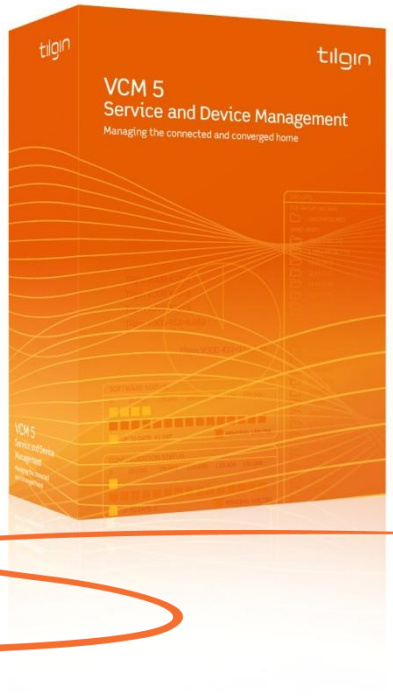
VCM

Tilgin Auto Configuration Server (ACS)

Centralized and open remote management solution for broadband devices enables fully automated and instant service activations. Millions of devices are completely managed with operational costs in full control.

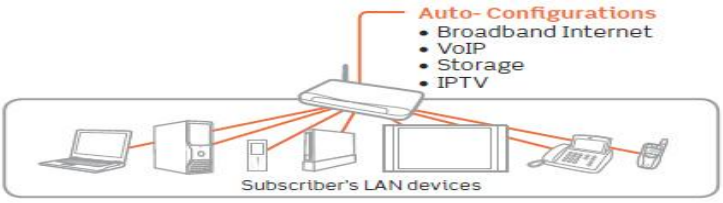


VCM highlights

- Complete TR-069 support
- Flexible provisioning
- Configuraition handling
- Firmware upgrades
- Extensive NBI
- Intelligent mass management
- Alarms, SNMP traps, emails
- Helpdesk and troubleshooting
- Live dashboard and statistics
- Real-time monitoring
- Extensive audit
- Fully localized user interface
- VCM Interoperabiliy Program

Tilgin's TR-069 ACS, VCM has been deployed commercially since 2001 and is one of the most mature technologies for device management in the market. VCM is an essential part of an operator's strategy as it relates to reducing operational cost, boosting revenues and ensuring customer satisfaction.

VCM is a comprehensive management platform for multi-vendor CPE, leveraging complete TR-069 support , VCM complies to all relevant specifications such as TR-069, TR-098, TR-104, TR-106,TR-111, TR-135 and TR-140. With one management platform, the operational cost is kept in control yet the service portfolio become diversified.



Through the Northbound Interface (NBI), full automation of provisioning process is achieved. Together with Customer Relationship Mgmt (CRM), OSS/BSS or Network Mgmt Systems (NMS) , VCM takes part of fully integrated workflow support for the operators.

To enable integration of new devices and fully take advantage of an open TR-069 environment, Tilgn offers VIP, VCM Interoperability program for TR-069 CPE. Following this well-defined and proven program, any TR-069 following devices are easily integrated in a controlled manner and new offerings can be introduced smoothly, also in an existing network environment.

VCM 5, Auto Configuration Server from Tilgin

Live Dashboard with statistics

With the VCM dashboard, any critical operational processes, such as massive software upgrades or configuration changes, can be monitored and followed closely. Also any CPE going offline or restarting excessively can be easily detected.

A convenient set of system metrics are also available as live graphs to show the status of the system. These graphs include historical data so that you can review the system performance over time. This is accomplished by taking samples from these metrics automatically, which are then archived periodically.

In addition to the server statistics shown as graphs, CPE performance statistics can be collected. This data can provide the measurement of service quality, network behavior, and CPE delivery and usage. VCM actually allows periodical collection of any type of data from the CPE. By analyzing the data collected, you can deliver quality and plan for the growth of your business.

Flexible service provisioning

Service provisioning with VCM is fully "plug & play" today. VCM supports various methods to accommodate different business models and network scenarios. There are many out-of-the-box models, however special solutions can be easily customized on demand.

Service provisioning is comprised of not only configuration updates but also software upgrades. Likewise, smooth handling of replacement devices is big part of VCM's service provisioning feature.

In VCM 5.7, it is possible to dynamically apply configuration changes based on a CPE's IP address or hierarchical group. Additionally, any other arbitrary information that a CPE or groups of CPE might have can be tagged in the database and serve as the basis for dynamic configuration changes.

Intelligent mass management

Hierarchical grouping and configuration inheritance is one of the tools that brings structure to your overall system. Efficiency is key when the service level for thousands of subscribers are upgraded at once or when devices with multiple services are managed together.

GUI based CPE grouping via service levels, geography or any other criteria that serves your workflow makes the complex handling of CPE configuration easy and manageable.

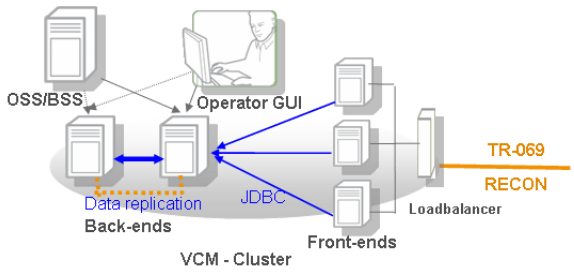
When grouped by geography, for example, dropping a new subscriber into the appropriate group causes the system to automatically configure the applicable dial plans and network parameters for the respective geographical area into the CPE.

If sub-grouped by service levels, upgrading a customer to a higher speed connection or an answering machine service or Triple Play services is no more complex than moving them to another pre-defined folder. All network connections, service parameters, and QoS configurations are dynamically reconfigured.

Scalable Cluster Solution

The VCM5 High-Availability (HA) cluster solution provides cost-effective fail-over protection as well as load-balancing for your ever-growing CPE population. Millions of devices can be reliably managed all while guaranteeing service availability and eliminating costly downtime interruptions. All single points of failure are eliminated by using a multi-node architecture that scales to your needs.

The overall HA architecture is highly flexible. It can be configured as a dual-node setup with active/passive nodes with a geographically redundant setup.



Powerful Helpdesk

The VCM5 helpdesk brings you troubleshooting tools, including live status checks of CPE, through a secure connection. The result is presented in a user-friendly way.

Additionally, a number of TR-069 based diagnostics tools are also available.

Using this powerful module, it is possible to upload and backup CPE local configurations or restore the backup onto the CPE once again.

It is also possible to retrieve the full configuration from a CPE and compare it to the configuration set in the database. This is all done interactively with support from the comprehensive user interface.

Active Alarms

VCM5 keeps track of error conditions that occurred in the system and raises an alarm for critical errors that might need corrective actions. Errors can be categorized and sorted by priority. Also, when the system detects error conditions being resolved, the active alarms will automatically be cleared.

CPE failures, such as software upgrade failures, configuration update failures or connection links going down, are all easily detected. Server related errors, such as failed backups, will also trigger an alarm.

Lastly, if the system is integrated to other network management tools for monitoring, VCM5 can send SNMP traps or e-mails to administrators.

Competent operational support

To enable true and full control of your operations, VCM includes full auditing of any single change within the system along with fine granular security guards using role-based administration.

The integrated documentation support, including pre-installed online guides along with operator-uploaded documentation, ensures competent management of the CPE along with all of your services.

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