

# PSBlueSky Help<sup>1</sup>

<https://jdhitsolutions.github.io>

v2.0.0

<sup>1</sup><https://github.com/jdhitsolutions/PSBluesky>

# Contents

<b>PSBluesky</b>	<b>2</b>
Installation . . . . .	2
Authentication . . . . .	4
Session and Tokens . . . . .	4
Credentials . . . . .	5
Rate Limits . . . . .	5
Posting . . . . .	5
Profiles . . . . .	6
Followers . . . . .	7
Searching for Users . . . . .	8
Following . . . . .	10
Feed . . . . .	11
Timeline . . . . .	12
Notifications . . . . .	12
Information and Troubleshooting . . . . .	13
Other Module Features . . . . .	14
Type Extensions . . . . .	14
Custom Verbose Messaging . . . . .	14
Roadmap . . . . .	15

# PSBluesky



This module is a set of PowerShell functions designed to let you interact with Bluesky API from PowerShell. Technically, the module commands are wrappers around the [atproto protocols](#). The module is written for **PowerShell 7**, although it might work as written in Windows PowerShell with minimal changes if you wish to fork the GitHub repository. Commands *have not* been thoroughly tested for cross-platform compatibility.

The commands in the module are **not** intended to provide complete coverage of the Bluesky API. Instead, the module focuses on the most common tasks you might want to do with Bluesky from a PowerShell prompt.

For best results, you should run this module in a PowerShell console that supports emojis and ANSI formatting like Windows Terminal.

## Installation

You can install the module from the PowerShell Gallery.

```
Install-Module -Name PSBluesky
```

Or using Install-PSResource from the [Microsoft.PowerShell.PSResourceGet](#) module.

```
Install-PSResource -Name PSBluesky -Repository PSGallery -TrustRepository
```

You might want to also install the following modules or related modules to securely store your Bluesky credentials:

- [Microsoft.PowerShell.SecretManagement](#)
- [Microsoft.PowerShell.SecretStore](#)

After installing this module, you should end up with these PSBluesky commands:

- [Add-BskyImage](#)
- [Find-BskyUser](#)
- [Get-BskyFeed](#)
- [Get-BskyFollowers](#)
- [Get-BskyFollowing](#)
- [Get-BskyModuleInfo](#)
- [Get-BskyNotification](#)
- [Get-BskyProfile](#)
- [Get-BskySession](#)
- [Get-BskyTimeline](#)
- [New-BskyPost](#)
- [Open-BskyHelp](#)
- [Start-BskySession](#)
- [Update-BskySession](#)

After importing the module you can run `Open-BskyHelp` which will open a PDF version of this document in the default application associated with PDF files. Or you can use the `-AsMarkdown` parameter to read this file using markdown formatting. Not all markdown features may properly render in the console.

You can use `Get-BskyModuleInfo` to get a summary of the module. The default output includes clickable links to online command help and the module's GitHub repository.

```
PS C:\> Get-BskyModuleInfo
```

```
Module: PSBlueSky [v2.0.0]
```

Name	Alias	Synopsis
Add-BskyImage		Upload an image to Bluesky
Find-BskyUser	bsu	Search <a href="#">for</a> Bluesky user accounts
Get-BskyFeed	bsfeed	Get your Bluesky feed
Get-BskyFollowers	bsfollower	Get your Bluesky followers
Get-BskyFollowing	bsfollow	Get a list of Bluesky accounts ...
Get-BskyModuleInfo		Get a summary of the PSBlueSky ...
Get-BskyNotification	bsn	Get Bluesky notifications.
Get-BskyProfile	bsp	Get a Bluesky profile
Get-BskySession		Show your current Bluesky session.
Get-BskyTimeline	bst	Get your Bluesky timeline
New-BskyPost	skeet	Create a Bluesky post

Open-BskyHelp	bshelp	Open the PSBluesky help document
Start-BskySession		Start a new Bluesky session
Update-BskySession	Refresh-BskySession	Refresh the Bluesky session token

## Authentication

### Session and Tokens



In order to send data, you must authenticate. Version 2.0.0 of this module introduces a new session model. After you import the module, you **must run** `Start-BskySession` to initialize the module and setup module-scoped variables.

```
Start-BskySession -credential $cred
```

The credential should be a `PSCredential` object representing your Bluesky username (handle) and password.

