

## Minimizing impact of Apple mobile device software downloads

Apple Mobile devices iPhone and iPad have grown exponentially over the past few years, driven primarily by consumer demand. As these devices become ubiquitous, consumers are bringing them into the office and onto corporate networks via wireless connectivity. Many users have linked their iPhone/iPad to business applications (e.g. Email/Calendar, Intranet sites) to help them in their jobs every day. Apple's continual expansion and updating of iOS, iTunes and applications is driven by market forces but also by security concerns. With increased functionality being added to iOS OS, iTunes and applications, updates and upgrades have become quite large in size, and for many consumers their home network connectivity is too limited or slow to handle the downloads. Hence many users wait until they have access to a corporate network to accept update/upgrade downloads.

The challenge for IT organizations is to enable productivity that comes with mobile devices, but minimize the impact of keeping these devices updated. Blocking iOS and iTunes updates/upgrades is typically not an option as it would affect user productivity, potentially expose many users to security issues and loss of company data.

Blue Coat MACH5 WAN optimization provides network administrators with the capability to optimize iOS OS and iTunes updates/upgrades while minimizing the impact on data center and branch office WAN/Internet connectivity. MACH5 WAN optimization proactively caches iOS OS and application updates/upgrades with the first download, close to users for rapid, repeated access.

In addition to minimizing the impact of mobile device updates/upgrades, Blue Coat MACH5 WAN optimization can accelerate internal applications and protocols (Exchange, SharePoint, SAP, Oracle, HTTP/S, CIFS, FTP, NFS, TCP, and iSCSI) to enable user productivity on existing network infrastructure.

### The impact of Apple iOS and application updates and upgrades on business networks

The dramatic growth of Apple iPhones and iPads has been driven by superior design and usability; low acquisition costs and connectivity to both Carrier and 802.x wireless networks for 24/7 access. For some users, having both iPhone and an iPad enables them to be completely available and productive (business and personally) anywhere at any time. Both the iPhone and iPad have been programmed to prioritize connections to wireless networks before sending network traffic over carrier networks. For employees, business wireless network connectivity provides greater performance and reliability than carrier networks for accessing internal and internet-based applications and websites.

iPhones and iPads connected to business networks can have a dramatic impact on network and application performance. iOS OS updates and upgrades, typically accompanied by iTunes upgrades, are extremely large in size and the download process will take as much bandwidth as the network has available. Below are the typical sizes of iOS, iTunes, and application downloads:

- > iOS upgrade: 700MB
- > iTunes update (tied to iOS upgrades/updates): 80MB
- > iOS Minor Updates: 5MB – 20MB
- > Application updates/upgrades (e.g. Salesforce.com, SAP, and United Airlines): 4 MB – 20 MB

A data center or branch office with a multitude of iPhone or iPad users can easily experience tremendous impact from iOS and iTunes updates and upgrades on network resources. The impact can affect application performance and user productivity. The table below shows the impact of iPhone users using networks at work to download iPhone iOS and iTunes upgrades.

1,000 Person Company	iOS Download @ work (700MB)	iTunes Download @ work (80MB)
10 People	7GB	800MB
50 People	35GB	4GB
100 People	70GB	8GB
250 People	175GB	20GB
500 People	350GB	40GB
1,000 People	700GB	80GB

Even the largest organizations with a small subset of iPhone users can easily have their network bandwidth overwhelmed with iOS and iTunes downloads. And because the downloads are coming from an outside infrastructure with no forseen schedule, resolving application performance trouble tickets can be frustrating for IT network professionals.

