

Power BI - Administration Role

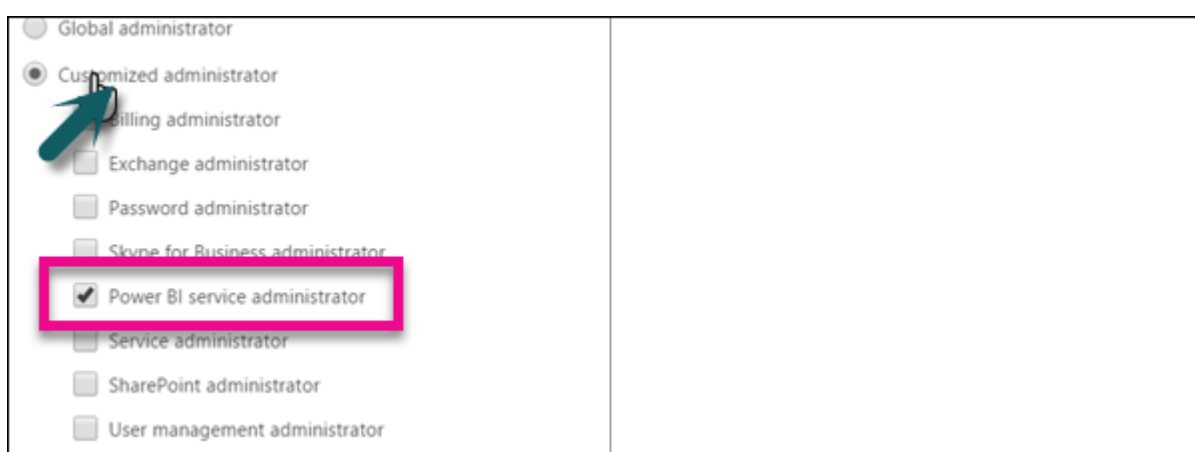
Power BI administration role is assigned to those who require admin privilege on BI Admin portal, without granting Office 365 access.

To provide admin access, navigate to Office 365 Admin Center, select Users and then Active Users.

Navigate to the Roles tab and click the Edit option.



Navigate to the Customized Administrator tab and select Power BI Service Administrator.



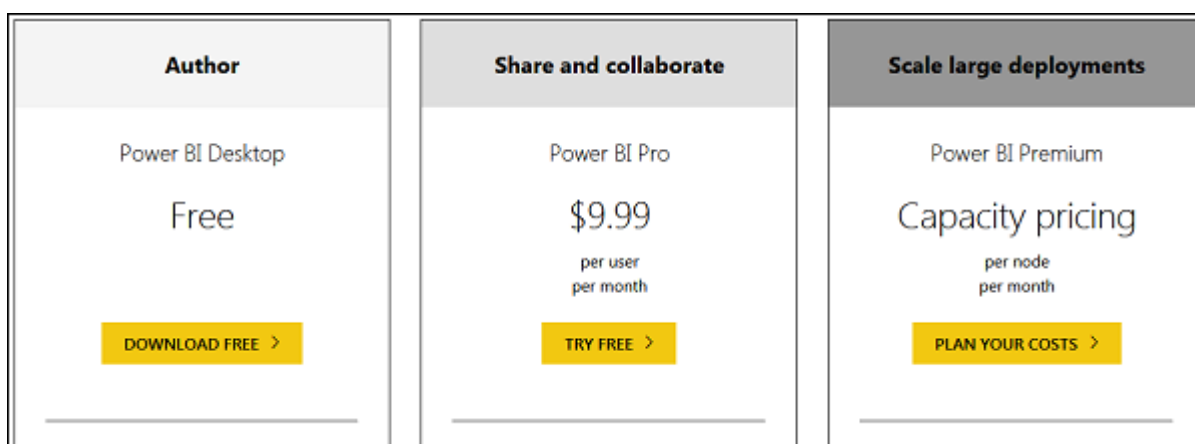
Purchasing

Power BI is a newly designed tool from Microsoft, which consists of the following components –

