



Sparrow^{IQ} Quick Start Guide

Requirements

You will need

1. A Network Tap or Ethernet switch with SPAN or port mirroring capability.
2. A PC with following minimum hardware requirements
 - a. 2+GHz processor
 - b. 2GB RAM
 - c. 80GB HDD
 - d. 1 to 3 Ethernet interfaces.
 - 1 Ethernet interface is required if using switch with port mirroring.
 - 2 Ethernet interfaces are required if using an Aggregator Tap
 - 3 Ethernet interfaces are required if using Regular Tap
3. The PC requires the following software
 - a. Microsoft Windows XP, Vista or 7.
 - b. Microsoft Visual C++ Redistributable 2008.

The Visual C++ Redistributable 2008 package can be downloaded for free from Microsoft's website. Check your installed programs list if the packages are already installed. Note that the multiple versions of the VC++ Redistributable can co-exist on the PC without any issue.

4. A web browser to access Sparrow^{IQ}. The supported web browsers are:
 - a. Firefox 12, 13
 - b. Chrome 18, 19
 - c. Internet Explorer 9
 - d. Safari 5

Download and Installation

Step1: Download and install Sparrow^{IQ} package

You can download a trial or purchase a Sparrow^{IQ} by going to www.sparrowiq.com. The package is an all-in-one solution and will install all the various pieces of libraries and software necessary for Sparrow^{IQ} to run. Double-clicking on the installation package will take you through the standard installation steps of license agreement, target directory etc.

It is recommended that you install Sparrow^{IQ} on a PC dedicated for network monitoring.

Obtaining a license: Note that a license is required for Sparrow^{IQ} to run. You may obtain one of the two following licenses:

1. A Trial license - you only need to specify name and email address.



2. Purchase Sparrow^{IQ}. When purchasing Sparrow^{IQ}, the PC on which it runs has to be identified by a SystemID. To obtain this SystemID, you may choose to either
 - Download the 'SystemIDFinder' package from the Support page on www.sparrowiq.com. Once downloaded, you can run the executable file to obtain the SystemID of the PC. Note that this Finder requires the .Net framework 2.0 package – which is available for free download from Microsoft's website.
 - Download and install Sparrow^{IQ} and on first run, it will prompt for a license and specify the SystemID of the PC, which you may then use to complete your order online.

For both the options, an email will be sent to your registered address with a Sparrow^{IQ} license.

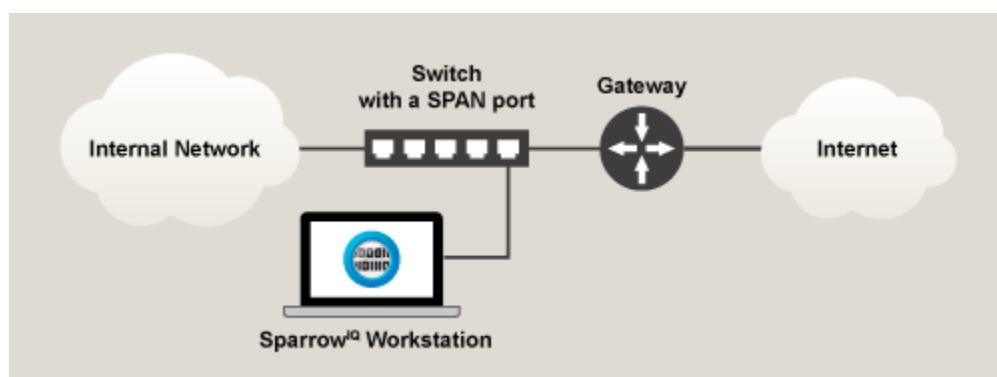
Step 2: Connect the PC to mirror port of the switch or Tap

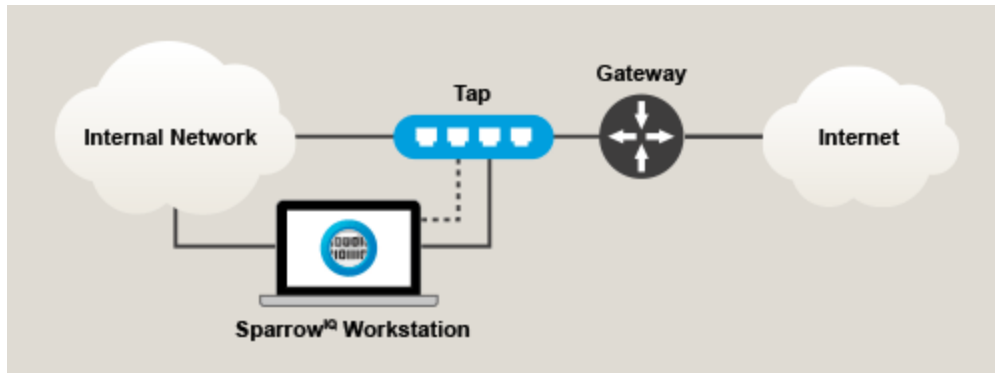
The data that needs to be monitored has to be channeled or copied to the PC running Sparrow^{IQ}. This is achieved by sending a copy of each packet from the gateway to the Sparrow^{IQ} PC via a port mirror or Tap.

