

# Upgrading a V-Series Appliance to version 7.7

Websense Support Webinar October 2012

**TRITON™**

Web security

Email security

Data security

Mobile security



**Greg Didier**

- **Title:**
  - Support Specialist
- **Accomplishments:**
  - 10 years supporting Websense products
- **Qualifications:**
  - Technical Support Mentor
  - Product Trainer

- V-Series appliance upgrade
  - Pre-upgrade activities
  - Post-upgrade activities
- Upgrading Websense off-appliance components
- Upgrade path
- Order for upgrading Websense components
- Backup
- Best practice check list
- Demonstration

- Versions 7.6.0, 7.6.1, 7.6.2, 7.6.5 may upgrade
  - Web Filter, Web Security, Web Security Gateway, and Web Security Gateway Anywhere
  - Email Security Gateway (Anywhere)
  - Data Security, v7.6.0, v7.6.2 and v7.6.3
- Non-appliance components
  - Version 7.5.x or v7.6.0-7.6.5 may directly upgrade
- Earlier versions must first upgrade to either v7.6.0, 7.6.1, 7.6.2, or 7.6.5

- **Patches** and **upgrades** preserve configuration settings
- **Patch**
  - Typically does not require updating other components
- **Upgrade**
  - Includes enhancements and results in raising your product version level
  - All components must be same version level
- **Recovery Image**
  - Erases all software modules, all data, and all settings
  - Restores the appliance to factory settings

- TRITON management server
  - On V-Series appliance (evaluations only)
  - Windows Server 2008 32-bit (Web Security only)
  - Windows Server 2008 R2 64-bit (best practice)

|                | Windows Server 2008 R2 (Standard and Enterprise) | Windows Server 2008 (Standard and Enterprise) 32-bit | V-Series Appliance |
|----------------|--|--|--------------------|
| Data Security  | ✓  |  |                    |
| Web Security   | ✓  | ✓  | ✓                  |
| Email Security | ✓  |  |                    |

- Hardware requirements increase when
  - Running SQL Server locally
  - Installing additional management modules
- Requirements range from 4-8 cores and 4-16 GB RAM

- TRITON management console browser support

| Browser                     | Versions         |
|-----------------------------|------------------|
| Microsoft Internet Explorer | 8* and 9         |
| Mozilla Firefox             | 4.x through 13.x |
| Google Chrome               | 13 and later     |

\* For Internet Explorer 8 only, do not use compatibility mode.

- Virtualization
  - All TRITON Unified Security Center components
    - Hyper-V over Windows Server 2008 R2
    - VMware over Windows Server 2008 R2

- Reporting database
  - Microsoft SQL Server 2008 R2 Express
    - May reside locally on TRITON management server
    - Best for evaluations and small deployments
    - Install SQL Express only via the Websense installer
  - Microsoft SQL Server, Standard or Enterprise version
    - May NOT reside locally on TRITON management server

| Supported Database Engines | Data Security | Web Security | Email Security |
|----------------------------|---------------|--------------|----------------|
| SQL Server 2005 SP4*       |               | ✓            |                |
| SQL Server 2008**          | ✓             | ✓            | ✓              |
| SQL Server 2008 R2 Express | ✓             | ✓            | ✓              |
| SQL Server 2008 R2***      | ✓             | ✓            | ✓              |

- Websense software components
  - Not supported on domain controllers
  - Most Web Security components are supported on
    - Windows Server 2008 (32-bit) and 2008 R2 (64-bit)
    - Red Hat Enterprise Linux 5 and 6
- Websense Content Gateway
  - Linux only
  - Red Hat Enterprise Linux 5 or 6
- For complete system requirements, see
  - [Deployment and Installation Center v7.7](#)

- Upgrading TRITON Infrastructure, Web Security, Data Security, and Email Security
  - Policy Broker resides on V-Series appliance and additional Websense components are located off appliance
    - Obtain downloads
      - Appliance upgrade rpm
      - Websense TRITON Unified Installer
    - Collect backups
    - Perform pre-upgrade steps
    - Upgrade primary appliance
    - Upgrade secondary appliance(s)
    - Upgrade off-appliance Websense components
    - Perform post-upgrade steps
    - Verify upgrade was successful

1. **Email Log Server** (only if installed alone)
2. **Policy Broker**
3. **Policy Server(s)**
4. **Filtering Service** or **User Service**, and **Directory Agent**
5. **Email Security mode** only appliance
6. **Web Log Server**, **Sync Service**, and **Email Log Server** (when installed with other Websense components)
7. **TRITON management server** (TRITON Infrastructure)
  - **Web Security** module
  - **Email Security** module
  - **Data Security** module

