

Cisco AppHQ: Managing Apps for a Mobile Workforce

The Industry's First Enterprise-Focused Applications Ecosystem

The explosive growth of cloud computing, mobility, and media tablets is causing companies to consider new strategies for mobile application deployment, management, and development. The goals are to:

- Give enterprise IT the controls to effectively manage and secure mobile applications
- Connect Android developers with the resources to build differentiated business applications that deeply integrate Cisco® Collaboration capabilities
- Provide users with secure, on-demand access to the applications they need to be more productive

Cisco is introducing Cisco AppHQ for the Cisco Cius™ business tablet. This innovative business applications ecosystem blends the needs of the enterprise with the needs of both end users and developers.

The Increasingly Mobile Workforce

Location, location, location. In real estate it is everything. However, in today's global economy, **where** you work has become irrelevant. Work is now regularly done at home; in coffee shops; and in trains, planes, and automobiles (Figure 1). Consider a recent survey noting that an astonishing 60 percent of employees now believe they do not have to be in an office to be productive.¹ In fact, some analysts have proclaimed that, "The era of the PC is over"².

Figure 1. Workforce Mobilization Requires New Ways to Collaborate

2011	2012	2013
		
Fifty Percent of Computing Devices Will Be Smartphones and Tablets ³ .	Seventy-Three Percent of Enterprise Workers Will Be Mobile ⁴ .	Eighty Percent of Businesses Will Support Their Workforce With Tablets ⁵ .

¹ http://www.youtube.com/watch?feature=player_embedded&v=Ct0KTSHhg8

² <http://www.idc.com/about/viewpressrelease.jsp?containerId=prUS22593310§ionId=null&elementId=null&pageType=SYNO>

³ Deloitte, Smartphones and tablets: more than half of all computers aren't computers anymore
http://www.deloitte.com/view/en_GX/global/industries/technology-media-telecommunications/tmt-predictions-2011/technology/fd19b1b06ef6d210VgnVCM1000001a56f00aRCRD.htm

⁴ Forrester <http://www.information-age.com/channels/comms-and-networking/perspectives-and-trends/1095262/three-quarters-of-enterprise-workers-will-be-mobile-by-2012.html>

⁵ Gartner, Tablets in the Enterprise, March 2011

Desktop virtualization has accelerated this shift away from the desktop. Gartner predicts that by 2012, 40 percent of businesses will communicate with cloud-based services⁶. The shift away from desktop PCs is also encouraged by mobilization of the workforce. Workforce mobilization is changing not only **when** and **how** we work, but also the **way** IT will deliver collaborative services to employees. And this transition is happening with unprecedented speed and scale.

These converging business trends require a new class of collaborative applications that will redefine workflows and enable the next wave of growth and opportunity. And the stakes are high, because many organizations will take advantage of these new applications to build competitive advantage. No longer will IT be tasked just to keep the business running - IT will be challenged to actually grow and even transform the business.

The Cisco Cius business tablet (Figure 2) is designed for the new mobile workspace. It delivers integrated applications that span corporate databases and embed advanced collaboration capabilities. However, managing these applications and the devices they reside on is a major challenge for enterprises today. Concerns about mobile device security, applications licensing, regulatory compliance, policy revisions, and conformance are widespread. There is also the question of how best to manage software updates.

Figure 2. The Cisco Cius Business Tablet Has the Power to Transform Business Processes



Further complicating IT's challenges, users now want the same freedom and convenience that they enjoy with their personal devices to be available on the devices they use for work. They want to be able to download the business applications they need, when they need them.

“App stores are not only viable, but an increasingly preeminent way in which software is acquired.”

— ZDNet, Enterprise App Stores Arrive, May 21, 2011

Although consumer app stores have set high expectations for convenience, ease of use, and vast numbers of entertaining and fun apps, they are neither focused on nor designed to meet the needs of business. To date, quality, security, scale, and applications management have not been accounted for. Consideration also needs to

⁶ Gartner, http://www.cisco.com/web/strategy/docs/gov/ps_cloud_wp8-31.pdf

be given to enterprisewide licensing, bulk provisioning, and corporate governance because these concerns are critical for enterprises today.

