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TRAINING ARCHITECT



Using Logical Volume Management (LVM) on RHEL 8

Exam Objectives Covered



Create and remove physical volumes



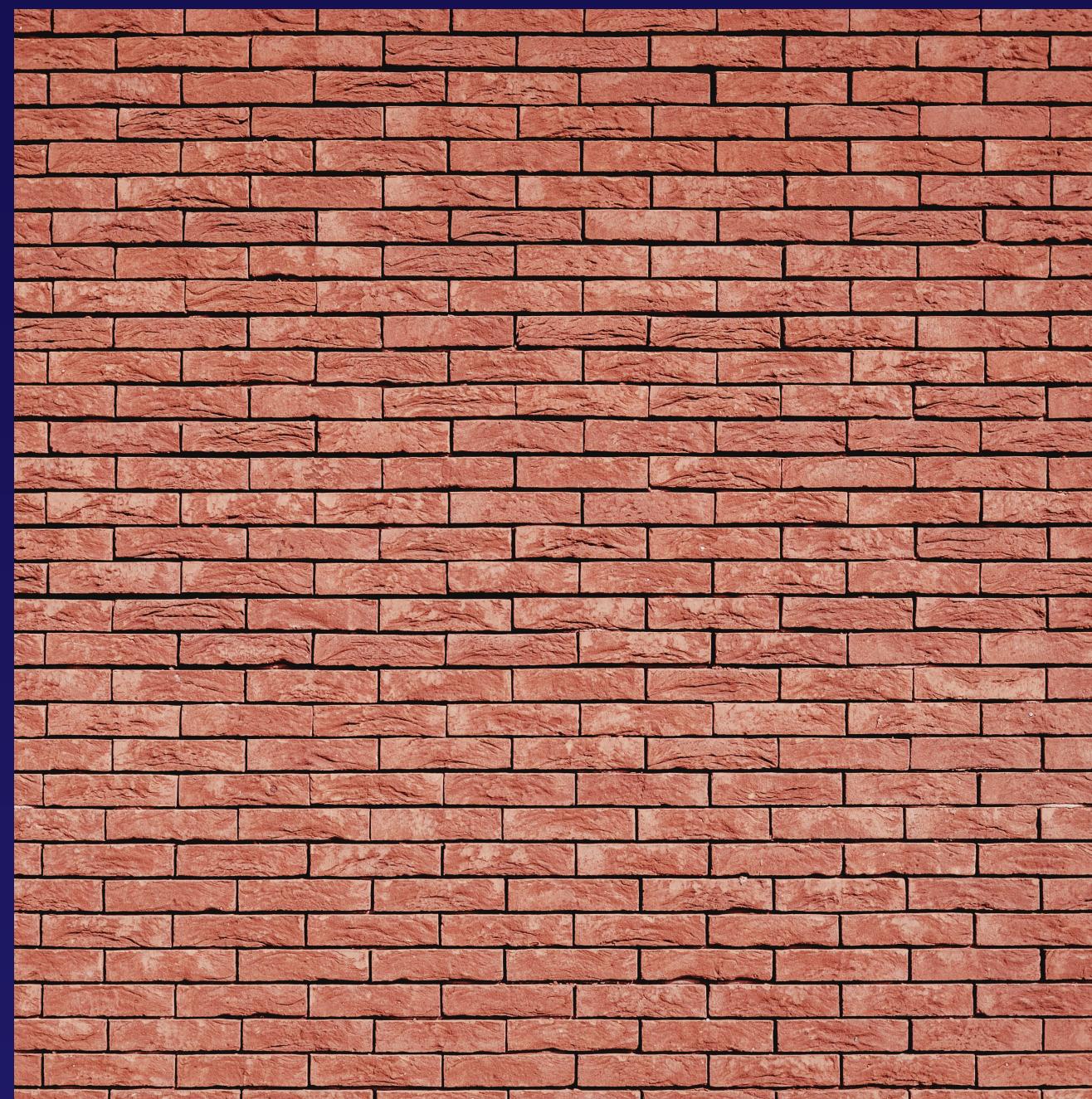
Assign physical volumes to volume groups



Create and delete logical volumes



Extend existing logical volumes



Prerequisites

Experience with configuring and managing **LVM** on **Linux** is necessary.

Knowledge and **previous experience** with **Logical Volume Manager (LVM)** are **essential** to **succeed** on the exam. You will need to **configure** a **physical volume**, **create** a **volume group**, **create/extend logical volumes**, and **create/extend filesystems** on top of them. It's also good to know how to **dismantle** all of the above.