## 8. Other Web Security components

- **Network Agent, Content Gateway** (software-based proxy), **Logon Agent, DC Agent, RADIUS Agent, eDirectory Agent,** and **Remote Filtering Server**

## 9. Filtering **plug-ins**

- Citrix XenApp or Microsoft Forefront TMG

## 10. Other Data Security components

- **Supplemental servers, SMTP agents, ISA/TMG agents, printer agents, protectors,** and **mobile agents**

## 11. Client components (any order)

- **Remote Filtering Client, Logon Application** (LogonApp.exe), **Web Endpoint,** and **Data Endpoint**

- Websense MUST be a functioning system
- Review product Release Notes
  - Websense Web Security, Content Gateway, TRITON Unified Security Center, V-Series Appliance, and Websense Data Security
- Machines must meet hardware and OS recommendations
- Ensure power to the V-Series appliance is not interrupted
- Confirm your third-party component works with v7.7
  - Microsoft ISA Server is not supported
  - Squid Web Proxy Cache is not supported
  - Supported Citrix versions have changed
  - Blue Coat Proxy no longer supports traditional (on-box or off-box) integrations
  - Check Point and Cisco integration version requirements have changed

- Data Security user name and password is limited to 19 characters
- Record your DLP quick policies regulatory and compliance attributes
- Back up the Websense reporting databases
- Stop Web and Email Security Log Server services
- Disable all Websense SQL Server Agent jobs
- Preserve Content Gateway logs (optional)
- Record Content Gateway IWA settings
- Disable Content Gateway cluster
- Disable Content Gateway Virtual IP failover

- Record Network Agent settings (situational)
- Websense network administrator accounts must have a designated email address
- Disable the on-appliance TRITON - Web Security
- Back up Websense systems
- Close Windows Event Viewer
- Close all open applications
- Disable firewalls (Windows and Linux)
- Stop antivirus software
- Set service recovery properties to “Take No Action”
- Restart Websense services before starting upgrade

- ❑ After saving the Full Appliance backup off to another machine, clear disk space by deleting backups

**Backup Utility**

Hostname: ts-v10000-5 Log Off

**Backup** | Restore

**Perform Backup**

Run the Backup Utility now or schedule backups to be performed on a regular basis. Use [Content Gateway Manager](#) to perform backups for Websense Content Gateway.

|                                  | Backup Type                  | Schedule Frequency | Last Scheduled Backup | Next Scheduled Backup |
|----------------------------------|------------------------------|--------------------|-----------------------|-----------------------|
| <input checked="" type="radio"/> | Full Appliance Configuration | Not scheduled      | Not scheduled         | Not scheduled         |
| <input type="radio"/>            | Web Security Configuration   | Not scheduled      | Not scheduled         | Not scheduled         |

[Run Backup Now](#) [Configure Backup Schedule](#) [Cancel Scheduled Backup](#)

**Local Backup Files**

Manage all backup files stored on this appliance.

View backups for: Full Appliance Configuration Full Appliance Configuration Web Security Configuration

| <input checked="" type="checkbox"/> | Date                  | Version | Backup source | Comments  |
|-------------------------------------|-----------------------|---------|---------------|---|
| <input checked="" type="checkbox"/> | Oct 12, 2012 08:55:01 | 7.7.0   | ts-v10000-5   | Web Security Gateway (Full policy source)           |
| <input checked="" type="checkbox"/> | Sep 07, 2012 16:04:18 | 7.7.0   | ts-v10000-5   | Web Security Gateway (User directory and filtering) |
| <input checked="" type="checkbox"/> | Aug 28, 2012 16:03:44 | 7.6.5   | ts-v10000-5   | Web Security Gateway (Full policy source)           |
| <input checked="" type="checkbox"/> | Aug 06, 2012 10:02:59 | 7.6.2   | ts-v10000-5   | Web Security Gateway (Full policy source)           |
| <input checked="" type="checkbox"/> | Jan 03, 2012 15:10:24 | 7.6.0   | ts-v10000-5   | Full policy source                                  |
| <input checked="" type="checkbox"/> | Jan 03, 2012 14:56:35 | 7.6.0   | ts-v10000-5   | Full policy source                                  |
| <input checked="" type="checkbox"/> | Jan 03, 2012 14:24:38 | 7.6.0   | ts-v10000-5   | Full policy source                                  |

