Frequently Asked Questions

Mobile Management Center General FAQ

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General Questions

Q: What is the HP Mobile Management Center (MMC)?

A: The HP Mobile Management Center (MMC) is an OMA DM (Open Mobile Alliance Device Management) standards-based solution for mobile device management. The solution enables an operator to gather a comprehensive profile of subscribers, merging both real-time subscriber and device information, providing visibility and control to deliver a unique mobile experience for both consumers and enterprises.

The HP MMC is architected in a modular manner using industry-standard Web Services, allowing operators to select from the modules below and customize the solution to meet their specific business goals.

Configuration management
Operators can help improve the user experience and adoption of wireless data services through automatic OTA (over-the-air) provisioning of device parameters helping ensure that services work without user intervention.

Diagnostics
Gather & view device parameters in real-time such as service settings, signal strength, OS version, resident software apps, etc. Resolve device issues automatically and obtain a summary of diagnostics results.

Firmware over-the-air (FOTA)
Provide complete lifecycle management for software and firmware updates. The solution automatically determines the required update(s) based on real-time subscriber/device information and permissions.

Application management
Manage applications remotely, create and deliver targeted revenue-generating campaigns, and enforce brand identity. Comprehensive application control includes remote install/remove of applications.

Enterprise management
Provide your enterprise customers with the ability to enforce policies, deploy enterprise applications, and remotely lock/wipe devices for helping to ensure corporate security while reducing support costs.

Q: What is OMA? What is OMA DM?

A: The Open Mobile Alliance or OMA is an industry standards organization, formed in June 2002, whose purpose is to develop wireless standards and specifications for mobile devices. OMA Device Management (DM) is a working group within OMA whose goal is to specify protocols and mechanisms for the management of mobile devices. The mProve solution uses the OMA DM protocol to communicate with any OMA DM-based server solution.

Q: Is MMC available for customers today?

A: Yes, the HP Mobile Management Center is commercially available for installation and use.

Q: Who is using HP MMC today?

A: HP's leading and patented HP Mobile Management Center supports millions of subscribers worldwide. HP's solution supports the largest OMA DM-based device management deployment in the world with China Mobile. In addition, HP MMC has been commercially deployed with leading operators such as Alltel Wireless, Hutchison 3G, Swisscom Mobile, and others.

Q: What is the typical customer profile of a HP MMC customer?

A: The target customers for the HP Mobile Management Center software solution are a wireless operator or service provider who needs mobile device management. Key requirements are:

- Support for the OMA DM mobile standard(s) such as OMA DM v1.2, FUMO v1.0, OMA DL v1.0, DiagMon v1.0, SCOMO v1.0, etc.
- Comprehensive framework for managing & distributing firmware updates (i.e. FOTA), applications, etc.
- Increasing support costs due to device complexity, rise in 3rd party applications, etc.
- OTA configuration of mobile devices using OMA DM or legacy provisioning protocols such as OMA Client Provisioning (OMA CP)

Q: What devices do you support?

A: HP MMC supports all OMA DM-based devices. In addition, the solution can support converged devices with operating systems from Microsoft, RIM, etc. Also, the solution supports non-phone devices such as PDAs over a WiFi connection.

Q: Can the solution integrate with my customer's existing infrastructure?

A: Yes, HP MMC has been architected in a modular manner and exposes a comprehensive set of industry-standard Web Services that enable seamless integration to existing 3rd party solutions. Through these standard APIs, the solution is designed to be integrated with external systems to support areas such as existing customer care operations, legacy device provisioning, and other third party network elements.

Q: Does HP MMC support the OMA DM standard?

A: Yes, the solution is fully compliant with the OMA DM standard. Specifically, MMC supports OMA DM versions 1.2 and 1.1.2, FUMO v 1.0, and OMA DL v 1.0, SCOMO, DiagMon, DCMO, and LAWMO specifications.

Q: What's SCOMO? DiagMon?

A: The Software Component Management Object specification, or SCOMO, defines the necessary management objects and behavior to manage software components and third party applications resident on a device. There are several proprietary technologies currently used today by vendors such as RIM and modified SCOMO-like implementations in use ahead of the standard from Nokia and Motorola to accomplish application management.

