

Homework 20

1. Power BI uses Premium Capacity to handle large datasets by giving dedicated cloud resources, higher storage limits, and faster refresh/performance. It allows models up to 400 GB+ and supports incremental refresh for big data.
2. **Import mode** – Data is **copied into Power BI**, fast performance, supports full modeling.
DirectQuery – Data stays in the **source**, queries run live, slower but always up-to-date.
Live Connection – Connects directly to a **published dataset or Analysis Services**, uses existing model (no local data).
3. **Deployment pipelines** help manage report and dataset versions across environments.
They include **three stages**:
 1. **Development** – build and test content.
 2. **Test** – validate with sample users/data.
 3. **Production** – publish final, live content to users.
4. Power BI Service integrates by:
 - **Embedding reports** directly in **Teams channels or chats** for collaboration.
 - **Adding reports/webparts** to **SharePoint Online pages** so users can view them without leaving SharePoint.
5. The **XMLA endpoint** in Power BI Premium allows **programmatic read/write access** to datasets using tools like SQL Server Management Studio or Tabular Editor.
It benefits developers by enabling **advanced modeling, automation, and enterprise-level dataset management**.
6. **Usage metrics** track how reports and dashboards are viewed (views, users, frequency).
Audit logs record **who accessed or modified content**, helping with **compliance and security monitoring**.
7. In a workspace, assign **roles** to users:
 - **Admin** – full control
 - **Member** – edit and publish content
 - **Contributor** – create/edit content, but can't change workspace settings
 - **Viewer** – read-only access to reports/dashboards

8. Data governance in Power BI Service is enforced through:

- **Row-Level Security (RLS)** for data access control
- **Workspaces & role-based permissions**
- **Data lineage & impact analysis**
- **Usage metrics & audit logs**
- **Certified/dataset endorsement** for trusted data sources

9. **RLS limitations with DirectQuery or Live Connection:**

- Only **role-based filters** defined on source tables are applied.
- **Dynamic RLS** (user-specific filters) often needs configuration at the source.
- Certain **DAX functions** may not work in Live Connection models.
- **Performance** can be slower since each query hits the live source.

10. You can refresh a dataset in Power BI Service using:

1. **Power Automate** – use the “**Refresh a dataset**” action, select the workspace and dataset, then trigger it on a schedule, button, or event.
2. **REST API** – call the **POST**
`https://api.powerbi.com/v1.0/myorg/groups/{groupId}/datasets/{datasetId}/refreshes` endpoint with proper authentication to start a refresh programmatically.