This command will create a hidden session object that will be called from other module commands to get the necessary authentication token for the `Invoke-ResetMethod` header. The access token has a limited lifetime unless it is refreshed. Beginning with version 1.2.0, the module will refresh the token every 15 minutes through a background runspace using a synchronized hashtable. If you remove the module, the runspace will be removed as well.

Run `Get-BskySession` to see your current session information.

```
PS C:\> Get-BskySession
```

```
User: jdhitsolutions.com
```

Active	AccessToken	RefreshToken	Age
-----	-----	-----	---
True	eyJ0eXAiOiJhdCtqd3Qi ...	eyJ0eXAiOiJyZWZyZXNo ...	00:05:41.5115796

If you want to manually test the Bluesky API in your own code, you can use the access and refresh token properties from this object.

```
PS C:\> $bskySession = Get-BskySession
PS C:\> $access = $bskySession.AccessToken
PS C:\> $refresh = $bskySession.RefreshToken
```

However, it is still possible you will encounter an expired token error message. If you do, you can run `Update-BskySession` to refresh the token.

```
Get-BskySession | Update-BskySession
```

If this also fails, remove the module, re-import and start a new Bluesky session, including re-running `Start-BskySession`.

## Credentials

You will need to create a `PSCredential` object with your Bluesky username and password. **The username is case-sensitive.** For automation purposes, you can use the Secrets management module to store your credential. Write your own code to retrieve the credential and pass it to the module commands.

You might want to use `PSDefaultParameterValues` to set the credential for all commands.

```
$PSDefaultParameterValues['*-Bsky*:Credential'] = $BlueskyCredential
```

You should only need this credential for `Start-BskySession`.

## Rate Limits

The commands in this module use the public Bluesky API which means there are [rate limits](#). If you exceed the rate limit, you will get an error message. You will need to wait until the rate limit resets.



There is a rate limit of 300 new sessions per day. This shouldn't be an issue for most people unless you are testing code or running some sort of high-volume automation.

## Posting



Use `New-BskyPost`, or its alias `skeet`, to post a message to Bluesky. There are parameters to include an image. If you include an image, the `New-BskyPost` command will call `Add-BskyImage` to upload the image. It is strongly recommended that you included ALT text for the image.

```
$param = @{
    Message      = "Getting close to sharing my #PowerShell Bluesky code."
    ImagePath    = "C:\work\MsPowerShell.jpg"
    ImageAlt     = "Ms. PowerShell"
    Verbose      = $true
}
New-BskyPost @param
```

The output is a URL to the post.

If your message contains a URL, it will be converted to a clickable link. Make sure your link is surrounded by white space. Beginning with v1.0.0, you can post Markdown style links.

```
PS C:\> $m = "Testing multiple Markdown style links from my [#PowerShell PSBluesky module](https://github.com/jdhitsolutions/PSBluesky) which you can find on the [PowerShell Gallery](https://www.powershellgallery.com/packages/PSBlueSky/0.6.0)"
PS C:\> skeet $m
```

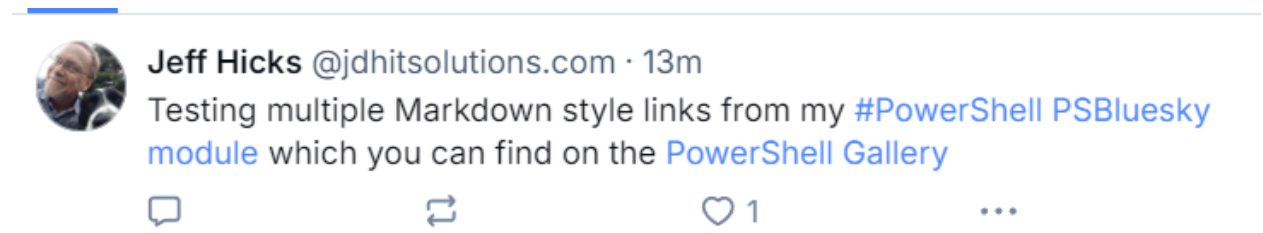


Figure 1: Markdown links in a Bluesky post

This example is using the skeet alias for New-BskyPost.

## Profiles

The module has a command to retrieve a Bluesky profile.

```
Get-BskyProfile jdhitsolutions.com
```

The module uses a custom format file.

The user's profile name should be a clickable link.