Maximum of 20 full appliance configuration backup files

[Delete](#)

## Open new firewall ports

- Data Security Management Server, open 17500-17515
- Email Security Gateway, open 17700-17714

- Cannot change configuration settings during upgrade
- Internet access may be disrupted
- Filtering Service downloads a new Master Database
- Personal Email Manager is not available during upgrade
- Cannot upgrade individual Websense components
- All components on a machine are upgraded in the correct order
- Cannot roll back a successfully upgraded component
- If Websense Log Server uses a Windows trusted connection with SQL Server, perform the upgrade logged on using same network account

- Full appliance configuration backup
- TRITON management server
- Web Security components
- Websense Content Gateway
- Email Security
- Data Security

- Full appliance configuration backup
  - **Appliance Manager > Administration > Backup Utility > Perform Backup > Full Appliance Configuration**
  - **Click Run Backup Now**
  - Move the backup file off the appliance
- **Demonstration**

- TRITON management server
  - On the TRITON management server machine
    - **Start > All Programs > Administrative Tools > Task Scheduler > Task Scheduler Library**
    - Ensure the **TRITON Backup** task is enabled
    - Right-click the **TRITON Backup** task and select **Run**
    - The **C:\EIPBackup** folder contains the backup data
  - Move the backup folder off the server
- Demonstration

- Web Security components
  - Do one of the following
    - Windows
      - Navigate to “**\\Websense\Web Security\bin**” and run
        - » `wsbackup -b -d <directory>`
    - Linux
      - Navigate to “**/opt/Websense/bin**” directory and run
        - » `export LD_LIBRARY_PATH=.`
        - » `./wsbackup -b -d <directory>`
      - The destination folder must already exist
    - Move the backup files off the server
    - Repeat on all machines with Websense Web Security components
  - Demonstration

- Websense Content Gateway
  - The Full Appliance Configuration backup includes Content Gateway module settings
    - When performing a Full Appliance Backup for recovery, it is not necessary to also generate a Content Gateway snapshot
  - Content Gateway Manager allows saving a snapshot
    - A snapshot saves the current running state of the Content Gateway module
    - Typically, you would use the **Content Gateway Manager > Configure > My Proxy > Snapshots > File System** option before making proxy setting changes
    - Restoring a snapshot allows for quickly recovering prior Content Gateway settings
- Demonstration - same as Full Appliance Backup

- Email Security
  1. TRITON - Email Security management server
    - **Settings > General > Backup/Restore > select Backup**
    - The **C:\ESGBackup** folder contains the backup data
  2. Appliance Manager console
    - **Administration > Backup Utility > Email Security Configuration**
    - Full Appliance Backup includes Email Security module
  3. TRITON - Data Security management server
    - **Task Scheduler**
  4. Microsoft SQL Server
    - Databases: **esglogdb76, esglogdb76\_n**
    - SQL Agent Job: **Websense\_ETL\_Job\_\_esglogdb76**
    - SQL Agent Job: **Websense\_Maintenance\_Job\_\_esglogdb76**
- Demonstration

- Data Security
  - Configure backup settings in TRITON - Data Security
    - **Settings > General > System > Backup**
    - For Path and Credentials data, and including Forensics
  - TRITON - Data Security management server machine
    - **Start > Administrative Tools > Task Scheduler > Task Scheduler Library > DSS Backup > Enable**
    - Right-click **DSS Backup** and select **Run**
    - Confirm the backup completed successfully
      - Within the backup folder, **C:\DSSBackup** (default), confirm the **DataBackup.log** does not include the words 'fail' or 'error'
- Demonstration

- Ensure all backup files are save to a safe network location not located on any Websense system

