

Service Control EasyApp—Measuring iPhone Usage

Abstract

This Cisco Service Control Engine (SCE) EasyApp memo explains how to use the SCE to assess the amount of iPhone-sourced traffic in the network and the value of that visibility.

EasyApp Category	SCE Equipment and Software Version	Type of Effort
Visibility and Business Intelligence	<ul style="list-style-type: none"> • Hardware: SCE 2000 and SCE 8000 • Software: Release 3.5 or later • Recommended Modules: <ul style="list-style-type: none"> ◦ Protocol Pack #21 ◦ Cisco Insight Reporting 	A few hours for configuration and report generation. We recommend repeating the process once every quarter to gain insights from developing trends.

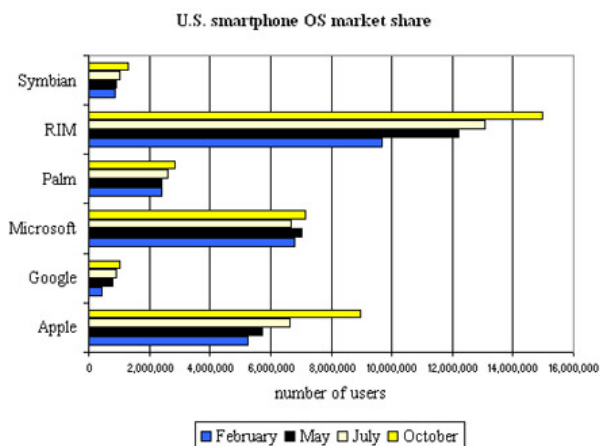
Subscribers Using an iPhone

One of the most important evolutions of the Internet in recent years is the proliferation of end devices used by consumers to access the Internet. Several years ago a full Internet experience was available almost exclusively through personal computers, but today that is no longer the case. A wide range of IP-enabled devices such as smartphones, netbooks, or game consoles, coupled with the increased worldwide availability of wired and wireless broadband access, has forever changed the way consumers go online.

Without doubt, the iPhone represents one of the key drivers in this change in consumption habits. Barely two years after its introduction to the market, the iPhone has gained tremendous market share in the smartphone market (Figure 1) and has enticed software developers to create, and users to consume, new ways to “go online” from a handheld device. As of December 2009, more than 3 billion applications have been downloaded from the iPhone AppStore¹, effectively creating a new industry.

Consumers' iPhones use both mobile and wired broadband through WiFi-enabled home gateways. Operators of both mobile and wired broadband services can gain a lot of intelligence from understanding what percentage of consumers are using iPhones and what percentage of bandwidth is being consumed by iPhone users on their network. Read this Cisco SCE EasyApp Note to learn how to do this on your network.

¹ Source: <http://www.apple.com/pr/library/2010/01/05appstore.html>

Figure 1. iPhone Market Share (Source: comscore)

Service Control Implementation

The following explains how to configure the solution to identify iPhone traffic, collect statistics, and generate consumption reports. The process should not take more than a few hours. Most customers find it useful to repeat this process on a quarterly basis to gain insight from the developing trends.

The approach we will take is to instruct the SCE to inspect the User Agent field in HTTP browsing traffic, looking for the unique marker of the iPhone's browser. While this approach is not guaranteed to be accurate and will not detect all iPhone-sourced traffic (for example the email reader), it should give a very good indication of the number of users using iPhones and the magnitude of the traffic their iPhone use produces.

