



SNIA SDC SMB3 IO Lab

September 21st-23rd 2020

Virtual Conference





File Server Test Suite Hands-on Lab

Jeff McCashland
Sr. Escalation Engineer

Yan ZENG
Software Engineer II



Agenda

Windows Protocol Test Suite Overview

File Server Test Suite

Demo

Hands-on Lab Step-by-Step

Agenda

Windows Protocol Test Suite Overview

File Server Test Suite

Demo

Hands-on Lab Step-by-Step

Windows Protocol Test Suite - Overview

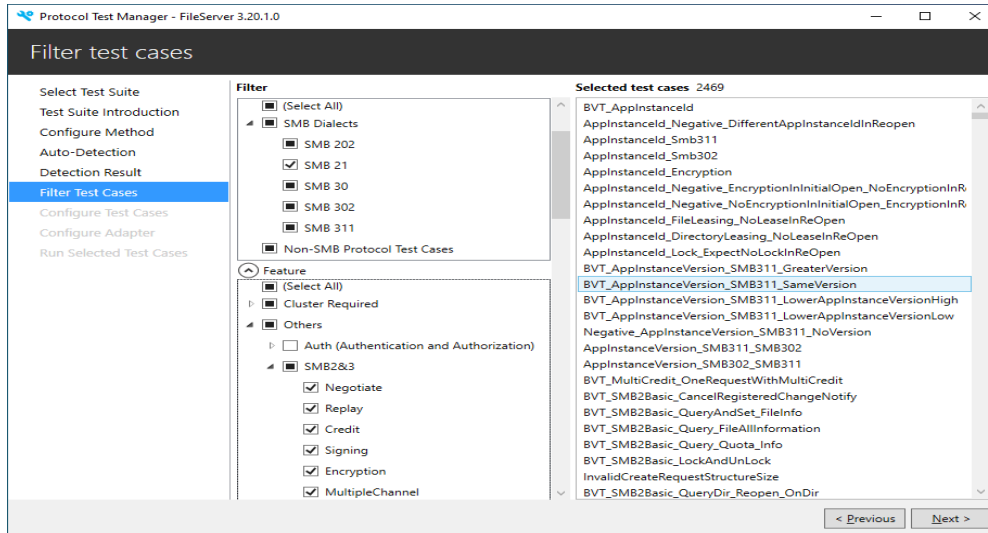
Motivation

- Originally developed for testing Microsoft Open Specifications
- Test/verify Windows behavior
- Test 3rd-party implementations for interoperability

Merit

- Ensure quality of Microsoft Open Specifications including accuracy and usability
- Help to identify your implementation issues
- Source code can be your reference in development phase