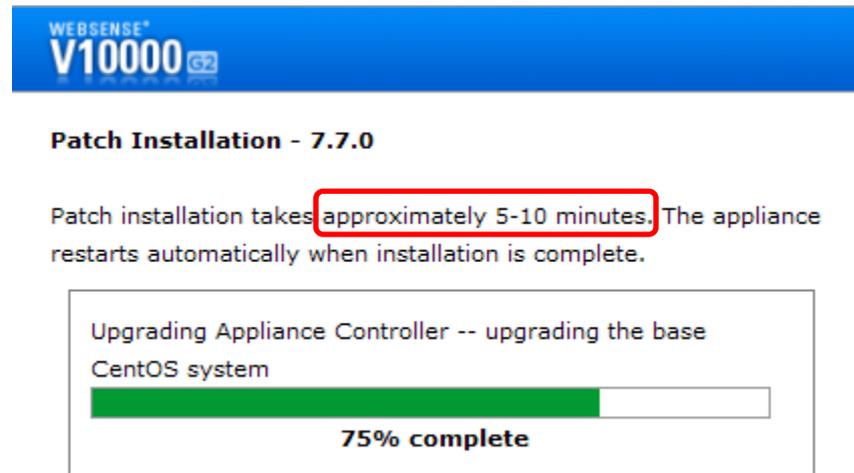
- Microsoft SQL Server
  - Email Security
    - Databases: **esglogdb76, esglogdb76\_n**
    - SQL Agent Job: **Websense\_ETL\_Job\_\_esglogdb76**
    - SQL Agent Job: **Websense\_Maintenance\_Job\_\_esglogdb76**
  - Web Security
    - Databases: **wslogdb70, wslogdb70\_n**
    - SQL Agent Job: **Websense\_ETL\_Job\_\_wslogdb70**
    - SQL Agent Job: **Websense\_IBT\_DRIVER\_wslogdb70**
    - SQL Agent Job: **Websense\_Maintenance\_Job\_\_wslogdb70**
  - Data Security
    - Database: **wbsn-data-security**
    - Database: **wbsn-data-security-temp-archive**

1. Ensure no administrator is logged into TRITON - Web Security management console
2. Restart the appliance
3. Download the upgrade patch
4. Click Install
5. When patch installation completes, restart the appliance
6. Verify V-Series version is v7.7
  - **Appliance Manager > Configuration > General**
7. Check time zone settings
  - **Appliance Manager > Select System > Configuration**
8. Upgrade remaining appliances
9. Upgrade off-appliance components



- Demonstration
- When upgrade completes, restart the appliance
  - When prompted, click **Restart Now**
  - Do not cycle the power

- During patch installation, a progress window displays the percentage of completion



- Actual upgrade times are approximately
  - 20-30 minutes for Filtering only mode
  - 40-50 minutes for Web Security Gateway mode
  - 80-90 minutes for Web Filtering Gateway and Email mode



- If your network contains an Email only appliance
  - Upgrade all non-email appliances first
  - Upgrade the Email appliance before upgrading any off-appliance Websense components
    - Exception
      - When Email Log Server is the only Websense component installed on a server



**Policy Broker**

- *Full policy source* resides on either a 'Web' mode or a combination 'Web and Email' V-Series appliance
  1. Upgrade the *Full policy source* V-Series appliance, and immediately restart
  2. Upgrade all *User directory and filtering appliances*, and immediately restart
  3. Upgrade all *Filtering only* appliances, and immediately restart
  4. After upgrading all appliances, upgrade off-box components

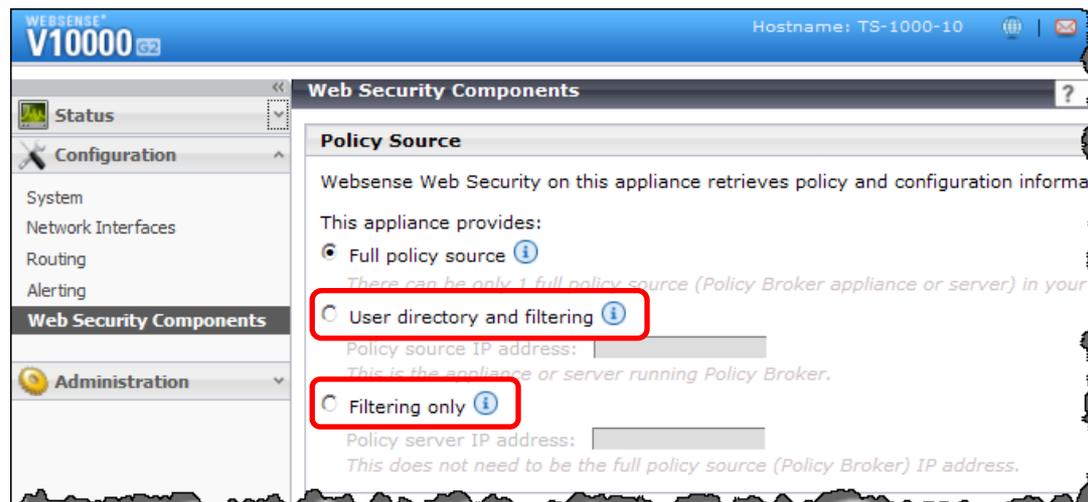


- *Full policy source* is NOT on a V-Series appliance
  1. Upgrade the Policy Broker system
  2. Upgrade all *User directory and filtering* appliances, and immediately restart
  3. Upgrade all *Filtering only* appliances, and immediately restart
  4. Upgrade off-appliance components