The Diagnostics & Monitoring, or DiagMon, specification defines the necessary management objects and behavior to read and gather device information over the air such as battery level, signal strength, firmware version, etc.

Q: What is the business model?

A: HP MMC is licensed on a per module basis. The modules available are the configuration management, FOTA, diagnostics, application management, and enterprise modules. Each module requires the purchase of the core OMA DM framework. In addition, the module pricing is tier-based based dependent upon the number of subscribers.

For example, if a customer wanted an OMA DM-based diagnostics solution. The customer would require the baseline OMA DM framework and the diagnostics module.

Also, there is an annual software support and maintenance fee. Professional services and deployment fess are based upon an agreed upon SOW between HP and the customer.

Q: Why should a customer choose HP MMC vs. the competition?

A: There are several reasons such as:

- **Best-In-Class Technology.** MMC has been developed over the past 8 years by experts in wireless device management using a repeatable software development process.
- **Market Validation.** HP Mobile Management Center has commercial deployments with operators such as China Mobile, Alltel Wireless, Hutchison 3G, and others supporting millions of subscribers worldwide.
- **Unparalleled Device Support.** The solution provides support for traditional mobile phones and converged devices such as Microsoft or RIM-based operating systems. In addition, HP MMC provides support for non-phone devices such as a PDA using a WiFi connection.
- **Stability & Maintainability.** The comfort of knowing a world-class organization such as HP is supporting your organization with best-in-class products and services. The other vendors are small venture-capital funded entities with short operating histories.
- **End-to-End Solution.** HP provides both the client and server-side software components allowing it to be a single source for a comprehensive device management solution.
- **Global Support.** A top-rated global support organization with over 69,000 qualified HP technicians delivering service in more than 170 countries enables you to receive unparalleled and timely product and customer support.

Technical Questions

Q: What are the key capabilities/product features of HP MMC?

A: The key product features for the HP MMC solution are represented below by module:

Configuration management module

- Segmentation of subscribers and devices for complex provisioning across multiple subscriber groups with multiple parameters per session.
- APIs for interfacing with 3rd party activation systems
- Ability to read and write settings for confirmation of successfully provisioned parameters
- Support for both OMA-DM and Legacy Provisioning protocols

Diagnostics module

- Helpdesk console for viewing of device parameters in real-time such as service settings, signal strength, OS version, resident software applications, etc.
- Analytics rules engine for diagnostics and automated resolution of device issues with summarized list of diagnostics results.
- Monitor device performance and key service metrics
- Auto-Healing of devices such that devices will self-check for issues and automatically repair themselves.

FOTA module

- Comprehensive bulk campaign management and monitoring
- Configurable software lifecycle management work flow for alignment with existing business processes
- Intelligent dependency management to automatically select one or more updates based on the subscriber and device permissions
- Manufacturer portal to streamline process for uploading new packages into the system

Application management module

- Proactively push applications to mobile device to promote services
- Dependency management to ensure device, platform, and language compatibility prior to sending application
- Opt-in logging to record user preferences for future push campaigns and push reminders
- Comprehensive application control including inventory, install, and remove applications
- Content repository for local management of applications or designation of URL for compatibility with external content management

Enterprise management module

- Policy enforcement to ensure devices are conforming to corporate information security policies across multiple business groups with ongoing checks automatically initiated by devices
- Security with over-the-air remote wipe & lock using HP MMC push capabilities
- Configuration of enterprise mobile services including messaging, unified communications, and WiFi networks
- Application deployment for mobile device fleet to add, update, or remove applications on corporate devices

Q: Does the solution support grouping subscribers?

A: Yes, the solution allows for the definition of subscriber classes which allows any number of subscriber groups to be defined each of which may be subscribed to different firmware types, download content types, or settings. This allows for upgrades of specific firmware versions based on subscriber membership into defined groups. Furthermore, these groups are not device dependent and a single group may include multiple different device types each with their own target firmware versions. For example, a class might be defined for a pre-defined customer demographic, another class specific to the employees of the ACME Corporation, and another class for subscribers within a specific country or region.

Q: Does the solution provide a lifecycle management workflow?

A: Yes, HP MMC provides complete lifecycle management capability for managing the progression of update packages through the certification process and restricts the accessibility of these updates during the test cycle. HP MMC's testing and validation workflow is flexible and designed to adapt to the existing business processes of operators and manufacturers.

