![DSInternals Logo](DSInternals.png)

# Contributing to the Project

## How can I contribute?

Any contributions to this project are warmly welcome. These are the most important areas:

- Bug reports

- Feature requests

- Testing the module against different Active Directory configurations

- Documentation

\* PowerShell help

\* XML documentation comments in the source code

- Code

\* Bug fixes

\* New features

\* Test cases

\* Code cleanup (StyleCop, FXCop, String to Resource extraction,...)

## Submitting Bug Reports

When submitting a [new bug report](https://github.com/MichaelGrafnetter/DSInternals/issues), please do not forget to mention the version of the target domain controller. The following information would also be very useful:

```powershell

# The entire command that caused the error

Get-History

# Error message

$Error[0].Exception.Message

# The entire exception stack trace

$Error[0].Exception.StackTrace

# Version of the DSInternals module

(Get-Module -Name DSInternals -ListAvailable).Version.ToString()

# OS on which the command was running

(Get-WmiObject -Class Win32\_OperatingSystem).Caption

# PowerShell version

$PSVersion

# Anything else that might help identifying and fixing the issue

```

## Building from Source Code

### Development Environment

If you want to build the module from source code yourself, you need to install these programs first:

- [Microsoft Visual Studio Community](https://www.visualstudio.com/en-us/products/visual-studio-community-vs.aspx) 2015, 2017 or 2019 with these features installed:

\* Common Tools for Visual C++

\* Windows SDK (you have to retarget the [DSInternals.Replication.Interop](../Src/DSInternals.Replication.Interop/DSInternals.Replication.Interop.vcxproj) project to the version you have)

\* PowerShell Tools for Visual Studio (optional)

\* Git for Windows (optional)

\* GitHub Extension for Visual Studio (optional)

- [Windows Management Framework 5](https://www.microsoft.com/en-us/download/details.aspx?id=50395).

To make IntelliSense work with \*.psm1 files, the following code needs to be added to the `C:\Program Files (x86)\Microsoft Visual Studio\2019\Enterprise\Xml\Schemas\catalog.xml` file:

```xml

<Association extension="ps1xml" schema="https://raw.githubusercontent.com/PowerShell/PowerShell/master/src/Schemas/Format.xsd" enableValidation="true"/>

<Association extension="ps1xml" schema="https://raw.githubusercontent.com/PowerShell/PowerShell/master/src/Schemas/Types.xsd" enableValidation="true"/>

```

### Build Steps

1. Install the prerequisities.

2. Checkout or download the source codes.

3. Run the [Scripts\Make.ps1](../Scripts/Make.ps1) script from PowerShell.

4. The resulting module will appear in the \*Build\bin\Release\* folder.

### Debugging

1. Open the [Src\DSInternals.sln](../Src/DSInternals.sln) file in Visual Studio.

2. Put any cmdlets you wish to debug into the [Src\DSInternals.PowerShell\Run-Cmdlets.ps1](../Src/DSInternals.PowerShell/Run-Cmdlets.ps1) script.

3. Set the [DSInternals.PowerShell](../Src/DSInternals.PowerShell/DSInternals.PowerShell.csproj) project as StartUp Project.

4. Switch to the \_Debug\_ configuration.

5. Start debugging (F5).

### Continuous Integration

[![Build Status](https://dev.azure.com/DSInternals/DSInternals%20CI/\_apis/build/status/MichaelGrafnetter.DSInternals?branchName=master&jobName=Release)](https://dev.azure.com/DSInternals/DSInternals%20CI/\_build/latest?definitionId=2?branchName=master)

![Test Results](https://img.shields.io/azure-devops/tests/DSInternals/DSInternals%20CI/2.svg?label=Test%20Results&logo=azuredevops)

Automatic build configuration is in the [azure-pipelines.yml](../azure-pipelines.yml) file.