

slurm mcqs

ChatGPT

Sure, here are some multiple-choice questions (MCQs) related to Slurm:

1. What is Slurm? a) A file system b) A batch job scheduler c) A programming language d) A distributed database system

Answer: b) A batch job scheduler

1. Which of the following commands is used to submit a job to Slurm? a) sbatch b) ssubmit c) srun d) submit

Answer: a) sbatch

1. What is the purpose of Slurm's "squeue" command? a) To display the status of running and pending jobs b) To display the available disk space on the system c) To display the number of users logged into the system d) To display the system's CPU and memory usage

Answer: a) To display the status of running and pending jobs

1. Which configuration file is used to define the overall behavior of Slurm? a) slurm.conf b) slurm.config c) slurmrc d) slurm.cfg

Answer: a) slurm.conf

1. What is the command used to cancel a running job in Slurm? a) sstop b) scancel c) skill d) sremove

Answer: b) scancel

1. Slurm supports both CPU and GPU job scheduling. True or False?

Answer: True

1. In Slurm, what is the purpose of the "sinfo" command? a) To display information about the scheduler b) To display information about the system's hardware c) To display information about the nodes in the cluster d) To display information about user accounts

Answer: c) To display information about the nodes in the cluster

1. Which command is used to display detailed information about a specific job in Slurm? a) sjobs b) sinfo c) scontrol d) squeue

Answer: c) scontrol

1. Slurm is primarily designed for managing which type of workloads? a) Sequential tasks b) Interactive tasks c) Parallel and batch jobs d) Real-time tasks

Answer: c) Parallel and batch jobs

1. Which of the following is a popular alternative to Slurm in high-performance computing (HPC) environments? a) SPANK b) OpenLava c) Torque d) PBS Pro

Answer: d) PBS Pro

Note: Keep in mind that the answer choices and correctness of the answers are based on the information available up to September 2021, and there may have been updates or changes to Slurm since then.

1. What is Slurm? a) A type of interconnect for HPC clusters b) An open-source job scheduler and resource manager c) A distributed file system for HPC storage d) A benchmarking tool for HPC performance evaluation

Answer: b) An open-source job scheduler and resource manager

1. Which of the following components is responsible for managing job submissions in Slurm? a) slurmd b) scontrol c) squeue d) sbatch

Answer: d) sbatch

1. What is the purpose of the Slurmctld daemon? a) It is responsible for executing user jobs on compute nodes. b) It manages the Slurm database and keeps track of job and node states. c) It monitors the health and status of compute nodes in the cluster. d) It provides a command-line interface for interacting with Slurm.

Answer: b) It manages the Slurm database and keeps track of job and node states.

1. Which command is used to submit a batch job to the Slurm scheduler? a) srun b) scancel c) sbatch d) sinfo

Answer: c) sbatch

1. How can you check the status of your submitted jobs in Slurm? a) sview b) scontrol c) sinfo d) squeue

Answer: d) squeue

1. Which Slurm configuration file is used to set up the Slurm control daemon? a) slurm.conf b) slurmctld.conf c) slurmdbd.conf d) slurmdb.conf

Answer: b) slurmctld.conf

1. In Slurm, what does "salloc" do? a) It shows the list of available compute nodes in the cluster. b) It allocates GPU resources to a job. c) It provides a shell environment on a compute node for interactive work. d) It cancels a running job.

Answer: c) It provides a shell environment on a compute node for interactive work.

1. Which command is used to display detailed information about a specific Slurm job? a) squeue b) scontrol c) sacct d) sinfo

Answer: c) sacct

1. What is the purpose of the "sinfo" command in Slurm? a) To show the status of compute nodes in the cluster. b) To show the status of jobs in the queue. c) To show the real-time system usage statistics. d) To display the configuration settings for the Slurm scheduler.

Answer: a) To show the status of compute nodes in the cluster.

1. Which command is used to cancel a submitted Slurm job? a) sstop b) scancel c) sdelete d) skill

Answer: b) scancel

Sure, here are some more multiple-choice questions (MCQs) related to Slurm:

1. What does Slurm stand for? a) Simple Load Utilization and Resource Manager b) Scalable Load Understanding and Resource Monitoring c) Simple Linux Utility for Resource Management d) Supercomputing Load Utilization and Resource Management

Answer: c) Simple Linux Utility for Resource Management

1. Which of the following statements about the "srun" command in Slurm is correct? a) It is used to submit batch jobs to the scheduler. b) It allocates resources and immediately runs a specified command on those resources. c) It is used to check the status of running jobs. d) It is the main Slurm daemon responsible for managing jobs.

Answer: b) It allocates resources and immediately runs a specified command on those resources.

1. In Slurm, what is the purpose of the "sacct" command? a) To check the status of the Slurm control daemon. b) To view real-time statistics of node performance. c) To check the status of pending jobs in the queue. d) To view historical job accounting information.

Answer: d) To view historical job accounting information.

1. Which component of Slurm is responsible for managing communication between the Slurmctld and the compute nodes? a) scontrol b) slurmd c) sbatch d) sacct

Answer: b) slurmd

1. What is the Slurm "step" in job scheduling? a) The process of allocating resources to a job. b) The execution of a specific task within a job. c) The time taken by the Slurm scheduler to allocate resources. d) The process of submitting a job to the Slurm queue.

Answer: b) The execution of a specific task within a job.

1. Which Slurm command is used to display information about nodes in the cluster, such as their state and availability? a) sinfo b) scontrol c) squeue d) sbatch

Answer: a) sinfo

1. In Slurm, what is the purpose of the "scontrol" command? a) To control the overall behavior of the Slurm scheduler. b) To view the status of submitted jobs. c) To display the configuration settings for Slurm. d) To manage user access and permissions for the cluster.

Answer: a) To control the overall behavior of the Slurm scheduler.

1. How can you limit the number of CPU cores used by a Slurm job? a) Using the "--mem" option in the sbatch command. b) Using the "--time" option in the sbatch command. c) Using the "--cpus-per-task" option in the sbatch command. d) Using the "--partition" option in the sbatch command.

Answer: c) Using the "--cpus-per-task" option in the sbatch command.

1. Which Slurm configuration file defines the partitions and their properties on the cluster? a) slurmdbd.conf b) slurm.conf c) slurmctld.conf d) slurmd.conf

Answer: b) slurm.conf

1. What does the "sdiag" command in Slurm do? a) It displays diagnostic information about the Slurm controller. b) It collects system diagnostic information for the cluster nodes. c) It provides a summary of the job status in the queue. d) It shows the real-time usage of system resources.

Answer: b) It collects system diagnostic information for the cluster nodes.

1. What is the primary purpose of Slurm in a high-performance computing (HPC) environment? a) To allocate disk space for data storage b) To manage user accounts and permissions c) To schedule and manage computational jobs d) To configure network interconnects

Answer: c) To schedule and manage computational jobs

1. Which Slurm component is responsible for managing individual compute nodes and their resources? a) slurmctld b) slurmd c) scontrol d) sbatch

Answer: b) slurmd

1. In Slurm terminology, what does "job step" refer to? a) The process of submitting a job to the cluster b) The allocation of resources to a job c) An individual task or command within a job d) The termination of a job after completion

Answer: c) An individual task or command within a job

1. How can you submit an interactive job in Slurm, allowing you to work directly on a compute node? a) Using the "salloc" command b) Using the "sbatch" command c) Using the "srun" command d) Using the "sinteractive" command

Answer: a) Using the "salloc" command

1. Which Slurm command is used to display detailed information about a specific job, including its resource usage and execution time? a) squeue b) sinfo c) sacct d) sbatch

Answer: c) sacct

1. What is the purpose of the "sview" command in Slurm? a) To visualize the cluster's topology and interconnects b) To view the real-time status of running jobs c) To create custom job scheduling profiles d) To display the system configuration settings

Answer: a) To visualize the cluster's topology and interconnects

1. When using the "sbatch" command to submit a job, how can you specify the required number of CPU cores? a) Using the "--nodes" option b) Using the "--ntasks" option c) Using the "--cpus-per-task" option d) Using the "--cpus" option

Answer: c) Using the "--cpus-per-task" option

1. What does the "scontrol show config" command do in Slurm? a) It displays the current status of compute nodes. b) It shows the real-time system usage statistics. c) It provides information about the Slurm scheduler configuration. d) It cancels a running job.

