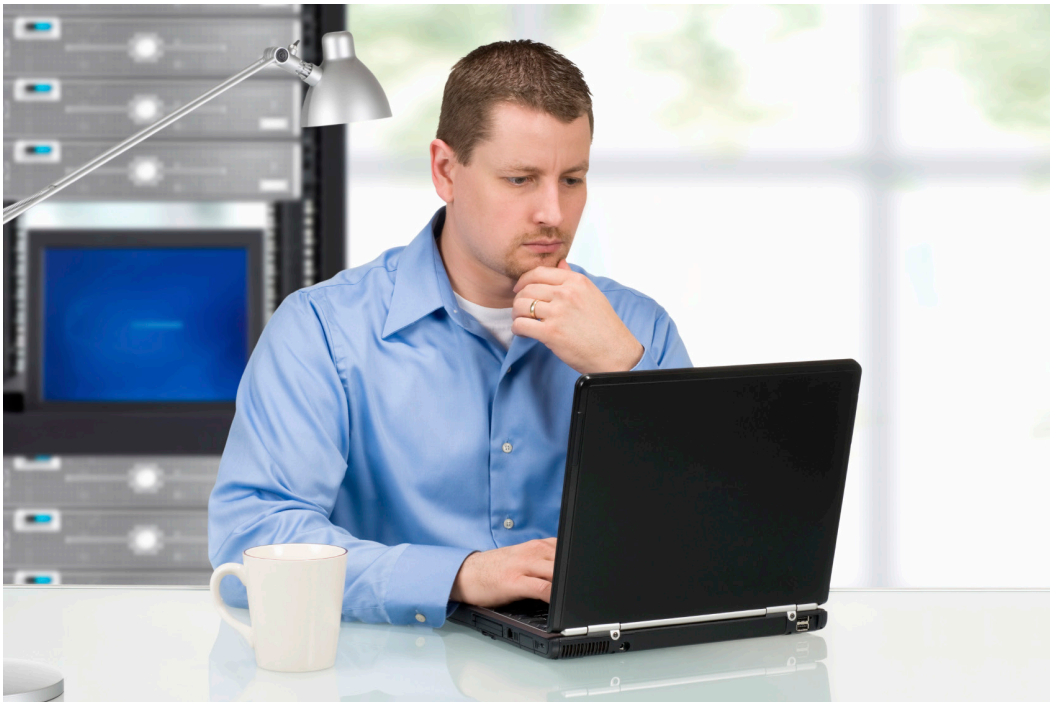


Vecima's **Terrace View** provides a proactive global monitoring and automated reporting system for MSOs with a significant installed base of Terrace commercial video products. Monitor alarms, CableCARD information, channel lineups and device information (serial number, IP addresses, MAC addresses, etc). Critical management operations (upgrade, reboot, debug dump) can be scheduled and/or performed remotely.

Terrace View provides central access to all Terrace devices on a user's network, eliminating the need to log into each device individually. Analyzing service impacting problems before customers notice a degradation of service is simplified and common issues affecting multiple units are easier to identify. Simply open a support case with Vecima's support team from within Terrace View to assist in resolving detected issues. This in turn reduces No Fault Found (NFF) returns and makes engagement with support personnel more effective.

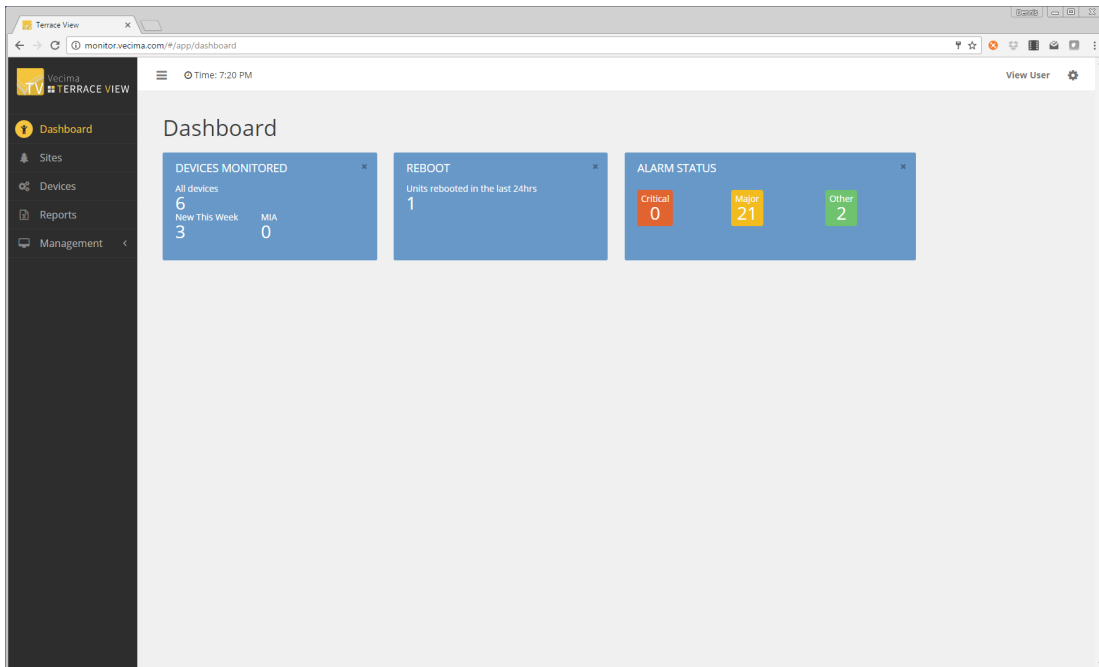


Highlights

- Groups page allows the Region, Headend, Hub, and Site location to be defined for Terrace devices
- Audit trail shows history of important actions taken within Terrace View such as login to Terrace View, creation/modification of regions or groups, redefining a Terrace device location, etc.
- Schedule and/or perform upgrades, reboots and debug dumps for Terrace devices remotely
- Central view of all Terrace devices simplifies data analysis and troubleshooting – issues affecting multiple devices are more easily detected
- View device information (listing, firmware, MIA, CableCARDS, QAM input mappings, analog output mappings, active alarms, QAM mappings, and OOB SI channel map) and current operational status
- Assists in detecting problems caused by equipment upstream of Terrace devices in the network chain
- Predefined user roles allow system administrators to control access
- Reports can be created for all devices, or devices found within a region, headend, hub, or site