The object has been customized with aliases and script properties.

```
PS C:\> $jeff = Get-BskyProfile
PS C:\> $jeff | Select-Object *
```

Username	: jdhitsolutions.com
Display	: Jeff Hicks
Created	: 5/21/2023 10:44:48 AM
Description	: PowerShell Author/Teacher/MVP/Guide ☐ Prof. PowerShell Emeritus ☐ Grizzled and grumpy IT Pro - https://jdhitsolutions.github.io/ ☐Amateur composer - https://musescore.com/user/26698536 Wine drinker ☐☐ and dog lover
Avatar	: https://cdn.bsky.app/img/avatar/plain/did:plc:ohgsqpfsbocaaxusxqlgfvd7/

```
PS C:\> Get-PSBlueskyProfile jdhitsolutions.com

Jeff Hicks [jdhitsolutions.com]

PowerShell Author/Teacher/MVP/Guide 🍷
Prof. PowerShell Emeritus 🦉
Grizzled and grumpy IT Pro - https://jdhitsolutions.github.io/
🎵 Amateur composer - https://musescore.com/user/26698536
Wine drinker 🍷🐶 and dog lover

Created                Posts Followers Following Lists
-----                -
5/21/2023 2:44:48 PM   533      317      172      0
```

Figure 2: A Bluesky user profile

```
bafkreifdfahcjmytu3iw2aj2d3howu6q7twkta3h23qmlve2d2mvo5sily@jpeg
Posts      : 734
Followers  : 1267
Following   : 319
Lists      : 1
URL         : https://bsky.app/profile/jdhitsolutions.com
DID        : did:plc:ohgsqpfsbocaaxusxqlgfv7
Name       : jdhitsolutions.com
Age        : 547.02:06:27.3639712
```

## Followers

You can retrieve a list of your followers. You can specify a number of followers between 1 and 100. The default is 50.

```
Get-BskyFollowers -Limit 2
```

```
PS C:\> Get-PSBlueskyFollowers -Limit 2

Display      Username      Description
-----      -
Jonathan Lank jpluk.bsky.social
Libby Brown   trubludevil.social Product manager @ SpruceID. Mom. Digital Wallet and Passl
```

Figure 3: Bluesky followers



The custom formatting includes a clickable link to the follower's profile if running in Windows Terminal or a console that supports hyperlinks.

You can pipe the follower object to `Get-BskyProfile` to retrieve more information.

```
PS C:\>$f= Get-BskyFollowers
PS C:\> $f[12] | Get-BskyProfile
```

Jess Pomfret [[jpomfret.bsky.social](https://jpomfret.bsky.social)]

Database Engineer with a passion for automation, proper football and fitness. She/Her.

Created	Posts	Followers	Following	Lists
8/14/2023 3:58:44 PM	125	236	157	1

The default behavior is to retrieve between 1 and 100 followers. Or you can use the `-All` parameter to retrieve all followers.

## Searching for Users

You can search for Bluesky users with `Find-BskyUser`. The default behavior is to search for a user by name. The search is case-insensitive

```
Find-BskyUser -UserName "jeff h" -Limit 3
```

The default output includes clickable links to the user's profile. This object too has been customized with aliases and script properties.

```
PS C:\> Find-BskyUser -UserName "jeff h" -Limit 2 |
Select-Object *Name,Description,Created,Age
```

```
DisplayName : F-O Loignon
UserName    : foloignon.bsky.social
Description : « Un p'tit gosseux » - MBC
            « Une caricature » - H. Buzetti
            « L'osti de tapette communiste woke » - Un pirate

            Je suis pas mal l'amalgame de tout ce que Jeff Fillion haït :
            prof, artiste, écolo, socialiste, LGBT, féministe, antiraciste,
            intello, etc.
Created     : 10/5/2023 8:09:28 PM
Age         : 409.16:46:04.9286865
```

```

Username: F-O Loignon [foiloignon.bsky.social]

Created      Description
-----
10/5/2023 8:09:28 PM « Un p'tit gosseux » - MBC
                  « Une caricature » - H. Buzetti
                  « L'osti de tapette communiste woke » - Un pirate

                  Je suis pas mal l'amalgame de tout ce que Jeff Fillion haït
                  : prof, artiste, écolo, socialiste, LGBT, féministe,
                  antiraciste, intello, etc.

Username: Jeff H [hershalltheway.bsky.social]

Created      Description
-----
9/22/2023 12:28:34 PM Writer-ish. Love collecting toys, mortal Kombat, horror
                  movies, and big butts (respectfully) (derogatory)

Username: Jeff H [capn-thundersleet.bsky.social]

Created      Description
-----
4/4/2024 11:11:39 AM Software exec, permaculturist, cat-friend, and amateur chef