Answer: c) It provides information about the Slurm scheduler configuration.

1. In Slurm, what does the "sbatch --dependency" option allow you to do? a) Specify the required job priority b) Set resource limits for a job c) Define a job dependency on another job d) Allocate specific GPU devices to a job

Answer: c) Define a job dependency on another job

1. Which Slurm command is used to cancel one or more jobs that are still waiting in the queue? a) sstop b) scancel c) sdelete d) skill

Answer: b) scancel



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Batch systems mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to batch systems:

1. What is a batch system in the context of computing? a) A system that processes tasks in real-time b) A system that allows users to execute commands interactively c) A system that schedules and executes tasks without user intervention d) A system that executes tasks concurrently

Answer: c) A system that schedules and executes tasks without user intervention

1. Which of the following is a primary advantage of using a batch system? a) Real-time response for user commands b) Interactivity for user tasks c) Efficient utilization of computing resources d) Lower system security

Answer: c) Efficient utilization of computing resources

1. In a batch system, what is a job? a) A sequence of commands that a user types interactively b) A unit of work submitted by a user or a program c) A file system where batch scripts are stored d) A specific computer used for running batch tasks

Answer: b) A unit of work submitted by a user or a program

1. Which component of a batch system is responsible for managing the queue of pending jobs? a) Job scheduler b) Operating system c) Compiler d) Job monitor

Answer: a) Job scheduler

1. Which of the following statements is true about the execution of jobs in a batch system? a) Jobs are executed in the order they are submitted. b) Jobs are executed immediately upon submission. c) Jobs are executed based on priority and resource availability. d) Jobs are executed in parallel on all available resources.

Answer: c) Jobs are executed based on priority and resource availability.

1. What is the purpose of a submission script in a batch system? a) To compile the source code of the submitted job b) To allocate resources for the job c) To specify the job requirements and commands to be executed d) To display the status of the running jobs

Answer: c) To specify the job requirements and commands to be executed

1. Which command is typically used to submit a job to a batch system? a) submit b) run c) execute d) sbatch

Answer: d) sbatch

1. In a batch system, what does the "fair-share" scheduling policy mean? a) Jobs are scheduled on a first-come, first-served basis. b) Jobs are scheduled based on their priority and historical resource usage. c) Jobs are scheduled randomly to ensure fairness. d) Jobs are scheduled based on their estimated completion time.

Answer: b) Jobs are scheduled based on their priority and historical resource usage.

1. What is the role of a "job monitor" in a batch system? a) To monitor the system's overall performance b) To ensure that jobs are executed in real-time c) To keep track of the job's resource usage and status d) To optimize the system's resource allocation

Answer: c) To keep track of the job's resource usage and status

1. Which of the following batch systems is commonly used in high-performance computing (HPC) environments? a) Cron b) LSF (Load Sharing Facility) c) Windows Task Scheduler d) systemd

Answer: b) LSF (Load Sharing Facility)

Note: Batch systems can vary in features and functionality depending on the specific system and environment. The answers provided above are general and based on common practices in batch systems as of my knowledge cutoff in September 2021.



slurm Batch systems mcqs

ChatGPT

Sure, here are some multiple-choice questions (MCQs) specifically related to the Slurm batch system:

1. What is Slurm? a) A distributed version control system b) An interactive command-line interface c) A batch job scheduler and resource manager d) A cloud computing platform

Answer: c) A batch job scheduler and resource manager

1. Which command is used to submit a job to the Slurm batch system? a) sbatch b) ssubmit c) srun d) submit

Answer: a) sbatch

1. In Slurm, what does the "squeue" command do? a) Submit a job to the queue b) Display information about the scheduler c) Display the status of running and pending jobs d) Show the available nodes in the cluster

Answer: c) Display the status of running and pending jobs

1. What is the purpose of the "sinfo" command in Slurm? a) Show information about available nodes and their status b) Submit a job to the cluster c) Display the contents of a batch script d) Show the status of a specific job

Answer: a) Show information about available nodes and their status

1. How does Slurm handle job scheduling among multiple users? a) First-come, first-served basis b) Randomly selects users for scheduling c) Based on user priority and resource availability d) All users have equal priority for scheduling

Answer: c) Based on user priority and resource availability

1. What is the purpose of the Slurm configuration file "slurm.conf"? a) Store user account information b) Define job submission scripts c) Specify the cluster's hardware details and behavior d) Store log files for job execution

Answer: c) Specify the cluster's hardware details and behavior

1. Which command is used to cancel a running job in Slurm? a) scancel b) sstop c) skill d) sremove

Answer: a) scancel

1. Slurm supports both CPU and GPU job scheduling. True or False?

Answer: True

1. In Slurm, what is the purpose of the "scontrol" command? a) Display information about the scheduler b) Monitor system performance c) Manage user accounts d) Control job and job step attributes

Answer: d) Control job and job step attributes

1. Which of the following is not a popular alternative to Slurm in high-performance computing (HPC) environments? a) Torque b) LSF (Load Sharing Facility) c) PBS Pro d) OpenLava

Answer: d) OpenLava

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to Slurm since then.



Resource manager mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to resource managers:

1. What is a resource manager in the context of computing? a) A software tool that allocates and manages hardware resources in a computer system b) A tool for managing software licenses in a networked environment c) A system for monitoring network bandwidth and data usage d) A component of an operating system responsible for managing files and directories

Answer: a) A software tool that allocates and manages hardware resources in a computer system

1. Which of the following is a primary function of a resource manager? a) Ensuring data security and encryption b) Managing user accounts and passwords c) Allocating CPU, memory, and storage resources to tasks and jobs d) Scheduling real-time tasks in a system

Answer: c) Allocating CPU, memory, and storage resources to tasks and jobs

1. What is the role of a resource manager in a cluster or a supercomputer environment? a) Managing user access to the cluster b) Monitoring network traffic and performance c) Balancing the load across multiple nodes in the cluster d) Handling power management and cooling of hardware components

Answer: c) Balancing the load across multiple nodes in the cluster

1. Which type of resource manager is specifically designed for high-performance computing (HPC) clusters? a) Cluster Manager b) Job Manager c) Batch Scheduler d) Parallel File System

Answer: c) Batch Scheduler

1. In a job scheduling context, what does the term "backfilling" mean? a) Filling unused disk space with backup files b) Reordering the sequence of job execution c) Allowing jobs to run on lower-priority resources to optimize utilization d) Reallocating memory from one job to another in real-time

Answer: c) Allowing jobs to run on lower-priority resources to optimize utilization

1. Which of the following resource management systems is widely used in high-performance computing clusters? a) Hadoop YARN b) Kubernetes c) Slurm d) Microsoft Active Directory

Answer: c) Slurm

1. What is the purpose of a job queue in a resource manager? a) To store completed jobs for historical analysis b) To hold jobs waiting to be executed on available resources c) To manage user accounts and permissions d) To prioritize real-time tasks over batch jobs

Answer: b) To hold jobs waiting to be executed on available resources

1. Which resource manager is often used in conjunction with a batch scheduler for managing HPC resources? a) Apache Mesos b) Torque c) OpenStack d) Grafana

Answer: b) Torque

1. In a cloud computing environment, what is the function of a cloud resource manager? a) Managing virtual machines and containers b) Monitoring network security and intrusion detection c) Allocating and managing cloud service subscriptions d) Balancing the load across multiple cloud providers

Answer: a) Managing virtual machines and containers

1. Which of the following is a key feature of a resource manager in a clustered environment? a) Real-time data analytics b) Automatic software updates and patch management c) Fault tolerance and high availability d) Web server configuration and management