Windows Protocol Test Suite – How to Run

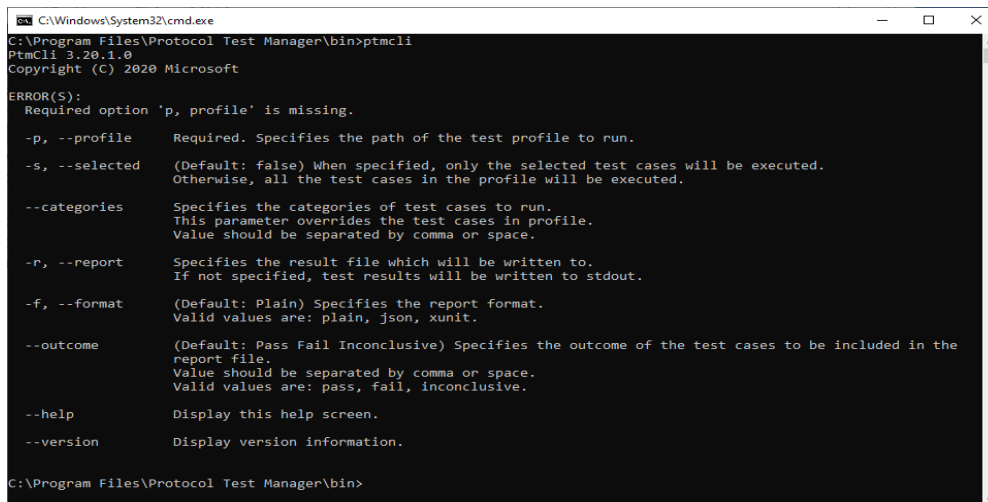


Detect Server capability

Configure test suite

Filter test cases

Run test cases



Be integrated to automation

Windows Protocol Test Suite – Open Source



staging 5 branches 14 tags

Go to file Add file Code

ms-hujia Merged PR 5042791: Add spng to PTM deploy 7e41688 5 hours ago 2,959 commits

AssemblyInfo	Update test suite version to 3.20.1.0.	7 months ago
CommonScripts	Clean up License header for staging branch	yesterday
Doc	Update tutorial's name from SMB to SMB2.	6 months ago
InstallPrerequisites	Merged PR 1694: Use vs_installershell.exe to substitue vs_installer.e...	5 months ago
MessageAnalyzerLibrary	Update version of visual studio and PTF in solution files and documents	2 years ago
ProtoSDK	Clean up License header for staging branch	yesterday
ProtocolTestManager	Merged PR 5042791: Add spng to PTM deploy	5 hours ago
RemoteRun	Clean up License header for staging branch	yesterday
TestSuites	Clean up License header for staging branch	yesterday
common	Clean up License header for staging branch	yesterday
pipelines	Merged PR 4863626: PTM build pipeline	9 days ago
.gitattributes	Clean up gitattributes rules	15 months ago
.gitignore	update Dictionary to IDictionary	last month
CONTRIBUTING.md	Refine as code review comments	4 years ago
LICENSE.txt	WindowsProtocolTestSuites initial commit	5 years ago
README.md	Fix a typo.	last month

About

Join us at Virtual SNIA SDC SMB IO Lab (9/21-9/23):
interopevents.com/sniaonline2020

Readme
View license

Releases 14

WindowsProtocolTestSuites 3... Latest
Jan 9

+ 13 releases

Packages

No packages published
[Publish your first package](#)

Contributors 29

+ 18 contributors

Microsoft



Open Source

Agenda

Windows Protocol Test Suite Overview

File Server Test Suite

Demo

Hands-on Lab Step-by-Step

File Server Test Suite -[MS-SMB2] Features

SMB2 Dialect 2.0.2, 2.1, 3.0, 3.0.2, 3.1.1

Encryption, Signing, Compression, MultiChannel
Oplock, Lease

Durable Handle, Persistent Handle, Resilient Handle

Covered messages:

Negotiate (Negotiate Contexts),
Session Setup,
Tree Connect/Disconnect,
Create/Close (Create Contexts),
IOCTL,
Query Directory,
Query Info/Set Info

...



File Server Test Suite - Other Protocols

[MS-FSA]: File System Algorithms

[MS-SWN]: Service Witness Protocol

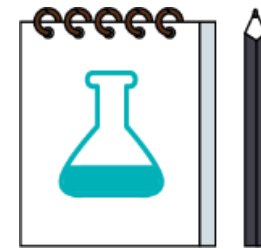
[MS-FSRVP]: File Server Remote VSS Protocol

