What is the difference between Power BI Desktop and Power BI Online Service?

Power BI Desktop is a free, Windows-based application used for building and designing reports, creating semantic models, and performing data transformations. It is mainly for development and authoring purposes. Power BI Online Service, also known as the Power BI Service, is a cloud-based platform where users can publish, share, and collaborate on reports and dashboards. In the Desktop version, users can connect to different data sources, transform data using Power Query, and design visuals. The Online Service allows scheduling of data refresh, sharing with colleagues, managing security, and creating dashboards. Desktop is for building and authoring, while Online Service is for sharing, collaboration, and administration. Reports created in Desktop are published to the Online Service for consumption. Desktop is a development tool, and Service is the distribution platform. The Service also provides governance, workspaces, and licensing features. Together, they complete the Power BI ecosystem workflow from authoring to collaboration.

How do you publish a Power BI report from Desktop to the Online Service?

To publish a Power BI report from Desktop to the Online Service, first save the report as a .pbix file. In Power BI Desktop, click on the Publish button in the Home ribbon. You will be prompted to sign in with your Power BI account credentials. After signing in, you can choose a destination workspace in the Power BI Service. By default, you can publish to your personal workspace or other workspaces you have access to. Once published, the report and its associated dataset are uploaded to the Service. You can then access the report via app.powerbi.com. From there, you can share the report, configure scheduled refresh, and pin visuals to dashboards. Publishing bridges the gap between local authoring in Desktop and cloud collaboration in Service. This workflow allows users to build locally and distribute globally.

What is a workspace in Power BI? What are the types of workspaces available?

A workspace in Power BI is a container for dashboards, reports, datasets, and dataflows. It is the collaboration environment where teams can work together on Power BI content. There are two main types of workspaces: My Workspace and Shared Workspaces. My Workspace is the personal space for an individual user to store and work with their reports. Shared Workspaces, also called App Workspaces, are designed for team collaboration. In a shared workspace, multiple users can contribute to creating and managing content. Workspaces allow role-based access, such as Admin, Member, Contributor, and Viewer. Content in a workspace can later be published as an App for wider distribution. Workspaces are essential for organizing and controlling access to Power BI content. They also enable collaboration, security management, and content lifecycle control.

What is the difference between a workspace and an app in Power BI?

A workspace in Power BI is a collaborative area where reports, dashboards, and datasets are developed and managed by a group of users. An app, on the other hand, is a packaged version of content from a workspace that is published for broader consumption. Workspaces are typically used by report developers and analysts who create and manage content. Apps are intended for business users who consume reports and dashboards. In a workspace, users can edit, collaborate, and refine reports. When ready, the workspace content can be published as an App, which provides a cleaner, read-only experience. Apps allow organizations to distribute content to large audiences in a controlled manner. They also allow updates in the workspace to be republished without disrupting the app users. Thus, the workspace is for collaboration and creation, while the app is for distribution. This separation helps manage content development and consumption effectively.

Explain the different Power BI license types and their limitations.

Power BI offers several license types: Free, Pro, and Premium. The Free license allows individuals to create reports in Power BI Desktop and publish to My Workspace, but sharing is limited. A Pro license enables collaboration, sharing, and use of shared workspaces. Pro is required to share content with other Pro users and to consume shared content. Premium is a capacity-based license that provides dedicated resources, larger dataset sizes, and advanced features like paginated reports and AI. Premium also allows free users to view shared content if it is hosted on a Premium capacity. Pro licenses are per-user, while Premium is purchased at the organizational level. Premium Per User (PPU) is a hybrid option providing Premium features to individual users. The choice of license depends on the organization's size, sharing needs, and performance requirements. Understanding license differences is critical for planning collaboration and scalability.

How can you share a report with someone who doesn't have a Pro license?

To share a report with someone who doesn't have a Pro license, the report must be hosted in a Premium capacity workspace. In this scenario, free users can access shared content without needing a Pro license. If the workspace is not Premium-enabled, then both the sender and recipient must have Pro licenses for sharing. Premium capacity provides organizational-level resources that allow broader sharing. Another option is to export reports as PDF or PowerPoint and share them outside Power BI. However, this approach removes interactivity and dynamic updates. Apps published from Premium capacity workspaces can also be shared with free users. Therefore, Premium is the key to enabling broad distribution without requiring Pro licenses. For enterprises, Premium is often chosen to reduce per-user licensing costs. Sharing strategy must align with license type and organizational needs.

What is a semantic model (dataset) in Power BI, and where is it stored in the service?