Answer: c) Fault tolerance and high availability

Note: Resource managers can have varying functionalities depending on the specific environment and requirements. The answers provided above are general and based on common practices in resource managers as of my knowledge cutoff in September 2021.



slurm Resource manager mcq

ChatGPT

Sure, here are some multiple-choice questions (MCQs) specifically related to Slurm as a resource manager:

1. What is Slurm? a) An open-source operating system b) A distributed version control system c) A cloud computing platform d) A cluster workload manager and job scheduler

Answer: d) A cluster workload manager and job scheduler

1. What is the primary function of Slurm as a resource manager? a) Managing virtual machines in a cloud environment b) Monitoring network traffic and performance c) Allocating and managing hardware resources in a cluster d) Handling software license management in a networked environment

Answer: c) Allocating and managing hardware resources in a cluster

1. In Slurm, what is a "job"? a) A sequence of commands that a user types interactively b) A unit of work submitted by a user or a program c) A virtual machine running on a cloud provider d) A specific computer used for running batch tasks

Answer: b) A unit of work submitted by a user or a program

1. Which Slurm component is responsible for scheduling jobs and allocating resources? a) Job submitter b) Job monitor c) Slurmctld d) Slurmd

Answer: c) Slurmctld

1. What is the purpose of the "squeue" command in Slurm? a) To submit a job to the queue b) To display information about the scheduler c) To display the status of running and pending jobs d) To show the available nodes in the cluster

Answer: c) To display the status of running and pending jobs

1. Which Slurm command is used to submit a job to the cluster? a) sbatch b) ssubmit c) srun d) squeue

Answer: a) sbatch

1. In a Slurm-based cluster, what does the term "backfilling" mean? a) Filling unused disk space with backup files b) Reordering the sequence of job execution c) Allowing jobs to run on lower-priority resources to optimize utilization d) Reallocating memory from one job to another in real-time

Answer: c) Allowing jobs to run on lower-priority resources to optimize utilization

1. Slurm can support GPU job scheduling. True or False?

Answer: True

1. What is the role of "Slurmd" in a Slurm cluster? a) It is the Slurm database daemon. b) It is the component responsible for managing the user accounts. c) It is the job submitter daemon. d) It is responsible for executing jobs on compute nodes.

Answer: d) It is responsible for executing jobs on compute nodes.

1. Which configuration file is used to define the behavior of Slurm in a cluster? a) slurm.conf b) slurm.config c) cluster.conf d) slurm.cfg

Answer: a) slurm.conf

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to Slurm since then.



openpbs Resource manager mcqs

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to the OpenPBS (Open Portable Batch System) resource manager:

1. What is OpenPBS? a) An open-source text editor b) A cloud computing platform c) A cluster workload manager and job scheduler d) A distributed version control system

Answer: c) A cluster workload manager and job scheduler

1. What is the primary function of OpenPBS as a resource manager? a) Managing virtual machines in a cloud environment b) Monitoring network traffic and performance c) Allocating and managing hardware resources in a cluster d) Handling software license management in a networked environment

Answer: c) Allocating and managing hardware resources in a cluster

1. In OpenPBS, what is a "job"? a) A sequence of commands that a user types interactively b) A unit of work submitted by a user or a program c) A virtual machine running on a cloud provider d) A specific computer used for running batch tasks

Answer: b) A unit of work submitted by a user or a program

1. Which OpenPBS component is responsible for scheduling jobs and allocating resources? a) pbs\_server b) pbs\_mom c) pbs\_sched d) pbs\_configure

Answer: c) pbs\_sched

1. What is the purpose of the "qstat" command in OpenPBS? a) To submit a job to the queue b) To display information about the scheduler c) To display the status of running and pending jobs d) To show the available nodes in the cluster

Answer: c) To display the status of running and pending jobs

1. Which OpenPBS command is used to submit a job to the cluster? a) qsub b) qsubmit c) qrun d) qstat

Answer: a) qsub

1. In an OpenPBS-based cluster, what does the term "fair-share" mean? a) All jobs are given an equal share of resources. b) Higher-priority jobs are executed before lower-priority jobs. c) Jobs are executed based on historical resource usage to achieve fairness. d) Fairness in resource allocation is not implemented in OpenPBS.

Answer: c) Jobs are executed based on historical resource usage to achieve fairness.

1. OpenPBS can support GPU job scheduling. True or False?

Answer: True

1. What is the role of "pbs\_mom" in an OpenPBS cluster? a) It is the OpenPBS database daemon. b) It is the component responsible for managing the user accounts. c) It is the job submitter daemon. d) It is responsible for executing jobs on compute nodes.

Answer: d) It is responsible for executing jobs on compute nodes.

1. Which configuration file is used to define the behavior of OpenPBS in a cluster? a) pbs.conf b) pbs\_server.conf c) cluster.conf d) pbs\_config

Answer: b) pbs\_server.conf

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to OpenPBS since then.



slurm Scheduler mcqs

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) specifically related to the Slurm scheduler:

1. What is the role of the scheduler in the Slurm batch system? a) Managing user accounts and permissions b) Allocating and managing hardware resources in a cluster c) Balancing the load across multiple nodes in the cluster d) Scheduling jobs and allocating resources to them

Answer: d) Scheduling jobs and allocating resources to them

1. Which component of Slurm is responsible for the scheduling of jobs? a) Slurmd b) Slurmctld c) Squeue d) Schedctl

Answer: b) Slurmctld

1. What does the Slurm scheduler use to determine the priority of jobs in the queue? a) The size of the job's input data b) The estimated completion time of the job c) The user's account balance and usage history d) A combination of factors such as job priority, resource availability, and fair-share policy

Answer: d) A combination of factors such as job priority, resource availability, and fair-share policy

1. In Slurm, what is the purpose of the "scontrol" command? a) To display information about the scheduler b) To monitor system performance c) To manage user accounts d) To control job and job step attributes, including job priorities

Answer: d) To control job and job step attributes, including job priorities

1. What is the term used in Slurm to refer to the waiting area where jobs are held until they are scheduled and executed? a) Pool b) Queue c) Stack d) Cluster

Answer: b) Queue

1. Which scheduling policy in Slurm ensures that high-priority jobs are executed before low-priority jobs? a) Backfilling b) First-come, first-served (FCFS) c) Priority-based scheduling d) Fair-share scheduling

Answer: c) Priority-based scheduling

1. In Slurm, what is "backfilling"? a) Reordering the sequence of job execution based on estimated completion time b) Allowing jobs to run on lower-priority resources to optimize utilization c) Cancelling jobs to free up resources for high-priority jobs d) Rescheduling failed jobs automatically

Answer: a) Reordering the sequence of job execution based on estimated completion time

1. Which Slurm command is used to display information about the status of the scheduler and its components? a) scontrol b) sinfo c) squeue d) sacct

Answer: b) sinfo

1. Slurm supports various job scheduling algorithms. True or False?

Answer: True

1. Which scheduling algorithm in Slurm is particularly useful for workloads with a large number of small jobs? a) Priority-based scheduling b) First-come, first-served (FCFS) scheduling c) Backfill scheduling d) Gang scheduling

Answer: d) Gang scheduling

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to Slurm since then.



openpbs Scheduler mcqs

ChatGPT

Sure, here are some multiple-choice questions (MCQs) specifically related to the OpenPBS (Open Portable Batch System) scheduler:

1. What is the role of the scheduler in the OpenPBS resource manager? a) Managing user accounts and permissions b) Allocating and managing hardware resources in a cluster c) Balancing the load across multiple nodes in the cluster d) Scheduling jobs and allocating resources to them

Answer: d) Scheduling jobs and allocating resources to them

1. Which component of OpenPBS is responsible for the scheduling of jobs? a) pbs\_mom b) pbs\_server c) pbs\_sched d) pbs\_configure

