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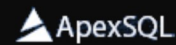
How to connect to (and query) Power BI and Azure using PowerShell
September 13, 2017 by Craig Porteous

Power BI "as a whole" is a bit of a black box. If you're like me and used to using SQL Server & its components; SSRS, SSAS etc. you have access to installation directories, Event logs, trace logs, error logs, chocolate logs? You can see full instances & their contents in one go, whether that be databases, reports or cubes. It gives you the control over & responsibility for performance & maintenance. Working with Power BI, like most cloud based services is a whole different game. You need to relinquish the control to Microsoft & make do with limited monitoring & performance analysis. I've detailed in a previous article that you can get more information out of the On-Premises data gateway to better understand how Power BI is getting along with your own data sources, bridging the gap between your "kit" and Microsoft's. In this article, I want to cover what we can get out of the cloud service itself using PowerShell. What we can see & what we can change. Unless you are already an Azure or Power BI admin you won't really have an accurate picture of licensing or workspaces, report & dashboard usage in your organization. There are a few methods to get information out of Power BI using PowerShell and you don't need to be an admin to use any of them. Interestingly, as some of the methods connect through Azure & due to the way Power BI is managed, you can get full visibility of things like licensing & workspaces tenant-wide which are handy! There are 3 main methods to connect to Power BI & Azure using PowerShell:

- MSOnline
- AzureAD
- Power BI REST API

MSOnline is the first set of modules to connect to Azure AD. These are now being deprecated. Microsoft considers these version 1 of the Azure PowerShell modules & wants everyone to move to the new AzureAD modules. There is no set date to deprecate MSOnline so you can still use it if you find it easier to work with but I'll compare both later. The things you can do within Power BI using each method varies with the API method being the most powerful. You can achieve the same thing with both versions of the PowerShell modules, however. Here's a detailed comparison of each method:

	msOnline	AzureAD	Power BI API
User & Tenant Licenses	☑	☑	

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Leonardo Villarroel Cubillos • 2 years ago

Hi Craig:

Excelent and complete article. Do you happen to know if there's a method on the APi to get apps published from a workspace?, including the audience defined for it?.

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Leonardo Villarroel Cubillos • 2 years ago

Hi Craig:

Is the a way to pull the apps published on a workspace and the users that has been granted access to it using the methods you have used in the examples above?.

Many thanks in advance.
Leo.

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Craig ↱ Leonardo Villarroel Cubillos • 2 years ago

Hi Leonardo, Sorry for the delay in getting back to you. I don't believe there is a way
to get App information through the API at present. Here is the reference