```

Figure 4: Bluesky user search

```

DisplayName : Jeff H
UserName    : jeffhechtaz.bsky.social
Description  : Phoenix, AZ ~ Copywriter by day ~ Musician by night ~ Bass
              (the instrument, not the fish) ~
              Proud Liberal ~ Commanders football ~ F1 ~ #BassGuitar ~
              #RaiseHail ~ #ScuderiaFerrari
              ~ #VoteBlue ~
Created      : 11/11/2024 1:05:34 PM
Age          : 6.23:49:58.3306295

```

The value you specify for the user name will also search the user's description property. This is a handy way of finding users with similar interests.

```
Find-BskyUser powershell
```

You can pipe the search results to Get-BskyProfile to retrieve more information.

```

PS C:\> $p = Find-BskyUser powershell -Limit 10
PS C:\> $p | Get-BskyProfile

```

```
Chrissy LeMaire [funbucket.dev]
```

```

Username: Dave Carroll [thedavecarroll.com]

Created          Description
-----
4/29/2023 6:52:59 AM #PowerShell #Developer and enthusiast with a side of
                    #DevOps, #Python, infrastructure, and #RetroComputing.
                    Lifelong #cinophile and #punster.

                    #Aspie #INTJ #9w1
                    He/Him

                    https://thedavecarroll.com

Username: Sandro [kharec.info]

Created          Description
-----
7/24/2023 3:46:02 AM F R /U S SysOps turned #DevOps 🧑🏻‍💻
                    Python/Go/C++/Perl developer 🎧 JSON/YAML/HCL lover 🇸🇪
                    Bash/PowerShell eater 🐙 repressed DBA ⚙️ pop culture nerd
                    📺 📺 📺 📺 📺

Username: Frode [frodeflaten.com]

```

Figure 5: Find Bluesky users via their description

Dual Microsoft MVP, GitHub Star, creator of dbatools, author  
<http://dbatools.io/book> ☐☐

Totally into PowerShell, SQL Server and AI.

☐ North of France

Created	Posts	Followers	Following	Lists
4/24/2023 12:12:00 PM	688	1435	614	0
...				

## Following

Likewise, you can get a list of all the accounts you are following.

```
Get-BskyFollowing -limit 3
```

As with followers, the default behavior is to retrieve between 1 and 100 accounts you are following. Or you can use the `-All` parameter to retrieve all accounts you are following.

```
PS C:\> get-bskyFollowing -limit 3
```

Display	Username	Description
Kevin Cunningham	<a href="#">dolearning.dev</a>	Developer educator   Helping dev teams keep their JS/TS, Python and PHP sharp (sometimes Java and Golang too)  <a href="https://kevincunningham.co.uk">https://kevincunningham.co.uk</a>
Richard M. Hicks Last Week Tonight with John Oliver UPDATE	<a href="#">richardhicks.com</a> <a href="#">lastweektonight1.bsky.social</a>	📍 Northern Ireland / video / info / resources / Last Week Tonight with John Oliver ~ unaffiliated

Figure 6: Bluesky following

## Feed

Use Get-BskyFeed to retrieve the latest posts from *your* feed. You can query for 1 to 100.

```
Get-BskyFeed -Limit 3
```

The default output uses a custom format file. The current behavior is to get posts and replies.

```
PS C:\> Get-PSBlueskyFeed -Limit 3
```

Jeff Hicks [[jdhitsolutions.com](#)]

*Getting close to pushing an update to my #PoewrShell bluesky module*

Date	Liked	Replied	Reposted	Quoted
10/27/2024 1:43:06 PM	0	0	0	0

Jeff Hicks [[jdhitsolutions.com](#)]

*Adding help documentation to my Bluesky #PowerShell module.*

Date	Liked	Replied	Reposted	Quoted
10/27/2024 1:12:18 PM	1	0	0	0

Jeff Hicks [[jdhitsolutions.com](#)]

*I'm using the #PowerShell InformationVariable to store the raw response from the Bluesky API.*

