

Modeling Schemas to Support Security Best Practices



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Security



Principals and privileges group into roles

**Roles supports rule of least privilege
and rule of least effort**

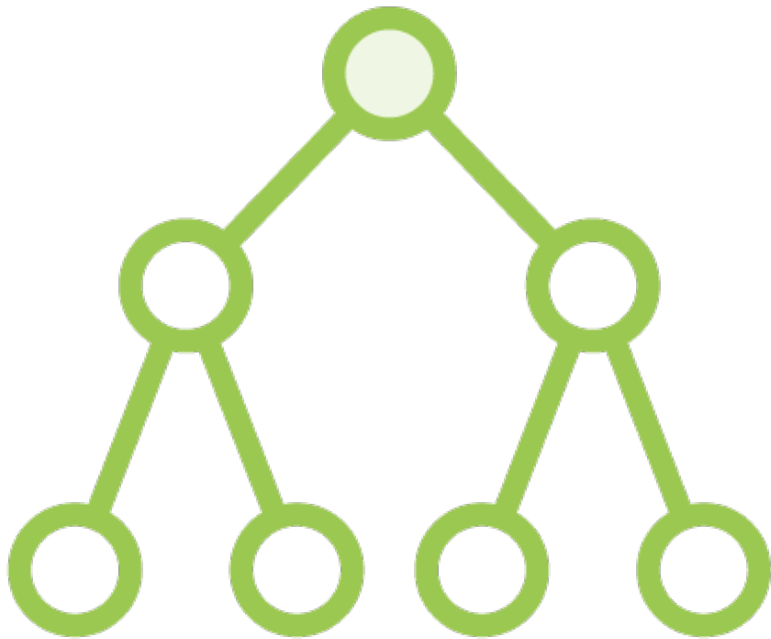
Up next:

Grouping securables for same purpose



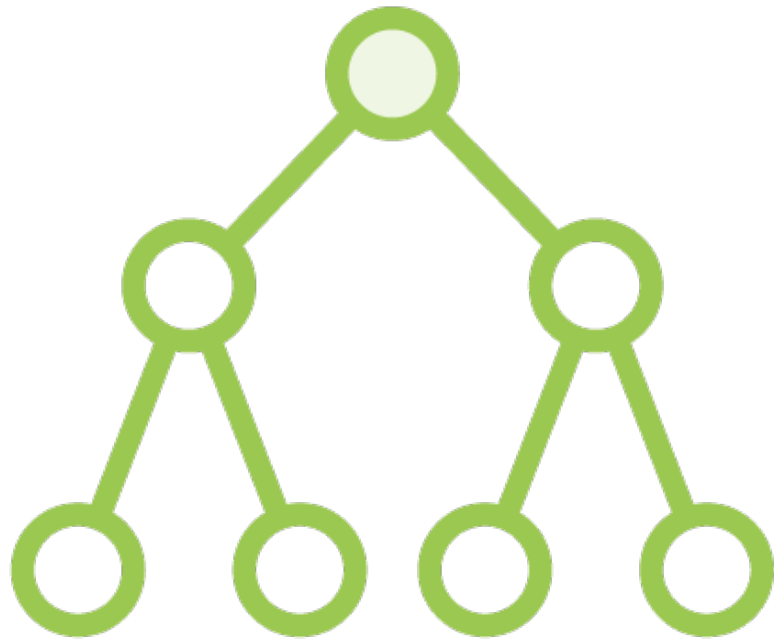
Relational Theory and Normalization





Schema in general

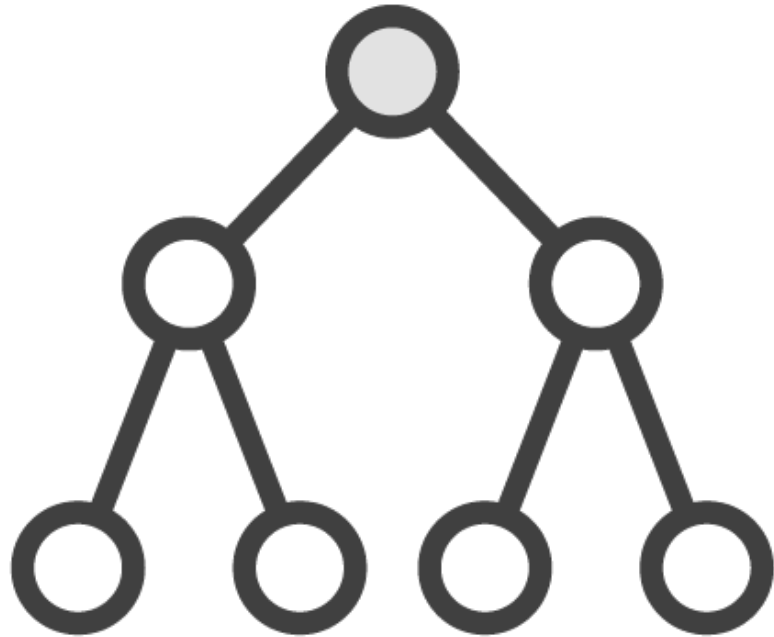
Complete schematic of objects, tables, and relationships



