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Thesis Question (Upskilling)

1. **What are the different types of Schedule Levels in networker?**

   There are 6 type of backup level

   -Full –All files, regardless of whether the files have changed

   -Incremental – Files that have change since the last backup

   -Cumulative Incremental – All files that have change since the last full backup

   -Logs only – All the transaction log of databases

   -Synthetic full – All data that has changed since the last full backup and subsequent incremental backups

   - Skip – Skips the scheduled backup

2. **What components make a data zone? Explain each component.**

   There are 3 components in Data Zone

   -Networker server – Supports the backup and stores tracking and configuration information

   - NetWorker Storage Node (SN) - Writes data and reads data from backup device.

   -NetWorker Client – Generates the backup data.

3. **Name all the binaries present in Storage Node and Explain functionalities of each binary.**

   -nsrsnmd

   Manage device operations and nsrmmd processes

   One nsrsnmd process runs on each configured storage node

   -nsrmmd

   Receives backup data from the client

   Reads from and writes to networker backup devices

   Organizes backup data

   Sends tracking information to the media database

   -nsrlcp

   Provides uniform library interface

   Controls library resources

4. **What all the instances need to be installed on server to make it a networker server.**

   There are 3 instances in a networker server

   -Server

   -Storage node

   -Client

5. **What is clone and what are the different ways to take clone backup?**
   Cloning is the process of coping save sets or a volume. It is used to create a duplicate copy of backup data securely offsite. It creates identical copies of save sets in case of damage to original media. No volume contains more than one instance of a save set. Cloning can be done either manually or automatically.

6. **Explain restart window in group properties?**
   When the restart windows are done in group properties, the backup will start again with the same level as it was running before the restart. It only being done if the backup is hanging or stuck

7. **What is the command to monitor from CLI?**
   nsrexec [-a auth] [-vR] [-c client] [-f file | -] [-N] [--
   ...]

8. **Mention any 5 Networker Resource Type and its function.**

   NSR Client – Configure supported clients for backup/recovery.

   NSR device – Configure backup devices.

   NSR directive - configure optional directions clients area to follow for backup

   NSR group – Configure start time for scheduled backups. Group clients together.

   NSR jukebox – Configure media library / autochanger/ jukebox

9. **How many networker administrative interfaces are there, Mention them.**
   There are 3 Networker administrative interfaces
   -NetWorker Management Console
   -nsradmin- command-line administrative utility on windows and unix
   -nsrwatch – Read-only NetWorker server monitoring utility (curses-based)

10. **Mention difference between Networker 8.x and 9.x version NMC?**
    - *There are a lot of different between the versions I will mention 5 of them.*

Category	**Previous to NetWorker 9.0**	**NetWorker 9.0**
Group	*Group - A logical group of clients which you can run to perform backup, clone, snapshot, bootstrap, and index backups. VMware backups are not supported.*	*Protection Group - Logical group of clients/virtual machines/NAS devices/Save sets/Dynamic Save-set Query/Dynamic client. You can associate to a workflow.*
Group > Probe	*Used to configure Probe before backup*	*Create Probe Action and Backup Action in a workflow. Probe resources*

		are retained and must be associated
Group > Clone	*Configure clone after backup as Immediate clone and concurrent immediate clone. Not all save sets can be cloned as soon as the backup completes.*	*Chain a clone action to a backup action and set the clone action to run concurrently with the backup action.*
Group > Snapshot backup	*Take snapshot backups using snapshot policy*	*Create a workflow with snapshot backup action. NSR Snapshot policy resource is deprecated.*
Group > Schedule	*Specify a schedule from existing schedule resources*	*Schedule resource cannot be used in policy. Schedule activity is part of backup action definition.*

11. Explain basic architecture of a Networker Datazone.?

-NetWorker datazone is the collection of all hosts within your environment for which a single NetWorker server provides backup and recovery services

-The three key types of hosts within a NetWorker datazone are as follows:

***Server** – A host that provides backup and recovery services (with all the associated management functions) for systems within your environment. There will either be (usually) a single NetWorker server in the datazone, or (in less common situations), a clustered pair of hosts acting as an active/passive NetWorker server.*
***Client** – Any system that has backup and recovery services managed by a NetWorker Server*
***Storage Node** – A host with access to one or more backup devices, either providing device mapping access to clients (I'll get to that in a moment) or transferring backup/recovery to/from devices on behalf of clients. (A NetWorker server, by the way, can also function as a storage node.) A storage node can either be a full storage node, meaning it can perform those actions previously described for any number of clients, or a dedicated storage node, meaning it provides those services just to itself.*

12. Explain how different processes gets involved during server initiated backups.(Server initiated backup process flow)?

There are 4 type of backup process:-

- *Backup Traditional – scheduled backup of the save sets defined for the client resources in the group*
- *Probe – Runs a script on a networker client host that passes a return code*
- *Check connectivity – test connectivity between clients and the networker server*
- *Clone – Creates a copy of one or more save sets*

13. **What is browse policy and retention policy, how do you relate these policies with browsable and Save set recovery?**
    - *Browse Policy - the lifecycle of the file index data for the save set*
    - *Retention Policy - the lifecycle of the save set itself (how long it remains recoverable).*

    Both policies are how to view the data (media) in the backup serve. both of the policies have expirers date, retention policy will have longer expirers date but administrator need to recall all the data as it cannot be browse file by file anymore.

14. **What are the different functions of Networker management console, how can we access NMC console from servers other than NMC server**?
    Function of Networker management console:-
    - *client configuration*
    - *policy settings*
    - *schedules setting*
    - *reports*
    - *daily operations for deduplicated and non-deduplicated backups*

    NMC console can be access from user client machine directly