[MS-RSVD]: Remote Shared Virtual Disk Protocol

[MS-SQOS]: Storage Quality of Service Protocol

[MS-DFSC]: Distributed File System (DFS): Referral Protocol

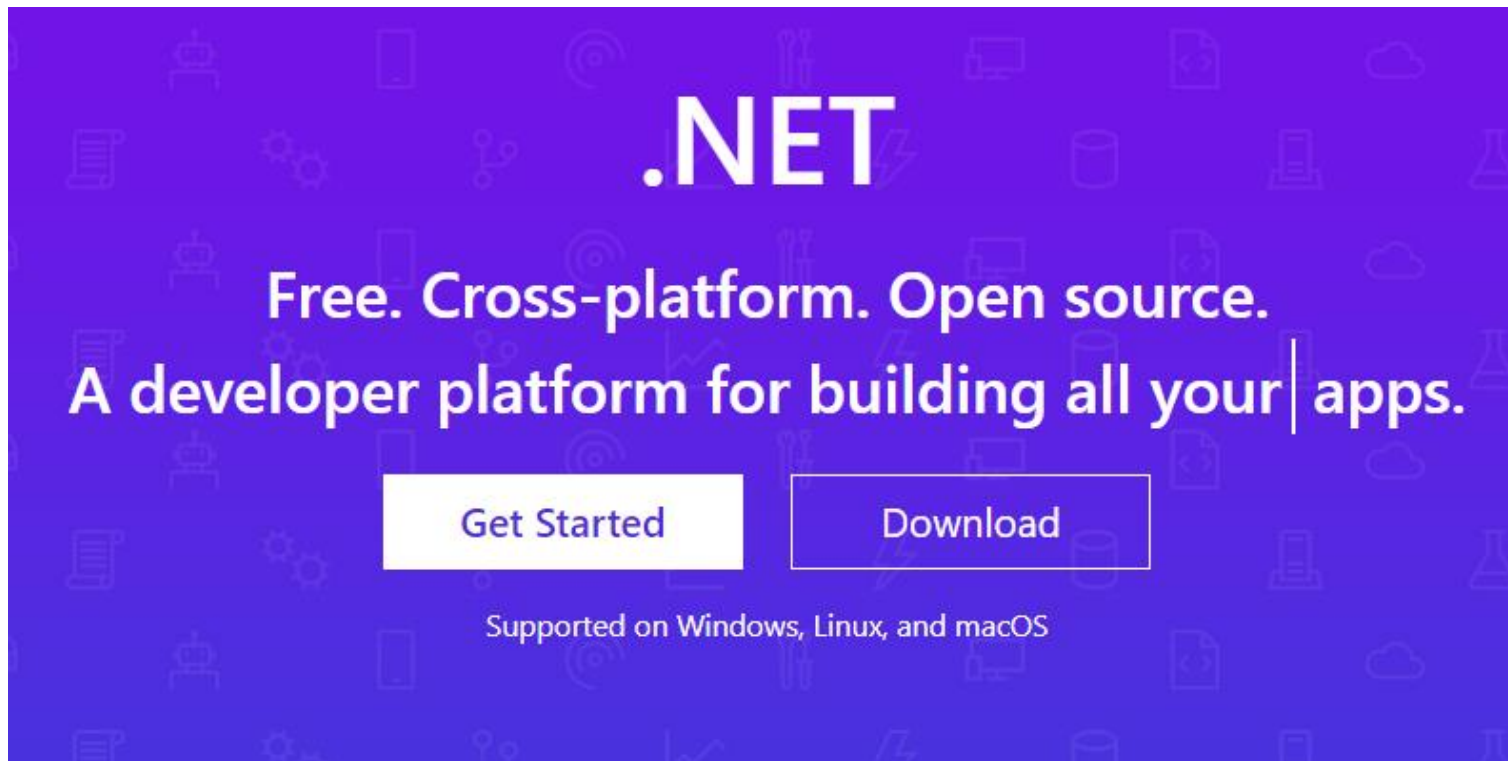
[MS-HVRS]: Hyper-V Remote Storage Profile



Protocols

File Server Test Suite - Install Prerequisites

Install .NET Core 3.1 from <https://dotnet.microsoft.com/>



.NET

Free. Cross-platform. Open source.
A developer platform for building all your apps.

