|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Method** | **Scopes** | **Client / Tenant ID** | **Unattended** | **AAD App configuration** | **Token refresh** |
| Device-code logon (default) | Selected via **-Scopes** parameter,  or via **Set**-**GraphConnectionOptions**  (in AuthSettings.PS1). Consent dialog. | Always Microsoft Graph PowerShell Tenant optional | No | Always uses Microsoft Graph PowerShell. (Consent may be pre-approved) | Inside. Authentication module  (refresh token saved) |
| Username/Password  (**-Credential**) | Must be assigned to app  (scopes option ignored) | Any client, Tenant required | Yes (if credentials available) | Well known or registered app (consent must be granted) | Inside PlusPlus module  (refresh token not saved) |
| As App (**-AsApp**)  (using app secret) | Must be assigned to app (scopes option ignored) | Registered App & Tenant required | Yes | Registered app, with secret (consent must be granted) | Inside PlusPlus module  (refresh token not saved) |
| As App (**-Certxxx**) (using app certificate) | Must be assigned to app (scopes option ignored) | Registered App & Tenant required | Yes (if certificate & private key available) | Registered app, with cert (consent must be granted) | Inside. Authentication module (no refresh token) |
| Existing Azure Session (**-FromAzureSesion**) | Fixed | Always Microsoft Azure PowerShell | Yes (if Azure logon is unattended) | None | Inside PlusPlus module.  (no refresh token) |
| Custom Token (-**Token**) | Grant method dependent | Grant method dependent | Grant method dependent | Grant method dependent | Manual |

For details of certificate configuration see <https://docs.microsoft.com/en-us/graph/powershell/app-only>.   
This page also gives a useful guide to creating the app for use with secrets, simply skip the creation of the certificate and at the step “Select Certificates & secrets under Manage, select ….“ select the add secret button instead of the Upload certificate button”. For Registered apps the ID (and secret if required)

**Connect-Graph** in the Microsoft.Graph.PlusPlus module is a wrapper for the **Connect-MgGraph** cmdlet from the Microsoft.Graph.Authentication module to add the following:

* Automatic requesting of the same set of scopes for each session
* Logging on with user credentials
* Logging on as the app using a secret
* Using an existing Azure PowerShell session (with the Az.Accounts module)
* Caching of extra account information for performance
* Confirmation of the account used to logon.

If you only use interactive device-code logon or app logon using certificates, or you create tokens in your own code , you are free to go directly to **Connect-MgGraph**.