Answer: c) pbs\_sched

1. What does the OpenPBS scheduler use to determine the priority of jobs in the queue? a) The size of the job's input data b) The estimated completion time of the job c) The user's account balance and usage history d) A combination of factors such as job priority, resource availability, and fair-share policy

Answer: d) A combination of factors such as job priority, resource availability, and fair-share policy

1. In OpenPBS, what is the purpose of the "qstat" command? a) To submit a job to the queue b) To display information about the scheduler c) To display the status of running and pending jobs d) To show the available nodes in the cluster

Answer: c) To display the status of running and pending jobs

1. Which OpenPBS command is used to change the priority of a job in the queue? a) qrun b) qalter c) qpriority d) qdel

Answer: b) qalter

1. What is the term used in OpenPBS to refer to the waiting area where jobs are held until they are scheduled and executed? a) Pool b) Queue c) Stack d) Cluster

Answer: b) Queue

1. In OpenPBS, what is the purpose of "backfilling"? a) Reordering the sequence of job execution based on estimated completion time b) Allowing jobs to run on lower-priority resources to optimize utilization c) Cancelling jobs to free up resources for high-priority jobs d) Rescheduling failed jobs automatically

Answer: a) Reordering the sequence of job execution based on estimated completion time

1. Which OpenPBS command is used to display information about the status of the scheduler and its components? a) pbsnodes b) qstat c) pbs\_server d) pbs\_sched

Answer: b) qstat

1. OpenPBS supports various scheduling policies and plugins. True or False?

Answer: True

1. Which scheduling policy in OpenPBS is particularly useful for parallel jobs that require multiple resources simultaneously? a) Priority-based scheduling b) Backfill scheduling c) Selective backfill scheduling d) Reservation-based scheduling

Answer: c) Selective backfill scheduling

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to OpenPBS since then.



openpbs mcqs

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to OpenPBS (Open Portable Batch System):

1. What is OpenPBS? a) A cluster workload manager and job scheduler b) An open-source text editor c) A cloud computing platform d) A distributed version control system

Answer: a) A cluster workload manager and job scheduler

1. What is the primary function of OpenPBS as a resource manager? a) Managing virtual machines in a cloud environment b) Monitoring network traffic and performance c) Allocating and managing hardware resources in a cluster d) Handling software license management in a networked environment

Answer: c) Allocating and managing hardware resources in a cluster

1. In OpenPBS, what is a "job"? a) A sequence of commands that a user types interactively b) A unit of work submitted by a user or a program c) A virtual machine running on a cloud provider d) A specific computer used for running batch tasks

Answer: b) A unit of work submitted by a user or a program

1. Which component of OpenPBS is responsible for the scheduling of jobs? a) pbs\_mom b) pbs\_server c) pbs\_sched d) pbs\_configure

Answer: c) pbs\_sched

1. What is the purpose of the "qstat" command in OpenPBS? a) To submit a job to the queue b) To display information about the scheduler c) To display the status of running and pending jobs d) To show the available nodes in the cluster

Answer: c) To display the status of running and pending jobs

1. Which OpenPBS command is used to submit a job to the cluster? a) qsub b) qsubmit c) qrun d) qstat

Answer: a) qsub

1. In an OpenPBS-based cluster, what does the term "fair-share" mean? a) All jobs are given an equal share of resources. b) Higher-priority jobs are executed before lower-priority jobs. c) Jobs are executed based on historical resource usage to achieve fairness. d) Fairness in resource allocation is not implemented in OpenPBS.

Answer: c) Jobs are executed based on historical resource usage to achieve fairness.

1. OpenPBS can support GPU job scheduling. True or False?

Answer: True

1. What is the role of "pbs\_mom" in an OpenPBS cluster? a) It is the OpenPBS database daemon. b) It is the component responsible for managing the user accounts. c) It is the job submitter daemon. d) It is responsible for executing jobs on compute nodes.

Answer: d) It is responsible for executing jobs on compute nodes.

1. Which configuration file is used to define the behavior of OpenPBS in a cluster? a) pbs.conf b) pbs\_server.conf c) cluster.conf d) pbs\_config

Answer: b) pbs\_server.conf

Note: The answers provided above are based on the information available up to September 2021, and there may have been updates or changes to OpenPBS since then.



OPEN PBS installation and configuration mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to the installation and configuration of OpenPBS (Open Portable Batch System):

1. Which of the following operating systems is commonly used to run OpenPBS? a) macOS b) Windows c) Linux d) Android

Answer: c) Linux

1. What is the recommended method for installing OpenPBS on a Linux system? a) Downloading the source code and compiling it manually b) Using a package manager to install pre-built binaries c) Running a Docker container with OpenPBS pre-installed d) Using a web-based installer

Answer: b) Using a package manager to install pre-built binaries

1. What is the main configuration file for OpenPBS that defines the behavior of the scheduler and server? a) pbs\_server.conf b) pbs.conf c) openpbs.cfg d) server.config

Answer: a) pbs\_server.conf

1. Which command is used to start the OpenPBS server? a) pbs\_server\_start b) pbs\_server c) start\_pbs\_server d) pbs\_sched

Answer: b) pbs\_server

1. After installation, where is the main OpenPBS configuration file typically located? a) /etc/openpbs b) /usr/bin/pbs c) /var/spool/pbs d) /opt/openpbs

Answer: a) /etc/openpbs

1. What is the purpose of the "qmgr" command in OpenPBS? a) To start and stop the OpenPBS server b) To submit a job to the queue c) To manage the configuration of OpenPBS d) To display the status of running jobs

Answer: c) To manage the configuration of OpenPBS

1. Which command is used to submit a job to the OpenPBS scheduler? a) qsub b) qsubmit c) pbs\_submit d) job\_submit

Answer: a) qsub

1. In OpenPBS, what is the default location where job scripts are stored? a) /usr/bin/pbs b) /var/spool/pbs c) /opt/openpbs d) /home/username

Answer: b) /var/spool/pbs

1. What is the purpose of the "pbsnodes" command in OpenPBS? a) To display information about the scheduler b) To show the status of compute nodes in the cluster c) To configure user accounts and permissions d) To manage the execution of jobs

Answer: b) To show the status of compute nodes in the cluster

1. After making changes to the OpenPBS configuration file, which command must be run to apply the changes? a) qsub b) qmgr c) pbs\_server\_reload d) pbsnodes

Answer: c) pbs\_server\_reload

Note: The answers provided above are based on the general installation and configuration process of OpenPBS up to September 2021. The specific commands and paths may vary depending on the system and version of OpenPBS being used. Always refer to the official documentation and guides for accurate installation and configuration instructions.



openpbs Submitting and managing jobs mcqs

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to submitting and managing jobs in OpenPBS (Open Portable Batch System):

1. How do you submit a job to the OpenPBS scheduler? a) qsubmit b) job\_submit c) qsub d) pbs\_submit

Answer: c) qsub

1. Which command is used to display information about the status of running and pending jobs in OpenPBS? a) qinfo b) qstat c) pbs\_stat d) job\_status

Answer: b) qstat

1. What is the purpose of the "qdel" command in OpenPBS? a) To delete a job from the queue b) To display the status of a job c) To change the priority of a job d) To submit a job to the queue

Answer: a) To delete a job from the queue

1. How can you submit a job script to the OpenPBS scheduler using the "qsub" command? a) qsub job\_script b) qsub -f job\_script c) qsub -s job\_script d) qsub --submit job\_script

Answer: a) qsub job\_script

1. In OpenPBS, how can you specify the number of nodes required for a job in the job script? a) #PBS -n 4 b) #PBS -l nodes=4 c) #PBS -nodes 4 d) #PBS -num\_nodes 4

Answer: b) #PBS -l nodes=4

1. What does the "qhold" command do in OpenPBS? a) It holds a job and prevents it from being scheduled for execution. b) It releases a job that was previously held and allows it to run. c) It changes the priority of a job in the queue. d) It displays information about held jobs.

Answer: a) It holds a job and prevents it from being scheduled for execution.