Date	Liked	Replied	Reposted	Quoted
10/27/2024 12:05:15 PM	1	0	0	0

Figure 7: Getting your Bluesky feed

The formatted output includes clickable links to the the author, which might be

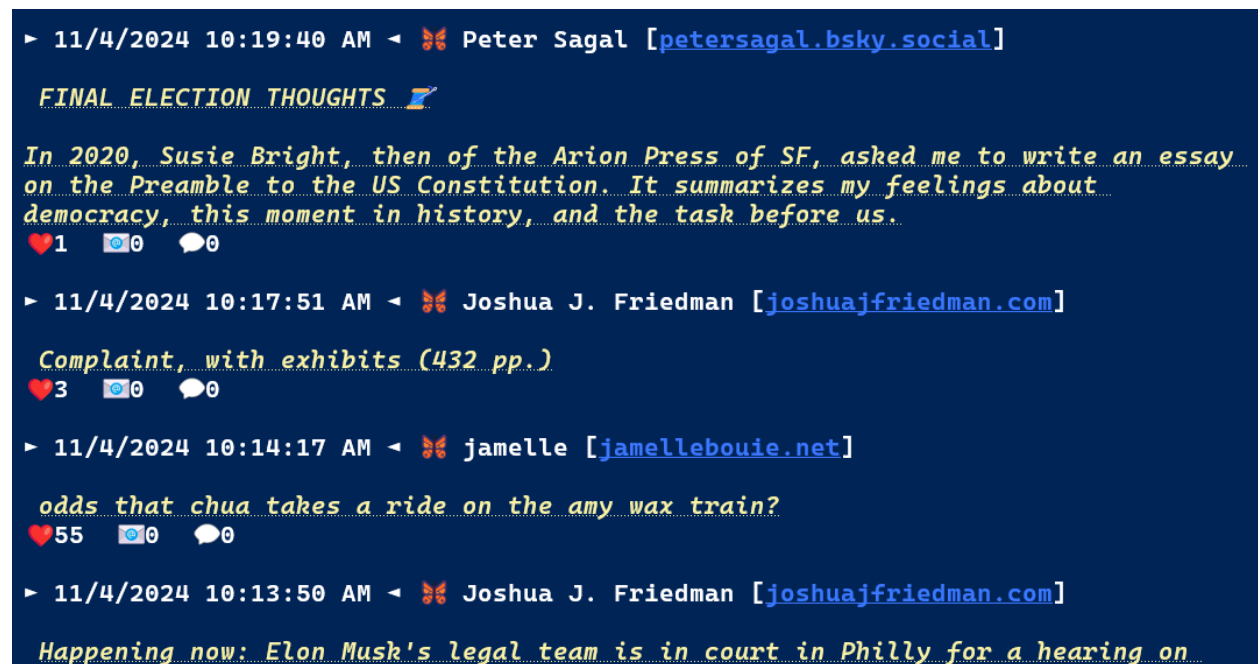
different than you if reposting, and the post. For best results, run PowerShell 7 in Windows Terminal.

## Timeline

If you want to view items from your timeline, use the `Get-BskyTimeline` command. You can specify a limit of 1 to 100. The default is 50.

```
Get-BskyTimeline -Limit 25
```

The command uses a custom format file.



```
> 11/4/2024 10:19:40 AM < 🦋 Peter Sagal [petersagal.bsky.social]
FINAL ELECTION THOUGHTS 📄
In 2020, Susie Bright, then of the Arion Press of SF, asked me to write an essay
on the Preamble to the US Constitution. It summarizes my feelings about
democracy, this moment in history, and the task before us.
❤️1 🗨️0 💬0
> 11/4/2024 10:17:51 AM < 🦋 Joshua J. Friedman [joshuaajfriedman.com]
Complaint, with exhibits (432 pp.)
❤️3 🗨️0 💬0
> 11/4/2024 10:14:17 AM < 🦋 jamelle [jameliebouie.net]
odds that chua takes a ride on the amy wax train?
❤️55 🗨️0 💬0
> 11/4/2024 10:13:50 AM < 🦋 Joshua J. Friedman [joshuaajfriedman.com]
Happening now: Elon Musk's legal team is in court in Philly for a hearing on
```

Figure 8: Getting your Bluesky timeline

The default formatted output includes clickable links to the author and the post.

## Notifications

You can retrieve your notifications with `Get-BskyNotification`. You can specify a limit of 1 to 100. The default is 50.

```
Get-BskyNotification -limit 10
```

The default formatted output includes clickable links to the author and the liked or reposted skeet. Long account names will be truncated in the formatted output.