Managing collaborative business applications for a mobile workforce requires a new approach - one that addresses the needs of the enterprise IT organization while delivering the consumer-style experience users have come to expect from an applications marketplace. Enter Cisco AppHQ.

“By 2014, subscribers globally will be downloading more than 70 billion mobile applications a year from app stores.”

— Gartner, Mobile and Wireless Scenario, March 2011

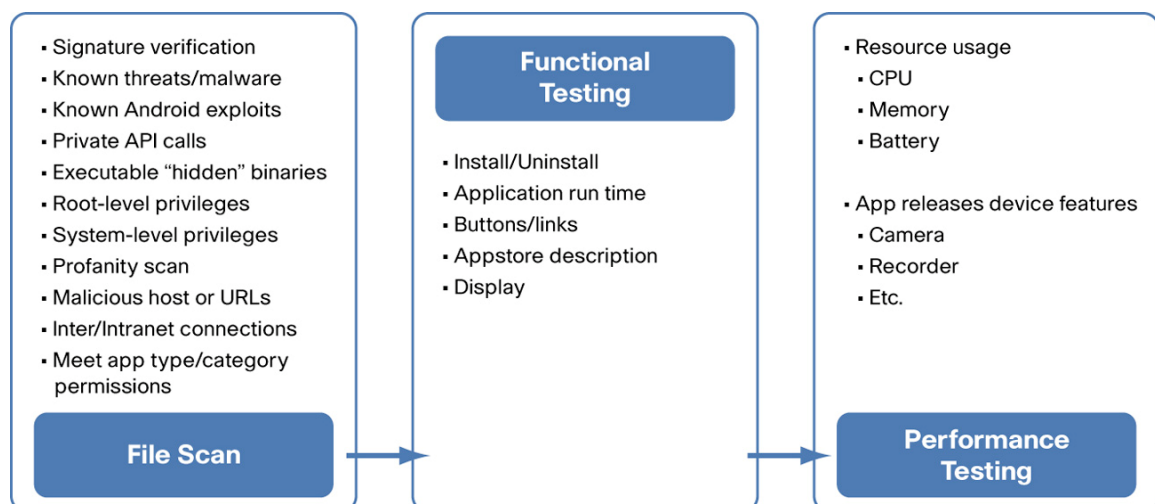
Cisco AppHQ: A Trusted Source for Transformative Business Applications

Cisco AppHQ, hosted by Cisco, is an ecosystem for the new class of collaborative applications supported on the Cisco Cius tablet. Cisco AppHQ is part of the broader Cisco Developer Network Marketplace of services and solutions and can be accessed directly from a factory-installed client app on the Cisco Cius business tablet, providing a trusted source for a wide variety of Cisco-selected and validated applications, including:

- Industry-leading business-to-business applications that deeply integrate Cisco Collaboration capabilities and will help transform business processes across enterprises and industries
- Business-to-business and business-to-consumer applications from developer partners

To address the security concerns of enterprises, every application within Cisco AppHQ, whether developed by Cisco or by third-party Android developer partners, will undergo an extensive multistep validation process to find and fix security flaws (Figure 3).

Figure 3. A Multistep Validation Process Is Performed on All Applications Certified by Cisco for the Cisco Cius Tablet



This comprehensive application security assessment includes:

