160</b> , PL220R, PL220T, PL240R, PL240T, <b>PL260</b> , PL400R, PL400T, R201, R204, R404, S Series S100, S Series S120, T430, T450, T604e, T620, EPC610, EPC810, IL400R, D204, D404, PL250, PL420, PL600, Powercluster Server; RL 470, T610; <b>Bull – Estrella:</b> 200, 300, 700, DT604, DT603-L, DT603-M, DT603-S, Mini Tower-MT603-L, Mini Tower-MT603-M, Mini Tower-MT604;	<b>Bull – Escala:</b> PL245, PL450, PL800; IL1600R, EPC2450; PL850, PL1600R, <b>BL1-700, E1-700, E1-705, E1-715, E2-705, E2-700 R/T, PL460, PL860R</b>	<b>Bull – Escala:</b> EPC1200A, EPC2400, PL820R, PL1650R, <b>BL2-700, E2-715, E3-700, E3-705, E3-715, E4-700 R/T, E4-705, E5-700, PL 1660R, PL 1660R-L</b>	<b>Bull-Escala:</b> PL3200R, PL3250R, PL6450R; <b>E5-715, H9-700, M5-715, M6-705, M6-715, M7-700, M7-705, M7-715, PL3260R, PL6460R</b>
<b>Compaq</b> (running Tru64 UNIX or OpenVMS)		<b>AlphaStation:</b> DS10, DS20E; TS40, ES40; <b>AlphaServer:</b> 800 5/500, 1000A 5/500, 1200 5/533, 4100 5/466, 4100 5/533, 4100 5/600, 8200 5/625, DS10, DS10L, DS20, DS20E, TS10, TS20; <b>AlphaServer:</b> DS10, DS15, DS20L, DS25; ES40, ES45, ES47,	<b>AlphaServer:</b> 8400 5/625, GS140, GS60, GS60E, GS160, HPC160; HPC320; <b>AlphaServer:</b> ES80, GS80, GS1280 8Way;	<b>AlphaServer</b> GS320, GS1280 (16Way); GS1280 (32Way);	<b>AlphaServer</b> SC Series; GS1280 (64Way), SC45;
<b>Digital</b> (running Digital UNIX)		AdvantageCluster Available Server 3620, 3820; AdvantageCluster Computer Server 1000, 2000, 3000, 5000; AdvantageCluster File Server 3000; <b>AlphaServer 300:</b> 4/266; <b>AlphaServer 400:</b> 4/166, 4/233; <b>AlphaServer 800:</b> 5/333, 5/400; <b>AlphaServer 1000:</b> 4/200, 4/200 CAB, 4/233, 4/266; <b>AlphaServer 1000A:</b> 4/233, 4/266, 4/300, 4/333, 4/400; <b>AlphaServer 2000:</b> 4/200, 4/233, 4/275, 5/250, 5/300, 5/375; <b>AlphaServer 2100:</b> 4/200, 4/233, 4/275, 5/250, 5/300, 4/200 CAB, 4/275 CAB; <b>AlphaServer 2100A:</b> 4/275, 5/250, 5/300, LP 5/300, LP 5/375; <b>AlphaServer 4000:</b> 5/300, 5/400, 5/466, 5/533, 5/600; <b>AlphaServer 4100:</b> 5/300, 5/300E, 5/400; <b>AlphaServer 8200:</b> 5/300, 5/350; 5/440; <b>AlphaServer 8400:</b> 5/300, 5/350, 5/440; <b>AlphaStation:</b> 200 4/100, 200 4/166, 200 4/233, 250 4/266, 255/233, 255/300, 400 4/233, 500/266, 500/333, 500/400, 500/500, 600 5/300, 600 5/333, 600/266, 600A 5/500; <b>DEC 2000 AXP:</b> 300, 500; <b>DEC 2100:</b> A500MP, A600MP; <b>DEC 3000 AXP:</b> 300, 300LX, 300X, 400, 400S, 500, 500S, 500X, 600, 600S, 700, 800, 800S, 900; <b>DEC 7000:</b> 710, 720, 730, 740, 750, 760; DEC 10000 Model 610 AXP; <b>Internet AlphaServer:</b> 1000 4/233, 1000 4/266, 1000A 5/300, 400 4/166, 400 4/233, 200 4/100; Personal Workstation Model 433au;	Adv'geCluster C/Svr 4000,		
<b>Fujitsu Siemens</b>		<b>PRIMEPOWER:</b> 100N, 200, 200F, 250, 400, 400N; 600,	<b>PRIMEPOWER:</b> 450, 650; 800,	<b>PRIMEPOWER:</b> 850; 900, 1000,	<b>PRIMEPOWER:</b> 1500, 2500, 2000;
<b>Fujitsu<sup>1</sup></b>		<b>GP 7000F:</b> 200, 400; 600	<b>GP 7000F:</b> 1000; <b>M10-1;</b> <b>SPARC:</b> T4-1, T4-2; <b>SPARC Enterprise:</b> M4000;	<b>GP 7000F:</b> 2000; <b>SPARC:</b> T4-4; <b>SPARC Enterprise:</b> M5000;	<b>M10-4, M10-4S;</b> <b>SPARC Enterprise:</b> M8000, M9000;
<b>HP 9000 PA-RISC</b>		Servers with maximum of 4 cores	Servers with maximum of 8 cores	Servers with maximum of 16 cores	Servers with more than 16 cores