1. How can you change the priority of a submitted job in OpenPBS? a) By modifying the job script directly b) By using the "qalter" command with the appropriate options c) By submitting the job again with a higher priority value d) By stopping and restarting the OpenPBS scheduler

Answer: b) By using the "qalter" command with the appropriate options

1. What is the purpose of the "qrls" command in OpenPBS? a) To release a held job and allow it to run b) To resubmit a previously completed job c) To remove a job from the queue d) To display information about job resource limits

Answer: a) To release a held job and allow it to run

1. Which OpenPBS command can be used to modify the job requirements of a submitted job, such as the number of nodes or the job name? a) qmod b) qalter c) qchange d) qconfig

Answer: b) qalter

1. What does the "qsub" option "-o" do in OpenPBS? a) It specifies the output file for the job's standard output. b) It changes the ownership of the submitted job to another user. c) It sets the job's priority in the queue. d) It displays information about the OpenPBS server.

Answer: a) It specifies the output file for the job's standard output.

Note: The answers provided above are based on the general usage of OpenPBS for submitting and managing jobs up to September 2021. The specific commands and options may vary depending on the version of OpenPBS being used. Always refer to the official documentation and guides for accurate information and usage instructions.



openpbs Writing the batch script mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to writing the batch script in OpenPBS (Open Portable Batch System):

1. What is the file extension commonly used for OpenPBS batch scripts? a) .pbs b) .job c) .sh d) .batch

Answer: a) .pbs

1. In an OpenPBS batch script, what is the purpose of the "#PBS" directive? a) To specify the number of nodes required for the job b) To indicate the job name c) To define environment variables d) To provide comments in the script

Answer: b) To indicate the job name

1. How do you specify the walltime (maximum execution time) for a job in an OpenPBS batch script? a) #PBS -t walltime=5:00:00 b) #PBS -l walltime=5:00:00 c) #PBS -w 5:00:00 d) #PBS -maxtime 5:00:00

Answer: b) #PBS -l walltime=5:00:00

1. What does the "#PBS -q" directive do in an OpenPBS batch script? a) It specifies the queue where the job should be submitted. b) It defines the number of processors required for the job. c) It sets the job's priority in the queue. d) It defines the job's working directory.

Answer: a) It specifies the queue where the job should be submitted.

1. How do you specify the number of nodes and processors per node required for a job in an OpenPBS batch script? a) #PBS -n 2 -ppn 4 b) #PBS -nodes 2 -procs 4 c) #PBS -l nodes=2:ppn=4 d) #PBS -nnodes 2 -nprocs 4

Answer: c) #PBS -l nodes=2:ppn=4

1. What is the purpose of the "#PBS -o" directive in an OpenPBS batch script? a) To specify the output file for the job's standard output. b) To set the job's priority in the queue. c) To define environment variables for the job. d) To indicate the job owner's email address.

Answer: a) To specify the output file for the job's standard output.

1. How do you specify environment variables in an OpenPBS batch script? a) #PBS -env VAR=VALUE b) #PBS -export VAR=VALUE c) #PBS -e VAR=VALUE d) #PBS -V VAR=VALUE

Answer: b) #PBS -export VAR=VALUE

1. What is the purpose of the "#PBS -j" directive in an OpenPBS batch script? a) To specify the job name b) To join the job's standard error and standard output into a single file c) To define the job's working directory d) To submit the job to the OpenPBS scheduler

Answer: b) To join the job's standard error and standard output into a single file

1. How do you specify that a job requires GPU resources in an OpenPBS batch script? a) #PBS -gpu 1 b) #PBS -l gpu=1 c) #PBS -require gpu d) #PBS -g 1

Answer: b) #PBS -l gpu=1

1. In an OpenPBS batch script, how do you specify the command or executable to be executed as part of the job? a) #PBS -cmd "command\_to\_run" b) #PBS -exec "command\_to\_run" c) #PBS -run "command\_to\_run" d) #PBS -l command="command\_to\_run"

Answer: d) #PBS -l command="command\_to\_run"

Note: The answers provided above are based on the general usage of OpenPBS batch scripts up to September 2021. The specific syntax and options may vary depending on the version of OpenPBS being used. Always refer to the official documentation and guides for accurate information and usage instructions.



Slurm installation and configuration mcq

ChatGPT

Sure! Here are some multiple-choice questions (MCQs) related to the installation and configuration of Slurm batch system:

1. What is Slurm? a) An open-source operating system b) A distributed version control system c) A cluster workload manager and job scheduler d) A cloud computing platform

Answer: c) A cluster workload manager and job scheduler

1. Which programming language is commonly used for implementing Slurm? a) Python b) C++ c) Java d) Bash

Answer: b) C++

1. What is the recommended method for installing Slurm on a Linux system? a) Downloading the source code and compiling it manually b) Using a package manager to install pre-built binaries c) Running a Docker container with Slurm pre-installed d) Using a web-based installer

Answer: b) Using a package manager to install pre-built binaries

1. What is the main configuration file for Slurm that defines the behavior of the scheduler and nodes? a) slurm.conf b) slurm.config c) slurm.cfg d) cluster.conf

Answer: a) slurm.conf

1. Which command is used to start the Slurm controller daemon? a) slurmctl start b) slurmctld c) slurm\_start d) slurm\_server

Answer: b) slurmctld

1. Where is the main Slurm configuration file typically located? a) /etc/slurm.conf b) /usr/bin/slurm c) /var/spool/slurm d) /opt/slurm

Answer: a) /etc/slurm.conf

1. What is the purpose of the "scontrol" command in Slurm? a) To submit a job to the queue b) To display information about the scheduler c) To manage user accounts and permissions d) To control job and job step attributes

Answer: d) To control job and job step attributes

1. Which command is used to submit a job to the Slurm scheduler? a) ssubmit b) srun c) sbatch d) squeue

Answer: c) sbatch

1. How do you specify the number of tasks and CPUs required for a job in a Slurm batch script? a) #SBATCH -t tasks=2 -c cpus=4 b) #SBATCH -tasks 2 -cpus 4 c) #SBATCH --ntasks=2 --cpus-per-task=4 d) #SBATCH -n 2 -p 4

Answer: c) #SBATCH --ntasks=2 --cpus-per-task=4

1. After making changes to the Slurm configuration file, which command must be run to apply the changes? a) sreload b) slurmctl reload c) sconfig d) scontrol reload-config

Answer: b) slurmctl reload

Note: The answers provided above are based on the general installation and configuration process of Slurm up to September 2021. The specific commands and paths may vary depending on the system and version of Slurm being used. Always refer to the official documentation and guides for accurate installation and configuration instructions.



slurm Submitting and managing jobs mcq

ChatGPT

Sure! Here are some multiple-choice questions (MCQs) related to submitting and managing jobs in Slurm:

1. How do you submit a job to the Slurm scheduler? a) ssubmit b) srun c) sbatch d) squeue

Answer: c) sbatch

1. Which command is used to display information about the status of running and pending jobs in Slurm? a) sinfo b) sstat c) squeue d) scontrol

Answer: c) squeue

1. What is the purpose of the "sbatch" command in Slurm? a) To submit a batch script to the scheduler b) To display the status of running jobs c) To modify the job priority in the queue d) To delete a job from the queue

Answer: a) To submit a batch script to the scheduler

1. How can you specify the number of tasks and CPUs required for a job in a Slurm batch script? a) #SBATCH --tasks=2 --cpus=4 b) #SBATCH -t 2 -c 4 c) #SBATCH -n 2 -p 4 d) #SBATCH --ntasks=2 --cpus-per-task=4

Answer: d) #SBATCH --ntasks=2 --cpus-per-task=4

1. What does the "srun" command do in Slurm? a) It submits a job to the scheduler. b) It displays information about the cluster nodes. c) It executes commands on allocated compute nodes. d) It cancels a running job.

Answer: c) It executes commands on allocated compute nodes.