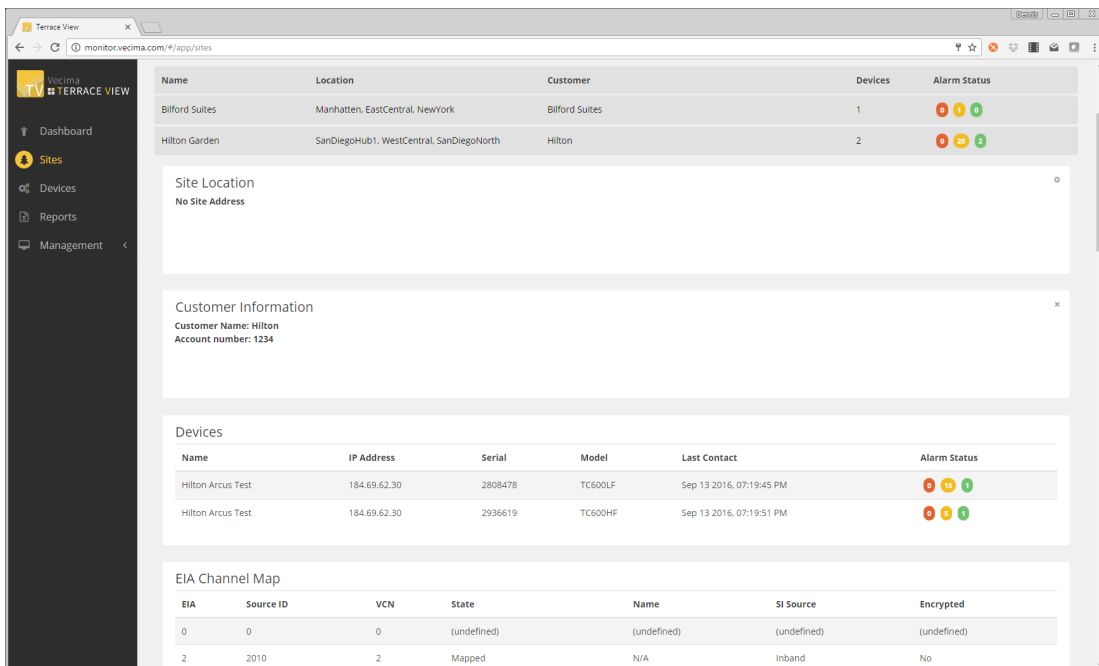
Dashboard

Information at a glance for how the Terrace devices are performing



Sites

Organize Terrace devices into sites to get a customer view of multiple devices. View a combined site channel map and pull together all the information required to quickly respond to customer calls.



Device Details

CableCARD details, Alarms, and more, aggregated into a single sign-on easy to use interface.

| MOCUR | Host ID | MAC | Card ID | Card Serial | Unit Address | Data ID |
|-------|-------------------|----------------|-------------------|-------------|---------------------|----------------|
| 1 | 058-000-052-647-6 | N/A (Motorola) | 000-011-408-059-1 | MA0837CAAF5 | 000-00114-08059-067 | 336-792-701-74 |
| 2 | 058-000-052-648-4 | N/A (Motorola) | 000-037-272-961-6 | MA1109F5V35 | 000-00372-72961-219 | 049-003-800-17 |
| 3 | 058-000-052-645-0 | Unavailable | Unavailable | Unavailable | Unavailable | Unavailable |
| 4 | 058-000-052-646-8 | Unavailable | Unavailable | Unavailable | Unavailable | Unavailable |
| 5 | 058-000-052-643-5 | Unavailable | Unavailable | Unavailable | Unavailable | Unavailable |
| 6 | 058-000-052-644-3 | Unavailable | Unavailable | Unavailable | Unavailable | Unavailable |

| Description | State | Time Raised | Time Cleared |
|---|----------|--------------------------|--------------|
| Demod 0.1 Link Down (Freq 747000000 Hz) | Existing | Sep 04 2016, 01:38:17 AM | |

Reports

Multiple reports that are quickly and easily exported to Microsoft Excel® to get key information when required.

Support

Existing debug dumps may be downloaded to assist with troubleshooting. New debug dumps may be generated prior to downloading if desired.

Quickly and easily open a support case if a device is not performing as expected.

Customer support

Your Contact Info:

Name: View User

Phone number: 3069557075

Email address: dennis.vanee@vecima.com

Problem Description:

Device Info:

Model: TC600HF

Serial: 2936619

IP address: 184.69.62.30

Close Submit

Current FW: 2.2.22

Backup Image

Installation Date: Sep 02 2016

Notes: No Notes

CableCARDS

| MOCUR | Host ID | MAC | Card ID | Card Serial | Unit Address | Data ID |
|-------|---------|-----|---------|-------------|--------------|---------|
|-------|---------|-----|---------|-------------|--------------|---------|

Server Requirements

For optimal operation, Terrace View should be deployed on a server with the following configuration:

- Operating System: CentOS Linux Version 7
- CPU Count: 4
- Memory: 16 GB
- Storage: 100 GB
- Database: External MYSQL