

Data Over Cable Service Interface Specification (DOCSIS)

Manufacturers of cable modems and head end systems (routers) use SilverCreek, the SNMP Test Suite for DOCSIS compliance testing. Suppliers of cable modems and cable modem head end systems must demonstrate compliance with the DOCSIS standard.

In the U.S., **Cable Television Labs (CableLabs)**, the research and development consortium of cable television system operators, administers the DOCSIS program for validating conformance to DOCSIS specifications, and uses IWL's SilverCreek test suite, to test cable modems for SNMP compatibility, per the DOCSIS specification.

In Europe, **The Euro-DOCSIS Certification Board** grants certification to Euro-DOCSIS compliant modems, and the qualified status to CMTS equipment, based on lab tests completed by **Excentis**. Excentis selected the [SilverCreek@SNMP Test Suite](#) from IWL as part of its official test fixture for certifying cable modems (CM) and cable modem termination systems (CMTS) to the Euro-DOCSIS 1.0 Specification.

"Excentis selected SilverCreek because of its ease of use and its wide acceptance in the cable modem industry" Said Wim De Ketelaere, Excentis Euro-DOCSIS Manager.

SilverCreek is the test suite for SNMPv3 conformance.

SNMPv3 forms the basis for Diffie-Hellman (RFC 2786) support in the DOCSIS standard, including SNMPv3 key ignition and key change functionality for CM and CMTS equipment. It is this Diffie-Hellman key initialization and key update mechanism that allows cable companies to authorize data services to customers, and provide data access services through their infrastructure.

DOCSIS1.0 certification: Requires that equipment pass SilverCreek Test Suite 1

(per the Cable Labs Specification)

DOCSIS2.0 and 1.1 certification: Requires that equipment pass SilverCreek Test Suites (1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 10.0 , 50.0 and Vulnerability tests)

- ▶ SilverCreek thoroughly covers OSS03 (SNMPv3 protocol testing/Diffie-Hellman)
- ▶ SilverCreek notification monitor tests the required DOCSIS notifications.
- ▶ SilverCreek has additional MIB walking sample test scripts for OSS01, OSS02.

DOCSIS3 certification: Requires that equipment pass SilverCreek Test Suites (1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 10.0 , 50.0 and Vulnerability tests)

- ▶ SilverCreek thoroughly covers OSS03 (SNMPv3 protocol testing/Diffie-Hellman)
- ▶ SilverCreek notification monitor tests the required DOCSIS notifications.

DOCSIS FAQ

Q Does SilverCreek cover all test items of DOCSIS ATP OSS CM part? Or a subset?

A SilverCreek covers a portion of the OSS test items, specifically OSS-3 the SNMP protocol tests.

Q What is the name rule relationship between the OSS test items and the SilverCreek test numbers?

A There is no "item-by-item" mapping in DOCSIS 2.0 or 3.0 . The specification states that you need to run all the protocol tests in SilverCreek. In other words, all the built-in tests in SilverCreek need to be run.

Q What are the tests in test suite 51.0. What does it mean in DOCSIS ATP Spec?

A Tests under test suite 51.0 are sample MIB walking tests we created for DOCSIS ATP 1.0 and 2.0. They cover OSS 1 and 2 MIB walking in ATP 1.0 and 2.0.

For example, you can match the test description of 51.OSSATP-2.0-CM-01.2.p1.1 to the texts in OSS 1 and 2 in ATP 2.0 to find out the exact "steps" it matches.

51.OSSATP-2.0-CM-01.2.p1.1

**"The purpose of this test is to perform MIB Walk using SNMPv1 Protocol
in NMAccess Mode for 2.0 CM in 2.0 Mode."**

The text quoted above is from ATP 2.0 OSS 1 and 2.

These sample MIB walk tests DO NOT cover new MIBs required in ATP 3.0.

Customers are expected to either extend these tests or do something on their own.

It is important to know that **THE** tests such as test1.2.2, test2.9.2 and test3.9.2 in SilverCreek Protocol testsuite 1.0, 2.0, 3.0 already can detect missing variables in any loaded MIBs. Although they do not produce the results format required by DOCSIS ATP.

DOCSIS Compliance Testing

Manufacturers of cable modems and head end systems (routers) use [SilverCreek, the SNMP Test Suite](#) for DOCSIS compliance testing. DOCSIS is the "Data Over Cable Service Interface Specification". Suppliers of cable modems and cable modem head end systems must demonstrate compliance with the DOCSIS standard. The DOCSIS community adopted Diffie-Hellman as its authentication methodology for Internet access.

