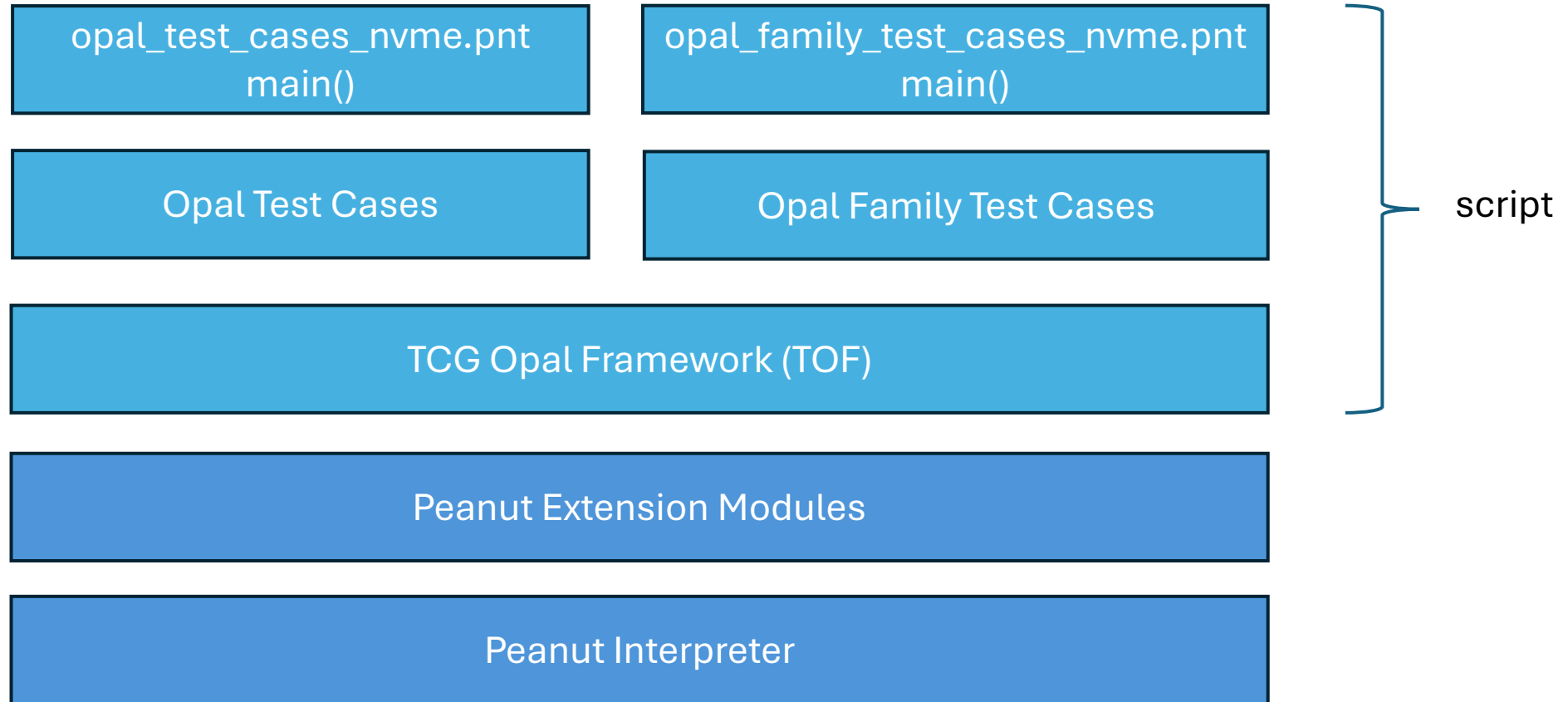


Penetrate TCG Opal Test Suites

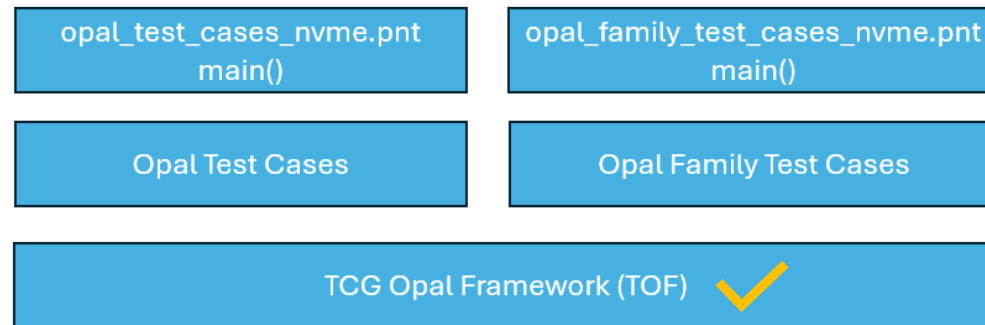
Cell Computers Ltd.