1. How do you specify the walltime (maximum execution time) for a job in a Slurm batch script? a) #SBATCH -w 5:00:00 b) #SBATCH --time=5:00:00 c) #SBATCH --maxtime=5:00:00 d) #SBATCH -t 5:00:00

Answer: d) #SBATCH -t 5:00:00

1. What is the purpose of the "scontrol" command in Slurm? a) To submit a job to the queue b) To display information about the scheduler c) To manage user accounts and permissions d) To control job and job step attributes

Answer: d) To control job and job step attributes

1. How do you specify the output file for the job's standard output in a Slurm batch script? a) #SBATCH -o output.txt b) #SBATCH -output output.txt c) #SBATCH -out output.txt d) #SBATCH --output=output.txt

Answer: d) #SBATCH --output=output.txt

1. What is the purpose of the "scancel" command in Slurm? a) To submit a job to the queue b) To display information about the scheduler c) To change the job priority in the queue d) To cancel a running or pending job

Answer: d) To cancel a running or pending job

1. After making changes to the Slurm configuration or job script, which command must be run to apply the changes? a) supdate b) sreload c) sapply d) scontrol update

Answer: b) sreload

Note: The answers provided above are based on the general usage of Slurm for submitting and managing jobs up to September 2021. The specific commands and options may vary depending on the version of Slurm being used. Always refer to the official documentation and guides for accurate information and usage instructions.



slurm Writing the batch script mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to writing the batch script in Slurm:

1. What is the file extension commonly used for Slurm batch scripts? a) .sl b) .sbatch c) .batch d) .job

Answer: b) .sbatch

1. In a Slurm batch script, what is the purpose of the "#SBATCH" directive? a) To specify the number of nodes required for the job b) To indicate the job name c) To define environment variables d) To provide comments in the script

Answer: a) To specify the number of nodes required for the job

1. How do you specify the walltime (maximum execution time) for a job in a Slurm batch script? a) #SBATCH -t 5:00:00 b) #SBATCH --time=5:00:00 c) #SBATCH -walltime=5:00:00 d) #SBATCH -maxtime=5:00:00

Answer: a) #SBATCH -t 5:00:00

1. What does the "#SBATCH -p" directive do in a Slurm batch script? a) It defines the job's working directory. b) It specifies the number of processors required for the job. c) It sets the job's priority in the queue. d) It indicates the partition or queue where the job should be submitted.

Answer: d) It indicates the partition or queue where the job should be submitted.

1. How do you specify the number of tasks and CPUs required for a job in a Slurm batch script? a) #SBATCH --tasks=2 --cpus=4 b) #SBATCH -t 2 -c 4 c) #SBATCH -n 2 -p 4 d) #SBATCH --ntasks=2 --cpus-per-task=4

Answer: d) #SBATCH --ntasks=2 --cpus-per-task=4

1. What is the purpose of the "#SBATCH -o" directive in a Slurm batch script? a) To specify the output file for the job's standard output. b) To set the job's priority in the queue. c) To define environment variables for the job. d) To indicate the job owner's email address.

Answer: a) To specify the output file for the job's standard output.

1. How do you specify environment variables in a Slurm batch script? a) #SBATCH -e VAR=VALUE b) #SBATCH -export VAR=VALUE c) #SBATCH -env VAR=VALUE d) #SBATCH --export=VAR=VALUE

Answer: b) #SBATCH -export VAR=VALUE

1. What is the purpose of the "#SBATCH -J" directive in a Slurm batch script? a) To set the job's priority in the queue. b) To join the job's standard error and standard output into a single file. c) To define the job's working directory. d) To indicate the job name.

Answer: d) To indicate the job name.

1. How do you specify that a job requires GPU resources in a Slurm batch script? a) #SBATCH -gpu=1 b) #SBATCH -l gpu=1 c) #SBATCH -g 1 d) #SBATCH -gres=gpu:1

Answer: d) #SBATCH -gres=gpu:1

1. In a Slurm batch script, how do you specify the command or executable to be executed as part of the job? a) #SBATCH -cmd "command\_to\_run" b) #SBATCH -exec "command\_to\_run" c) #SBATCH -run "command\_to\_run" d) #SBATCH --wrap "command\_to\_run"

Answer: d) #SBATCH --wrap "command\_to\_run"

Note: The answers provided above are based on the general usage of Slurm batch scripts up to September 2021. The specific syntax and options may vary depending on the version of Slurm being used. Always refer to the official documentation and guides for accurate information and usage instructions.



Application level check pointing in resource management and accounting mcq

ChatGPT

Checkpointing is a technique used in resource management and accounting to save the state of an application periodically, allowing for the recovery of the application from that state in case of failures. Here are some multiple-choice questions (MCQs) related to application-level checkpointing in resource management and accounting:

1. What is application-level checkpointing in resource management and accounting? a) A technique to monitor resource usage of an application in real-time b) A mechanism to checkpoint the entire system's state periodically c) A method to save the state of an application at certain intervals d) A process to terminate and restart an application when needed

Answer: c) A method to save the state of an application at certain intervals

1. What is the primary purpose of application-level checkpointing? a) To reduce the resource usage of an application b) To monitor the performance of an application c) To improve the reliability and fault tolerance of an application d) To allocate resources to the application effectively

Answer: c) To improve the reliability and fault tolerance of an application

1. How does application-level checkpointing help in fault tolerance? a) By monitoring system logs and generating alarms for potential issues b) By terminating and restarting applications automatically upon failure c) By saving the application's state, which allows recovery from failures d) By redistributing resources to other applications when one fails

Answer: c) By saving the application's state, which allows recovery from failures

1. In the context of application-level checkpointing, what is a "checkpoint"? a) A point in time when the application starts b) A user-defined metric to monitor application performance c) A snapshot of the application's state saved to disk d) A periodical restart of the application

Answer: c) A snapshot of the application's state saved to disk

1. Which of the following statements is true regarding application-level checkpointing and resource management? a) Application-level checkpointing can only be done by the system administrator. b) Application-level checkpointing helps manage hardware resources efficiently. c) Checkpointing can only be done during the execution of parallel applications. d) Checkpointing can help to reduce the overall runtime of an application.

Answer: d) Checkpointing can help to reduce the overall runtime of an application.

1. What is the typical frequency of checkpointing in application-level checkpointing? a) Every few seconds b) Every few minutes c) At the end of the application execution d) It varies depending on the application's requirements and system conditions

Answer: d) It varies depending on the application's requirements and system conditions

1. Which component is responsible for creating and managing checkpoints in application-level checkpointing? a) The operating system kernel b) The resource manager c) The application developer d) The checkpointing library or middleware

Answer: d) The checkpointing library or middleware

1. In resource management, how is the checkpoint data used in case of failure? a) The checkpoint data is used to analyze resource usage patterns. b) The checkpoint data is used to allocate additional resources. c) The checkpoint data is used to recover the application to a previously saved state. d) The checkpoint data is used to generate billing and accounting reports.

Answer: c) The checkpoint data is used to recover the application to a previously saved state.

1. What is the difference between application-level checkpointing and system-level checkpointing? a) Application-level checkpointing saves only application-specific data, while system-level checkpointing saves the entire system state. b) Application-level checkpointing is used for billing and accounting purposes, while system-level checkpointing is used for fault tolerance. c) Application-level checkpointing is done automatically by the operating system, while system-level checkpointing requires manual intervention. d) Application-level checkpointing is used for resource management, while system-level checkpointing is used for job scheduling.

Answer: a) Application-level checkpointing saves only application-specific data, while system-level checkpointing saves the entire system state.

1. Which type of applications would benefit most from application-level checkpointing? a) Short-lived applications with no critical data b) Applications with no concurrency or parallelism c) Long-running and computation-intensive applications d) Small-scale single-threaded applications

Answer: c) Long-running and computation-intensive applications

Note: The answers provided above are based on the general understanding of application-level checkpointing in resource management and accounting up to September 2021. Checkpointing techniques and implementations can vary based on specific systems and applications.



slurm Application level check pointing mcq

ChatGPT

As of my last update in September 2021, Slurm (Simple Linux Utility for Resource Management) itself does not provide built-in support for application-level checkpointing. Checkpointing is typically a user-level responsibility, and applications need to be designed to handle checkpointing independently.