SCE Configuration

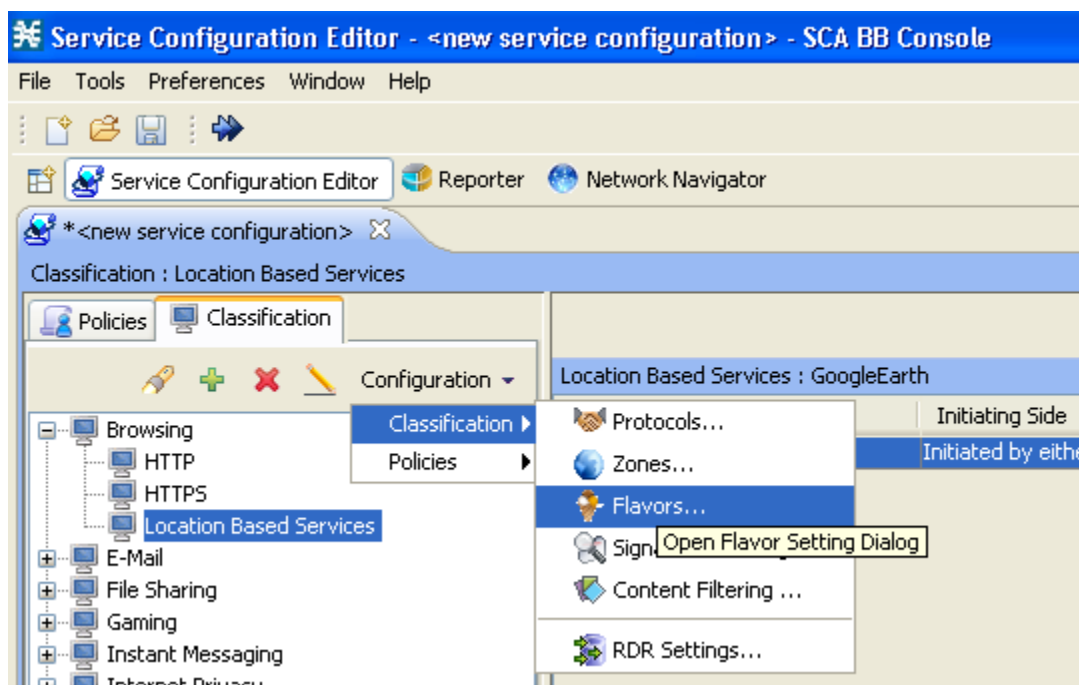
There are a few steps you need to take to configure an SCE to perform this analysis.

Note: SCE configurations using Protocol Pack #21 or later will already have these flavors configured. In that case, you should skip directly to Step 3.

Step 1. Open the Flavors configuration.

Open your SCE Service Configuration Editor and select the Flavors Classification configuration screen.

Figure 2.



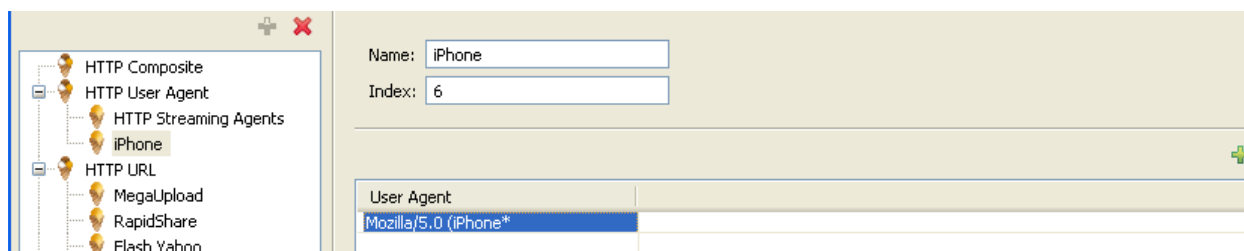
Flavors are Layer 7 classification rules that refine the existing signature database with additional constraints.

Step 2. Create a new Flavor.

Create a new Flavor under the [HTTP User Agent] category. Use the following parameters

- Name: iPhone
- Index: (do not change)
- Create a Flavor Item and cut and paste the following string into the Flavor Item:
 - Mozilla/5.0 (iPhone*

Figure 3.



Note: Make sure you copy the full User Agent string, including the trailing asterisk (*), as it appears in the figure. Depending on your screen resolution, the string may not be fully visible in the table, but you should be able to enlarge the User Agent cell as needed.