Q: Does HP MMC support both network-initiated and user-initiated sessions?

A: Yes, HP MMC supports either bulk, or network-initiated, and user, or client-initiated updates. The MMC Campaign Execution Center gives a customer total control to safely initiate and monitor operations to millions of subscribers. The solution's flexibly allows a customer to deploy and manage firmware, software, settings, PRL, and various other bulk provisioning campaigns.

The HP MMC solution provides advanced capabilities for defining and enforcing bulk scheduling and SMS throttling plans, as well as providing visibility to track and manage active device management operations. The Campaign Execution Center gives the operator total control to safely initiate and monitor DM operations to millions of subscribers. The solution's flexibly configures the behavior of bulk jobs including:

- Device selection
- SMS throttling/rate plan
- Retry options
- Subscriber-Device correlation
- Scheduled start time
- Priority
- Definable update workflow

Q: Does HP MMC provide support for resuming the download after a break in connection from the last error-free data block?

A: HP MMC provides download resume using the OMA Download (DL) v1.0 protocol and incorporates HTTP byte-ranges. The OMA Download protocol is a standards-based protocol which incorporates a download descriptor to provide information on the content prior to committing to download the content itself. The OMA DL protocol supports use of HTTP(S) and can support download resume by use of HTTP byte-ranges without violating the standard.

Q: Can the system define a severity level for each update?

A: Yes, HP MMC provides support for defining severity levels for the update package. For example, a severity one update package may automatically perform the update on the mobile device without user prompts.

Q: Is there a diagnostics rules engine to identify and update incorrect or out dated settings for a device.

A: Yes, within the HP MMC Diagnostics Module there is a rules engine which automatically analyzes the information gathered from the device against a rules database to detect and resolve issues or abnormalities with the device.

Q: Does the solution support the distribution of 3rd party applications?

A: Yes, the HP MM Application Management module provides for the lifecycle management, tracking, and distribution of mobile applications.

Q: Is the solution scalable?

A: Yes, HP has certified the solution to this availability in a high-availability clustered environment. The capacity of the HP MMC is determined by a combination of hardware and software. The performance of the system is largely dependent on the delivery server edge elements (DM and delivery servers) that are responsible for communicating with the device. These elements are both vertically and horizontally scalable and are designed with the intent to be as lightweight as possible. This design coupled with a load-balanced high-availability platform approach enables the customer to limit initial hardware expenditure, and add new edge elements at lower cost as system load increases.

Q: Does the solution provide API support?

A: Yes, all HP MMC core services are accessible, locally and remotely, using Web Services APIs for easy integration with operator operation and business support systems. Through these standard APIs, the solution is designed to be integrated with external systems to support areas such as Customer Care Operations, Device Provisioning, and OTA Administration. The HP MMC database provides direct access via JDBC/OCI calls for integration with external systems for reporting or the purposes.

Q: How do you ensure interoperability with OEMs?

A: Device support and interoperability is a key strength of the HP MMC solution.

First, HP has an extensive Device Interoperability Program to certify devices with HP MMC. Through this program, HP has engaged in IOT testing with over 25 different vendors, such as Nokia and Samsung.

Second, HP is an active participant in standards bodies such as OMA and CDG. For example, in early 2003, HP co-authored the first standardization contribution for FOTA titled: *Firmware over-the-air (FOTA) distribution using IOTA*.

Third, HP MMC has been designed to not only ensure device interoperability but also streamline the device support process. The combination of HP MMC's Device Capabilities and Device Adaptor features allows an operator to address the multiple permutations and nuances with standards-based and proprietary OMA DM implementations.

Fourth, HP has strategic agreements in place with vendors such as Nokia, Motorola, Samsung, LG, etc. These OEMs use the HP client-side solutions which are tested against the MMC solution during production. This provides HP unprecedented insight into the development and release processes.

Q: What additional 3rd party software does HP MMC require?

A: HP MMC requires the use of Sun Solaris 8 or greater (or Redhat Linux AS 5), Oracle 10g database or higher, BEA Weblogic 8.1 SP4, JDK 1.4.2 or greater, and Microsoft Internet Explorer 6.x or greater.