

# Z-Push

## Heinlein Mailserverkonferenz 2011

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# Mobile Question ?

- **Who uses a mobile device ?**
- **SyncML ?**
- **RIM / Blackberry ?**
- **Activesync ?**

# Admin vs. Developer

- **Who is a admin ?**
- **Who is a developer ?**
  
- **Just a user ???**

# Z-Push targets

- **Easy integration with groupware backends**
- **Works with PocketPC 2003, Windows Mobile 5, 6, 6.1 and 6.5, Nokia E/N-series, iPhones and other Activesync compatible devices**
- **Developer-friendly**
- **User-friendly**

# Z-Push history

- **Research 2006**
- **Start as project 2007**
- **Sebastian Kummer and Manfred Kutas joined developer team**
- **2010 many Email / Groupwaresolution use it for their mobile connectivity**
- **2011 Fedora Fusion and Debian .....**

# Platform choices

- **Apache**
- **Redirect via Apache Alias**
- **Pure PHP4/5 implementation**
- **No non-standard PHP extensions required**
- **Internal PHP-based WBXML implementation**

# Z-Push protocol stack

- **Based on:**
  - HTTP
  - WBXML
  - Z-Push DTD
- **Z-Push in PHP due to good requirements fit**

Z-Push

WB-XML

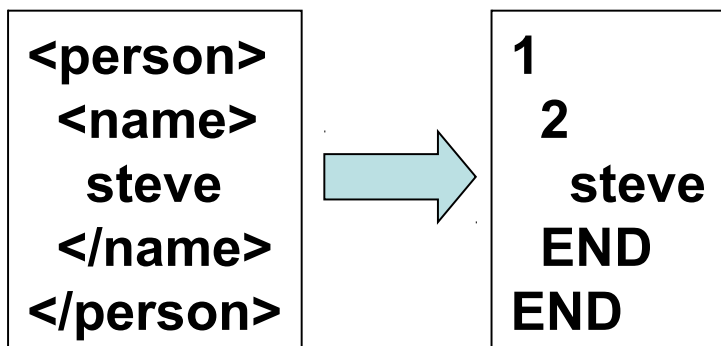
HTTP

# Z-Push Authentication

- **Authentication is done via standard HTTP authentication**
- **Username is sent via URL**
- **Domain is normally ignored under Linux**
- **SSL is possible via standard apache mod\_ssl**

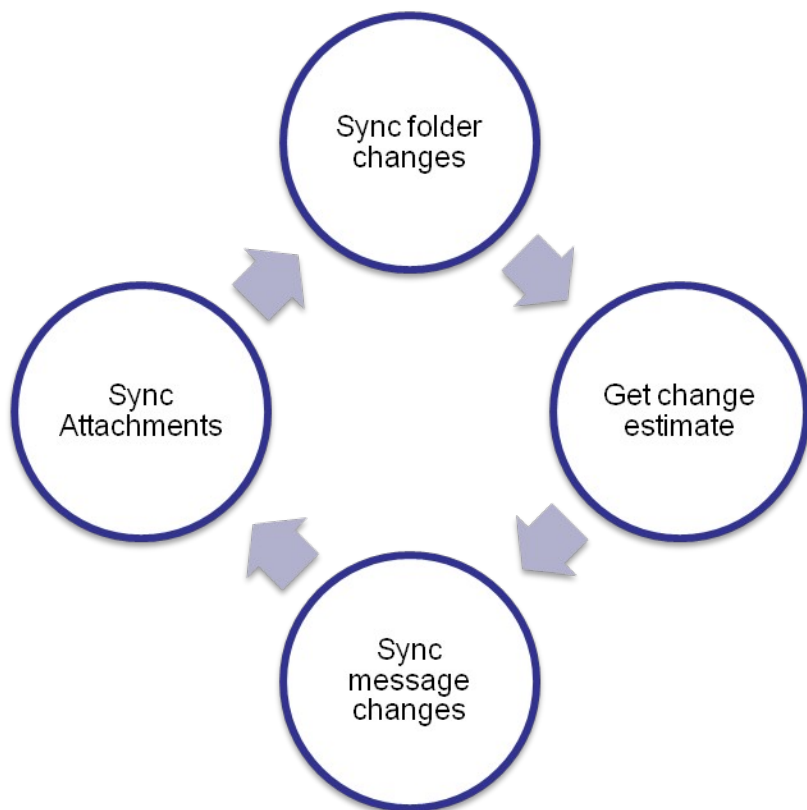


# WBXML: compressed XML



- Wap Binary XML
- Replaces tags by single-byte entities
- Data content is sent as-is
- WBXML is also used for SyncML and WAP
- Much lower overhead than 'normal' XML

# Synchronization cycle



- Each synchronization step is sent through 1 HTTP request
- Z-Push parses the WBXML request, and replies with the relevant WBXML

# WBXML example (1)

## *Request:*

```
<foldersync>  
  <synckey>  
    {319AB5B1993BF831A}1  
  </synckey>  
</foldersync>
```

## *Response:*

```
<foldersync>  
  <synckey>  
    {319AB5B1993BF831A}2  
  </synckey>  
  <changes>  
    <add>  
      <displayname>  
        INBOX  
      </displayname>
```

...

