

AirMagnet Survey PRO 9.1

Release Notes

December 2016

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Introduction

AirMagnet Survey PRO is a powerful, easy-to-use WLAN site survey tool that empowers WLAN professionals with everything they need to plan and survey any 802.11 a/b/g/n/ac wireless network.

This *Release Notes* highlights issues addressed in the 9.1 release in addition to the new features and major known issues in the AirMagnet Survey PRO 9.0 release. It also provides basic instructions and important notes regarding the installation and operation of the software.

Special Notes

- You must uninstall any beta or demo version of AirMagnet Survey before installing the released version of Survey PRO/Planner 9.1.
 - When installing Survey PRO, NETSCOUT recommends that a clean installation be done rather than using the 'Repair' function. Using Repair has resulted in unreliable performance in some versions of Windows.
 - Survey PRO 8.8 and later releases use the *.svdx* file extension for survey data files, which is different from the *.svd* file extension used in all previous releases. **It is important to note that you cannot open *.svdx* files in any previous version of Survey PRO. If you've done a survey using Survey PRO**
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v8.8 or later, you MUST open the survey data (.svdx) file in Survey PRO 8.8 or later. You can still open or import survey projects and data files saved in .svd format from earlier versions of the application. However, when you open a .svd file for the first time in Survey PRO 8.8 or later, the application will first convert the file to the new .svdx file format. The conversion may take longer than just opening a file. You can view the progress of the conversion from the progress bar at the bottom of the screen.

- Survey PRO 8.8 and later use a ‘tiling’ mechanism for determining the smallest ‘square’ of space to color on a heatmap. The tile size is determined by the overall dimensions of the floorplan. For very large sites, this may result in a blocky look to the heatmap when zoomed in to look at small areas. To counteract this, a new feature has been added to display heatmaps with increased granularity. This feature is covered in the New Features section below.
- For AP-on-a-stick surveys performed in previous versions of Survey, in which multiple surveys were performed using the same AP, NETSCOUT recommends merging the survey files in Survey PRO 8.7.* first and then converting them to .svdx format in Survey PRO 9.1. This preserves AP alias names as unique for each source survey.
- When using any of the USB wireless adapters, you may need to re-create the wireless profiles when plugging the same adapter into a different USB port. This is because wireless profiles are stored based on the port, not the adapter itself.
- You must have a Cisco “Plus” license to use the Cisco Prime Infrastructure feature.
- To use 802.11ac USB adapters with this AirMagnet Survey PRO 9.1 release, you must have the following versions of the Microsoft Windows operating system:
 - ✓ Microsoft® Windows 7 Enterprise/Professional/Ultimate 64-bit
 - ✓ Microsoft Windows 8 Pro/Enterprise 64-bit
 - ✓ Microsoft Windows 8.1 Pro/Enterprise 64-bit
 - ✓ Microsoft Windows 10 Pro/Enterprise 64-bit
- Some features of AirMagnet Survey become unavailable when you use an 802.11ac USB adapter with the application. They include, but are not limited to, VoFi surveys, roaming control for Active or Active Iperf surveys, indication of channels being scanned, and the Station tab in the Passive Survey window.
- When performing AP-on-a-stick active surveys with an 802.11ac adapter, NETSCOUT recommends the following configuration scenarios:

Scenario	AP Configuration	Gateway Configuration	Adapter Configuration
1	DHCP server	Yes (using AP’s IP address)	DHCP
2	DHCP server	No, not configured	DHCP
3	Not configured as DHCP server; static IP address assigned to AP	No, not configured	Static IP Address (within AP’s IP address range)

- When using the supported built in 802.11ac adapter in MacBook laptops, be sure to download version 6.30.118.70 of the driver from your MyAirMagnet account. Other versions of the driver result in data accuracy issues.
- As of the Survey PRO v.8.8 release and above, the application ceases to support the following wireless network adapters:

Vendor	Adapter
D-Link	<ul style="list-style-type: none"> D-Link DWA-160
Ubiquiti Networks	<ul style="list-style-type: none"> Ubiquiti Networks SR71-USB
AirMagnet	<ul style="list-style-type: none"> AirMagnet 802.11n PCCard C1060
NETSCOUT	<ul style="list-style-type: none"> NETSCOUT 802.11n PCCard
NEC	<ul style="list-style-type: none"> NEC Warpstar Aterm WL300NC
Intel	<ul style="list-style-type: none"> Intel 5100 Intel 5300 Intel 4965

New Features in v9.1

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Automatic Wall Extraction

Drawing walls in a floorplan can be a tedious and time consuming task, AirMagnet Survey PRO release 9.1 allows you to automatically import walls from a CAD image of your building, dramatically reducing the time it takes to prepare a floorplan.