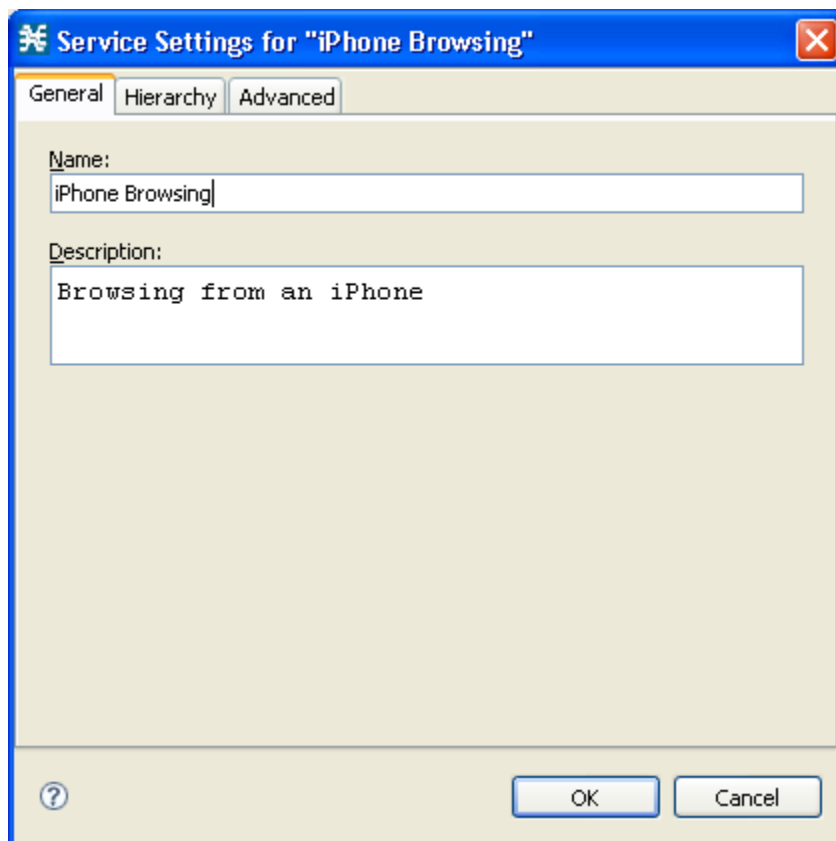
This creates a new classification constraint that will only match HTTP traffic where the User Agent field starts with the unique value used by iPhones. We will activate this constraint in the next step.

Step 3. Create a classification service.

Under the classification service tree, create a new service with the following parameters:

- Name: iPhone Browsing
- Parent Service: Browsing
- Under the Hierarchy tab, check “Map this service to an exclusive Global Counter”.
- (Leave the remaining parameters with default values or adapt to your specific needs.)

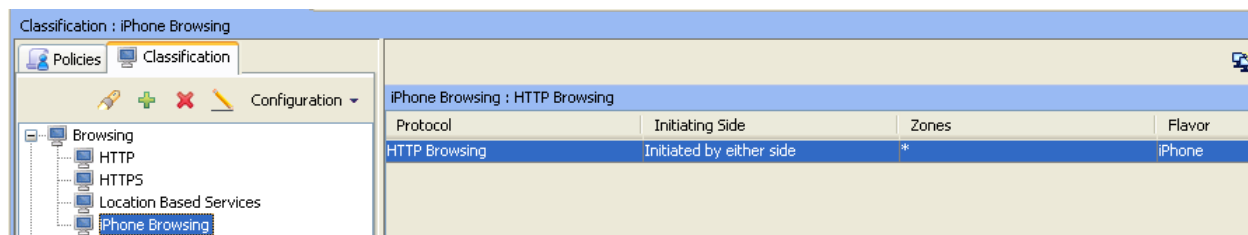
Figure 4.

**Step 4. Add the iPhone service element.**

Add a new service element to the service, using the following parameters:

- Name: iPhone Browsing
- Protocol: HTTP Browsing
- Flavor: iPhone
- (Leave the remaining parameters with default values or adapt to your specific needs.)

Figure 5.



Step 5. Apply the configuration.

The preceding instructions assume a new service configuration, so make sure you adjust it to match the configuration you currently have on the SCE. Save the new configuration and apply to the SCE device or devices you wish to use.

