

IBM

Exam C4040-250

Power Systems with POWER8 Sales Skills V1

Version: 10.6

[Total Questions: 108]

Question No : 1

What is the PVU value for an IBM two socket Scale-out system?

- A. 120 PVUs per system
- B. 70 PVUs per core
- C. 100 PVUs per socket
- D. 50 PVUs per processor

Answer: B

Explanation: You need 70 PVUs per core for a two socket scale-out system.

Reference: [https://www-](https://www-950.ibm.com/events/wwe/grp/grp019.nsf/vLookupPDFs/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202/$file/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202.pdf)

[950.ibm.com/events/wwe/grp/grp019.nsf/vLookupPDFs/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202/\\$file/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202.pdf](https://www-950.ibm.com/events/wwe/grp/grp019.nsf/vLookupPDFs/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202/$file/Vortrag%20%20L%C3%B6sung%20f%C3%BCr%20Linux%20on%20Power%202.pdf) (page 7)

Question No : 2

A customer is evaluating infrastructure options in order to deploy IBM DB2 BLU. What is a benefit of running DB2 BLU on POWER8?

- A. It exploits large caches and memory bandwidth, delivering better performance
- B. It takes full advantage of 16 threads per core, delivering better performance.
- C. It can be managed with PowerVP to simplify deployment of new images.
- D. It minimizes the number of support contracts that the customer needs.

Answer: A

Explanation:

Moving data from memory to disk and back again impacts query performance. But if data stays in memory, the response time is much faster. DB2 10.5 introduces BLU Acceleration for next generation in-memory computing. BLU Acceleration provides breakthrough performance by delivering instant insight from operational data and historical data. IBM Power Systems, with the new POWER8 processor, provides industry-leading capability to keep high volumes of data in memory because of its large cache sizes and memory bandwidth. Power Systems are designed to optimize analytics performance for big data.

Reference: <http://www-01.ibm.com/software/data/db2/power-systems/>

Question No : 3

An existing POWER8 customer with an E870 recently acquired a small company with an x86 Linux server running a scripting Java application. They would like to run that application on their E870, but are concerned about the porting effort.

How should the salesperson respond?

- A. Well-written Linux on x86 applications written in scripting Java or most interpretive languages will run as is, with no changes.
- B. IBM Bluemix is a Platform as a Service (PaaS) offering that creates a hybrid OpenStack environment of AIX, IBM i and Linux.
- C. POWER8 systems come with Nvidia coprocessors designed specifically to run most x86 Linux applications in their native modes.
- D. PowerKVM is an open-source virtualization solution designed to run Linux-only applications written in C++ and Java applications from x86.

Answer: A

Explanation: IBM reports that 100 percent of hardware-agnostic Linux on x86 applications written in scripting (e.g., Java) or interpretive languages (e.g., PHP, Python, Perl, Ruby, etc.) will run as is with no changes.

Question No : 4

A customer is running an application that is licensed per core.

What advantage does POWER8 have compared to x86 that could lower software costs?

- A. Memory performance
- B. Bandwidth performance
- C. Processor performance
- D. I/O performance

Answer: C

Explanation: Power8 unique processor features provide lower software costs compared to

x86 processor infrastructure.

Question No : 5

What are key cost elements that should always be included in a POWER8 proposal?

- A. Rack space and DR
- B. Staffing and energy
- C. Software and hardware
- D. RAS and financing

Answer: B

Explanation:

Of course, you need to include the software and hardware implications of Power8 in the proposal so the customers can understand the performance of Power8 in hardware and software environment.

Reference:

<http://public.dhe.ibm.com/common/ssi/ecm/po/en/pob03046usen/POB03046USEN.PDF>

Question No : 6

A customer is running a large application on x86 Linux with an Oracle Enterprise database.

Which of the following can be used to financially justify migrating the application to POWER8 and DB2?

- A. POWER8 requires fewer cores to run the same workload.
- B. POWER8 Active Memory Expansion reduces the cost of memory.
- C. POWER8 cores exploit SMT6.