- Power BI Desktop
- Power BI Service
- Connector Gateway

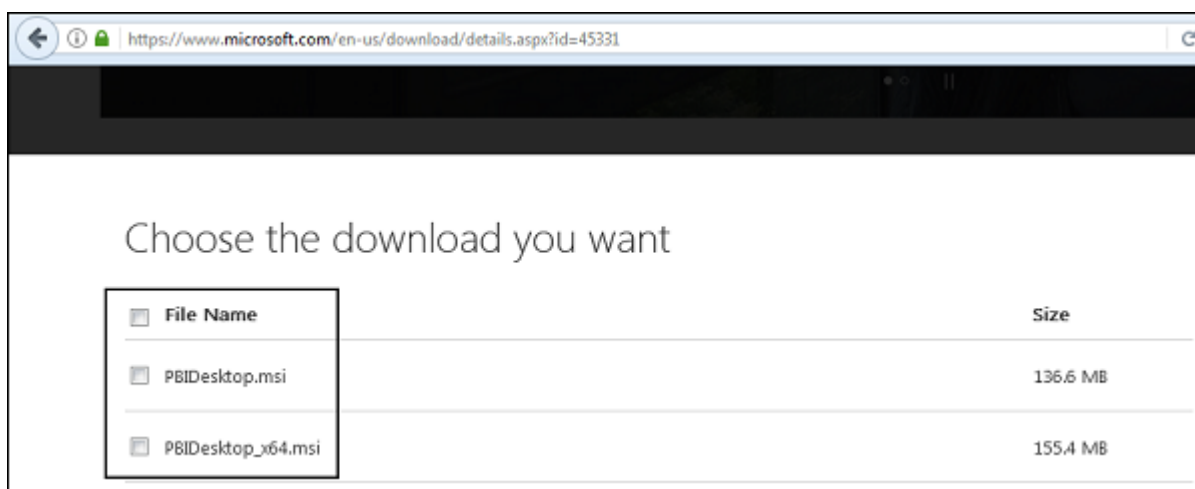
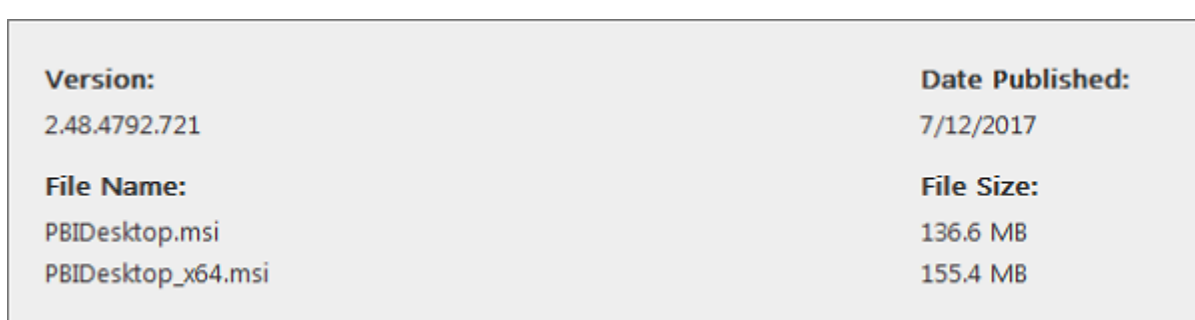
Power BI desktop is a free tool that can be installed from the Microsoft site without any additional cost.