# WBXML example (2)

## *Request:*

```
<sync>  
  <class>  
    E-Mail  
  </class>  
  <folderid>  
    386417173671313135-3511  
  </foldierid>  
  <synckey>  
    {319AB5B1993BF831A}1  
  ...
```

## *Response:*

```
<sync>  
  <synckey>  
    {319AB5B1993BF831A}2  
  </synckey>  
  <changes>  
    <add>  
      <name>  
        Hardy, Steve  
      </name>  
    ...
```

# Pushmail

- **Most ActiveSync clients support PUSH**
- **This is implemented by an always-on HTTP connection to the server**
- **Z-Push will handle this internally for the diff engine by polling every N seconds, providing almost-instant push mail**
- **Backend can provide real-time push mail when not using 'diff' engine**
- **Make sure that Apache can handle enough open HTTP connections (default: 100)**

# Generelle Funktionalitäten

## . Allgemein

- **Email, Termine, Aufgaben und Kontakte auf Mobilgeräten**
- **„Remote wipe“ Funktionalität (wenn vom Gerät unterstützt)**

## . E-Mail

- **Synchronisation der Ordnerliste des IMAP-Servers**
- **Synchronisation von E-Mails aus abonnierten Ordnern**
- **Push von den Nachrichten der Inbox auf das mobile Gerät**
- **Darstellung von HTML-E-Mails**
- **Markieren einer Nachricht als gelesen / ungelesen**
- **Verschieben der Nachrichten in die verfügbaren Ordner**
- **Löschen von Nachrichten**
- **Anlegen, Umbenennen, Verschieben, Löschen von verfügbaren Ordnern**
- **Suche in den globalen Adressen**

# Generelle Funktionalitäten

## Kontakte

- Synchronisation von bestehenden Ordnern
- Synchronisation von Kontakten in den verfügbaren Ordnern / Kategorie
- Anlegen, Bearbeiten, Löschen von Kontakten
- Push von Änderungen auf das mobile Gerät

## Kalender

- Synchronisation von bestehenden Ordnern
- Synchronisation von Terminen in den verfügbaren Ordnern / Kategorien
- Anlegen, Bearbeiten, Löschen von Terminen
- Push von Änderungen auf das mobile Gerät
- Wiederholende Termine inkl. Ausnahmen

## Terminanfragen

- Senden von Terminanfragen
- Annehmen / Ablehnen / Annehmen unter Vorbehalt von Terminanfragen

