



## Product Update Summary: Version 3.0



### Key Benefits

#### Definable Queries

Enables users to collect any data type from any device on any network.

#### Correlation Rules

Can be configured by users to correlate disparate data types.

#### Edit Mode

Enables each user to define their own tabs, dashboards, charts and graphs.

#### Forensic Search

Enables users to search through all data at lightning speeds.

#### Report Builder

Enables users to create comprehensive and meaningful reports automatically.

#### Policy Builder

Enables users to build their own standards and assessments.

#### Custom Fields

Turns data capture into business intelligence.

### Key Features

Simple to deploy

Agentless

Supports any Device

Onsite or Secure Hosting

Encrypted Browser Access

Application Layer Protection

Data 256-bit AES Encrypted

Multiple Language Support

Multi-tenant Segregation

Incredibly scalable

Completely customizable

The key to Pervade Software's extensibility is an ingenious new architecture. Each of the products is designed to sit on a single common database and share a series of unique software engines. This means that updating the database and/or any of the engines makes those updates available to all products at once. This document details the latest updates to this unique platform.

### Goals of Version 3.0

Version 3 is the second major release since the platform was launched in 2012. First and foremost, the aim of Pervade upgrades is to improve **extensibility** and there are a number of groundbreaking new features which extend functionality (*see Extensibility ShowCase for more details*).

This release also incorporates new features which improve **manageability** for system administrators and **usability** for contributors.

In addition, the core database has been upgraded to dramatically **increase the speed** of the system for inbound data processing as well as aggregated data reporting.

### Upgrades to Version 3.0

This document details the following upgrades (as compared to version 2.5):

#### Extensibility Upgrades

- ✓ Language Builder
- ✓ Report Builder

#### Manageability Upgrades

- ✓ Setup Wizard
- ✓ Admin Alerts
- ✓ System Backup Utility
- ✓ Disk Management Utility
- ✓ Data Collector Actions Improved
- ✓ Sub-Hour Timeframe
- ✓ Query Types
  - Agentless File Integrity Monitoring (FIM)
  - NMAP (Open Port Detection & OS Detection)
  - WMI & SNMP Query Editing Improved

#### Usability Upgrades

- ✓ Improved Workflow and Ownership
- ✓ Rules Engine Rebuild
- ✓ Compliance Update Button Removed
- ✓ Custom Compliance Answer Type
- ✓ Answer Cache for Participants

#### Database Upgrade

- ✓ Source searches improved to from 20,000 to 26,000 records per second
- ✓ New ZOF File Format

### Bug Fixes in Version 3.0

Version 3.0 also addresses the following reported bugs:

- ✓ Policy Update Error
- ✓ Search Export PDF Error
- ✓ Search Export CSV Error

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## Extensibility Upgrades

The design principle at the heart of all Pervade products is **extensibility** and the challenge is to build-in configurability and customization so that users are able to mold the system to fit their business, rather than being forced to change the way the business works to fit the software.

### Language Builder

Administrators of the system have access to a unique Language Builder within the system. This intuitive wizard provides the ability to create new languages and customize existing languages by listing every label and phrase used in the software with an editable text box next to it.



Any vocabulary and terminology typed into these boxes, including Roman script, Cyrillic or Asian characters, is stored under a new language file that can be used by any user.



In addition, every other customizable feature in the product (such as the Chart Builder, the Report Builder, the Policy Builder etc.), uses text boxes to provide names, labels and content, so these can also be written in any language.

When a user logs into either **OpView™** or **OpAudit™**, their language preference is automatically detected and the references in the software are all changed to use their language of choice, even if that is a custom language.

### Report Builder

In order to improve the flexibility, style and ease-of-use of exporting data a new Report Builder has been added which will control the configuration of all scheduled reports and data exports.

Report Builder can be accessed via the Export button on all screens. It will appear over the screen as a drilldown window (just like the Chart Builder) with 3 tabs - Settings, Design and Filters.



The Settings tab controls the name and description of the report, the frequency it should run if it is a scheduled report and the output options (Email, FTP and SFTP). A local copy to be saved and made available through the report archive in the user interface.

The Design tab is where reports are built section by section with headers/footers, cover page, charts from the system, compliance components or free text which can be added using a full HTML editor.

The HTML Editor allows reports to become very advanced with cover pages including logo pictures, contents pages, indexes and embedded media.



The Filters tab contains controls for filtering the data shown in any charts, graphs, tables or policy sections referenced from either **OpView™** or **OpAudit™** in order to show the specific data needed for the report.