Oracle and SQL Server Schema

Collection of objects within scope of database

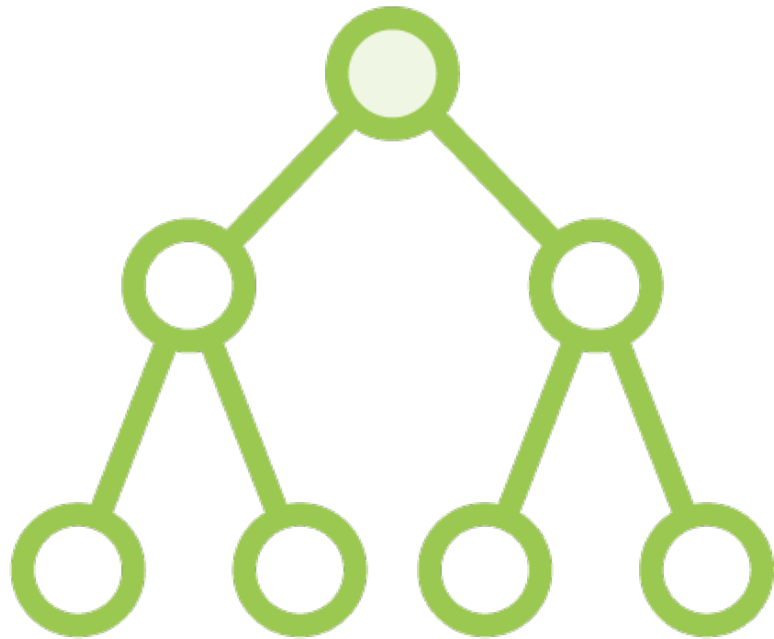
One database can have many schema



MySQL Schema

Synonym of database

No lower scoped organizational object

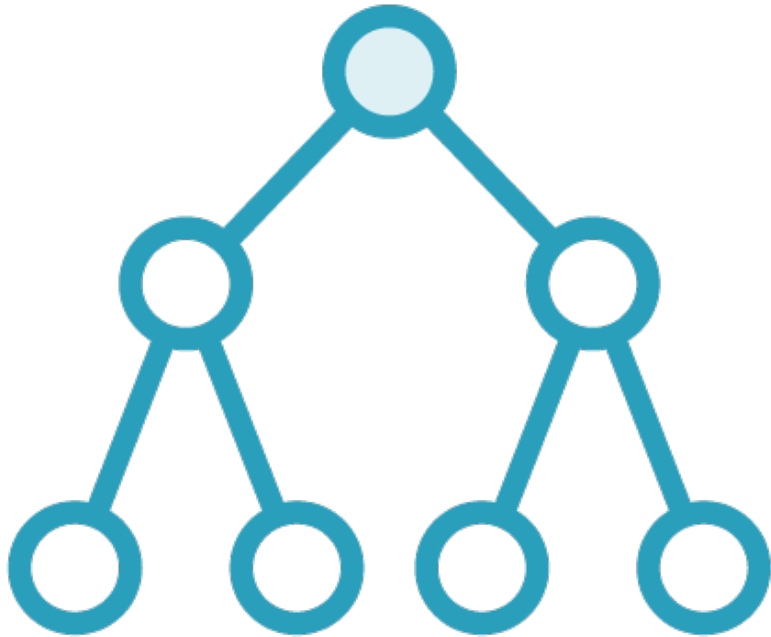


SQL Server

Can have multiple databases within a single server instance

Oracle

One database per server instance



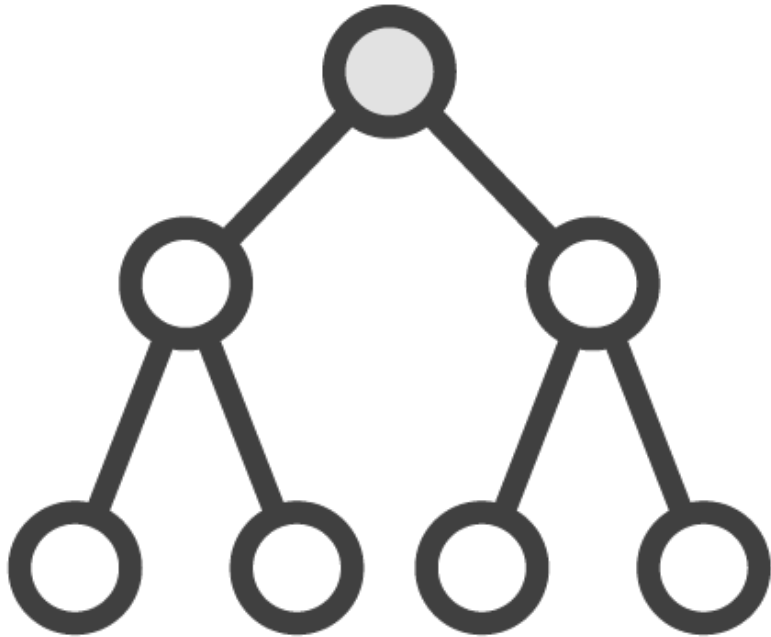
Unless otherwise specified we will use the SQL Server specific definition of schema

Demo



Let's talk schema





Schema:

Eases object organization