## Aufgaben

- Synchronisation von Aufgaben
- Anlegen, Bearbeiten, Löschen von Aufgaben



# Device overview

category of Activesync compatibility	Vendor or Type	OS / ActiveSync Client	General Functionality <sup>1</sup>	Remote Wipe	Subfolder Push	Recurring Calendar	Multiple Folders <sup>2</sup>	Meeting Requests	Comment or remarkable change since
<b>1. Best</b>	Windows Mobile	WM 5	Em/Ca/Co/Ta	Full ROM	Yes	Yes	No	Inv / Resp	Best compatibility in all versions
		WM 6.0	Em/Ca/Co/Ta	Full ROM	Yes	Yes	No	Inv / Resp	
		WM 6.1	Em/Ca/Co/Ta	Full ROM	Yes	Yes	No	Inv / Resp	
		WM 6.5	Em/Ca/Co/Ta	Full ROM	Yes	Yes	No	Inv / Resp	
<b>2. Improving</b>	Apple	iPhone since FW 2	Em/Ca/Co <sup>3</sup>	Full ROM	Yes	Limited <sup>3</sup>	YES	Inv / Resp	Best with Z-Push 1.4 RC Invitations from mobile and responses
<b>3. Reasonable</b>	HTC	Android Mail (internal)	Em/Ca/Co <sup>3</sup>	No wipe	No	No	No		Requires "enabled" in config: <b>LOOSE PROVISIONING</b>
	Various	Android – <a href="#">Touchdown</a>	Em/Ca/Co/Ta	Profile & Application	Yes	Limited <sup>3</sup>	No	Inv / Resp	Currently best and recommended Android client
		Android – <a href="#">Moxier Mail</a>	Em/Ca/Co/Ta	Not known	Yes	Yes	No	Inv / Resp	Shows all mail folders in one view, syncs into own addressbook, requires SVN trunk for writing operations
	HP	PalmPre WebOS	Em/Ca/Co/Ta	No wipe	No	Yes	No	Inv / Resp	Best with Z-Push 1.3
	Nokia	E/N-Series Mail4Exchange	Em/Ca/Co/Ta	Profile delete	Since MFE v. 3	Limited <sup>3</sup>	No	Respond only	Best with Z-Push 1.4 RC
		Nokia Mail 2 (E75) ( <a href="#">build in Activesync</a> )	Em/Ca/Co/Ta	Profile delete	No	Limited <sup>3</sup>	No	Inv / Resp	FW 201.12.01 presents errors with HTML E-mails <a href="#">New firmware reported to fix issues.</a>
	Various	RoadSync <sup>4</sup>	Em/Ca/Co/Ta	Profile delete	No	Limited <sup>3</sup>	No	-	Devices are functional with Z-Push but not widely used.
	Motorola	Milestone – Android	Em <sup>4</sup>	Not known <sup>4</sup>	-	Not known	-	-	
	Samsung	Various – RoadSync	Em/Ca/Co/Ta	Profile delete	No	Limited <sup>3</sup>	No	-	
	Nokia	N900 - M4E on Linux	Em/Co <sup>4</sup>	Not known <sup>4</sup>	Not Known <sup>4</sup>	Not known <sup>4</sup>	Not known <sup>4</sup>	Limited	Compatible since firmware <i>Maemo 5 PR1.1</i>

<sup>1</sup> E-Mail (Em), Contacts (Co), Calendar (Ca), Tasks (Ta)   <sup>2</sup> additional Contact and Calendar Folders   <sup>3</sup> Client limitation   <sup>4</sup> Feedback requested



# Public Bugtracker & Roadmap



Mantis Bugtracking

Logged in as: *skummer* (*skummer* - developer)

2010-06-07 04:19 CEST

Project: z-push

## z-push - Roadmap

[z-push](#) - [1.5](#) (Scheduled For Release 2010-08-05) [ [View Issues](#) ]

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- [0000156](#): **[Feature Request]** Update included MimeDecoder and RFC822 parser - new.
- [0000152](#): **[Backend ICS - Contacts]** Creating contacts using Moxier Mail breaks ([skummer](#)) - feedback.
- [0000158](#): **[Feature Request]** Conflict setting from mobile is not honored when synchronizing ([skummer](#)) - assigned.
- [0000157](#): **[Backend ICS - Appointments]** Moxier Mail: duplicated exception when confirming reminder ([skummer](#)) - assigned.
- [0000155](#): **[Feature Request]** Browser access to Z-Push displays additional information ([skummer](#)) - assigned.
- [0000151](#): **[Processor]** Remote wipe on Nitrodesks Touchdown 5.1.0087b (FINAL RC3) ([mku](#)) - assigned.

0 of 6 issue(s) resolved. Progress (0%).

[z-push](#) - [2.0](#) (Scheduled For Release 2010-09-15) [ [View Issues](#) ]

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- [0000125](#): **[Feature Request]** Recurring Tasks are not working - new.
- [0000146](#): **[Feature Request]** Status l2 should be returned if folder is not found while synching - new.
- [0000150](#): **[Feature Request]** Status should be correctly set when missing folder information - acknowledged.
- [0000136](#): **[Backend ICS]** Nokia N900 is not able to synchronize ([skummer](#)) - assigned.

<http://z-push.sf.net/tracker>  
<http://z-push.sf.net/roadmap>

## Latest code from SVN

Available at: <http://svn.berlios.de/projects/z-push/trunk>

- Feature tested (not regression tested) - unstable
- Latest fixes available

### **/branches**

- Development and community branches
  - Partly feature rich, but not ready for production use. No support, only testing recommended.
  - Do **NOT** necessarily represent upcoming versions!

- **/releases/**

- Latest versions of Z-Push – testing (beta, RC) and stable

## Links

# Thank you for your attention!

More information at:

<http://z-push.sf.net/forums>

<http://z-push.sf.net/tracker>

<http://z-push.sf.net/download>

<http://z-push.sf.net/compatibility>

Contact: [zpush@zarafa.com](mailto:zpush@zarafa.com)

# Questions?