Penetrate TCG Opal Test Suites



TCG Opal Framework (TOF)

- TCG SSC Opal tables and objects definitions
- Functions to encode/decode/dump payloads
- Protocol handlings
- Encrypted Peanut script files in a demo release

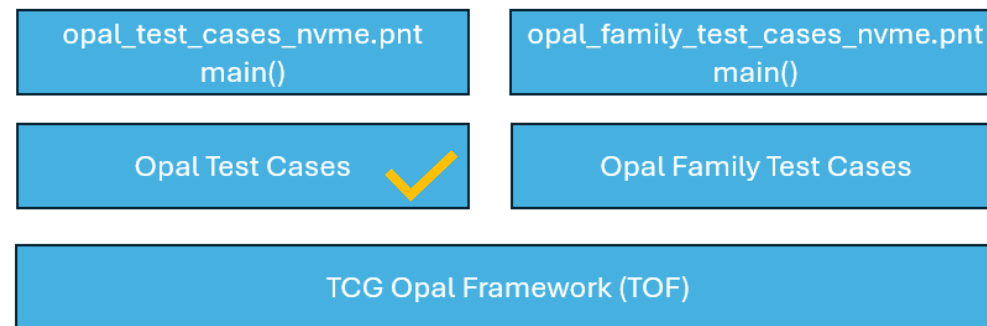


TCG Opal Framework (TOF) – file list

File	Description
CapabilityDiscovery.pnt	Retrieve TPer Level 0 Discovery features
CommunicationRoutines.pnt	Form/send/receive communication payloads
Def.pnt	Constants and structures definitions
Globals.pnt	Global variable declarations
Misc.pnt	Helper functions
Packet.pnt	Form tokens as packet; dump packet contents
PostTestProc.pnt	Post test process; revert SPs
Tables.pnt	Form TCG SSC Opal/Pyrite tables

Opal Test Cases

- Implementation of test cases requested by "TCG Storage Opal Test Cases Specification", Version 1.00 FINAL, 2011
- Entries of Opal Test Cases



Opal Test Cases – file list (1/2)

Filename
A02_SecurityProtocol0related.pnt
A03_Level0Discovery_BasicGrammar.pnt
A04_SynchronousCommunicationProtocol.pnt
A05_ComPacket_Packet_Subpacket.pnt
A06_MethodInvocationResponse.pnt
A07_Transaction.pnt
A08_EndingSession.pnt
A09_EmptyAtom.pnt
A10_Properties.pnt
A11_StartSession_SyncSession.pnt
A12_Get_BasicGrammar.pnt

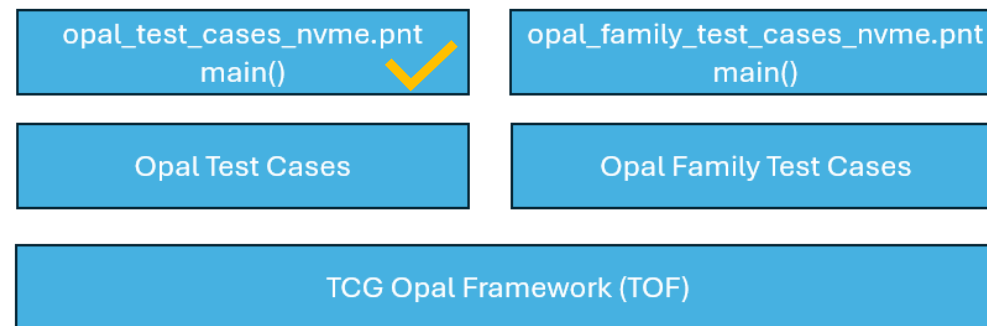
Filename
A12_Get_BasicGrammar.pnt
A13_Set_BasicGrammar.pnt
A14_Next_BasicGrammar.pnt
A15_GetACL_BasicGrammar.pnt
A19_RevertSP_BasicGrammar.pnt
C01_Level0DiscoveryContents.pnt
C02_Properties_Contents.pnt
C03_Get_TableContents.pnt
C04_Next_Contents.pnt
C05_GetACL_Contents.pnt
D01_ACE_Set_GrammarAndEffect.pnt

Opal Test Cases – file list (2/2)

Filename
D02_Authority_Set_GrammarAndEffect.pnt
D03_C_PIN_Set_GrammarAndEffect.pnt
D04_Locking_Set_GrammarAndEffect.pnt
D05_MBRControl_Set.pnt
D06_MBR_Set_GrammarAndEffect.pnt
D07_DataStore_Set_GrammarAndEffect.pnt
D08_GenKey.pnt
D09_Activate_GrammarAndEffect.pnt
D10_Revert_RevertSP.pnt
D11_PowerCycle.pnt