<https://powerbi.microsoft.com/en-us/pricing/>



This is the link to directly download Power BI files –

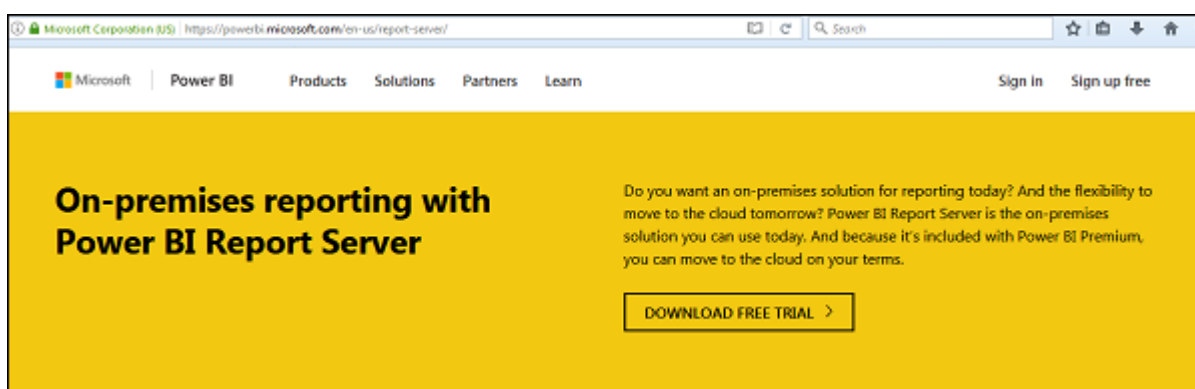
<https://www.microsoft.com/en-us/download/details.aspx?id=45331>



Power BI Pro has 60-days free trial and then it can be purchased for 9.99\$/user/month. Power BI Premium is as per the capacity pricing per node/month.

Power BI also provides on-premise report server, which can be used for publishing a report with the flexibility to move to the cloud environment later.

<https://powerbi.microsoft.com/en-us/report-server/>



A trial version is also available for Power BI Pro Report Server and as per the company website - Power BI Report Server provides access to data and insights, and the enterprise reporting capabilities of SQL Server Reporting Services in a modern, on-premises solution.

It assists in visually exploring data and quickly discovering patterns to make better, faster decisions. At the same time, it generates precisely formatted reports based on the business needs. You'll also be able to confidently scale to thousands of users as Power BI Report Server is based on a proven, enterprise-grade platform.

REST API

In Power BI, it is also possible to push data in real time using REST APIs. With Power BI REST API, you can create data sets, dashboards, add and delete rows and get groups.

A Power BI REST API can be created using any of the following technologies –

- .NET
- JQuery
- Ruby

To authenticate Power BI, you need to get an Azure Active Directory token and this can allow your app to access Power BI dashboards.

Following is the C# code to get an authorization code from Azure AD in Power BI service.

```
protected void signInButton_Click(object sender, EventArgs e)
{
    //Create a query string
    //Create a sign-in NameValueCollection for query string
    var @params = new NameValueCollection
    {
        //Azure AD will return an authorization code.
        //See the Redirect class to see how "code" is used to AcquireTokenByAuthorizationCode
        {"response_type", "code"},

        //Client ID is used by the application to identify themselves to the users that they are
        //You get the client id when you register your Azure app.
        {"client_id", Properties.Settings.Default.ClientID},

        //Resource uri to the Power BI resource to be authorized
        // https://analysis.windows.net/powerbi/api
        {"resource", Properties.Settings.Default.PowerBiAPI},

        //After user authenticates, Azure AD will redirect back to the web app
        {"redirect_uri", "http://localhost:13526/Redirect"}
    };

    //Create sign-in query string
    var queryString = HttpUtility.ParseQueryString(string.Empty);
    queryString.Add(@params);

    //Redirect authority
    //Authority Uri is an Azure resource that takes a client id to get an Access token
    // AADAuthorityUri = https://login.windows.net/common/oauth2/authorize/
    string authorityUri = Properties.Settings.Default.AADAuthorityUri;
    var authUri = String.Format("{0}?{1}", authorityUri, queryString);
    Response.Redirect(authUri);
}
```

Security

Azure Active Directory (AAD) authentication is used in Power BI when a user authenticates using Power BI service. Power BI login credentials can be an email account used by users to set up their BI account and is an effective username.

Power BI provides security level used by Azure cloud that includes the following level of security –

- Multitenant Environment Security
- Networking Security
- AAD based Security

For data storage, there are two different repositories used in Power BI –

- Azure BLOB
- Azure SQL Database

Azure BLOB storage is used for data uploaded by users and Azure SQL database is used to store system data. Power BI security is mostly based on data and network security features available in Azure cloud and authentication is also based on Azure AD.