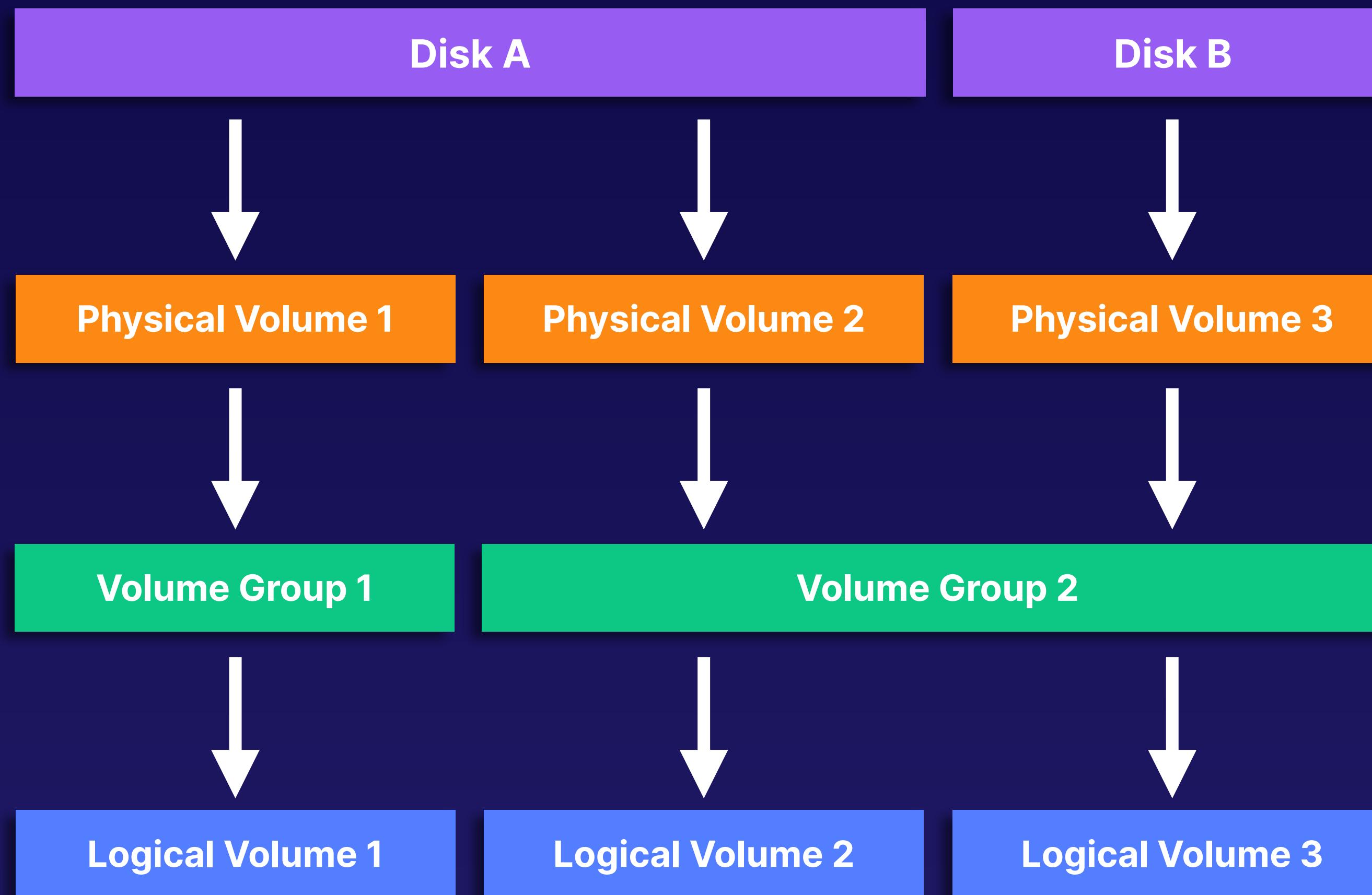
Using Logical Volume Management (LVM) on RHEL 8

If there's one constant in the universe, it's that **storage needs will increase** over time. **Logical Volume Management (LVM)** provides a framework to advance storage capabilities beyond the basic "**disk/partition/filesystem**" relationship. In this lesson, we **create and remove physical volumes**, **add them to a volume group**, and **work with logical volumes** on **RHEL 8**.