Enhances security options

Like a database, schema has scope

Demo



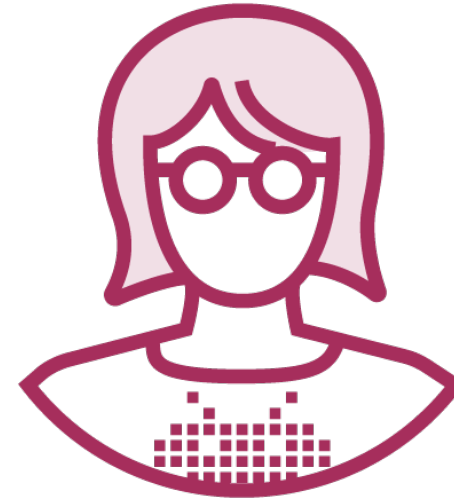
Let's apply a schema to protect data for compliance with PCI



Low Privilege \ Low Effort Options for the Win



Rule of least privilege

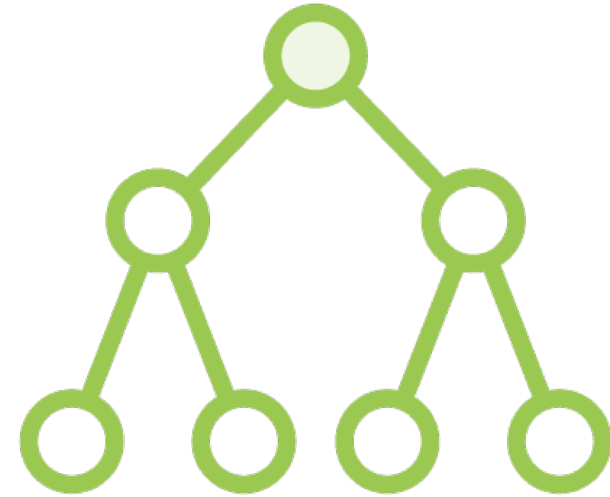


Rule of least effort

Increase Security and Reduce Effort



Roles Group Principals

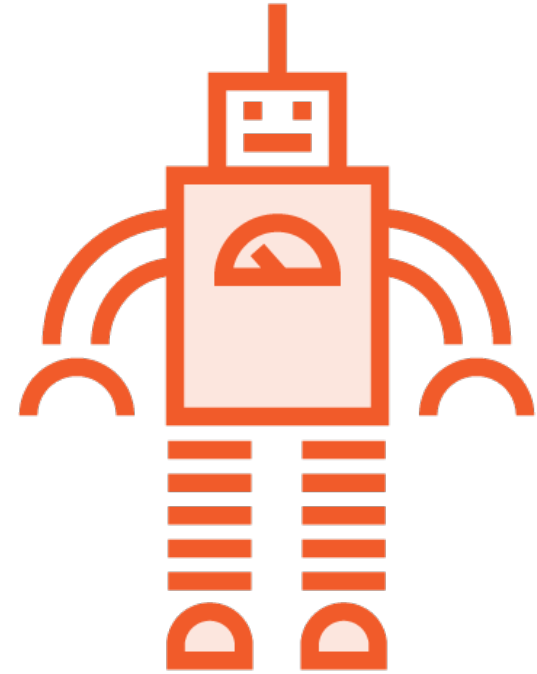


Schema Group Securables

Rule of Least Privilege



Rule of Least Privilege



Audits Made Easy



Up Next



Protecting Sensitive Data with Encryption