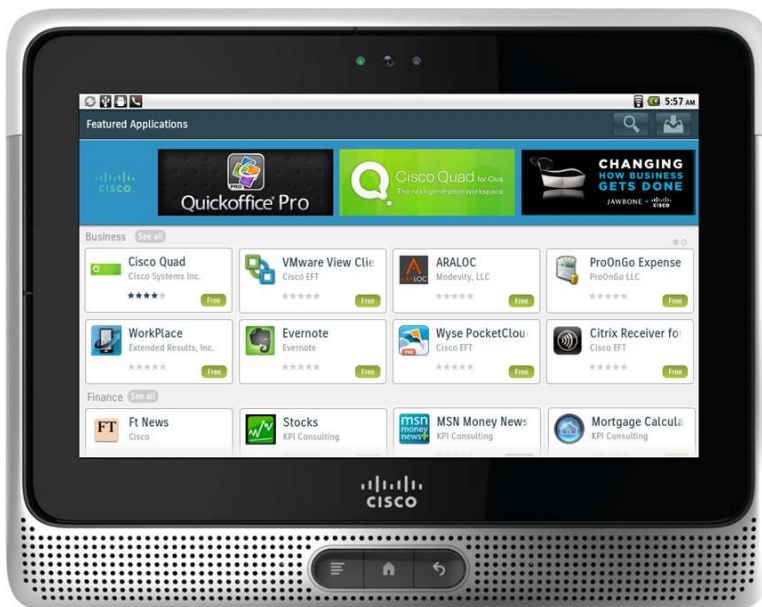
- File scan: In this first step, the application is searched for known threats, exploits, profanity, and malicious hosts or URLs. The software is also scanned for private application-programming-interface (API) calls, executable or “hidden” binaries, root- and system-level privileges, inter- and intranet connections, and meet app type and category permissions. For example, if a calendar-based application asks for permission to

access the contacts directory of a mobile application, the file scan flags this request to Cisco. Cisco then engages with the application developer to confirm that permission is necessary and justified. Ultimately, when enterprises know which permissions have been granted in an application, they can make more informed decisions about which applications they should make available to users.

- Functional testing: During this step, the application undergoes a variety of tests to validate critical functions, including install/uninstall, application run time, buttons and links, app store description, and display.
- Performance testing: In this final step, resource usage for the CPU, memory, and battery is tested. App release device features such as camera and recorder performance are also tested.

With this thorough testing, companies can trust that new applications, published to Cisco AppHQ from a wide variety of vendors, will meet the criteria for enterprise security (Figure 4).

Figure 4. All Applications in Cisco AppHQ Have Been Cisco-Validated



IT administrators have flexible, powerful provisioning tools for Cisco Cius. Applications can be pushed or pulled through Cisco Unified Communications Manager at the customer premises or through the cloud with Cisco AppHQ. On-premises, client-based or cloud-based provisioning is interchangeable based on the needs of IT at the time. IT is empowered to permit or deny access to apps by user, groups of users, device, or app category. Security is also extended to commercial marketplaces, such as the Android Marketplace with its 300,000+⁷ apps. Through Cisco Unified Communications Manager and Cisco Cius, IT has the power to grant (or deny) access by user, groups of users, the entire enterprise, or by device. In cases where access is granted, the Cisco Cius home screen then includes an Android Marketplace icon for quick access.

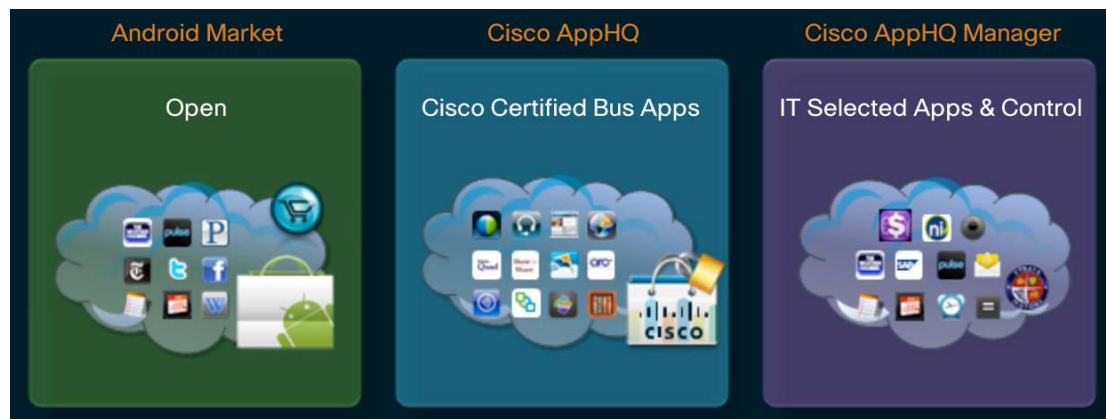
Cisco AppHQ Manager: A Comprehensive Management Suite for Collaborative Applications