Get Started Download

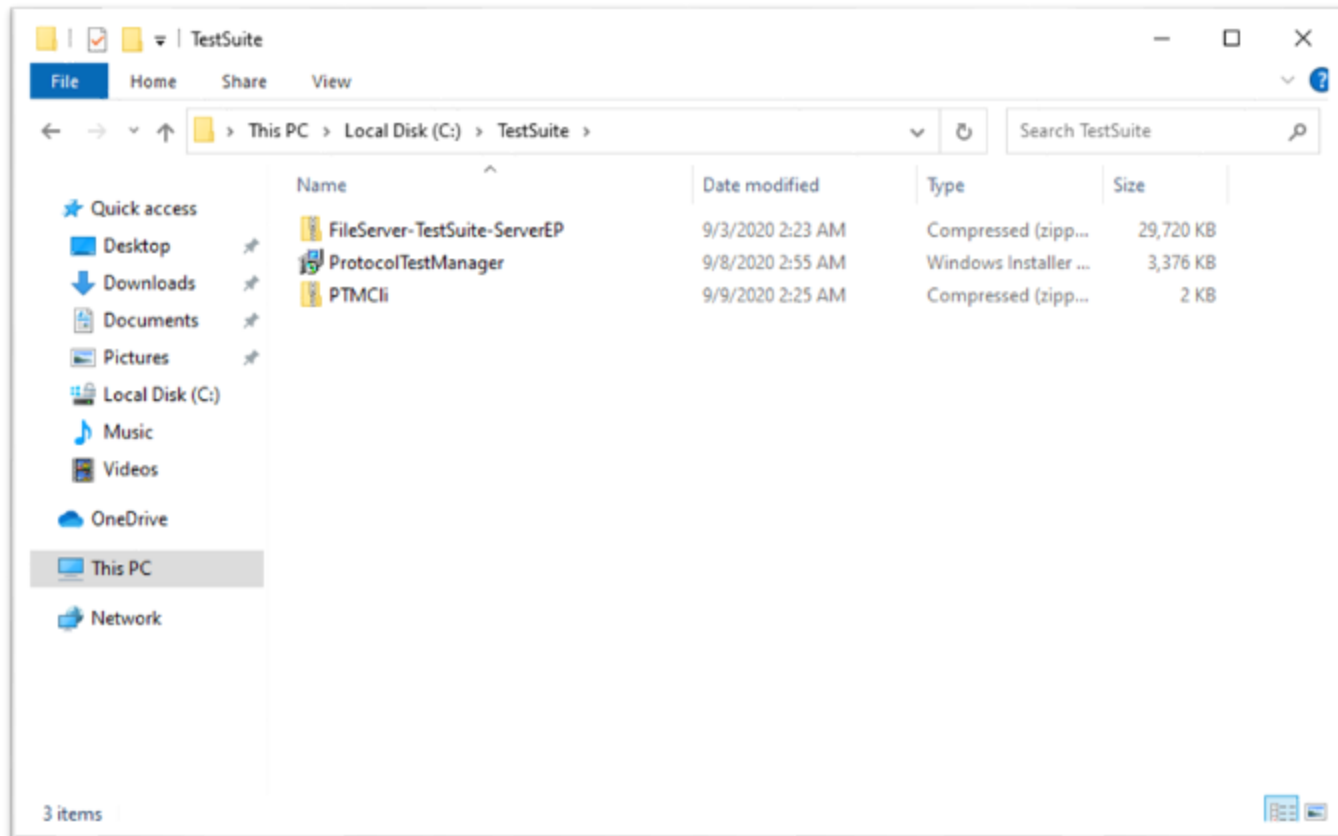
Supported on Windows, Linux, and macOS

File Server Test Suite - Install test suite and PTM

Download the FileServer-TestSuite-ServerEP.zip, ProtocolTestManager.msi and PTMcli.zip from GitHub