Each CAD layer can be individually selected for extraction and given a unique attenuation type to get the most accurate model possible for the site. Extraction allows you to choose as many or as few layers as needed. All the same wall attenuation types that are available in Planner for manual wall placement are available for CAD extracted walls.

VoFi Surveys without VoFi Analyzer

As of AirMagnet Survey PRO release 9.1, VoFi surveys can now be conducted without an installed copy of VoFi Analyzer being present. VoFi surveys can be helpful in troubleshooting problem areas in a VoFi deployment; they can provide details about the active call such as WiMOS, roaming frequency, and signal strength.

VoFi surveys gather data from an active connection between a wireless AP and a VoFi phone. To establish this connection, you generate a call between two phones (one of which must be a VoFi phone; the other may be VoFi or wired) before attempting to start the survey. Once Survey detects the call, you can start collecting the survey data. With the differences between individual VoFi phones, you must provide some configuration information in order to ensure that Survey can properly interpret the data received from VoFi surveys. This process consists of you creating VoFi phone profiles within Survey's phonebook that correspond to the types of phones in use (or expected to be in use) on the VoFi deployment.

Be aware that Softphones may not be detected since they may not generate enough traffic to allow call detection.

Refer to the *User Guide* for additional specific configuration information relative to conducting VoFi surveys.

Display with Increased Granularity

Survey PRO 8.8 and later use a 'tiling' mechanism for determining the smallest 'square' of space to color on a heatmap. The tile size is determined by the overall dimensions of the floorplan. For very large sites, this may result in a blocky look to the heatmap when zoomed in to look at small areas. Surveys of large sized sites can now be opened in Increased Granularity mode to counteract this. The increased granularity will be visible in the Display screen, as well as any reports generated while the survey is set to Increased Granularity.

To open a survey in increased granularity, right click the survey in the survey list while in the Display screen and select "Open with Increased Granularity". The survey data will now be recalculated with a smaller tile size. When using the Increased Granularity feature please be aware of the following:

- Calculating heatmaps will take longer than with standard granularity and will be more pronounced in some heatmaps over others. Channel Interference takes a large amount of memory to calculate and may become slow to load when using Increased Granularity. If Survey generates an 'Out of Memory' message, you will need to reload the survey in Standard Granularity to view that heatmap.
- If you enter AirWISE while your data is in Increased Granularity you may see slightly different percentage values than when in Standard Granularity. This is expected behavior as the increased granularity can influence how much overall area meets a given cutoff value
- DiffView and MultiView automatically re-open all projects in Standard Granularity. This will force you to re-open your project in Increased Granularity when you return to Display. It is recommended that any necessary Display work be done before moving to DiffView or MultiView to save time in recalculating data
- Simulation view is incompatible with Increased Granularity, the memory burden on most systems results in severely deprecated performance. If you need to use Simulation, open the project in Standard Granularity first.

New Antenna Patterns

This Survey PRO 9.1 release adds the following antenna patterns.

Vendor	Antenna Pattern
AccelTex	AccelTex ATS-OP-245-47-4RPSP-36
Aruba	Aruba AP 320 Aruba AP 325 - Update Aruba AP 225 - Update
Cisco	Cisco AIR-ANT2566D4M-R Cisco AIR-ANT2566P4M-R Meraki ANT-21 Meraki ANT-20 Meraki ANT-23 Meraki ANT-25
Watchguard	Watchguard AP 320 Watchguard AP 120

New Features in v9.0

- Survey Mobile5
- CAD Layer Viewing5
- Disable Headers / Footers in Reports5
- Automatic AP Numbering5
- Improved Wall Selection5

Survey Mobile

AirMagnet Survey PRO release 9.0 provides you with NETSCOUT'S Android-based survey tool Survey Mobile.