<sup>1</sup> The Fujitsu systems listed have been replaced by the PRIMEPOWER series; see Fujitsu Siemens category.

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IBM		<p><b>eServer pSeries:</b> 610 (6C1), 610 (6E1), 615 (6C3), 615 (6E3), 620 (6F0), 640 (B80), 660 (6H0), T70; 620 (6F1), 630 (6C4), 630 (6E4), eServer pSeries 630 Workstation; p5 185 Express, p5 505 (all), p5 510 (all), p5 520 (all), <b>IntelliStation POWER 9114 Model 275;</b>Power 185 Express, Power 285 Express <b>Cluster Server:</b> HA50, HA-H70; <b>SMP Server:</b> J40, J50, R40, R50; S70 Advanced (S7A), S70; SP Winterhawk node, SP Silver node; <b>Blade Server:</b> JS20, JS21 Express, <b>JS12 Express,</b> <b>BladeCenter:</b> PS700 Express; <b>Server:</b> 250, 390, 397, 39H, 43P-140, 43P-150, 43P-240, 43P-260, 44P-170, 44P-270, 590, 591, 595, B50, C10, C20, E20, E30, F30, F40, F50, G40 SMP, H10, H50, H70, R20, R24; F80, H80, <b>Workstation:</b> 25T/25W, 397, 3AT, 3BT, 3CT, 41T/W, 42T/W, 43P-100, 43P-120, 43P-132, 43P-140, 43P-150, 43P-240, 43P-260, 44P-170, 44P-270, F40; <b>Power Series:</b> 830, 850; IntelliStation POWER 9112 Model 265; <b>POWERserver:</b> 220, 230, 320, 320H, 340, 34H, 350, 360, 370, 380, 520, 520H, 530, 530H, 540, 550, 550L, 560, 570, 580, 58H, 59H, 930, 950, 970, 970B, 980, 980B, 990, G30, J30, R10, R21, R30; <b>POWERstation:</b> 220, 230, 320, 320H, 340, 34H, 350, 355, 360, 365, 36T, 370, 375, 37T, 40P, 520, 520H, 530, 530H, 550, 560, 570, 580, 58H, 590, 730, M20, M2A;</p>	<p><b>eServer pSeries:</b> p5 550, p5 550Q Express, 650, 655, 660 (6M1), 660 (6H1); ; 680; 681 <b>Blade Server:</b> JS22 Express, <b>JS23, JS43</b> Express; <b>BladeCenter:</b> PS701 Express, PS702 Express, PS703 Express; <b>Server:</b> M80; <b>SMP Server:</b> S80; SP Nighthawk node <b>System p:</b> p 520 Express <b>Power (P6):</b> 520 Express <b>Power7:</b> 710 Express, 720, 720 Express <b>PowerLinux:</b> 7R1, 7R1 Express;</p>	<p><b>eServer pSeries:</b> p5 560Q Express, p5 570 Express, p5 570, p5 575, 670 <b>System p:</b> p 550 Express <b>Power (P6):</b> 550 Express <b>BladeCenter:</b> PS704 Express; <b>Power7:</b> 730 Express, 740, 740 Express ; <b>PowerLinux:</b> 7R2;</p>	<p><b>eServer pSeries:</b> p5 590, p5 595, 690; <b>System p:</b> p 570 (with POWER6 proc; not "p5") <b>Power (P6):</b> 570, 575, 595 <b>Power7:</b> 750 Express, 755, 760, 760 Express, 770, 780, 795;</p>