A semantic model, also known as a dataset, in Power BI is the data model that includes tables, relationships, measures, and calculated columns. It is the foundation upon which reports and dashboards are built. The dataset transforms raw data into an analytical structure with business logic. In Power BI Service, datasets are stored in the cloud, specifically within the workspace where they are published. Each dataset can support multiple reports that connect to it. Datasets can be refreshed on a schedule if connected to live or imported data sources. They can be managed, secured, and shared with users depending on permissions. Semantic models serve as a single source of truth for consistent analytics. In large organizations, datasets are reused across multiple reports and dashboards. Thus, datasets play a central role in ensuring data integrity and reusability.

How does Scheduled Refresh work in Power BI Online Service?

Scheduled Refresh in Power BI Online Service automates the process of updating datasets with the latest data. It allows you to define specific times and frequencies when the dataset should refresh. For example, you can configure it to refresh daily or multiple times a day. Power BI connects to the underlying data source, retrieves the updated data, and reloads it into the dataset. Scheduled refresh ensures that reports and dashboards always reflect current information. The refresh process depends on data source type and gateway configuration if on-premises. There are limitations on refresh frequency depending on the license type (Pro vs Premium). Failure notifications can be sent if a refresh fails. This feature helps maintain data consistency and reliability in reporting. It is essential for scenarios requiring near real-time insights or frequent updates.

What is the difference between a dataset and a dataflow in Power BI?

A dataset in Power BI is a semantic model that includes imported or connected data, relationships, and measures. It is primarily used for building reports and dashboards. A dataflow, on the other hand, is a collection of tables created and managed in the Power BI Service using Power Query

Online. Dataflows are used for data preparation and transformation, and they can be reused across multiple datasets. Datasets are report-specific, while dataflows are more like ETL pipelines for broader use. Dataflows store data in Azure Data Lake storage, enabling centralized data management. Datasets depend on dataflows or other data sources as inputs. Dataflows promote reusability and consistency in data transformations. Datasets focus on semantic modeling, while dataflows focus on data preparation. Both work together to streamline the reporting process. Organizations use dataflows to avoid duplication of transformation logic across datasets.

When and why would you use a dataflow instead of a dataset?

You would use a dataflow instead of a dataset when you need to centralize and standardize data preparation. Dataflows are beneficial when multiple datasets require the same cleaned or transformed data. By using dataflows, you can apply ETL steps once and reuse them across many reports. This reduces duplication of work and ensures consistency. Dataflows are managed in the Power BI Service, so they are accessible to different teams. They can scale better in enterprise environments by storing data in Azure Data Lake. Datasets are more limited to individual reports or workspaces. Dataflows are preferable for large organizations where data needs to be shared across domains. They also allow better governance and version control of data preparation. In short, use dataflows for reusable transformations, and datasets for modeling and reporting.

What are dashboards in Power BI Online? How are they different from reports?

Dashboards in Power BI Online are single-page canvases that display a collection of visuals pinned from reports. They are designed to provide a high-level overview of key metrics. Reports, in contrast, are multi-page and contain detailed interactive visuals. Dashboards can combine visuals from multiple reports and datasets into one view. Reports are created in Power BI Desktop and then published, while dashboards are created in the Service. Dashboards support features like alerts, Q&A;, and pinning live pages. Reports offer deeper exploration and drill-through capabilities. Dashboards are read-only for consumers, while reports can be more interactive. A dashboard is often considered a summary, while a report is detailed analysis. Both serve different purposes but complement each other in Power BI.

How do you pin a visual to a dashboard from a report?

To pin a visual to a dashboard, first open the report in Power BI Service. Hover over the visual you want to pin and click the Pin icon on the top right corner of the visual. You will be prompted to choose an existing dashboard or create a new one. Once confirmed, the visual will appear as a tile on the selected dashboard. Pinned visuals are snapshots and do not carry all report interactivity. However, they update automatically when the underlying dataset is refreshed. You can pin entire report pages as well as individual visuals. Pinning allows combining content from multiple reports into one dashboard. It is a simple but powerful way to create executive summaries. Pinned tiles can also be resized, moved, or linked back to the report.

What is the mobile view in Power BI and why is it useful?