D. POWER8 hardware and software maintenance costs are lower.

Answer: A

Explanation:

Comparing performance, the 740D 3.6ghz 16 core is rated at 197.7 rPerf (SMT4) whereas the S822 3.89ghz 12 core is rated at 220.1 rPerf (SMT4) or 235.6 rPerf (SMT8).

So you can get 11 to 19 percent more performance, more memory, more disk bays and PCIe slots for about 40 percent less cost. Another point to note is that the memory and I/O bandwidth for the POWER8 servers (scale out and enterprise) is significantly higher than all of the previous architectures. And there are additional follow-on savings for software licensing—for our 740D versus S822, we need four fewer cores on the POWER8, which allows for additional savings on software licensing.

Reference:<http://www.ibmssystemsmag.com/linuxonpower/Trends/What-s-New/power8-time-is-now/>

Question No : 7

A customer has 40 Power 520 servers and is concerned about the ongoing operational cost, space, and high availability.

Which solution should be discussed in order to satisfy the requirements?

- A. Purchase one S824 with PowerVM and PowerHA.
- B. Purchase two S824 servers with PowerVM and PowerHA
- C. Purchase one E870 with PowerVM and PowerHA.
- D. Purchase four S812L servers with PowerVM and PowerHA

Answer: B

Reference:<http://www.redbooks.ibm.com/redpapers/pdfs/redp5097.pdf> (page 19)

Question No : 8

A customer with an AS/400 running S/36 code needs to migrate to a new POWER8 system. They require a deskside solution.

Which solution will satisfy the customer's requirements?

- A. S812L running IBM i 6.2
- B. S814 running IBM i 7.1
- C. S822 running IBM i 7.2
- D. S814 running IBM i 6.1

Answer: B

Explanation:

S814 is deskside solution and with IBM I 7.1 it can execute S/36 code.

: <http://www-03.ibm.com/systems/power/hardware/s814/specs.html>

Question No : 9

A customer is running a critical and large Oracle Database on x86 servers in an 8-node RAC cluster. The client has regular outages and poor performance.

Which POWER8 advantage is most relevant to the customer?

- A. Near linear scaling
- B. Service Processor
- C. ECC memory
- D. License savings

Answer: A

Explanation: There are some algorithms that scale nearly perfectly to thousands (or hundreds of thousands) of threads

Question No : 10

What resource should be used to assemble the sales material for a competitive opportunity?

- A. Knowledge Center
- B. ibm.com

- C. InfoCenter
- D. FindIt

Answer: D

Explanation:

FindIt ends the problem of matching sources to objects in a busy production environment. FindIt locates sources or objects on a single AS/400 (System i) or across a network of many AS/400 systems, and lets you instantly match the correct version of a source against that live object.

On a command line simply enter FIND followed by the name of the source member, and FindIt displays a complete list of all versions of that source, showing where the source is located, giving source files, libraries and iSeries systems.

Question No : 11

What is a major differentiator with the IBM Solution for Hadoop - Power Systems Edition, compared to Hadoop on x86?

- A. The IBM solution provides fixed configurations for hardware and software for easy deployment.
- B. The IBM solution uses MapReduce for scalability to thousands of servers.
- C. The IBM solution uses SSDs and faster interconnects.
- D. IBM hardware and software components are customizable for best price/performance

Answer: D

Explanation:

Advanced technology for performance and robustness. The hardware and software components in this infrastructure are customizable to allow the best performance or the best price/performance ratio.

Reference:

<http://www-03.ibm.com/systems/power/solutions/bigdata-analytics/hadoop/>

Question No : 12

Customers benefit from the OpenPOWER Foundation because:

- A. OpenPOWER Foundation-developed solutions run on all POWER6, POWER7, and POWER8.
- B. OpenPOWER-developed solutions by the Foundation are provided at no charge
- C. OpenPOWER Foundation-development teams creating new solutions for Power architecture
- D. OpenPOWER Foundation-developed solutions are all developed to utilize CAPI for optimal performance.