As such, there are no specific MCQs related to Slurm's application-level checkpointing since it is not natively integrated into Slurm. Instead, application-level checkpointing is usually implemented using specialized libraries and tools that are separate from the Slurm batch system.

If you are interested in questions related to checkpointing in general or checkpointing techniques for specific applications, I'd be happy to provide you with relevant MCQs. Please let me know your specific focus or area of interest, and I'll tailor the questions accordingly.



Managing nodes in resource management and accounting mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to managing nodes in resource management and accounting:

1. In the context of resource management, what is a "node"? a) A user account on a cluster b) A central server that manages resources c) A computing unit within a cluster, typically a server or a compute node d) A virtual machine running on a cloud platform

Answer: c) A computing unit within a cluster, typically a server or a compute node

1. What is the primary role of a node manager in resource management? a) To allocate resources to jobs and applications b) To monitor network traffic and performance c) To manage user accounts and permissions d) To control and monitor the utilization of resources on individual nodes

Answer: d) To control and monitor the utilization of resources on individual nodes

1. Which component is responsible for node management in a cluster environment? a) Scheduler b) Resource Manager c) Node Manager d) Job Queue

Answer: c) Node Manager

1. What does the term "node state" refer to in resource management and accounting? a) The geographical location of a node in the cluster b) The physical health and temperature of a node c) The current utilization and availability of resources on a node d) The user who currently has access to a node

Answer: c) The current utilization and availability of resources on a node

1. Which of the following actions can be performed by a node manager? a) Scheduling jobs and allocating resources b) Controlling power states of nodes (e.g., power on, power off) c) Managing user accounts and access permissions d) Monitoring overall system performance and health

Answer: b) Controlling power states of nodes (e.g., power on, power off)

1. How do node managers communicate with the central resource manager in a cluster environment? a) Through a shared database b) Through direct network communication c) Through a message-passing interface d) Through a batch submission system

Answer: b) Through direct network communication

1. What is the purpose of node accounting in resource management? a) To track the number of nodes in the cluster b) To monitor the power consumption of individual nodes c) To record resource usage and job statistics on each node d) To manage access permissions for users on specific nodes

Answer: c) To record resource usage and job statistics on each node

1. How can node-level accounting data be used in resource management? a) To determine the number of users logged into each node b) To generate billing reports for individual users or projects c) To track the performance of the central scheduler d) To allocate resources to jobs based on node availability

Answer: b) To generate billing reports for individual users or projects

1. Which resource management component is responsible for collecting and storing node-level accounting data? a) Scheduler b) Resource Manager c) Node Manager d) Accounting Server

Answer: c) Node Manager

1. In a large-scale cluster, what is a "node allocation policy"? a) The process of assigning unique IDs to each node for identification b) The method used to determine the number of nodes allocated to each user or job c) The rules governing the physical placement of nodes in the cluster d) The policy that defines when and how often node-level accounting data is collected

Answer: b) The method used to determine the number of nodes allocated to each user or job

Note: The answers provided above are based on the general understanding of managing nodes in resource management and accounting up to September 2021. Node management and resource management practices can vary based on the specific cluster or system being used.



Setting server scheduling policies in resource management and accounting mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to setting server scheduling policies in resource management and accounting:

1. What is a "server scheduling policy" in resource management and accounting? a) The process of allocating server resources to applications b) The rules and algorithms used to prioritize job scheduling on servers c) The method of collecting and analyzing server performance metrics d) The process of setting up user accounts on servers

Answer: b) The rules and algorithms used to prioritize job scheduling on servers

1. Which factor is typically NOT considered in server scheduling policies? a) Job priority and resource requirements b) User quotas and account limits c) Power consumption and cooling efficiency d) Server hardware specifications

Answer: c) Power consumption and cooling efficiency

1. What is the purpose of setting server scheduling policies in resource management? a) To optimize server performance and resource utilization b) To manage user access and permissions on servers c) To allocate specific tasks to individual servers d) To monitor server hardware health and reliability

Answer: a) To optimize server performance and resource utilization

1. Which type of server scheduling policy aims to ensure fairness among users or groups? a) First-Come-First-Served (FCFS) b) Priority-based scheduling c) Weighted Fair Queuing (WFQ) d) Round-Robin Scheduling

Answer: c) Weighted Fair Queuing (WFQ)

1. In server scheduling policies, what does "job priority" refer to? a) The level of access a user has to a server b) The urgency or importance of a job relative to other jobs c) The number of tasks a server can handle simultaneously d) The physical location of the server within the data center

Answer: b) The urgency or importance of a job relative to other jobs

1. Which scheduling policy allows all jobs to have an equal share of the server's resources over time? a) First-Come-First-Served (FCFS) b) Priority-based scheduling c) Round-Robin Scheduling d) Weighted Fair Queuing (WFQ)

Answer: d) Weighted Fair Queuing (WFQ)

1. How do server scheduling policies impact job throughput and response time? a) They have no impact on job throughput and response time. b) They directly control job throughput and response time. c) They indirectly influence job throughput and response time. d) They only affect job response time but not throughput.

Answer: c) They indirectly influence job throughput and response time.

1. Which scheduling policy is best suited for time-critical or urgent jobs that need immediate attention? a) First-Come-First-Served (FCFS) b) Priority-based scheduling c) Round-Robin Scheduling d) Earliest Deadline First (EDF)

Answer: d) Earliest Deadline First (EDF)

1. What is "backfill scheduling" in resource management? a) A technique to fill empty server slots with lower-priority jobs b) A policy to reschedule jobs that have been canceled or failed c) A method to prioritize server maintenance and downtime d) A strategy to reduce job priority and resource requirements

Answer: a) A technique to fill empty server slots with lower-priority jobs

1. Which component of a resource management system is responsible for implementing server scheduling policies? a) Job Scheduler b) Node Manager c) Accounting Server d) Resource Allocator

Answer: a) Job Scheduler

Note: The answers provided above are based on the general understanding of setting server scheduling policies in resource management and accounting up to September 2021. Scheduling policies can vary based on the specific resource management system or cluster being used.



Scheduler Algorithm in resource management and accounting mcq

ChatGPT

Certainly! Here are some multiple-choice questions (MCQs) related to scheduler algorithms in resource management and accounting:

1. What is the role of a scheduler algorithm in resource management and accounting? a) To allocate hardware resources to applications b) To monitor network traffic and performance c) To manage user accounts and permissions d) To track resource usage and generate billing reports

Answer: a) To allocate hardware resources to applications

1. Which type of scheduler algorithm aims to maximize the utilization of available resources? a) First-Come-First-Served (FCFS) b) Round-Robin Scheduling c) Priority-Based Scheduling d) Load Balancing

Answer: d) Load Balancing

1. What is the primary objective of a "fair share" scheduler algorithm? a) To allocate resources based on job priority b) To ensure each user or group gets an equal share of resources over time c) To minimize the response time for high-priority jobs d) To maximize the overall throughput of the system

Answer: b) To ensure each user or group gets an equal share of resources over time

1. Which scheduling algorithm is based on giving each job a fixed amount of time to execute before switching to the next job? a) First-Come-First-Served (FCFS) b) Shortest Job First (SJF) c) Round-Robin Scheduling d) Earliest Deadline First (EDF)

Answer: c) Round-Robin Scheduling

1. In a priority-based scheduling algorithm, which jobs get scheduled first? a) Jobs with the lowest priority values b) Jobs with the highest priority values c) Jobs submitted first d) Jobs with the shortest estimated runtime

Answer: b) Jobs with the highest priority values

1. Which scheduling algorithm focuses on minimizing the average waiting time for jobs? a) First-Come-First-Served (FCFS) b) Shortest Job First (SJF) c) Priority-Based Scheduling d) Least Recently Used (LRU)

