## Hewlett-Packard Company

### ProLiant BL465c (AMD Opteron (TM) 2220)

**SPECint2000 = 1991**  
**SPECint_base2000 = 1829**

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<thead>
<tr>
<th>Benchmark</th>
<th>Reference Time</th>
<th>Base Runtime</th>
<th>Base Ratio</th>
<th>Runtime</th>
<th>Ratio</th>
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</table>

**Hardware**

- CPU: AMD Opteron (TM) 2220
- CPU MHz: 2800
- FPU: Integrated
- CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
- Parallel: No
- Primary Cache: 64 KB I + 64 KB D on chip per core
- Secondary Cache: 1 MB I+D on chip per core
- L3 Cache: N/A
- Other Cache: N/A
- Memory: 8 GB (4x2 GB PC2-5300P CL5.0)
- Disk Subsystem: 1x36 GB 10 K SAS

**Software**

- Operating System: Windows Server 2003 Enterprise SP1
- Compiler: Intel C++ Compiler for 32-bit applications,   
  (version 9.1 Build 20060927Z)  
  Microsoft Visual Studio .NET 7.0.9466 (for libraries)  
  MicroQuill Smartheap Library 8.0
- File System: NTFS
- System State: Default

### Notes/Tuning Information

- **Base tuning for C programs:** `-fast -arch:SSE2 -Oi- +FDO ONESTEP=yes`  
  `-fast -arch:SSE2 -Oi- +FDO ONESTEP=yes`  
- **Base tuning for C++ programs:** `-fast -Qcxx_features -arch:SSE2 +FDO ONESTEP=yes`  
  `-fast -arch:SSE2 -Oi- -Qunroll3          +FDO`  
  `-fast -arch:SSE2 -O3 -Qipo -QaxN                          +FDO ONESTEP=yes shlw32M.lib`  
- **Portability flags:**  
  176.gcc: `-Dalloca=_alloca /F10000000`  
  186.crafty: `-DNT_i386`  
  253.perlbmk: `-DSPEC_CPU2000_NTOS -DPERLDLL /MT`  
  254.gap: `-DSYS_HAS_CALLOC_PROTO -DSYS_HAS_MALLOC_PROTO`  
- **Peak tuning:**  
  164.gzip: `basepeak=yes`  
  175.vpr: `-fast -arch:SSE2 -Qoption,c,-ip_ninl_max_stats=2000`  
  `-Qoption,c,-ip_ninl_max_total_stats=4500 +FDO ONESTEP=yes`  
  `-Qoption,c,-ip_ninl_max_stats=2000 +FDO ONESTEP=yes`  
  `-Qoption,c,-ip_ninl_max_total_stats=4500 +FDO ONESTEP=yes`  
  `-Qoption,c,-ip_ninl_max_stats=2000 +FDO ONESTEP=yes`  
  `-Qoption,c,-ip_ninl_max_total_stats=4500 +FDO ONESTEP=yes`  
  `253.perlbmk: basepeak=yes`  
  `254.gap: basepeak=yes`
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SPECint_base2000 = 1829

Notes/Tuning Information (Continued)

255.vortex:  -fast -arch:SSE2 -Oi -Qoption,c,-ip_ninl_max_stats=2000
             -Qoption,c,-ip_ninl_max_total_stats=4500 +FDO ONESTEP=yes shlw32M.lib
256.bzip2:  -O3 -Qipo -QaxN -Qunroll12
300.twolf:  -fast -arch:SSE2 -Qansi_alias +FDO ONESTEP=yes shlw32M.lib

BIOS Configuration Notes
Node Interleaving Disabled

Other Configuration Notes
The start /b /wait /affinity command is used to bind CPU(s) to processes.