## Blue Coat MACH5 minimizes impact of Apple Software downloads

Blue Coat MACH5 is a powerful, yet flexible WAN optimization tool for improving application and protocol performance. Deployed in the network core and remote branches, MACH5 appliances form a transparent, secure and fast infrastructure that improves application performance, reduces bandwidth consumption and enables key IT initiatives. MACH5 offers these key features that minimize the impact of Apple iOS Software downloads:

- > **Local byte and file caching.** Caching at the byte and file object level helps reduce bandwidth requirements by up to 99% for repetitive data access.
- > **Enable safe, direct branch office Internet access.** Blue Coat's direct-to-net access allows users to access the Internet and download Apple iOS or iTunes downloads directly without backhauling through the Data Center. With direct-to-net, IT organizations can reduce networking costs, offload recreational traffic from the WAN and accelerate Apple iOS downloads.

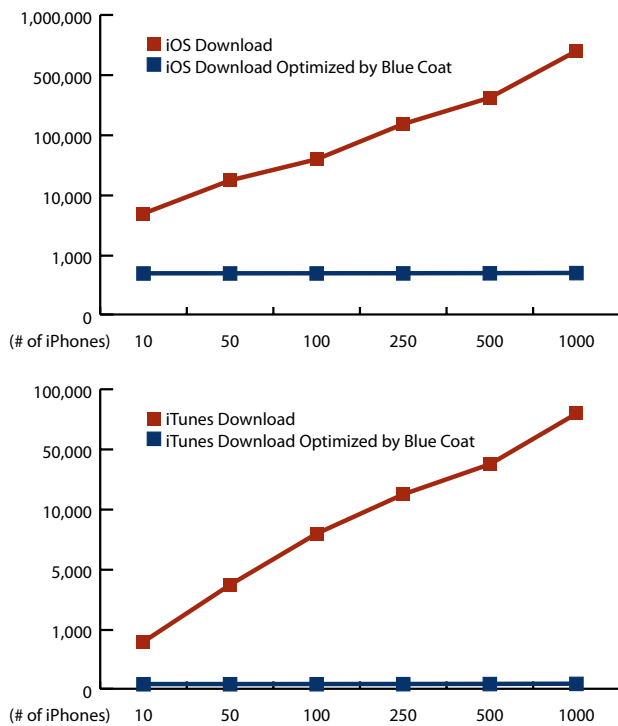


Figure 1. Acceleration gains and byte reduction with Blue Coat

- > **Protocol optimization.** iOS software downloads are often slowed down by HTTP protocol and other network constraints. Optimization of HTTP and other protocols eliminates round trips over the Internet or WAN, which accelerates storage and replication processes and increases user productivity.
- > **Compression.** Compression increases capacity of links for non-repetitive traffic, such as iOS upgrades or iTunes.

## Enable Apple Mobile Device Software downloads without impacting applications or user productivity

With Blue Coat, you can quickly enable iOS software downloads without impacting applications and users productivity. MACH5 WAN optimization direct to net capabilities enable IT organizations to allow iPhone users to download iOS and iTunes updates and upgrades directly from the internet thereby completely removing the traffic away from the WAN.

Blue Coat MACH5 WAN optimization accelerates internal applications and protocols (Exchange, SharePoint, SAP, Oracle, HTTP/S, CIFS, FTP, NFS, TCP, and iSCSI) to enable user productivity on existing network infrastructure.

With MACH5 in place, IT organizations can intelligently prioritize traffic based on granular controls, such as by user or time of day, to conserve bandwidth and ensure critical applications perform at expected levels. As a result, you can:

- > Eliminate impact of software downloads on internal applications and user productivity
- > Ensure that important software updates and upgrades are readily accessible to users in a timely fashion
- > Utilize lower cost Internet connectivity for Internet-originating traffic
- > Minimize user initiated trouble tickets around application performance or disrupted application access

### Blue Coat: A recognized industry leader

Blue Coat's technology leadership has been recognized by a number of industry analysts, including:

- > 2011: Gartner positioned Blue Coat in the Leaders Quadrant of the WAN Optimization Magic Quadrant
- > 2009: Gartner positioned Blue Coat in the Leaders Quadrant of the WAN Optimization Magic Quadrant