Answer: D

Explanation:

IBM's POWER architecture is the cornerstone of innovation for the OpenPOWER Foundation, creating a computing platform available to all
Reference:

<http://openpowerfoundation.org/press-releases/openpower-foundation-technology-leaders-unveil-hardware-solutions-to-deliver-new-server-alternatives/>

Question No : 13

A client running Oracle databases is considering a Power solution. They want the highest level of reliability, performance, and support.

Which operating system on Power should be recommended?

- A. Red Hat
- B. IBMi
- C. AIX
- D. SUSE

Answer: C

Explanation:

Businesses today need to maximize the return on investment in information technology. Their IT infrastructure should have the flexibility to quickly adjust to changing business computing requirements and scale to handle ever expanding workloads—without adding complexity. But just providing flexibility and performance isn't enough; the IT infrastructure also needs to provide rock-solid security and near-continuous availability and while

managing energy and cooling costs.

These are just some of the reasons why more and more businesses are choosing the AIX operating system (OS) running on IBM systems designed with Power Architecture® technology. With its proven scalability, advanced virtualization, security, manageability and reliability features, the AIX OS is an excellent choice for building an IT infrastructure. And, AIX is the only operating system that leverages decades of IBM technology innovation designed to provide the highest level of performance and reliability of any UNIX operating system.

Reference: <http://www-03.ibm.com/systems/power/software/aix/v71/>

Question No : 14

In addition to one System Node, what is (are) the minimum E880 hardware feature(s)?

- A. One System Control Unit and two I/O drawers
- B. One System Control Unit
- C. One I/O drawer
- D. Two I/O drawers and one disk expansion drawer

Answer: C

Explanation:

The IBM Power System E880 with POWER8 system node uses 8-core symmetric multiprocessing (SMP) processor chips with 512 KB of L2 and 8 MB of L3 cache per core, DDR3 CDIMM memory, dual memory controllers, and an industry-standard Gen3 PCIe I/O bus designed to use 32 lanes organized in two sets of x16. The peak memory and I/O bandwidths per system node have increased over 300% compared to POWER7+™ servers. The two primary system building blocks are one system control unit and one or more system nodes. Additional I/O support is provided with a 19-inch PCIe Gen3 I/O expansion drawer and an EXP24S SFF Gen2 expansion drawer. The processors, memory, and base I/O are packaged within the system nodes. The system nodes are rack based.

New POWER8 processor single chip modules (SCM) are provided in each system node. Processors are interconnected by two sets of system buses. Each SCM contains two memory controllers per processor module. Four 4.35 GHz 8-core SCMs are used in each system node, providing 32 cores (#EPBB). As few as eight cores in the system can be activated or up to 100% of the cores in the system can be activated. Incrementing one core at a time is available through built-in capacity on demand (CoD) functions to the full

capacity of the system.

The Power E880 can have up to four system nodes per system. With 32-core nodes, the maximum is a 128-core system. In 2014, up to two system nodes per server are supported or a maximum of 64 cores.

The system control unit provides redundant system master clocks and redundant system master service processors (FSPs). Additionally, it contains the Operator Panel, the System VPD, and the Base DVD.

Reference:

<http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=an&subtype=ca&appname=g pateam&supplier=877&letternum=ENUS ZG14-0262>

Question No : 15

Which product enables cloud functionality and is included in the AIX Enterprise Edition at no additional cost?

- A. IBM Cloud Orchestrator
- B. WebSphere
- C. IBM Cloud Manager with OpenStack
- D. Cloud Network Security

Answer: A

Explanation: IBM SmartCloud Orchestrator includes services contract for IBM Implementation Services for Power Systems AIX® V6.1 and IBM Migration Services for Power Systems AIX V6.1.

Reference: <http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=an&subtype=ca&appname=g pateam&supplier=897&letternum=ENUS 213-375>

Question No : 16