Port mirroring (SPAN port) - Please check your switch's user manual to verify that the feature exists and follow the specified configuration steps to enable port mirroring to one free port. This is the port that your Sparrow^{IQ} PC will be connecting to.

Network Tap - If using a Tap, the input and output ports need to be connected to allow the data to pass through. The Sparrow^{IQ} PC is connected to the drop of the Tap where data is copied to. The drops from Tap will be either one or two connections depending on the type of Tap. If it is an Aggregator Tap, only one Ethernet connection will be available; if not there will be two Ethernet connections.

The following figures depict the deployment scenarios.





Launch and Access

Step 3: Launch Sparrow^{IQ}

Start Sparrow^{IQ} software by clicking to SparrowIQ > SparrowIQ Analyzer under Windows Start menu list. This brings up a Configuration window which on first start will be prompt you to enter a valid Sparrow^{IQ} license. A Sparrow^{IQ} icon will reside in the system tray via which you may access the Configuration or Viewer.

Step 4: Access Sparrow^{IQ}

If accessing on the same PC that is running Sparrow^{IQ}, you can access by clicking on Sparrow^{IQ} Viewer in Configuration or Windows Start menu or right-clicking on the system tray icon. This will launch the default web browser on the PC and bring up the login page. However, Sparrow^{IQ} can be accessed from any PC or mobile device in the network. Sparrow^{IQ} is supported on tablets, mobile phones via the web browser provided you are connected via WiFi to the same WLAN. Simply point your web browser to the appropriate IP address of the Sparrow^{IQ} PC and port 8000.

For e.g., if the Sparrow^{IQ} PC is at address 192.168.1.100, use the following address on your web browser to access Sparrow^{IQ}.

<http://192.168.1.100:8000>



The login page features the SparrowIQ logo at the top center. Below it are two input fields: 'Username:' and 'Password:'. A 'Login' button is positioned below the password field. A link 'Forgot your password?' is located below the login button. At the bottom left, there is a 'Help' link and a copyright notice: '© 2013 Solana Networks Inc., All Rights Reserved.'

The default login credentials are:

Username: admin

Password: admin

If accessing Sparrow^{IQ} on the installed PC, you may also use the address <http://localhost:8000>

Configuration

Step 5: Configuring Sparrow^{IQ}

If the Sparrow^{IQ} PC has only one interface and running on SPAN (port mirroring) mode, you may skip this step as the PC will pick the only interface available. If there are multiple interfaces and/or using Tap mode, the appropriate interface needs to be selected in Settings > Probe

The screenshot shows the 'Settings' page in SparrowIQ. The top navigation bar includes 'Dashboard', 'Reports', 'Alerts 75', 'Settings' (active), and 'Help'. The 'Settings' page has a sub-header 'Settings' and a list of tabs: 'System Status', 'Settings', 'Gateway Setup', 'Name Mapping', 'Port Mapping', 'Service Mapping', 'Groups', and 'Probe' (selected). Below the tabs, there is a message: 'If changes are made to the network cards (e.g. added or removed) on your machine, Sparrow^{IQ} may need to be restarted to ensure the changes are properly detected.' Below this message are two buttons: 'Span' and 'Tap'. The 'Probe 0' section shows the status 'RUNNING Traffic < 1Mbps' and the interface 'Broadcom NetXtreme Gigabit Ethernet Driver (Microsoft's Packet Scheduler)'. A 'Save' button is located at the bottom right of the 'Probe 0' section.



If you wish to see a breakdown of your traffic in the bandwidth gadget (which classifies data by Incoming, Outgoing, Local and Other traffic), you will need to specify the subnet information in Sparrow^{IQ}. This can be specified on the *Gateway Setup* tab of the *Settings* page. The following example shows the subnet as 192.168.1.0/24.