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LVM Basics



Logical Volume Management (LVM) is based on **three major components**.

PHYSICAL VOLUMES

Underlying physical devices, generally **disk** or some other **abstraction of disk** — possibly a **whole device** or a **partition** — split into **physical extents**

VOLUME GROUPS

One or more physical volumes combined to create a **pool** of **physical extents** available for allocation to **one or more logical volumes**

LOGICAL VOLUMES

A **set of logical extents** that each map to **one or more physical extents** of the **same size** by the **volume group**



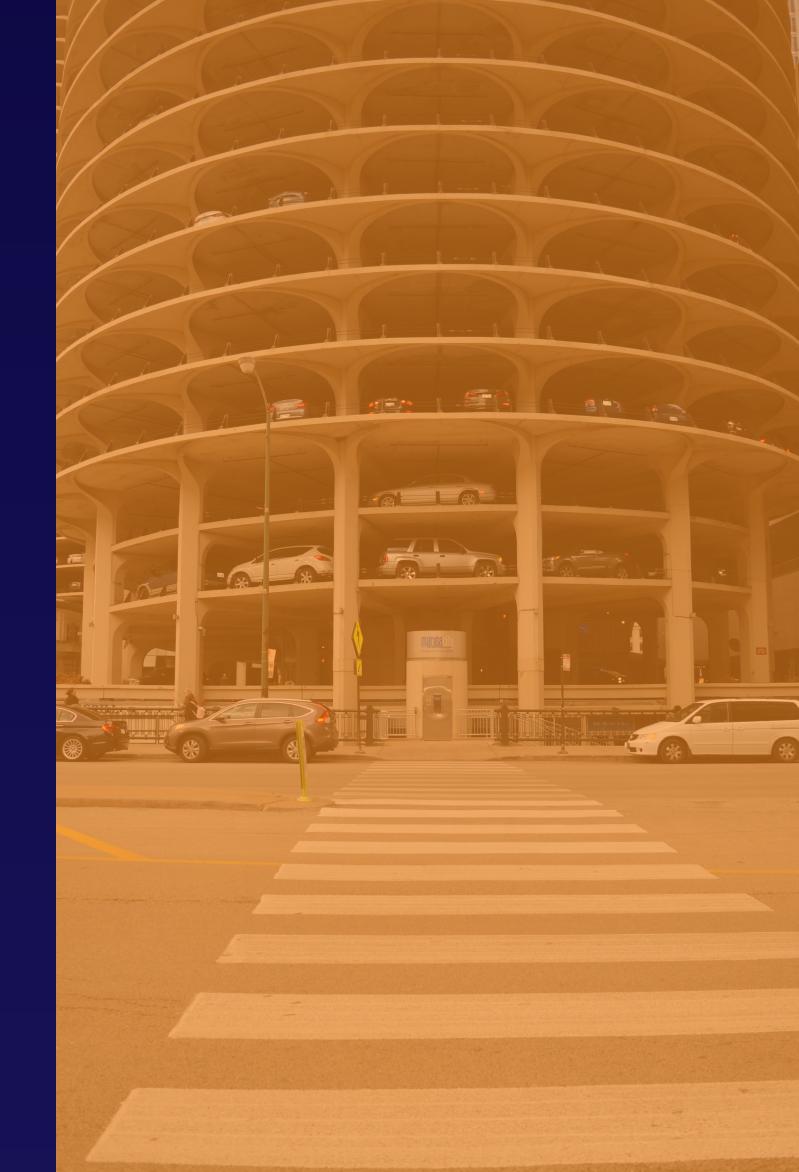
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SCENARIO

Our DBA Team keeps running out of space for their databases!

It seems like **every time** we finish setting up new storage for our Database Admin (DBA) Team we have another request **asking for more space!** We've decided to swap using disk with a filesystem on top of it, in favor of using **Logical Volume Management**. This allows the storage to **grow** with the DBA Team's needs while **keeping the databases online**. Let's see how it's done!

In this
lesson, we
covered:



- Creating and removing **physical volumes**
- Assigning **physical volumes** to **volume groups**
- Creating and deleting **logical volumes**
- Extending existing **logical volumes**

Configuring Local Storage on RHEL 8 - A Review



Manipulating Disk Partitions in Linux

Manage **MBR** and **GPT partitions** and **add/ remove swap** on running systems



Managing Mounted Disks on RHEL 8

Configure systems to **mount** filesystems at boot by the **universally unique ID (UUID)** or **label**



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