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Device Synchronization and Management in the Cloud

Description of the DevSyncMan Wireless Cloud System product and examples of how it can be used to provide different functionality for different devices and organizations.

Focusing on OEM Business

DevSyncMan (Cloud DM and DS)

Device Management

Remote Device Inventory (check status, software versions, battery condition, etc.)

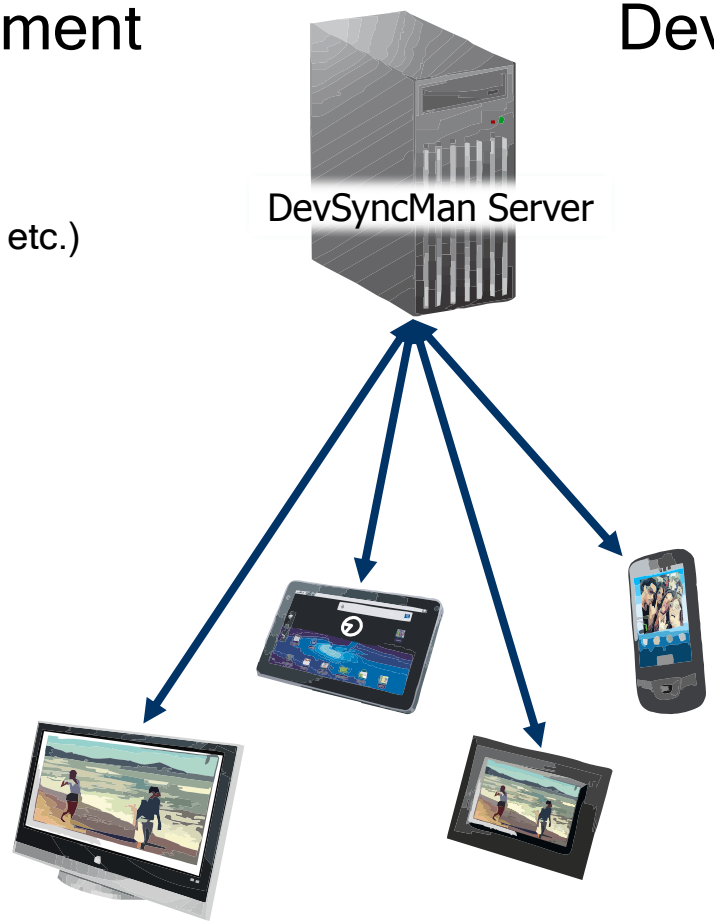
Push software updates to device and track versions

Track device location

Lock device remotely

Wipe to factory settings remotely

And much more...



Device Synchronization

Backup ANY data to server!

Backup Calendar to Server

Backup Contacts to Server

Backup configuration settings, pictures etc. to Server

Restore backed up data to clean/new device

Customizable, can additionally sync other information.

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DevSyncMan Cloud System Components

DM – Device Management

- Client application installed on connected device
- Provides the functionality so that the device can be managed from the Server

DS – Device Synchronization

- Client application installed on connected device
- Does the Synchronization between Device and Server

Server with WEB User Interface

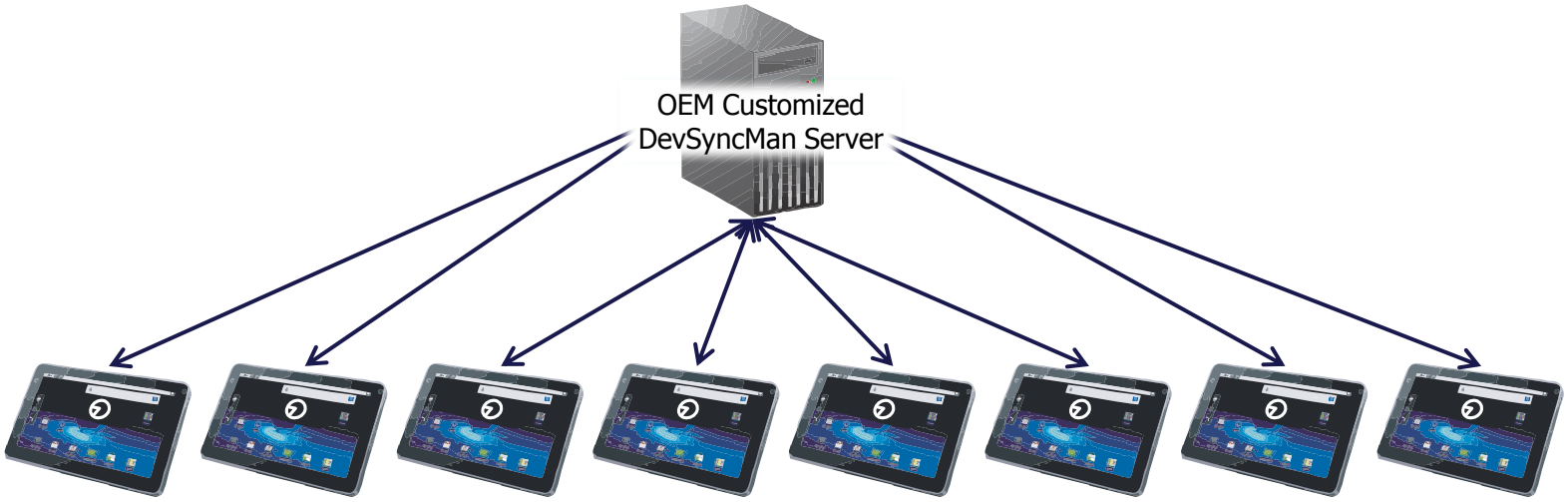
”in the cloud”