Extract FileServer-TestSuite-ServerEP and PTMcli

Install ProtocolTestManager



Agenda

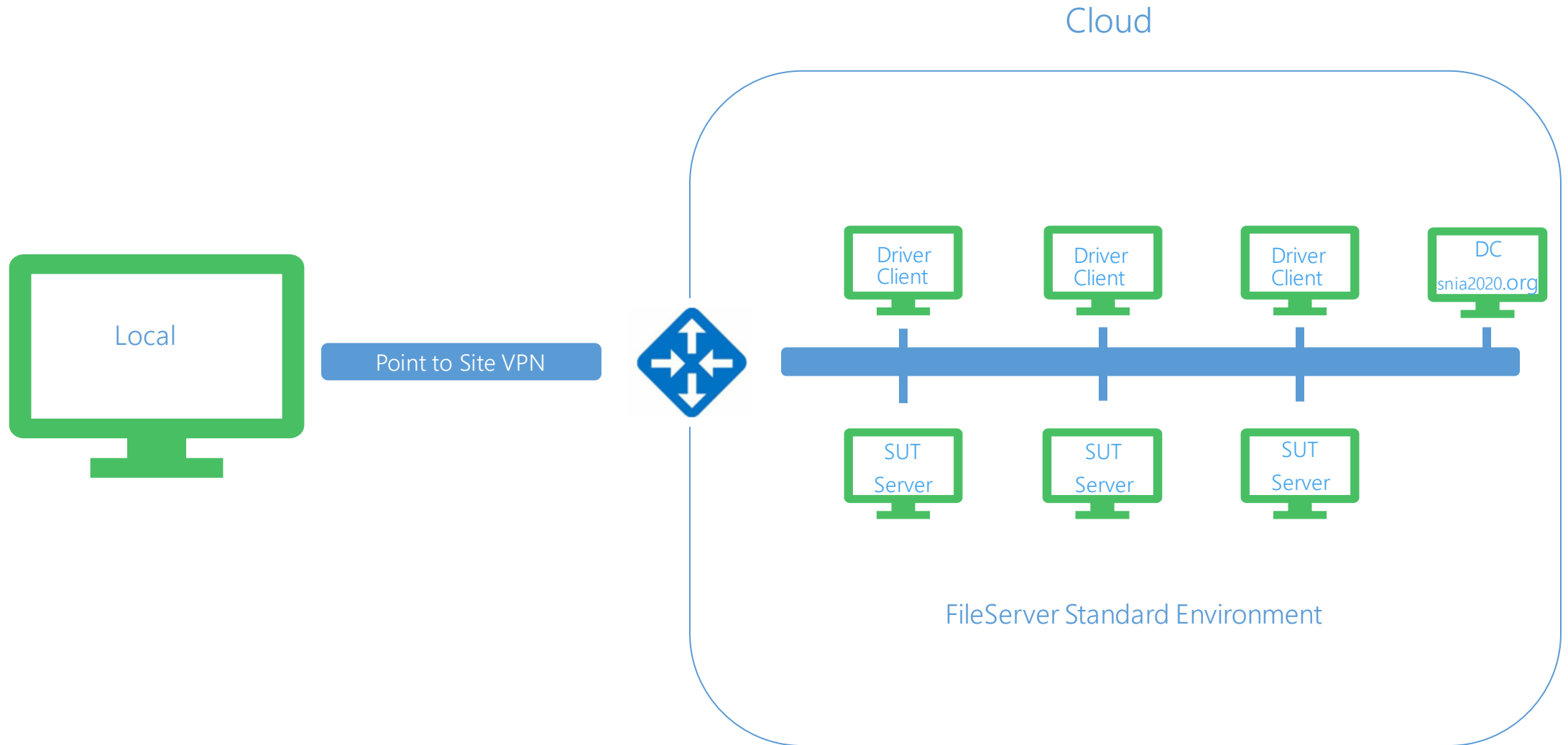
Windows Protocol Test Suite Overview

File Server Test Suite

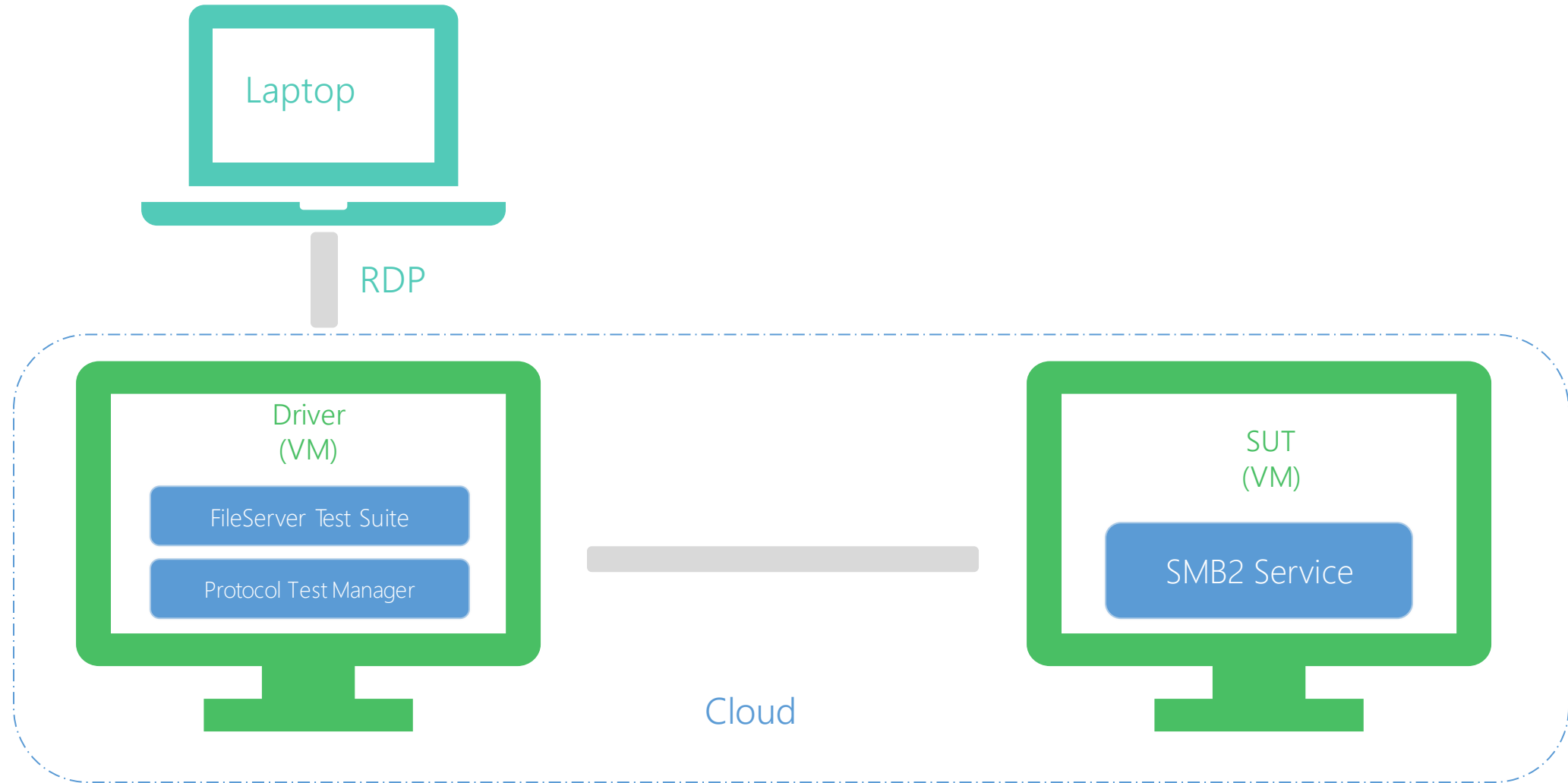
Demo

Hands-on Lab Step-by-Step

Lab Environments - Topology

