

## / DEVICE MANAGER BY SMARTRG

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### Features Guide

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## WELCOME!

Thank you for purchasing this SmartRG product.

SmartRG offers solutions that simplify the complex Internet ecosystem. Our solutions include hardware, software, applications, enhanced network insights, and security delivered via a future-proof operating system. Based in the USA, SmartRG provides local, proactive software development and customer support. We proudly offer the best, most innovative broadband gateways available.

Learn more at [www.SmartRG.com](http://www.SmartRG.com).

## *Purpose & Scope*

This Device Manager Features Guide provides an overview of the standard features and services provided at the inception of your Device Manager instance.

## *Intended Audience*

The information in this document is intended for Network Architects, NOC Administrators, Field Service Technicians and other networking professionals responsible for deploying and managing broadband access networks. Readers of this manual are assumed to have a basic understanding of computer operating systems, networking concepts and telecommunications infrastructure.

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## INTRODUCTION

SmartRG Inc. is proud to offer our feature-rich TR-069 ACS Platform, Device Manager by SmartRG. Device Manager serves all broadband service provider needs from full device management capabilities in xDSL, Fiber and Ethernet to LAN management in Cable; Device Manager has the features allowing you to Monitor, Manage and Monetize the connected home.

### Device Manager by SmartRG Hosted

SmartRG has deployed the Device Manager platform in our North American datacenters to better serve our customers needs around resiliency, latency and security. Our hosted platform model allows for quick deployments and services customers in all ranges of size and complexity.

### Device Manager by SmartRG On-Premise, Fully Managed

For our customers who prefer the benefits of applications on their own network and security, SmartRG offers our On-Premise, Fully Managed Device Manager by SmartRG solution where we will host the platform from your datacenter. This solution allows our customers to avail of our management and maintenance capabilities while maintaining the platform in their own infrastructure.

### Device Manager by SmartRG On-Premise

Reserved for those customers who will be managing two hundred thousand devices or more and who wish to maintain and manage the Device Manager platform in their own infrastructure. SmartRG is your go-to partner for your entire Device Manager licensing, configuration and professional services needs.

### Professional Services

At SmartRG we don't just offer the Device Manager by SmartRG platform, we offer solutions; we manage and support our customers needs and provide the following professional services to ensure all your bases are covered:

- CPE Interoperability Development
- API Integrations
- OSS/BSS Integrations
- Scripting & Custom Development
- Training (On-Premise and Remote)

Please contact your SmartRG sales team to receive further information, request a quote or demonstration, or simply to get started. We at SmartRG look forward to working with you and extend our commitment to ensuring you receive the best solution that works for your organization.

## STANDARD DEPLOYMENT FEATURES AND APPLICATIONS

The following features and applications are standard with any Device Manager deployment. Features are dependent on CPE capabilities and may vary depending on CPE manageability.

### *LAN Device Management*

- Automatically identifies the vendor and configured device name for most LAN devices in the home
- Shows connectivity status (online/offline, Wireless/Ethernet)
- Manage LAN-side IP addressing

### *Managed WiFi*

- Verify SSID and passphrase settings
- Check encryption type
- Help select least congested channel to improve performance
- View WiFi signal strength

### *WiFi Signal Monitor*

- Shows the wireless signal strength of each client device, enabling easy troubleshooting of WiFi performance issues

### *Managed Firewall*

- Help setup a port forward if necessary
- Explain IP conflicts and how to resolve them

### *Universal Device Management (UDM™) Click-thru*

- Simple setup of HTTP click thru to the local UI for LAN devices such as webcams and printers
- Customizable URL path and port numbers

### *WAN Configuration Management*

- Modify PPP credentials
- View WAN status and statistics (i.e. packets transmitted, received, dropped, errors)

## *Device Firmware Updates*

- Push firmware updates to a device if required
- Assist with RMA processes

## *Device Status*

- View connectivity history
- Push settings such as Inform Interval and turn on advanced diagnostics for troubleshooting

## *Modem Security*

- Disable WAN-side modem access
- Manage modem access passwords

## *CPE UI Click Thru*

- Click-thru to local CPE user interface to view more detailed statistics such as WAN configuration

## *Captive Portal*

- Allows the service provider to redirect the user to local diagnostics or to the website of their choosing, as a way of proactively troubleshooting or enforcing usage policies. Captive portal is a standard feature but requires customization services for deployment.