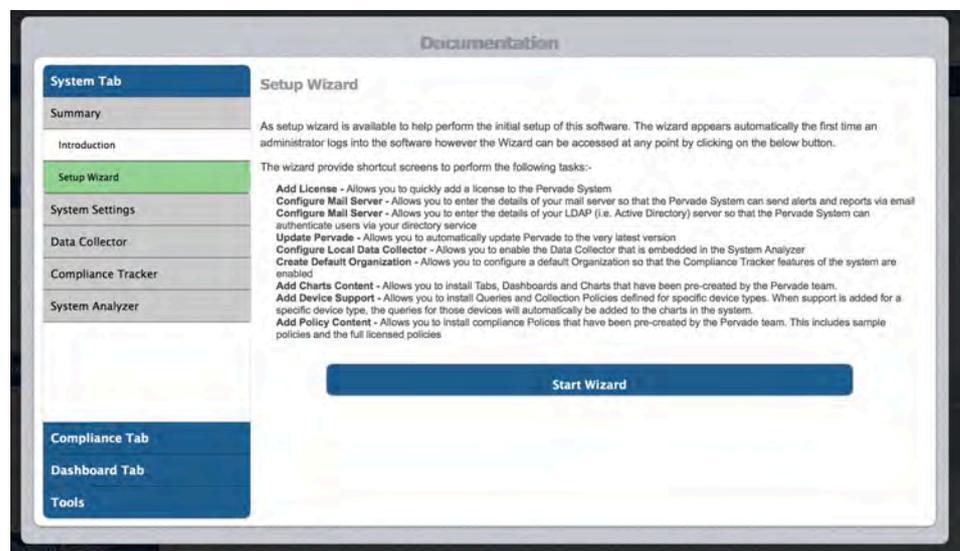
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## Manageability Upgrades

Pervade Software's products have an incredible amount of functionality and most of the capabilities are configurable by an administrator so it is critical that the system is easy to manage.

### Setup Wizard

The setup wizard is located in the documentation within the summary section and provides a simple wizard to perform the tasks required to set up a new system. The setup wizard can be run at any time.



Two features of the setup wizard are worthy of additional note:-

- ✓ The Content pages of the wizard (the last 3 pages) Allow users to add pre-build content that has been designed by Pervade. The list of content in these pages is updated with every release and is continuously being improved. This content includes queries for devices, charts/graphs and compliance policies including free trial versions of major compliance regulations.
- ✓ The "Update Pervade" page Provided that the server has access to the Pervade Software online API, this page will perform a check to see whether your system is patched to the latest version and if not will provide a list of patches that need to be applied. If performing a large upgrade (for example from version 2.4 to version 3) this feature is invaluable as it automatically recommends the shortest upgrade path taking into account role-up patches.

### Admin Alerts

This feature allows administrators to enter an admin email address and then select from a checkbox list of all logged events in the Pervade system of which they would like to receive email notifications. This feature means that administrators can receive notifications on low disk space, major configuration changes and security events such as user account lockouts.

### System Backup Utility

Under the System Management->Disk Management accordion in the Settings page a new feature allows administrators to take and download complete backups of the Pervade system configuration. These backups include all **OpView™** settings and all compliance answers for **OpAudit™** as well as all system settings.

In addition to taking and downloading the backup through the UI, scheduling options have been added that allow administrators to automatically take these backups and send them via FTP or SFTP to another server.

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## Disk Management Utility

In addition to the System Configuration Backup utility, the Disk Management accordion also contains a feature for removing data from the Pervade system in order to save disk space. Data can be removed by database type, these include Query Data (Data used for reporting), Source Data (Data for forensic searches) and System Log Data (Logs from the Pervade system). Once a data type is selected, options will be provided to remove data by Hour/Day/Month.

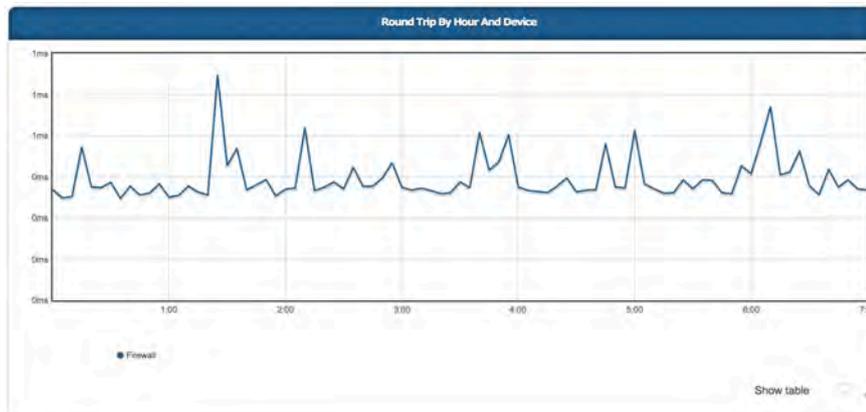
## Data Collector Actions Improved

Data collector actions can now be run on multiple devices which can be selected from a new group-based checkbox system. When an action is run on end devices (run from the System->Data Collectors->Collector->Settings->Actions page) feedback will be returned for each devices to show whether the action was successful or not.

