Assignment Cloud

Q: What algorithm to use in live migration on desk without interrupting or hurting the availability of vm ?

1-**Pre-Copy Migration Algorithm:**

* Initialization:

Identify the source and destination hosts for migration.

Establish a connection between the source and destination hosts.

Allocate resources on the destination host to accommodate the migrating VM.

* Memory Copy Iterations:

Begin iterative memory copying from the source to the destination.

During each iteration, identify and transfer memory pages that have been modified since the last iteration.

Continue the iterations until the remaining delta (difference between source and destination memory) becomes small.

* Downtime Phase:

Suspend the VM on the source host to capture the final memory delta.

Copy any remaining modified memory pages to the destination.

Resume the VM on the destination host.

**2- Burstable VMs:**

* Monitoring:

Continuously monitor resource usage of VMs.

Identify periods of resource surplus or lower demand.

* Resource Allocation:

Temporarily allocate additional resources to the VM during migration.

Facilitate faster data transfer and minimize impact on performance.

**3- Stateful Live Migration:**

* State Capture:

Capture the entire state of the VM, including CPU and device state.

Ensure consistency in the state transfer to the destination host.

* Synchronization:

Continuously synchronize the state between the source and destination hosts.

Minimize downtime by maintaining a near real-time state on the destination.

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