- Provides easy to use WEB interface for managing the clients that are synchronized to the server, and managed by the server.
- Customizable (simple ”logo only”, or complete colors and look)

OEM / SoC Implementation

1) License the DevSyncMan Server software (hosted by Winwap, or own hardware)

2) Pre-integrate the DevSyncMan Client on each device before distribution



3) Devices Syncronize with Cloud Server, and can be managed remotely from Server either by OEM, or by providing direct access to consumers to their own accounts for Locating, Locking or Wiping the Device.

Cloud Synchronization Example

Synchronize SmartPhone Over The Air with Server

(typical setup) Using pre-installed DevSyncMan client on the SmartPhone:

Step 1: On first startup, (*optional: ask the user first*) it will register on the Server over the internet.

Step 2: The DevSyncMan client starts a complete synchronization of content with server.

[...]: From that point on, the device will update the synchronized content at regular intervals with the Server (interval customizable)

Ready for accidents: If device gets replaced, simply restore old content and configuration to the new device.

"The Internet"

DevSyncMan Cloud Server

The Server stores the user synchronized data in secure databases and uses several key methods to identify users to avoid compromise of security.

Device Management Example

DevSyncMan Cloud Server

Manage a Tablet Device Over The Air from Cloud server

(typical setup) Using pre-installed DevSyncMan client on the SmartPhone:

Step 1: On Server, select the device (search by criteria) from the Web UI

Step 2: Investigate details of device inventory (specifics varies by implementation)

[...]: Push new software to device, Check it's location, Lock it, Wipe it, etc..

The Cloud (e.g. Wireless Internet connection)

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DevSyncMan Target Client Devices

Target Devices for Client functionality

- SmartPhone devices
- Tablet devices (with and without integrated 3G/4G modules)
- SmartTV (for remote management and tracking)
- Set-top-Boxes, Connected Blu-Ray, etc. (for remote management and tracking)
- Industrial applications (Cranes, Robotic Devices, Telematic devices, etc)

Requirements of target device

- WiFi, 3g/4g/cdma/lte or LAN network capability
- Low RAM/ROM requirements (varies depending on what is synchronized/managed)
- Synchronization interval can be configured to adjust the amount of system resources and battery that are consumed to keep device synchronized.

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DevSyncMan Server Requirements

To host the Server on own hardware, these are examples of the hardware requirements with 100.000 and 1.000.000 users (e.g. Devices that connect to the server). For higher user amounts more hardware might be required, but DevSyncMan has no limits in itself.

Component	100K Users	1M Users
Physical server hardware as the host for VMware vSphere virtualization	1	1
VMware vSphere 5 Hypervisor (a.k.a. ESXi)	version 5	version 5
Amount of processors and cores on the physical server hardware	1 x 4-core	2 x 6-core
Amount of connected network adapters on the physical server hardware	2	4
Amount of memory on the physical server hardware	20 GB	52 GB
Memory amount for the master database server	8 GB	16 GB
Memory amount for each frontend application server	8 GB	8 GB
Number of frontend application servers	1	4
Number of service monitoring alliances	1	1
Disk space for service: virtual machine operating systems	40 GB	100 GB
Disk space for service: service applications	20 GB	100 GB
Disk space for service: core databases	10 GB	30 GB
Total amount of disk usable disk space required on the server for core service	140 GB	300 GB
Disk space for service: subscriber device data backup (contacts, calendar, SMS, notes, todo)	8 MB/subs	10 MB/subs
Disk space for backup: 25 – 40 % of the size of subscriber device data backup	2 MB/subs	4 MB/subs

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