Date	Account	Subject
11/13/2024 1:36 PM	→ <a href="#">mscommunity.bsky.social</a>	
11/13/2024 1:24 PM	→ <a href="#">Oscar</a>	
11/13/2024 1:18 PM	→ <a href="#">dirteam.bsky.social</a>	
11/13/2024 1:04 PM	→ <a href="#">Hoang Chu</a>	
11/13/2024 1:01 PM	👍 <a href="#">Madhu PERERA</a>	<u>I have published v1.2.0 of the PSBluesky module to the #PowerShell Gallery. Run Open-BskyHelp to read the help PDF</u>
	Like	
	follow	
11/13/2024 12:54 PM	→ <a href="#">medford</a>	
11/13/2024 12:48 PM	→ <a href="#">tysonro.bsky.social</a>	
11/13/2024 12:17 PM	→ <a href="#">sqljuju.bsky.social</a>	
11/13/2024 11:47 AM	👍 <a href="#">Mark Oldham</a>	<u>I'm on track to double my follower count in one week. I don't think I ever had this type of engagement in the upside down. Thank you.</u>
	links	
11/13/2024 11:38 AM	→ <a href="#">martyntolley.bsky.social</a>	

Figure 9: Getting your Bluesky notifications

- 👍 Like
- → Follow
- ↺ Repost
- ↻ Reply

## Information and Troubleshooting

The commands in this module should write the raw response from the API request to the Information stream. Some commands might include additional information.

```
![Information stream](images/bsky-information.png)
```

The output will be an object.

```
```powershell
PS C:\> $v.MessageData | Select-Object did,handle,*count

did           : did:plc:ohgsqpfsbocaaxusxqlgfv7
handle        : jdhitsolutions.com
followersCount : 322
```

```
followsCount    : 177
postsCount      : 543
```

You might want to set a default parameter value.

```
$PSDefaultParameterValues['*-*Sky*:InformationVariable'] = "iv"
```

## Other Module Features

### Type Extensions

You are encourage to pipe command results to Get-Member to discover additional properties you might find useful.

```
PS C:\> Get-BskyProfile thedavecarroll.com |
Format-List Name,Description,Created,Age

Name           : thedavecarroll.com
Description    : #PowerShell #Developer and enthusiast with a side of #DevOps,
                #Python, infrastructure, and
                #RetroComputing. Lifelong #cinophile and #punster.

                #Aspie #INTJ #9w1
                He/Him

                https://thedavecarroll.com
Created        : 4/29/2023 6:52:59 AM
Age            : 569.04:06:51.6915207
```

### Custom Verbose Messaging

This module uses ANSI formatting with localized string data and customized verbose messaging.

```
PS C:\> $f = Get-BskyFeed -Limit 10 -Verbose
VERBOSE: [10:31:47:2888 BEGIN ] Get-BskyFeed-> Starting PSBluesky module command
VERBOSE: [10:31:47:2891 BEGIN ] Get-BskyFeed-> Running under PowerShell version 7.4.6
VERBOSE: [10:31:47:2892 BEGIN ] Get-BskyFeed-> Using PowerShell Host ConsoleHost
VERBOSE: [10:31:47:2894 BEGIN ] Get-BskyFeed-> Running under Operating System Microsoft Windows 10.0.26100
VERBOSE: [10:31:47:2895 BEGIN ] Get-BskyFeed-> Using module PSBluesky version 2.0.0
VERBOSE: [10:31:47:2898 PROCESS] Get-BskyFeed-> Querying 10 feed items for jdhitsolutions.com
VERBOSE: [10:31:47:2899 PROCESS] Get-BskyFeed-> https://bsky.social/xrpc/app.bsky.feed.getAuthorFeed?actor=did:plc:ohg
sppfsbocaaxusxqlgfvd7&limit=10&filter=posts_with_replies
VERBOSE: Requested HTTP/1.1 GET with 0-byte payload
VERBOSE: Received HTTP/1.1 response of content type application/json of unknown size
VERBOSE: Content encoding: utf-8
VERBOSE: [10:31:47:8473 END ] Get-BskyFeed-> Ending PSBluesky module command
PS C:\>
```

Figure 10: Custom verbose messaging

# Roadmap

I have a short list of items on my wish list:

- Add support posting multiple images
- Add support for posting video
- Add commands to work with direct messages, aka chat
- Maybe create a TUI-base reader for your timeline

If you are testing the module and think you've found a bug, please post an **Issue**. For all other topics and questions, including feature requests, please use the repository's **Discussions** section. I am open to pull requests if you have a feature you'd like to add. I especially would love to see the Pester tests expanded and the pending tests completed.

**Note:** You can find me on Bluesky as [jdhitsolutions.com](https://jdhitsolutions.com).