Survey Mobile allows you to quickly and easily conduct surveys on Android phones or tablets. This allows data to be collected on lower end BYOD / consumer grade devices to see how these devices will experience the network. Once your survey is complete, just email the project from your handheld device and open the project (.svd file) in AirMagnet Survey PRO for deeper survey analysis and reporting.

You can find the .apk file for this software in your Survey PRO installation directory.

CAD Layer Viewing

When importing a DWG image, you can now select which specific layers within the CAD drawing you would like to view within Survey. This can cut down on clutter and make CAD files much easier to work with.

Disable Headers / Footers in Reports

This release adds the ability to enable and disable the header and footer areas within a generated report. This allows multiple reports to be combined to create a master report without having contradictory header/footer information.

Automatic AP Numbering

This release adds an automatic renumbering feature to access points placed within Planner. If APs are deleted / removed during the course of planning, the renumbering button now allows all APs to be renumbered without missing AP numbers

Improved Wall Selection

Holding the shift key along with the select icon now allows you to select all wall objects that fall completely within the selection area. These objects can then be moved or deleted as a group.

System Requirements

Laptop/Notebook PC/Tablet PC

- Operating Systems: Microsoft® Windows 7 Enterprise/Professional/Ultimate or Microsoft Windows 8 Pro/Enterprise 64-bit, Microsoft Windows 8.1 Pro/Enterprise 64-bit, or Microsoft Windows 10 Pro/Enterprise 64-bit.

Note: 64-bit operating system supported on Windows 7, 8 and 8.1 for certain wireless adapters. Refer to [Supported Wi-Fi Adapters](#) for details.

- Intel® Core™ 2 Duo 2.00 GHz (Intel® Core™ i5 or higher recommended).
- 4 GB memory or higher.
- 800 MB free HDD or SSD space.
- AirMagnet-supported wireless network adapter(s).
- USB port or ExpressCard slot for external adapter use.
- When using multiple adapters, AirMagnet recommends the use of its multi-adapter kit. Otherwise, multiple slots/ports in the PC are required.
- Optional AirMagnet Spectrum XT adapter and license for integrated spectrum survey on Survey PRO. This is required for viewing spectrum data and heat map.
- Microsoft® MapPoint 2004 or higher (required for running large-scale outdoor survey using the MapPoint integration feature; Survey PRO only).
- Internet connection for using Microsoft® Virtual Earth integration for outdoor surveys (Survey PRO only).
- Google Earth must be installed in order to export the GPS data for outdoor surveys to Google Earth (Survey PRO only).

Apple® MacBook® Pro

- Operating Systems: MAC OS X v10.9 or higher running a supported Windows OS (as noted under the Laptop/Notebook PC/Tablet PC section) using Boot Camp®.
- Intel®-based CPU 2.0 GHz or higher.
- 4 GB memory or higher.
- 800 MB free HDD or SSD space.
- USB port for external adapter use.
- Built-in Atheros-based Airport Extreme 802.11n wireless adapter or any AirMagnet-supported wireless network adapter (whichever applicable).
- Optional AirMagnet Spectrum XT adapter and license for integrated spectrum survey on Survey PRO. This is required for viewing spectrum data and heat map.
- Microsoft® MapPoint 2004 or higher (required for running large-scale outdoor survey using the MapPoint integration feature; Survey PRO only).
- Internet connection for using Microsoft® Virtual Earth integration for outdoor surveys (Survey PRO only).
- Google Earth must be installed in order to export the GPS data for outdoor surveys to Google Earth (Survey PRO only).
- When using multiple adapters, AirMagnet recommends the use of its multi-adapter kit. Otherwise, multiple slots/ports in the MacBook® Pro are required.

Supported Site Map Image Formats

.bmp, .dib, .dwf, .dwg, .dxf, .emf, .gif, .vsd, .jpg, .wmf, .vdx, and .png.

Supported Wi-Fi Adapters

An AirMagnet-supported Wi-Fi adapter is required in order to operate the AirMagnet Survey/Planner software. For a complete, up-to-date listing of AirMagnet-supported wireless adapters, visit <http://enterprise.netscout.com/products/airmagnet-survey>.

When installing Intel® and USB adapters, it is important that you uncheck the option to install the adapter's client utility in addition to the driver software.

Recommended drivers for certain 3rd-party adapters are available at https://airmagnet.netscout.com/my_airmagnet/public/documents/ (The link becomes accessible only after you have logged into a valid MyAirMagnet account.)

