



# CRR Firmware Changelog

## Version 1.0.8.2

Question and Technical Support Email  
crr-support@atcorp.com

Jan 21, 2021

### Contents

1. PKI and Exportable Private Keys.....	2
2. On-Demand Web Server.....	2
3. Firmware Upgrades .....	2
4. VPN .....	2
5. General Improvements.....	2
6. Significant Packages Updates .....	2
7. Other Notable Bug Fixes.....	2
8. New CLI Commands Summary .....	3

## 1. PKI and Exportable Private Keys

- Private keys cannot be exported by default. However, when generating a new key, the user can now choose to export keys at creation time by prefixing names with "exported-". This is useful for generating keys and certificates to be use by clients such as Windows or mobile devices.
- Updated PKI certificate templates for easy certificate chain creation
- Support for generating .p12

## 2. On-Demand Web Server

- Allow uploading and downloading individual backup and PKI files. The files that are available via the web server depend on the context. Currently the webserver supports the following contexts:
  - pki server: download or upload pki material; keys/certificates
  - backup server : browse, download, or upload backup files
  - upload server : upload a new firmware

## 3. Firmware Upgrades

- Better errors diagnostics when doing firmware upgrades
- Prevent firmware upgrades from proceeding if the packages get corrupted
- Support for diagnostics firmware updates to target specific unit issues

## 4. VPN

- Support for Post-Quantum Key Exchange using NTRU Encryption and NewHope
- Support for forwarding of multicast and broadcast traffic between connected clients and between clients and a LAN attached to the router

## 5. General Improvements

- DHCP server fixes and better Integration with ARES.
- SSH custom configuration and RSA key access support
- Network diagnostic tools, traceroute, non-persistent IP addresses and static routes

## 6. Significant Packages Updates

- FRRouting : upgrade to version 7.5.atc.4 with up to date bug fixes

## 7. Other Notable Bug Fixes

- Fix inconsistent backup output listing
- Fix file permission issues
- Fix vpn handling of some keywords in ID and Cert fields such as %any and %same
- Multicast RP-List multicast group array fix

## 8. New CLI Commands Summary

- pki pkcs12 : bundle certificate chain and private keys in PKCS#12 containers
- pki copy : copy certificate files between cert directories
- pki import/export all : import /export all pki material on one command
- pki print : now accept private, public, and crl files as parameters
- tool top : show running processes and system resources
- tool rm : remove stale service pid files
- show ip summary : show a short list of interfaces and their IP addresses
- net ip : add non persistent IP addresses
- net route : add non persistent static routes
- net traceroute : diagnostic network trace route
- configure sysctl : configure system wide and kernel parameters
- net ssh keying : generate and 4096-bit ssh RSA key
- net ssh copy-id : copy the public key to a remote server
- update verify : check the status of the update package store for issues