

## 1. How Power BI Handles Large Datasets & Role of Premium Capacity

- **Power BI Pro** supports datasets up to **1 GB per model** and limited refreshes.
- **Premium Capacity** increases limits:
  - Dataset size up to **400 GB**
  - Up to **48 refreshes/day**
  - Enhanced performance with **dedicated compute**
- Premium also enables **AI features**, **paginated reports**, and **large semantic models**.

## 2. Differences: Import Mode, DirectQuery, Live Connection

Mode	Data Stored in PBIX?	Real-time Data?	Pros	Cons
<b>Import</b>	Yes	No	Fastest, best performance	Not real-time, needs refresh
<b>DirectQuery</b>	No (queries source)	Yes	Real-time, smaller file size	Slower, source limitations
<b>Live Connection</b>	No (for SSAS/PBI datasets)	Yes	Centralized models, real-time	No data modeling in PBI Desktop

## 3. Deployment Pipelines in Power BI

Used to promote reports and datasets across environments:

- **Stages:**
  1. **Development**
  2. **Test**
  3. **Production**
- Supports **version control**, **workspace comparison**, and **data source rules** for connection mapping.

## 4. Power BI & Microsoft Teams/SharePoint Integration

- **Teams:**
  - Embed reports in Teams channels
  - Chat about reports in real time
- **SharePoint:**
  - Embed interactive reports via **Power BI web part**
- Enhances **collaboration** without switching platforms

## 5. XMLA Endpoint in Premium

- Allows **read/write** access to Power BI semantic models using **SSMS**, **Tabular Editor**, or **Visual Studio**
- Enables:
  - Advanced modeling
  - CI/CD automation
  - Integration with DevOps pipelines
- **Enterprise-grade modeling** just like SSAS

## 6. Usage Metrics & Audit Logs

- **Usage Metrics:** In-built reports to see report views, active users, favorites, etc.
- **Audit Logs** (via Microsoft 365 Admin Center):
  - Track who viewed, shared, or exported content
  - Useful for **compliance and security**

## 7. Workspace Access & Permissions

- Power BI workspaces support **role-based access**:
  - **Admin:** full control
  - **Member:** edit content
  - **Contributor:** create and edit items
  - **Viewer:** read-only
- Access is managed via **Azure AD groups** or manually by workspace admins.

## 8. Enforcing Data Governance in Power BI Service

- **Sensitivity labels** via Microsoft Purview
- **Data Loss Prevention (DLP)** policies
- **Endorsements** (certified or promoted datasets)
- **Audit logs & activity monitoring**
- **Row-Level Security (RLS) & Object-Level Security (OLS)**

## 9. Limitations of RLS with DirectQuery or Live Connection

- **DirectQuery:** RLS applies, but **performance may degrade** due to real-time filtering.
- **Live Connection** to SSAS:
  - RLS must be handled in **SSAS**, not in Power BI.
  - Power BI cannot override SSAS roles.

## 10. Refresh a Dataset via Power Automate or REST API

### Power Automate:

- Use “**Refresh a dataset**” Power BI connector.
- Trigger refresh on schedule, after file updates, or events.

### REST API:

- Use endpoint:  
POST  
`https://api.powerbi.com/v1.0/myorg/groups/{groupId}/datasets/{datasetId}/refreshes`
- Automate via scripts, DevOps tools, or Azure Functions.