## Sub-Hour Timeframe

A new setting is available in System->System Management->User Interface that allows administrators to define how short the time intervals are between recorded data points.

By default both **OpView™** and both **OpAudit™** aggregate data on an hourly basis, this means that a chart queries by "Time" will show 24 data points in a day, 1 per hour and the data within each hour will be aggregated to show the total or average based on the settings of the chart. The new setting allows administrators to define a shorter interval so that multiple sub-hour plots will show up on the charts



## Query Types

Query types are used by **OpView™** to collect data from end devices. Query types are constantly being improved and added based on customer demand. Two new query types have been added with this release:-

- ✓ Agentless File Integrity Monitoring (FIM)  
Provides the ability to monitor files for changes. This query type can connect to a directory via FTP, SFTP or Windows File Sharing and recursively monitor for changes to files contained within that directory. Changes will include file added, file removed, file modified, directory added, directory removed. All changes detected by changes to the time last modified or filesize properties of the file.
- ✓ NMAP (Open Port Detection & OS Detection)  
Scans devices to detect open TCP ports as well as detect operating system name and version where possible.

In addition to these new query types, the existing query types for WMI and SNMP have been improved. With the last version of **OpView™** editing these queries meant starting the wizard again from scratch but now the wizard preloads the data based on the existing query settings.



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## Usability Upgrades

The combined functionality of **OpView™** and **OpAudit™** means that there could be hundreds, if not thousands of users accessing the system. Improvements are constantly being made to the user interface in response to feedback from these users.

## Improved Workflow and Ownership

Administrators can now assign devices and compliance questions to an owner. The forms for creating new Users and new Participants in the Pervade systems now allow an email address to be added. This will be important for a number of upcoming workflow improvements but in this version specifically it allows users to be dynamically emailed as the owner of a device or question. New functionality added to the rules engine for **OpAudit™** allows rules to be triggered based on compliance question or participant "Due Dates". Due Dates are deadlines that can be applied and that will generate a "DaysLeft" property on all questions. This will allow email alerts to be set up notifying question owners and participants that they have X days left to answer their questions. Multiple alerts can be set up counting down the days left if required.

## Rules Engine Rebuild

The rules engine that is used by both **OpView™** and **OpAudit™** has been rewritten to make inline rule processing faster and to improve the change detection algorithm.

## Compliance Update Button Removed

In all previous versions of **OpAudit™** (including Compliance Tracker) when users have answered their compliance question and completed any custom fields they were required to click an update button in order for the changes to take effect. This button has now been removed and the question will be updated as soon as a change is detected to the answer or any custom fields.

## Custom Answer Types

The ability to create custom answer types in **OpAudit™** has changed to allow varying levels of compliance. Administrators will now be prompted to define the compliance score associated with the option. For example, this feature now allows 25%, 50%, 75% and 100% compliance scores to be assigned to different options for an answer which has not been possible before.

## Answer Cache for Participants

**OpAudit™** has always provided an answer cache system for user accounts, this system improves system speed, avoids conflicts where multiple users answer the same questions and improves the speed at which users get feedback from the system. This feature has now been extended to Participant users. This includes users who are impersonating participants.

## Database Upgrade

Version 3 upgrades the core database used by the platform to leverage version 6.4 of the Pervade Object-Persistent Database. This new database version offers a new object format, Compressed Simple Object Format (.zof), which provides a much faster way of encrypting and compressing new data. This new file format offers a 3x speed improvement on the time taken to encrypt (at 256bit) and compress (minimum 4:1, maximum 20:1) new data.

In addition to improving the rate at which new data is received, new indexing features also improve the rate at which source data (forensic analysis of log data) can be searched. The official Records Per Second (RPS) rate now increases from 20,000 to 26,000.

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## About Pervade Software

Pervade Software is the UK-based creator of **OpView™** and **OpAudit™**. The company is a privately funded and cash positive software vendor with strong roots in the capital of Wales. Thanks to award-winning new architecture, **OpView™** can collect, correlate and display every data type and **OpAudit™** can track both technical and manual compliance evidence, all in a single configurable system. The products are used by a wide range of private and public sector clients across all verticals operating in more than 80 countries. Resale partners range from independent consultants to global managed security service providers.

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## Pervade Software

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