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Sun		<p><b>Enterprise:</b> 220R, 250, 420R, 450, 3000, 3500, 4000, 5000, 2HA Cluster Server, 2PDB Cluster Server; <b>Enterprise 2:</b> 1170, 1200, 1300, 1400, 2170, 2200, 2300, 2400;</p> <p><b>Fire:</b> V100, V120, 280R, B100s Blade, B100x Blade, (Note 6), V125, V210, V215, V240, V245, V250; V480, 480R, V880z Visualization Server;</p> <p><b>HPC:</b> 2, 450; 3000, 3500, 4000, 4500, 5000, 5500; Ultra 4000 Creator3D Workstation <b>MediaCenter:</b> 20, 5, 1000E; <b>Netra 20, 120; Netra ct:</b> 400, 410, 800, 810, 820; Fault Tolerant 1800 Server;</p> <p><b>Netra Internet Server:</b> i 1140, i1200/2200, i2/1300, i20, i3000, i600, i625, i 1170, i1/200E, i4, i400, i410, i5, i500, i5-170, i525, J 1/145, J 1/175, J 2/1200, J 2/1300, J 3000, J4, J5; <b>Netra AX1105S-500 Netra NFS:</b> 2/1300, 2/2300; <b>Netra t:</b> 1120, 1125, 1400, 1405; <b>Netra t1:</b> 100, 105, 200; <b>Netra X1;</b> SPARC Xterminal 1; SPARCclassic; ft-SPARC;</p> <p><b>Netra:</b> 210, 240, 440 Server, <b>T5220</b></p> <p><b>SPARCserver:</b> 630MP-M41, 670MP-M41, 690MP-M41, 630MP-M54, 670MP-M54, 690MP-M54, 630MP-M52, 670MP-M52, 690MP-M52, 1000, 1000E; <b>SPARCserver 4:</b> 110, 70, 85;</p> <p><b>SPARCserver 5:</b> 110, 70, 85; <b>SPARCserver 10:</b> 30; 40; 402MP, 41; 51; 512MP, 514MP, 52;</p> <p><b>SPARCserver 20:</b> 151, 152MP, 50, 502MP, 51, 514MP, 61, 612MP, 71, 712MP;</p> <p><b>SPARCcluster 1:</b> 2000E HA, 2000E PDB; 1, 2, 4, 1000E HA, 1000E PDB, <b>SPARCstation:</b> ELC, IPC, IPX, LX, Voyager; <b>SPARCstation 2; SPARCstation 4:</b> 110, 70, 85; <b>SPARCstation 5:</b> 110, 170, 70, 85; <b>SPARCstation 10:</b> 20, 30, 40, 402MP, 41, 51, 512MP, 514MP, 52; <b>SPARCstation 20:</b> 502MP, 514MP, 612MP, HS14MP, 152MP, 712MP, HS22MP, 151, 50, 51, 61, 71, HS11, HS21; <b>SPARCcenter:</b> 2000, 2000E; <b>SPARC Enterprise:</b> M3000;</p> <p><b>Ultra:</b> 5, 10, 25, 45, 60, 80, 450; <b>Ultra 1:</b> 140, 140E, 170, 170E, 200E; <b>Ultra 2:</b> 1200, 1300, 1400, 1170, 2170, 2200, 2300, 2400; <b>Ultra 30:</b> 250, 300;</p> <p><b>Ultra Enterprise:</b> 5S, 10S, 150; <b>Ultra Enterprise 1:</b> 140, 170, 170E; <b>UltraServer 1:</b> 140, 170, 170E;</p> <p><b>Ultra Enterprise Cluster Server:</b> 3000HA, 3000PDB;</p> <p>Ultra 3000 Creator3D Workstation</p>	<p><b>Enterprise:</b> 4500, 5500; 6000, 6500, M4000; T5120, T5220</p> <p><b>Fire:</b> 3800, 4800, 4810, V440, V445, V490, V880, V890, V1280, T1000, T2000</p> <p><b>HPC:</b> , 6000, 6500;</p> <p><b>Ultra Enterprise Cluster Server:</b> 4000HA, 4000PDB, 5000HA, 5000PDB, 6000HA, 6000PDB;</p> <p><b>Netra:</b> 240 Server; 440 Server; <b>Netra 1280;</b> T2000, <b>T5440, T6340 Server Blade:</b> Netra CP 3060 UltraSparc T1 ATCA; T6300, T6320, CP3260, CP3060, <b>T6340 SPARC (also Netra):</b> T3-1, T3-1B, T4-1B, T4-1, T4-2;</p> <p><b>SPARC Enterprise:</b> T5120, T5220, T5140, T5240, M4000;</p>	<p><b>Enterprise:</b> 10000; M5000, T5140, T5240</p> <p><b>Fire:</b> E2900, E4900; 6800, HPC: 10000;</p> <p><b>SPARC:</b> T3-2 Server, T3-4 Server, T4 - 4 Server, T5-1B Server Module, T5-2 Server;</p> <p><b>SPARC Enterprise:</b> M5000, T5440; <b>Netra SPARC:</b>T5-1B server;</p>	<p><b>Enterprise:</b> M8000, M9000</p> <p><b>Fire:</b> 12K, 15K, E25K, E20K, E6900;</p> <p><b>SPARC:</b> M5-32 server, T5-4 Server, T5 - 8 Server, SuperCluster Half Rack, SuperCluster Full Rack; <b>SPARC Enterprise:</b> M8000, M9000; <b>Fujitsu:</b> M10-4 Server, M10-4S Server;</p>