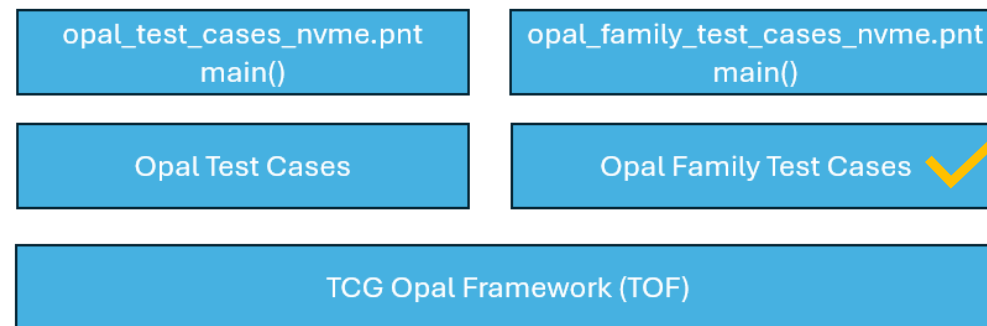
opal_test_cases_nvme.pnt

- main() entry of the Opal Test Cases
- Load extension modules
- Include all Opal Test Cases files
- Call entries of Opal Test Cases



Opal Family Test Cases

- Implementation of test cases requested by "TCG Storage Opal Family Test Cases Specification", Version 1.00, 2019
- Entries of Opal Family Test Cases



Opal Family Test Cases – file list (1/3)

Filename
ETC02_IFSendRecvSyncProtocol.pnt
ETC03_InvalidIFSendTransferLen.pnt
ETC04_InvalidSessionID_RegularSession.pnt
ETC05_UnExpTokenOutsideMth_RegularSession.pnt
ETC06_UnExpTokenInMthHdr_RegularSession.pnt
ETC07_UnExpTokenOutsideMth_ControlSession.pnt
ETC08_UnExpTokenInMthParamList_ControlSession.pnt
ETC09_ExceedTransactionLimit.pnt
ETC10_InvalidInvokingID_Get.pnt
ETC11_ETC12.pnt
ETC13_ETC14.pnt

Filename
ETC15_ExceedTPerProps_ControlSession.pnt
ETC16_OverlapLockingRanges.pnt
ETC17_InvalidType.pnt
ETC18_RevertSP_GlobalRangeLocked.pnt
ETC19_Activate_ATASecInteract.pnt
ETC20_StartSessionOnInactiveLockingSP.pnt
ETC21_StartSession_IncorrectHostChallenge.pnt
ETC22_MultipleSessions.pnt
ETC23_DataRemovalMechanism_SetUnsuprtVal.pnt
SPF01_Transaction.pnt
SPF02_IFRECVBehaviorTests.pnt

Opal Family Test Cases – file list (2/3)

Filename
SPF03_04_05_TryLimit_TriesReset.pnt
SPF06_Next.pnt
SPF07_HostSessionNumber.pnt
SPF08_RevertSP.pnt
SPF09_RangeAlignVerify.pnt
SPF10_ByteTableAccessGranularity.pnt
SPF11_StackReset.pnt
SPF12_TPerReset.pnt
SPF13_Authenticate.pnt
SPF15_Random.pnt
SPF16_CommonName.pnt

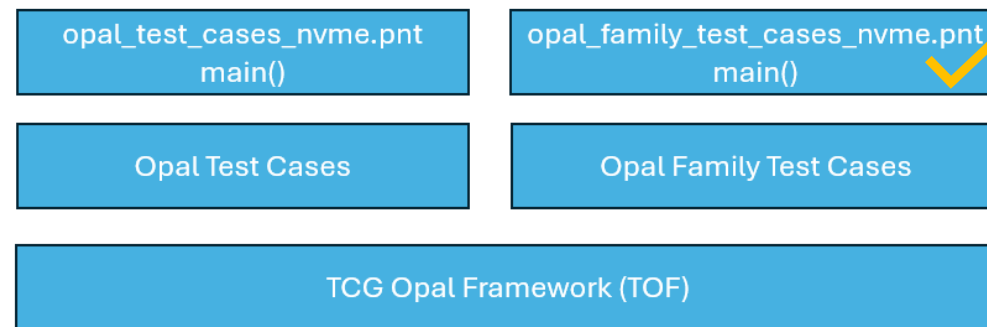
Filename
SPF17_ADSTables.pnt
SPF18_RangeCrossingBehavior.pnt
SPF19_BlockSIDAuth.pnt
SPF20_DataRemovalMechanism.pnt
UCT01_Level0Discovery.pnt
UCT02_Properties.pnt
UCT03_TakingOwnership.pnt
UCT04_ActivateLockingSP.pnt
UCT05_ConfiguringAuthorities.pnt
UCT06_ConfiguringLockingObjects.pnt
UCT07_UnlockingRanges.pnt

Opal Family Test Cases – file list (3/3)

Filename
UCT08_ErasingRanges.pnt
UCT09_UsingTheDataStoreTable.pnt
UCT10_EnableMBRShadowing.pnt
UCT11_MBRDone.pnt
UCT12_RevertLockingSP.pnt
UCT13_14_15_16_RevertAdminSP.pnt

opal_family_test_cases_nvme.pnt

- main() entry of the Opal Family Test Cases
- Load extension modules
- Include all Opal Family Test Cases files
- Call entries of Opal Family Test Cases



Thanks For Your Time.