Generating Reports

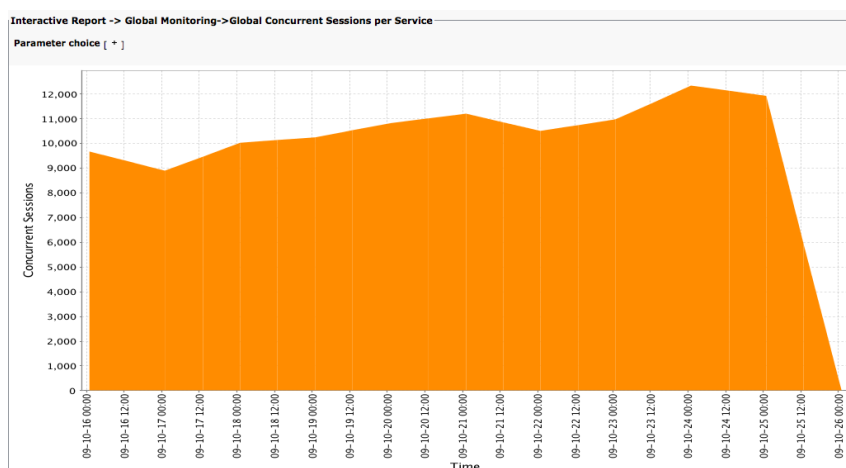
Once the configuration is applied, the system should be left to gather data for at least 24 hours so that a meaningful sample is collected. At this point the following reports should be generated. Samples are given on the right-hand side.

Note: The following explains how to generate Internet video reports using Cisco Insight. Cisco Insight, a Cisco SCE reporting solution released in 2009, offers a comprehensive web-based reporting solution. You can generate similar reports using the legacy Cisco Reporter tool as well by following the instructions for that tool.

Global Active Subscribers per Service (under Demographic Data and Service Popularity)

Select the **iPhone Browsing** service and see what percentage of the active subscriber base is using an iPhone to browse online.

Figure 6.

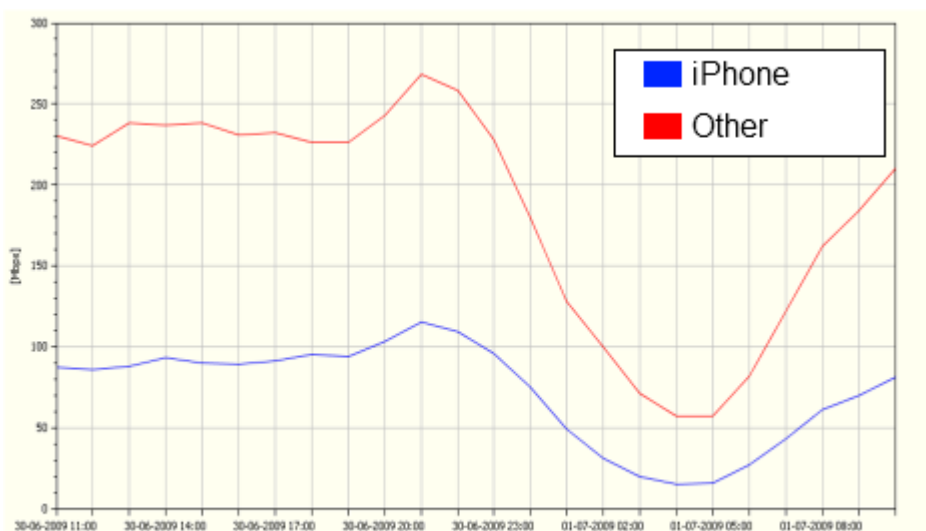


Global Bandwidth per Service (under Global Monitoring)

Select the **iPhone Browsing** service to review the amount of traffic generated by iPhone browsers.

Note: Depending on the percentage of subscribers using an iPhone and other characteristics of your network, this amount may be small. Make sure to filter out of the report any other service that is overwhelming the chart.

Figure 7.



For More Information

The Cisco Service Control EasyApp Guides are short, easy-to-follow guides that provide new and experienced SCE customers with information on how best to use the platform in their network. The guides contain practical, actionable advice on the SCE platform that will help you learn more about network usage patterns, reduce cost, and optimize the network's behavior to provide a superior experience for its users. Browse the full selection of Cisco Service Control EasyApp Guides at <http://www.cisco.com/go/servicecontrol> to improve your network today.



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