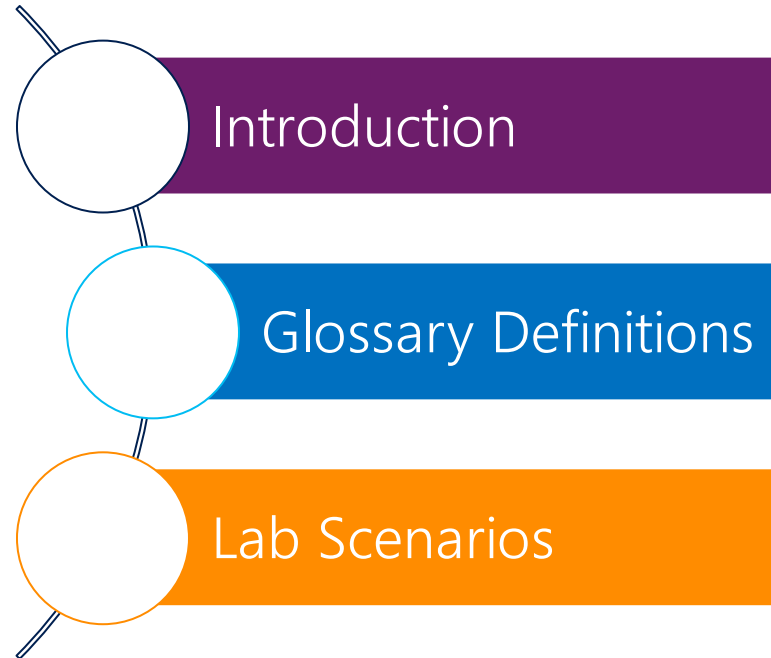


Lab Environments - How to access Lab VMs



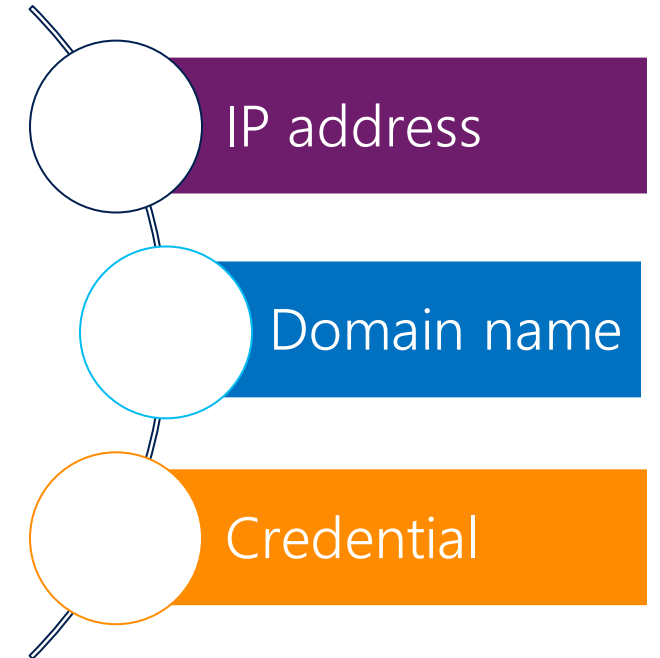
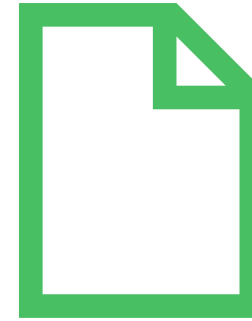
Lab Material

Step-by-Step



<https://github.com/microsoft/WindowsProtocolTestSuites/tree/main/Doc>

Lab Configuration



<https://microsoft.sharepoint.com/teams/SNIASMBIOLab2020/Lists/Reserve%20Environment/AllItems.aspx>

6 Lab scenarios

Configuring the Test Suite with the PTM Wizard

Running the test cases by PTM

Analyzing the test results

Saving a profile

Running the test cases by PTM Command Line

Configuring the Test Suite by loading a profile

D

E

M

O