Cisco AppHQ Manager builds upon the capabilities of Cisco AppHQ, with a comprehensive set of application management tools. These enterprise-class tools let companies create and control their own secure applications

⁷ <http://asia.cnet.com/crave/study-android-to-overtake-ios-app-count-in-july-62208428.htm>

center (Figure 5). Hosted by Cisco, AppHQ Manager delivers the additional controls that IT desires while providing users with a convenient storefront experience - all from a single, trusted source.

Figure 5. Enterprises Have Innovative Application Deployment Options for Cisco Cius Applications



As an example, consider a fictitious automotive company, Strata Motors. Because the company deployed its own enterprise applications center using Cisco AppHQ Manager, the IT team has the tools it needs to efficiently manage software applications and Cisco Cius tablets. Capabilities of Cisco AppHQ Manager include:

- Cost-effective application selection and deployment: Strata Motors publishes only the applications it needs in the company-controlled applications center. The company can select applications from Cisco AppHQ and from Android Marketplaces. It can also publish applications that have been developed for or by Strata Motors. This custom applications center reduces software management costs by making it easier for users to find the applications they need. It also increases security and streamlines application deployment.
- Flexible provisioning: Because all applications have been preapproved, IT can opt to let users download the applications they need on demand. If desired, Strata Motors can restrict or permit access to specific applications based on security policies. IT can assign permissions by:

- User
- Groups of users such as sales, finance, etc.
- User roles such as executive, administrative staff, etc.
- Device

IT can also take advantage of zero-touch bulk provisioning to tag and push applications out to the entire enterprise. Applications can also be tagged and pushed by the user, by roles, by groups of users, by device, and by application type. Tagging supports removal through remote wipe functions if that is required.

- Corporate or personal purchases: Strata Motors can acquire applications by purchase order or corporate credit card.

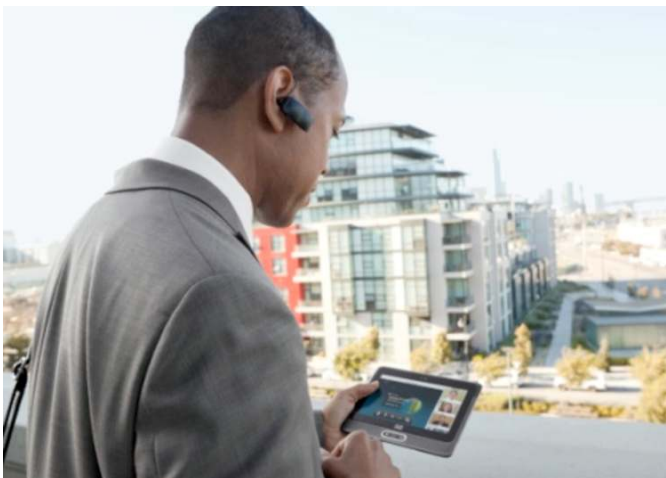
- Release management the IT way: Strata Motors' IT can also control how applications are used by end users with enforceable policies. For example, if Strata Motors standardizes on a given release of an application and a new release is published to Cisco AppHQ, Strata Motors can automatically accept the release because it has been validated as "secure" by Cisco. In turn, Strata could opt to "sandbox" the release, pending further testing within its infrastructure for the effect of the release on other applications. After testing, Strata could then accept or reject the release. Strata Motors retains control throughout the application lifecycle.
- Licensing options: Strata Motors can track licenses by corporate-owned applications or by employee-owned applications. It is the company's choice.
- Sandboxing applications: New applications can be "sandboxed" for testing prior to making them available to users. Or applications can be tested by Cisco as a service if Strata Motors does not have the tools or resources.
- Powerful reporting: The IT team can continuously improve the company's application library by monitoring applications usage and collecting feedback and ratings from users. They can also collect feedback from the larger community of individuals and companies that purchase applications from Cisco AppHQ. These powerful reporting tools can help control software costs, because instead of basing purchasing decisions on anecdotal information, IT can purchase only those applications that users deem valuable. Reporting also enhances user productivity, because users spend less time locating the applications they need to perform their work.