Note: To use the Netgear A6200 on Windows 8.1 operating system, you must download and install the latest recommended driver from <http://support.netgear.com/product/A6200>. This ensure that you get the Win 8.1 beta driver with DFS channels support for Europe listed on Netgear's website.

Guideline for Use of Wi-Fi Adapters

AirMagnet Survey/Planner requires that a supported Wi-Fi adapter along with a supported driver be operating on the same computer running the application in order to capture Wi-Fi data.

AirMagnet mobile products categorizes supported Wi-Fi adapters into the following types

- **Preferred Adapters:** These adapters have been tested by AirMagnet and are recommended for use with AirMagnet products. Drivers have been customized for extended feature support.
- **Standard Adapters:** These adapters have been comprehensively tested by AirMagnet and are recommended for use with AirMagnet Survey PRO for 802.11ac surveys. Drivers have not been customized and provide limited feature support.

Limitations of Standard Network Adapters

Standard network adapters are those that have been comprehensively tested by AirMagnet and are recommended for use with AirMagnet Survey PRO for 802.11ac WLAN surveys. However, because their drivers have not been customized, standard network adapters only provide limited feature support.

The Broadcom 3x3 802.11a/b/g/n/ac Network Adapter used in active/lperf survey mode and the Netgear A6210, 802.11ac USB 3.0 Dual Band adapter use the manufacturer's standard driver. As such, they are designated as standard adapters. The following are noted limitations of standard adapters in AirMagnet Survey.

- No ability to scan specific channels: all channels are scanned. There is no Scan or 802.11 tab under the **File>Configure** menu.
- No noise or signal-to-noise ratio (SNR) measurements.
- Measured PHY data rates in the uplink and downlink directions are not separated. Only a single PHY data rate for the connection is reported.
- No packet retry and loss measurements on active and lperf surveys.
- lperf throughput performance may vary, depending on the model of the standard adapter in use.

- Limitations in the wireless channels that they scan: They may only be able to scan channels that are approved for wireless use in a specific country, and unable to scan channels assigned as Dynamic Frequency Selection (DFS) channels.
- Only one 802.11ac adapter can be used when utilizing multiple adapters. Refer to “Utilizing Multiple Adapters” in the *AirMagnet Survey User Guide*.
- There is no roaming control for active and Iperf surveys.
- Due to the inability to disable roaming on the adapter, only by SSID (not by AP) are available for active and Iperf surveys.

Bug Fixes

This section covers the defects that have been fixed in this release.

Survey

Defect ID	Description
DE15809	Reports cover sheet image cannot be changed in Portrait oriented reports.
DE15824	Checkbox for Select All 2.4GHz and 5GHz in the tree view does not show heat map when 5GHz selected.
DE15471	Cannot perform Active / Iperf surveys to an SSID which contains the & (ampersand) character.
DE15969	In reports, total SSIDs in reports section of AP Detail Breakdown is not accurate.
DE16071	Alias name not applied as expected for active surveys.

Planner

Defect ID	Description
DE16114, DE16115, DE16116, DE16117	Antenna correction for Aruba 225 & 325.

Survey Mobile

Defect ID	Description
DE15822	Crash when adding a floor plan to a Survey Project.
DE15891	Crash when exporting a project for Survey PRO.

Previous 9.x Releases

Defect ID	Description
DE9339	Spectrum Interferers go missing from the Display view Interferer Power heatmap after changing the RF propagation radius.
DE9974	The legend on the Reports page doesn't match the color bar adjustment options you select.
DE10023	Survey data collected with Calibration not tagged accordingly.
DE10388	Report AP count does not display correctly when the AP Grouping is enabled.
DE14197	AP-on-a-stick → During a data merge, AP alias name is overwritten.

Defect ID	Description
DE14215	When creating an AirWISE report, the application uses the filter selection from the AirWISE view which may not match the filter shown in the Report view.
DE14395	Channel Interference is not shown correctly in AirWISE or Display with AP Grouping enabled
DE14861	In reports, occasionally first time running a report results in the wrong number of APs shown.
DE14943	A Different Max Signal is shown in filtered survey data than in the original merged source.
DE15102	Channel interference is shown incorrectly for 20MHz channel APs in the 5GHz band.
DE15213	Cisco Location Service heatmap displays incorrectly in AirWISE.
DE15230	The heatmap changes when enabling or disabling AP grouping.
DE15404	Reporting misses AirWISE sections on first run.