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## Itanium Systems

Itanium systems are rated independent from operating system and processor details, we merely count the CPUs (cores).

Note that the number of CPUs always indicates the maximum possible, not the currently equipped sockets / boards.

This table also applies to Itanium blade servers.

	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
<b>Itanium Rule</b>	Servers with max. 1-2 CPUs (cores)	Servers with max. 3-4 CPUs (cores)	Servers with max. 5-12 CPUs (cores)	Servers with max. 13-24 CPUs (cores)	Servers with more than 24 CPUs (cores) as their maximum

## INTEL and AMD Systems

### Standard Servers and Blade Servers

This section applies to Linux / Windows standalone or blade servers with Intel/AMD processors, or to Solaris on AMD Opteron.

Note that the number of CPUs always indicates the maximum possible, not the currently equipped sockets / boards.

For virtual system details, please refer to bullet point 9 on the initial page

For blade server details, please refer to bullet point 10 on the initial page

Hardware	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
<b>Intel / AMD Rule</b>	Servers with max. 1-4 cores running supported versions of Windows, Linux, Netware, Solaris	Servers with max. 5-8 cores running supported versions of Windows, Linux, Netware, Solaris	Servers with max. 9-32 cores running supported versions of Windows, Linux, Netware, Solaris	Servers with max. 33-64 cores running supported versions of Windows, Linux, Netware, Solaris	Servers with more than 64 cores as their maximum

Note that RISC blades running UNIX are not listed here, but in the standard manufacturer section. Analogously, Itanium based servers can be found in the Itanium section on the previous page.

## RISC Systems not listed above

Due to continuous development of new hardware models based on RISC processors, some systems may not show up in the tables above. For this systems, the following rules apply:

Hardware	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
<b>Sun SPARC</b>	n/a	1-8 cores	13-16 cores	17-32 cores	more than 32 cores
<b>IBM Power</b>	n/a	1-4 cores	5-8 cores	9-16 cores	more than 16 cores
<b>DEC Alpha</b>	n/a	1-8 cores	13-16 cores	17-32 cores	more than 32 cores