Cisco is the first business tablet vendor to deliver this secure "app center within an app center" for enterprises. This capability lets IT organizations balance the individual freedom of users with the corporate control, security, cost efficiency, and scale that is typically associated with centralized management.

Cisco AppHQ: A Community for Developers

As part of the broader Cisco Developer Network Partner Marketplace, Cisco AppHQ gives the Cisco Cius developer community the tools and resources needed to keep pace with rapidly evolving business needs (Figure 6).

Figure 6. Cisco AppHQ Gives Android Developers Access to New Cisco Cius Users Around the World



With Cisco AppHQ, Android application developers can:

- Enhance existing enterprise applications by embedding powerful Cisco Collaboration and Unified Communications capabilities
- Simplify development of a new class of Android-based enterprise applications that deeply integrate Cisco Collaboration capabilities
- Share information, get support, and communicate with other developers through Cisco Developer Network forums and communities

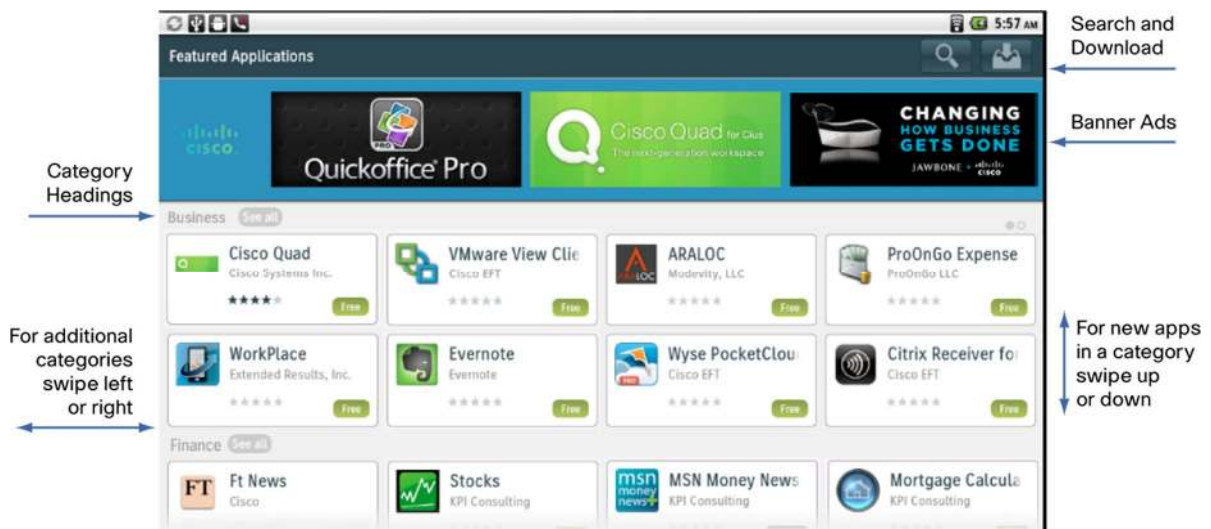
In addition, a wide range of benefits is available to enterprise IT professional application developers, independent enterprise application developers, independent software vendors (ISVs), system integrators (SIs), and Cisco Unified Communications Partners. With Cisco AppHQ, these professionals can:

- Accelerate application development with tools, training, and resources
- Affordably test unified communications and collaboration integration for work-in-process apps with Cisco Remote Access Validation Environment (RAVE) labs or DeviceAnywhere
- Submit applications to Cisco AppHQ for validation testing and receive feedback within 48 hours; the Cisco AppHQ team works with the developer to remediate any problems detected, such that the application can then be resubmitted for testing
- Obtain Cisco Cius business tablets through loaner or developer pricing purchase programs
- Gain sales momentum through the Cisco addressable market
- Connect to new and enhanced market opportunities worldwide