## *Replace Device*

- Copies the settings of a device to second device
- Ideal for RMA workflow

## *Service Provider Announcements*

- Create customized messaging that appears in the CSR portal
- Useful for daily bulletins or reminders

## *Other Administrative Tasks*

- Provision subscriber, associate to a device, enable and disable services
- View connectivity history for a device
- Reboot device
- Change inform interval for a device
- Create and apply labels to devices/subscribers
- Create new users of the system and manage roles and permissions

## *Device Manager Bulk Operations*

Bulk Operations is used to modify settings for a large number of devices in a concerted, scheduled fashion. Below are some examples of how Bulk Operations may be used:

- Modify the inform interval of subset of devices. For example, for all CPEs that have been online for 60 days, back-off the inform interval to 72 hours to lessen network traffic.
- Setup periodic retrieval of device information for reports. This would allow the operator to collect data during off-hours and run the report during the day.
- Set Captive Portal settings for specific devices. Captive portal can be used to force the subscribers web browser to a specific site, which is applicable for bulletin notifications (security alerts, new offers, etc) or to get opt-in on new terms of service (See DMCA use cases).
- Upgrade firmware to a CPE, and in the future to other TR-069 enabled LAN devices.
- Modify device settings on the CPE, for instance changing wireless channel to “auto” for devices that are experiencing poor WiFi performance or are stuck on channel 6. Could be used for TR-069 parameters as well such as the ACS URL and SSL on/off.
- Enable a new service to appear in the Control Panel for subscribers to try out. Makes it easy to enable new services on a trial basis.

## *Control Panel Subscriber Portal*

The Control Panel subscriber portal helps consumers setup and access their devices and services from anywhere in the world. Here are some of the key uses for the Control Panel:

### **Home Network Device View**

- Provides a simplified view of all devices in the home, connectivity type, online vs. offline
- Accessible using a browser, from within the home or remotely

### **Wireless Configuration**

- Allows user to easily configure their WiFi network without assistance from customer support

### **Firewall Configuration**

- Setup of port forwards and static IP addresses needed for certain applications (e.g. games, devices) to securely access the Internet

### **Universal Device Management (UDM™) Click-thru**

- Simple setup of HTTP click thru to the local UI for LAN devices such as webcams and printers
- Customizable URL path and port numbers

### **Device Manager Northbound API**

- Subscriber API enables 3rd party systems to provision and manage subscriber data
- RESTful services are common programming tools that make it easy to build dynamic provisioning and service enablement flows

## DEVICE MANAGER DEPLOYMENT CHECKLIST

### *Standard Services*

By default, the following standard services will be enabled in the Device Manager Customer Support Portal UI:

Account management:

- Device details including PPP information
- Local Network status
- Account status
- Subscriber status

Services:

- WiFi Service (single SSID)
- Firewall Service
- Reboot Service
- Local GUI Click Through

Advanced Actions:

- Event Logs
- Parameter Browser
- Replace Device
- Scripts
- Firmware Update

Note: Optional items may be added for demonstrations and trials, but will be disabled for live deployment if not purchased.

### *Optional Applications*

The following applications are optional and can be added to any Device Manager deployment for an additional fee. These applications are dependent on CPE capabilities and may vary depending on CPE manageability.

#### **Domains Management**

- Separates subscribers, devices, and system users into distinct domains
- Ideal for segmenting support entities, and creating wholesale support offerings



## Scripting Engine

The scripting engine provides access to the Device Manager Javascript editing tool, which can be used to create and customize scripts for managing end devices.

## Device Manager Analytics

Analytics is used to aggregate data maintained in Device Manager. This data can be used to study a wide variety of conditions.

Studying Managed Device Trends:

This includes providing a snapshot of shipment trends during promotions or watching for information about which devices tend to churn more quickly than others. This data is useful when deciding on the value of higher- vs. lower-end managed devices. It may also help indicate product longevity, based on a first-inform time analysis.

Examples of other trend reports:

- Managed devices by Manufacturer, Model, and Firmware version
- Watching the distribution of Wired vs. Wireless networks
- Studying device trends in the home, which is helpful for understanding device trends and up-sell potential
- Examples of in-home managed device trends would include:
  - Number of LAN devices per subscriber
  - Number of Wi-Fi vs. Ethernet devices per subscriber
  - Percentage of subscribers using Wi-Fi security (and, if so, at what level of security)
  - Wi-Fi channel use
  - Port forward use

Examining Speed Breakdown for the installed base:

This information can be correlated with network-side information and as a function of managed device manufacturer/model/version. For example:

- Downstream/upstream link speed
- Investigating subscriber breakdown by device associated, advanced services enabled vs. used, label, location, and first contact date

## Revision History

Rev	Date	Description
1.0	01/02/2016	Initial Release
1.2	03/15/2016	Re-branded for Device Manager Launch
1.3	05/02/2017	Added Welcome section Updated formatting to current tech pub standards