Answer: b) Shortest Job First (SJF)

1. What is the purpose of a backfilling scheduler algorithm in resource management? a) To reschedule jobs that have failed or been canceled b) To prioritize jobs based on their resource requirements c) To fill empty slots in the schedule with lower-priority jobs d) To allocate resources based on user quotas and account limits

Answer: c) To fill empty slots in the schedule with lower-priority jobs

1. Which scheduling algorithm is best suited for real-time or time-critical applications? a) First-Come-First-Served (FCFS) b) Priority-Based Scheduling c) Earliest Deadline First (EDF) d) Load Balancing

Answer: c) Earliest Deadline First (EDF)

1. Which scheduling algorithm is based on giving each job a priority value that changes dynamically based on its behavior and resource usage? a) Fair Share Scheduling b) Backfilling Scheduling c) Weighted Fair Queuing (WFQ) d) Dynamic Priority Scheduling

Answer: d) Dynamic Priority Scheduling

1. In cluster computing, which scheduling algorithm aims to distribute tasks evenly across all available nodes to avoid overloading some nodes? a) Load Balancing b) First-Come-First-Served (FCFS) c) Priority-Based Scheduling d) Backfilling Scheduling

Answer: a) Load Balancing

Note: The answers provided above are based on the general understanding of scheduler algorithms in resource management and accounting up to September 2021. Scheduler algorithms can vary based on the specific resource management system or cluster being used.



Scheduler Algorithm in slurm mcqs

ChatGPT

Sure! Here are some multiple-choice questions (MCQs) related to scheduler algorithms in Slurm:

1. What is the primary role of the scheduler in Slurm? a) To allocate resources to jobs and applications b) To monitor network traffic and performance c) To manage user accounts and permissions d) To track resource usage and generate billing reports

Answer: a) To allocate resources to jobs and applications

1. Which scheduling algorithm is used by default in Slurm to prioritize pending jobs? a) First-Come-First-Served (FCFS) b) Priority-Based Scheduling c) Earliest Deadline First (EDF) d) Backfilling Scheduling

Answer: b) Priority-Based Scheduling

1. What is the purpose of the "fair share" scheduler algorithm in Slurm? a) To allocate resources based on job priority b) To ensure each user or group gets an equal share of resources over time c) To minimize the response time for high-priority jobs d) To maximize the overall throughput of the system

Answer: b) To ensure each user or group gets an equal share of resources over time

1. In Slurm, what does the "Priority" field represent for a job? a) The user who submitted the job b) The time the job was submitted c) The estimated runtime of the job d) The priority value assigned to the job by the scheduler

Answer: d) The priority value assigned to the job by the scheduler

1. Which scheduling algorithm in Slurm allows higher-priority jobs to preempt lower-priority ones? a) First-Come-First-Served (FCFS) b) Preemptive Scheduling c) Priority-Based Scheduling d) Backfilling Scheduling

Answer: b) Preemptive Scheduling

1. What is "backfill scheduling" in Slurm? a) A technique to fill empty server slots with lower-priority jobs b) A policy to reschedule jobs that have been canceled or failed c) A method to prioritize server maintenance and downtime d) A strategy to reduce job priority and resource requirements

Answer: a) A technique to fill empty server slots with lower-priority jobs

1. Which scheduling algorithm in Slurm aims to distribute tasks evenly across all available nodes to avoid overloading some nodes? a) Load Balancing b) First-Come-First-Served (FCFS) c) Priority-Based Scheduling d) Backfilling Scheduling

Answer: a) Load Balancing

1. How does Slurm handle the scheduling of multi-node jobs by default? a) It schedules the entire job on a single node only. b) It evenly distributes tasks across all requested nodes. c) It runs tasks on the first available node in the queue. d) It depends on the user-defined job settings.

Answer: b) It evenly distributes tasks across all requested nodes.

1. Which Slurm scheduler algorithm is best suited for real-time or time-critical applications? a) First-Come-First-Served (FCFS) b) Priority-Based Scheduling c) Earliest Deadline First (EDF) d) Load Balancing

Answer: c) Earliest Deadline First (EDF)

1. How can users influence job scheduling priority in Slurm? a) By specifying the job's preferred node b) By setting the job's walltime to a specific value c) By using a priority modifier in the job script d) By selecting a different scheduling algorithm for their jobs

Answer: c) By using a priority modifier in the job script

Note: The answers provided above are based on the general understanding of scheduler algorithms in Slurm up to September 2021. Scheduler algorithms and settings may vary based on the specific configuration and version of Slurm being used.



SLURM Accounting

ChatGPT

SLURM (Simple Linux Utility for Resource Management) provides accounting functionality to track and report resource usage and job statistics on a cluster. SLURM accounting allows cluster administrators to monitor the utilization of resources, track user and job activity, and generate reports for billing and auditing purposes. Here are some key aspects of SLURM accounting:

1. **Job Accounting**: SLURM records detailed information about each submitted job, including its start time, end time, resource usage (CPU time, memory, etc.), user who submitted the job, and job status (running, completed, failed, etc.).
2. **User Accounting**: SLURM keeps track of resource usage by individual users, enabling administrators to monitor user activity and enforce resource limits or quotas.
3. **Cluster Resource Usage**: SLURM aggregates resource usage data from all nodes and jobs, providing an overview of cluster utilization, performance, and efficiency.
4. \*\*Account



SLURM Accounting mcq

ChatGPT

Sure! Here are some multiple-choice questions (MCQs) related to SLURM accounting:

1. What is SLURM accounting used for in a cluster environment? a) Monitoring network traffic b) Managing user accounts and permissions c) Tracking resource usage and job statistics d) Load balancing across cluster nodes

Answer: c) Tracking resource usage and job statistics

1. What type of information does SLURM accounting record for each job? a) Job name and priority b) Job owner and start time c) CPU and memory usage d) All of the above

Answer: d) All of the above

1. How does SLURM store accounting data by default? a) In a local log file on each compute node b) In a centralized database on the head node c) In a CSV file on a shared network storage d) In an SQLite database on each compute node

Answer: b) In a centralized database on the head node

1. What is the purpose of SLURM accounting plugins? a) To increase the speed of job execution b) To enhance the security of the cluster c) To customize the information recorded in accounting records d) To manage the power consumption of compute nodes

Answer: c) To customize the information recorded in accounting records

1. Which utility is used to generate SLURM accounting reports? a) squeue b) sreport c) sacct d) sbatch

Answer: c) sacct

1. What can be determined from SLURM accounting reports? a) The number of compute nodes in the cluster b) The total CPU time used by each user c) The cluster's network performance d) The status of system services

Answer: b) The total CPU time used by each user

1. How does SLURM handle the frequency of accounting data collection by default? a) It collects accounting data every hour. b) It collects accounting data at the end of each day. c) It collects accounting data for completed jobs only. d) It collects accounting data at regular intervals and significant events (job completion, termination, etc.).

Answer: d) It collects accounting data at regular intervals and significant events (job completion, termination, etc.).

1. Which SLURM configuration file is typically modified to adjust accounting settings? a) slurm.conf b) slurmdbd.conf c) sacctmgr.conf d) slurm\_acct\_db.conf

Answer: a) slurm.conf

1. What can SLURM accounting be used for in addition to resource usage tracking? a) Monitoring and controlling power consumption b) Managing cluster node boot order c) Enforcing data encryption on shared storage d) Generating billing and chargeback reports

Answer: d) Generating billing and chargeback reports

1. How does SLURM handle accounting data for jobs that are still running? a) It immediately purges accounting data for running jobs. b) It stores accounting data for running jobs in a separate database. c) It accumulates accounting data for running jobs until they complete. d) It discards accounting data for running jobs after a predefined time.

Answer: c) It accumulates accounting data for running jobs until they complete.

Note: The answers provided above are based on the general understanding of SLURM accounting up to September 2021. SLURM features and configurations may vary depending on the specific version and setup. Always refer to the official SLURM documentation for the most accurate and up-to-date information.