Cisco AppHQ: An Intuitive, Powerful Storefront Your Users Will Want to Use

Cisco AppHQ makes it fast and easy for you to find and obtain a wide range of transformative business applications for Cisco Cius business tablets. Cisco AppHQ provides the “one-click” simplicity you have grown accustomed to with commercial marketplaces (Figure 7). Instead of waiting to be logged onto your desktop PC or network-linked laptop, you simply click the Cisco AppHQ icon on your Cisco Cius tablet. Or, if your company has its own custom storefront, you can click on your company’s custom AppHQ icon. Either way, you will get the right applications at the right time, so you can continue to work productively wherever you are.

Figure 7. The Cisco AppHQ User Interface for Cisco Cius is Simple, Intuitive, and User-Friendly



Whether accessing enterprise apps from the AppHQ storefront or from your company's own Cisco AppHQ application center, your experience is hassle-free, providing you with:

- Feature-rich, intuitive search functions: From a single destination, you can search for apps by name, by category, and by industry or developer. You can also search by highest-rated apps, newest apps, version, and publication date.
- Simple, efficient, flexible procurement: You simply click to quickly purchase, download, and install individual apps from the Cisco AppHQ storefront. This transaction, using a personal or corporate credit card, offers the same convenience as consumer app stores. For companies like the fictitious Strata Motors, that take advantage of Cisco AppHQ Manager to create their own custom application center, you choose from IT-published apps that are owned and managed by the company.
- Community ratings and feedback: You can rate apps, request features, and make recommendations to the business and the developer community through discussion groups and other social media tools.

Cisco AppHQ provides password-protected access to more than 20 app categories for Cisco Cius business tablets, including:

- Collaboration applications such as Cisco WebEx[®], Cisco Jabber[™], Cisco Pulse[®], Cisco Quad[™], Cisco Show and Share[®], Cisco Unity[®] Connection, Cisco Unified Presence, and Visual Voicemail applications
- Branded market apps
- Strategic partner apps such as QuickOffice, Adobe Flash Version 10.1, and Virtual Desktop Integration (VDI) apps from Wyse, Citrix, and VMware
- Cisco Solution Plus Partners' apps such as IPCelerate, Singlewire, Synapps, and Andtek
- Industry apps for virtually every industry
- IT Google apps from the Android Marketplace

Why Cisco?

Cisco is the worldwide leader in networking solutions that transform how people connect, communicate, and collaborate. Cisco offers market-leading solutions for:

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- Communications
 - Collaboration
 - Borderless Networks
 - Virtualization

Like many of Cisco's business-transformation solutions, Cisco AppHQ is part of an end-to-end ecosystem. This complete solution includes:

- The Cisco Cius business tablet
- The Cisco Developer Network Marketplace for services and solutions
- The user-friendly, Cisco-hosted Cisco AppHQ storefront for secure Cisco Cius applications validated by Cisco
- The optional Cisco AppHQ Manager for the creation of a company-controlled applications center hosted by Cisco
- A vibrant developer community to develop and market transformative business applications for the Cisco Cius tablet

With a proven, 25-year record of enterprise service and support, investment protection, and brand preference, Cisco is ready to help you transform your organization.

Get Ready for a New Era

We now live in a post-PC world where virtual desktops will be increasingly accessed by mobile devices like the Cisco Cius business tablet. Cisco is leading the way in defining a new class of collaborative applications for Cisco Cius that will transform the way we work. Cisco AppHQ, the first applications ecosystem for the enterprise, will help make this transformation possible. Whether you are a developer, IT administrator, or user, come join the new work revolution. It is happening now with the Cisco Cius business tablet.

For More Information

For more information, please visit:

- <http://www.cisco.com/go/cius>
- <http://www.cisco.com/go/apphq>
- <http://www.ciusdeveloper.com>



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