- If the *Full policy source* appliance is unavailable
  - Set the *User directory and filtering* or *Filtering only* appliance to temporarily be a *Full policy source*
    - **Appliance Manager > Configuration > Web Security Components > Policy Source > Full policy source > Save**



- Upgrade to v7.7 and immediately restart
- When the original *Full policy source* appliance becomes available again and is running v7.7
  - Change the upgraded temporary *Full policy source* machine, pointing it back to the original *Full policy source* appliance
    - **Appliance Manager > Configuration > Web Security Components > Policy Source > User directory and filtering (Filtering only) > enter primary appliance's IP address > Save**
- Upgrade remaining off-appliance components



- Machines must be rebooted to complete upgrade
- All components must be the same version
- Exclude Websense folders from antivirus scans
- Restart antivirus, firewall, etc.
- Enable the SQL Server Agent jobs
- Integrations may require additional upgrade steps
  - Integrating Web Security with Check Point, [page 445](#)
  - Integrating Web Security with Cisco, [page 481](#)
  - Integrating Web Security with Citrix, [page 513](#)
  - integrating Web Security with Microsoft Products, [page 535](#)
  - Installing Web Security for Universal Integrations, [page 563](#)
    - *NOTE: Overtime, the page numbers above will change somewhat as the referenced document is updated*

## Repair Email Security Gateway (Anywhere) registration with Data Security

1. **TRITON - Email Security** > Settings > General > Data Security, click Unregister
2. **TRITON - Data Security** > Settings > Deployment > System Modules > Email Security Gateway registration > Delete the older instance > click Deploy
3. **TRITON - Email Security** > Settings > General > Data Security
  - Register the Email Security appliance with Data Security
4. **TRITON - Data Security** > click Deploy
5. **Verify**
  - Redirect email traffic through V-Series appliance

- Register appliance with Web Security Policy Server
  - **TRITON - Web Security** > Settings > Policy Servers > add the appliance
  - **TRITON console** > Appliances tab > register the appliance
- Register Content Gateway nodes
  - **TRITON - Web Security** > Settings > Content Gateway Access page
- Configure Content Gateway system alerts
  - **TRITON - Web Security** > Settings > Alerts > System page
- Clear browser cache for new management console

- TRITON Unified Security Center management console requires importing new security certificate
- Restore Network Agent settings
- Restore IWA settings
- Enable proxy cluster
- Enable Virtual IP failover
- Clients may need to re-import Root CA
  - In v7.7, the default Root CA presented to clients is SHA-1
  - Prior to v7.7, the Root CA was signed with a MD5 hash

- [Before upgrading Web, Email, and Data Security](#)
- [Upgrading V-Series Appliances to v7.7](#)
- [Upgrading solutions that include Web, Email, and Data Security](#)
- [Backing up and restoring your Websense data](#)
- [Backup and Restore FAQ](#)
- [Deployment and Installation Center](#)
- **Release Notes**
  - [Websense Web Security](#)
  - [Websense Content Gateway](#)
  - [TRITON Unified Security Center](#)
  - [V-Series Appliance](#)
  - [Websense Data Security](#)
  - [Email Security Gateway](#)

## Webinar Update

Title:

### **Quick Start 1: Web Security Configuration and Setup**

Date:

**November 14th, 2012**

Time:

**8:30 A.M. PDT (GMT -8)**

How to register:

<http://www.websense.com/content/SupportWebinars.aspx>

- To find Websense classes offered by Authorized Training Partners in your area, visit:

<http://www.websense.com/findaclass>

- Websense Training Partners offer classes online and onsite at your location.

- For more information, please send email to:

[readiness@websense.com](mailto:readiness@websense.com)

## Websense Customer Training

### Designed for:

- ▶ System administrators
- ▶ Network engineers
- ▶ Other members of your organization as appropriate

### Training locations:

All training is conducted at Authorized Training Centers (ATCs). Each ATC has information on costs, course schedules, and types of classes (in-person, virtual, or computer-based).