1. How does Power BI handle large datasets in the Online Service, and what is the role of Premium Capacity in this?

- **Large datasets** (over 1 GB) are only supported in **Premium Capacity**, which provides **dedicated resources** (CPU, memory).

- Premium allows:

    o **Dataset sizes up to 400 GB** (with large model support).

    o **Incremental refresh** to handle high volumes efficiently.

    o **Higher refresh frequency** (up to 48/day).

- Without Premium, the dataset size is limited to **1 GB** after compression and only **8 refreshes/day**.

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2. What are the differences between Import mode, DirectQuery, and Live Connection in Power BI Service?

Mode	Description	Data Storage	Performance	Use Case
Import	Data is loaded into Power BI	Stored in Power BI	Fastest (cached)	Best for performance
DirectQuery	Queries sent to source in real-time	No storage	Slower, depends on source	For real-time data
Live Connection	Connects to external models (e.g., SSAS)	No data in Power BI	Fast (delegates all logic)	Corporate tabular models

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3. Explain deployment pipelines in Power BI Online. What stages do they include?

- **Deployment pipelines** automate the **promotion of content** across environments.

- Stages:

    o **Development**: Build and test reports/models.

    o **Test**: Validate and QA in a near-production environment.

    o **Production**: Final stage where content is used by end users.

- Benefits: **Version control**, **consistency**, and **minimal manual errors** in content deployment.

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4. How can Power BI Service integrate with Microsoft Teams or SharePoint for collaboration?

- **Microsoft Teams**:

    o Use the **Power BI app in Teams** to view and share reports.

    o **Embed reports** in channels or chats.

- **SharePoint**:

- Use the **Power BI web part** to embed reports and dashboards directly into SharePoint Online pages.

- Benefits: Seamless collaboration, no need to switch platforms.

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5. What is the XMLA endpoint in Premium and how does it benefit developers or enterprise BI teams?

- The **XMLA endpoint** allows external tools (like SSMS, Tabular Editor, Excel) to connect to Power BI datasets.

- Available in **Premium or PPU**.

- Benefits:

  - Advanced modeling capabilities.

  - Better version control and deployment automation.

  - Integration with DevOps and scripting tools.

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6. Describe how usage metrics and audit logs work in Power BI Service.

- **Usage Metrics**:

  - Built-in reports show **who viewed what**, **when**, and **how often** for dashboards and reports.

- **Audit Logs** (via Microsoft 365 Compliance Center):

  - Tracks detailed activities: sharing, access, export actions, refreshes, etc.

  - Useful for **security auditing** and **compliance tracking**.

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7. How do you manage workspace access and permissions for different users?

- Assign **roles** at the workspace level:

  - **Admin**: Full control.

  - **Member**: Can edit content.

  - **Contributor**: Can add/edit but not publish apps.

  - **Viewer**: Can only view content.

- Use **Azure AD groups** for managing access at scale.

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8. How can data governance be enforced in Power BI Service?

- Key mechanisms:

  - **Sensitivity Labels** (from Microsoft Purview).

  - **Data loss prevention (DLP) policies**.

- o **Endorsement** (Certified/Promoted datasets and dataflows).

- o **Usage monitoring** with audit logs.

- o **Row-Level Security** for access control.

- o **Centralized dataflows** for standardized data prep.

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9. What are the limitations of Row-Level Security when using DirectQuery or Live Connection?

- **DirectQuery**:

  - o RLS is supported, but performance may suffer since every query is sent to the source.

  - o Requires **Single Sign-On (SSO)** for secure data filtering.

- **Live Connection**:

  - o RLS is **defined in the source model** (e.g., SSAS) — Power BI cannot override it.

  - o Cannot define RLS in Power BI Desktop.

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10. Explain how you can refresh a dataset via Power Automate or REST API.

- **Power Automate**:

  - o Use the **Power BI connector** → Action: **"Refresh a dataset"**.

  - o Can be triggered by events (e.g., form submission, scheduled time).

- **REST API**:

  - o Use POST https://api.powerbi.com/v1.0/myorg/groups/{groupId}/datasets/{datasetId}/refreshes.

  - o Requires a registered app and authentication token.

- Both methods are useful for **automation** and **event-driven data workflows**.