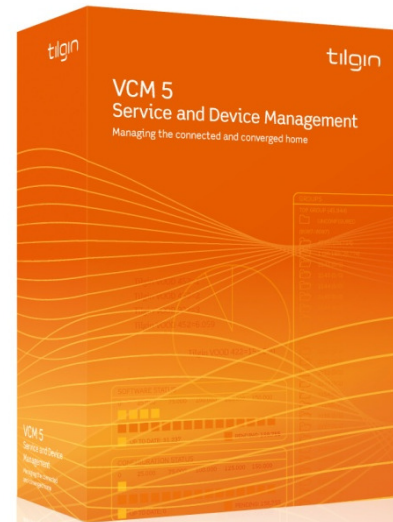


# VIP

## VCM interoperability program for TR-069 CPE

Engage Tilgin expertise of CPE management and TR-069 interoperability and ensure the success of your integration project.

Tilgin offers operators, system integrators as well as CPE vendors a professional service based on well-defined process for integration of new devices into the VCM, the carrier-grade TR-069 ACS from Tilgin.



VCM, the TR-069 ACS, is today fully interoperable with a wide range of products from a number of leading CPE vendors in the market. VCM, designed to easily handle new devices from any vendor following the TR-069 standard, has been subject for rigorous and extensive interoperability testing over the years.

Today, VCM follows all the latest and relevant standard specifications and Tilgin participates regularly in exhaustive interoperability testing. Tilgin is firmly committed to TR-069 standard and is also member of Broadband Forum.

Before a successful CPE deployment, the interoperability must be ensured between the CPE and ACS. The TR-069 protocol and the technical specifications from Broadband Forum allow vendor specific extensions and some times the specification is not strict enough allowing different interpretations from vendor to vendor. The need of interoperability verification is inevitable and must be carried out in a controlled and efficient way.

Tilgin has defined and developed a certification program, namely VIP, to make the integration process simple and predictable. Tilgin expertise ensures not only full interoperability between Tilgin ACS and CPE of choice but also guarantees an easy roll-out of the selected CPE.

VIP includes testing TR-069 protocol interoperability and any necessary tools for easy roll-out are developed. Once certified, Tilgin support program will allow any further development of customer-specific scenarios or services.

When relying on VIP, qualifying and integrating new CPE into VCM is a simple task, fully controlled and predictable both in time and effort.

VIP is based on

- Test cases from PD-128 (Broadband Forum)
- TR-069 interoperability tests on-board
- Test reports
- Certificate when approved.

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The integration of TR-069 devices starts with protocol certification of the CPE and its firmware. Once certified, Tilgin support program allows a predictable path to deployment with any customer specific scenarios or provisioning needs.

#### Protocol Certification

Any integration project starts with protocol certification which consists of basic TR-069 interoperability testing using an on-board tool.

The 12 mandatory test cases cover CPE-initiated and ACS-initiated interactions, getting and setting parameters and objects and verifying firmware upgrades. Complimentary test cases include secure communication, reboot commands, active and passive notifications and more advanced requests.

The goal of this certification is to find out the level of compatibility between TR-069 stacks of the VCM and of the device and address if any discrepancies found.

Once tests are completed, test report is written by Tilgin professional services and a recommendation on how to proceed is issued.

If all mandatory test cases pass, Tilgin issues the VIP certificate to the CPE and its firmware.

Tilgin will also provide the necessary files and instructions based on the earlier tests:

- software package
- data model as supported by the device
- device identity files or mechanism to generate such files

When the certification is completed, any technical barriers or limitations are mostly likely discovered and addressed properly.

#### After certification VCM Support starts

Once the CPE is certified as interoperable with VCM, Tilgin experts will provide support to the customer during their internal testing phase and during their deployment within the scope of VCM support agreement.

Depending on customers business goals and time line, Tilgin expertise will assist the testing and integration project and guide to a successful deployment of the selected solution. During this period, customer specific network scenario and configurations, including customized provisioning will be defined and verified. With VCM support agreement in place, a competitive and profitable solution can be launched in a timely manner.

Within the support agreement, two additional certifications are included per year to ensure any updates from the CPE vendor exhibit necessary interoperability with VCM.

#### VIP timeline

- Protocol Certification: 1-2 weeks
- Support: yearly contract