The mobile view in Power BI is a layout mode optimized for mobile devices. It allows report creators to rearrange visuals specifically for smaller screens. This ensures that reports remain usable and easy to read on phones and tablets. The mobile view does not change the desktop layout but provides an alternative. Users can switch to mobile view when designing reports in Power BI Service. It is useful because business users often access Power BI on mobile apps. Having a tailored mobile experience improves accessibility and adoption. It ensures that key KPIs and visuals are front and center. Mobile view supports interactive capabilities like filters and slicers. Overall, it enhances the usability of Power BI content across devices.

What is a paginated report in Power BI and when would you use it?

A paginated report in Power BI is a report format optimized for printing and exporting. It is pixel-perfect and designed to fit content across multiple pages. Paginated reports are created using Power BI Report Builder. They are ideal for operational reports like invoices, statements, or forms. Unlike interactive Power BI reports, paginated reports are static and structured. They support complex layouts with tables, charts, and images. Paginated reports can handle large amounts of data in a tabular format. They are part of Power BI Premium or Premium Per User features. You would use them when stakeholders need printable documents. They complement interactive reports by serving different reporting needs.

Can you export reports from Power BI Service to PDF or PowerPoint? How?

Yes, reports in Power BI Service can be exported to PDF or PowerPoint. To do this, open the report in the Service and click File > Export. Choose Export to PDF or Export to PowerPoint. In PDF export, each report page is captured as a page in the PDF. In PowerPoint export, each report page is added as a slide. Exported files are static and do not maintain interactivity. This feature is useful for sharing with users who do not have Power BI access. It is also used for presentations and offline review. Scheduled exports can be automated using third-party tools or APIs. Exporting supports distribution in scenarios where interactivity is not needed.

What does 'Live Connection' mean in Power BI Service, and how does it work?

A Live Connection in Power BI means the report directly queries the underlying data source in real time. No data is imported into Power BI; instead, queries are sent to the source each time. This ensures the most up-to-date data is always displayed. It is commonly used with Analysis Services, Azure Analysis Services, or Power BI datasets. Live Connection reports depend on the performance of the underlying data source. Modeling options in Power BI are limited in Live Connection mode. Measures and visuals can still be created, but structural changes are restricted. Security and access are governed by the data source itself. Live Connection provides a single version of truth at the enterprise level. It is useful for centralized, controlled, and large-scale analytics.

Explain Row-Level Security (RLS) and how it’s applied in Power BI Online.

Row-Level Security (RLS) in Power BI restricts data access for specific users based on filters. It allows different users to see different subsets of the same data. RLS is implemented by creating roles and DAX filters in Power BI Desktop. For example, a role can restrict users to only see data for their assigned region. After publishing, roles are enforced in the Power BI Service. Admins assign users to specific roles in the Service. RLS works with both Pro and Premium licenses. It enhances data security by preventing overexposure of sensitive data. Dynamic RLS can use user login information to filter automatically. RLS ensures that the right people see the right data without duplicating reports.

How can you test RLS roles in Power BI Service?

To test RLS roles in Power BI Service, open the dataset settings in the Service. Navigate to Security settings where the roles are defined. Click on the Test as role option to simulate the view of a user in that role. You can also test by entering a specific user email to simulate their access. The Service then shows how the report appears under that role’s filters. Testing ensures the RLS filters work correctly before deploying to users. It is best practice to test both static and dynamic RLS scenarios. Testing helps catch misconfigurations that might expose data incorrectly. Desktop also provides a View as Role feature for testing locally. Always validate roles thoroughly to maintain data security.

What are Apps in Power BI and how do you publish one?

Apps in Power BI are packaged collections of dashboards and reports published from a workspace. They provide an easy way to distribute content to large groups of users. Apps offer a simplified, read-only experience for consumers. To publish an app, you must have Admin or Member rights in a workspace. From the workspace, click Publish App, then configure details like name and description. You can define which users or groups have access to the app. Apps can include multiple dashboards and reports from the workspace. Once published, users install the app from a link or through the Power BI Service. Updates to content in the workspace can be republished to the app. Apps provide a scalable, controlled way to share content across organizations.

What are some key benefits of using the Power BI Online Service in enterprise environments?

The Power BI Online Service offers several benefits for enterprises. It provides centralized access to reports and dashboards in the cloud. It supports collaboration across teams with shared workspaces. Security features like RLS and permissions ensure controlled access. Scheduled refresh keeps reports updated automatically. Premium capacity offers dedicated resources and scalability. Apps allow easy distribution of curated content to business users. Integration with Microsoft 365 and Teams enhances productivity. Mobile access ensures insights are available anywhere. The Service provides governance and compliance capabilities. Overall, it empowers enterprises with secure, scalable, and collaborative analytics.