Known Issues

This section documents the major known issues with this AirMagnet Survey 9.0.1/9.1 release.

Defect ID	Description
DE2262	For Cisco Prime Infrastructure AirMagnet planner export, a shift in the border rendering may occur. Workaround: <ol style="list-style-type: none"> 1. After importing the project into Cisco Prime Infrastructure, select the building. 2. Select the floor plan. 3. Select "Map Editor". 4. Maximize the browser. 5. Select "Click here".
DE2990	Clicking Yes within Recalibrate prompt may not produce the recalibrate push pins. The workaround is to try again using the measure tool.
DE2870	Simulated noise level is not saved to the simulation data file.
DE3040	When creating a Planner project, changes made to a multi-segment wall may not get saved when changing the segments to another wall type.
DE3170	When using Multi Floor Planner with a floor plan in Visio image format, an incorrect walls/areas offset may occur upon recalibration.
DE3390	When running the application on Windows 7 64-bit, the RF Spectrum Report may show all spectrum data points, not just those selected to be included in the report.
DE3522	With a virtual survey loaded, AirWISE may indicate the throughput threshold option as "NA" when it should be "Available".
DE3623	When using Multi Floor Planner, the blue, purple, and green color legends under 2D floor view may become blurry in an exported PDF building level report.
DE3778	When using Multi Floor Planner, you may not be prompted to close and restart Multi Floor Planner after making any changes to Display Performance, Sampling Density, or Data Processing.
DE5540	802.11 ac spatial stream value changes that occurred during a survey are not reflected in the bubble help.
DE7098	With two plans created in Planner, the heatmap of one plan may be shown on the other after it is deleted. Workaround: Click the Refresh button.
DE7879	When using Multi Floor Planner with imported Visio images, some floors may be blackened out.
DE9455	If you change the color legend scheme for Predictive PHY Data Rate, the scheme for other heatmaps may also change. Workaround: Navigate to another heatmap and then return.

Defect ID	Description
DE9623	If APs are deleted in the Throughput Simulator, you may see the pop-up message 'Please make sure each AP is associated with at least one STA.' when selecting the Run option even though the AP is associated with a station. Workaround: Close and re-open the Throughput Simulator.
DE11479	In Planner, positions of walls on a floor plan may shift if a project is opened on a computer configured with Windows' Region and Language settings different than those on the computer on which the original project was created.
DE13513	A Signal/Noise Ratio heatmap for a merged virtual survey and an actual survey may show SNR values for areas only covered in the virtual survey. Virtual surveys do not include noise, and therefore should not have SNR values.
DE13173	After creating a virtual survey in Planner and using Advisor to place APs, the throughput heatmaps may not display when you open it in Display view.
DE14096	The view action sometimes fails to take effect when you select View per Channel in DiffView. Workaround: Select a different heatmap.
DE14552	After placing an AP in Planner and generating heatmaps, the AP icon may not show if you go directly to Simulation. Workaround: Go to the Display view first, and then go to the Simulation view.
DE14608	The Add AP button shows up as disabled when you open the Simulation view after placing an AP in a survey project with no power APs in it and turning it into a power AP, Workaround: Close the survey project after adding the power AP and then re-opened the survey project.
DE3619	When using Multi Floor Planner, resizing the alignment window may cause the application to stop working. This may be an issue caused by the NVIDIA video driver. Workaround: Roll back the NVIDIA video driver to version 6.14.11.5685.

Release History

Release Month	Release Version
12/2016	AirMagnet Survey PRO 9.1 (Build 36631)
09/2016	AirMagnet Survey PRO 9.0.1 (Build 36460)
08/2016	AirMagnet Survey PRO 9.0 (Build 36354)

Technical Support

If you need help for this AirMagnet Survey PRO 9.1 release, contact NETSCOUT Enterprise Solutions, as follows:

Contact Venue	Description
Web:	www.enterprise.netscout.com
E-mail:	CustomerCare@netscout.com
Phone:	(844) 833-3713

Note: International and global support phone numbers are available at <https://www.enterprise.netscout.com/myaccount/gold-support-contact-numbers>.