The screenshot shows the SparrowIQ web interface. At the top, there's a navigation bar with the SparrowIQ logo, a 'Welcome admin' message with a 'Logout' link, and a menu with 'Dashboard', 'Reports', 'Alerts 77', 'Settings' (highlighted in blue), and 'Help'. Below the navigation bar, the 'Settings' page is displayed. It has a sub-header 'Settings' and a series of tabs: 'System Status', 'Settings' (active), 'Gateway Setup', 'Name Mapping', 'Port Mapping', 'Service Mapping', 'Groups', and 'Probe'. Under the 'Settings' tab, there are three sub-tabs: 'Email Setup', 'Users', and 'Report Emails'. The 'Gateway Setup' sub-tab is active. It contains two main sections. The first section, 'Gateway Monitoring', has a checked checkbox and text: 'Enable if Sparrow^{IQ} is probing the internet gateway of your network. This will enable the option to add directionality to reports based on your internal network.' The second section, 'Show Local Traffic', also has a checked checkbox and text: 'This will show internal traffic (e.g. internal file transfers) separately on reports. By default, internal traffic is included in reports as part of the overall traffic.' To the right of these sections is the 'Internal IP Addresses' section, which says 'Add your internal IP addresses and subnets here so that they can be identified in your analytics.' It contains five input fields labeled 'Subnet Address #1' through '#5'. The first field is filled with '192.168.1.0/24', and the others contain placeholder text 'xx.xx.xx.xx/yy'. A 'Save' button is located at the bottom right of the form.

You are now setup and ready to monitor your network. You should start seeing data being populated on your dashboard in a matter of minutes.

Sparrow

Dashboard

Reports

Alerts

Settings

Help

Welcome admin

Logout

Dashboard

Filter

Add Gadget

15m

1hr

6hr

24hr

Jul 12 14:57

Create PDF

Refresh

Alerts

1 of 3

Mark's iPad : (Jul 12 2012 14:35) Bandwidth crossed 1Mbps (3.4Mbps), 1 time in 5 minutes for Mark's iPad

Dismiss

2 of 3

Mark's iPad : (Jul 11 2012 12:11) Bandwidth crossed 1Mbps (1.3Mbps), 1 time in 5 minutes for Mark's iPad

Dismiss

3 of 3

FTP Traffic : (Jul 10 2012 15:34) Bandwidth crossed 2Mbps (2.5Mbps), 2 times in 10 minutes for FTP data

Dismiss

Show All Alerts

Top Conversations - Last Hour

2.5 MB

185.9 MB

Mark's iPad

Vimeo

82.2 MB

0.0 B

Steve-PC2

FTP-Server1

4.3 MB

48.7 MB

pn1-facebook.com

Catherine-PC1

19.2 MB

285.9 KB

Bell Canada

John-Thompson-PC2

16.7 MB

250.0 KB

Google

John-Thompson-PC2

Details

Traffic Statistics - Last Hour

Total Volume: 420.96 MB

Average Volume: 35.08 MB

Max. Traffic Rate: 5.24 Mbps

Avg. Traffic Rate: 927.87 Kbps

Min. Traffic Rate: 6.27 Kbps

Traffic Volume - Last Hour

Bytes

150 M

100 M

50 M

0

14:00

14:10

14:20

14:30

14:40

14:50

Details

Top Applications - Last Hour

HTTP[80]

SSH[22]

HTTPS[443]

POP3[110]

IRC[8000]

Details

Top Endpoints - Last Hour

Mark's iPad

Vimeo

FTP-Server1

Steve-PC2

John-Thompson-PC2

Details

Endpoint	Received	Transmitted	Total
Mark's iPad	192.64 MB	3.87 MB	196.51 MB
Vimeo	2.52 MB	185.88 MB	188.40 MB
FTP-Server1	82.22 MB	0.00 B	82.22 MB
Steve-PC2	0.00 B	82.22 MB	82.22 MB
John-Thompson-PC2	61.72 MB	1.65 MB	63.37 MB

Bandwidth - Last Hour

bps

8 M

5 M

3 M

0

14:00

14:10

14:20

14:30

14:40

14:50

Details

Series	Min Rate	Avg Rate	Max Rate
Total Data Rate	6.27 Kbps	927.87 Kbps	5.24 Mbps
Outgoing	2.83 Kbps	129.08 Kbps	736.52 Kbps
Incoming	2.47 Kbps	602.16 Kbps	4.18 Mbps
Local	0.00 bps	196.03 Kbps	4.08 Mbps
Other	0.00 bps	0.72 bps	87.47 bps

Top Classes of Service - Last Hour

DSCP 0 / Best Effort

DSCP 2

DSCP 46 / Expedited Forwarding

DSCP 1

DSCP 26 / AF31

Details

Dashboard

Reports

Alerts

Settings

Help