

# Novell Data Synchronizer: wie kan er nog zonder?

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Wiljo Tiele  
Geert Wirken

# Welkom op Novellcongres.nl

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- Mobiele telefoons uit aub
- In het Reehorst-gebouw niet roken
- De presentaties staan na vandaag op de website
- Heeft u een parkeermunt gekregen indien nodig?
- En vooral: Veel plezier vandaag

Tip: vul meteen na elke sessie de evaluatie in

# Inhoud

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- Introductie
- Architectuur
- Voordelen
- Business cases
  
- Techniek
- Webadmin
- Demonstratie
  
- Planning
- Vragen

# Introductie

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- Bi-directionele synchronisatie-oplossing
- Verbindt meerdere softwareproducten met elkaar
- Server-side, niet afhankelijk van installatie op client
  
- Real-time
- Meerdere verbindingen tegelijkertijd
- Standaard connectors
- Eigen connectors

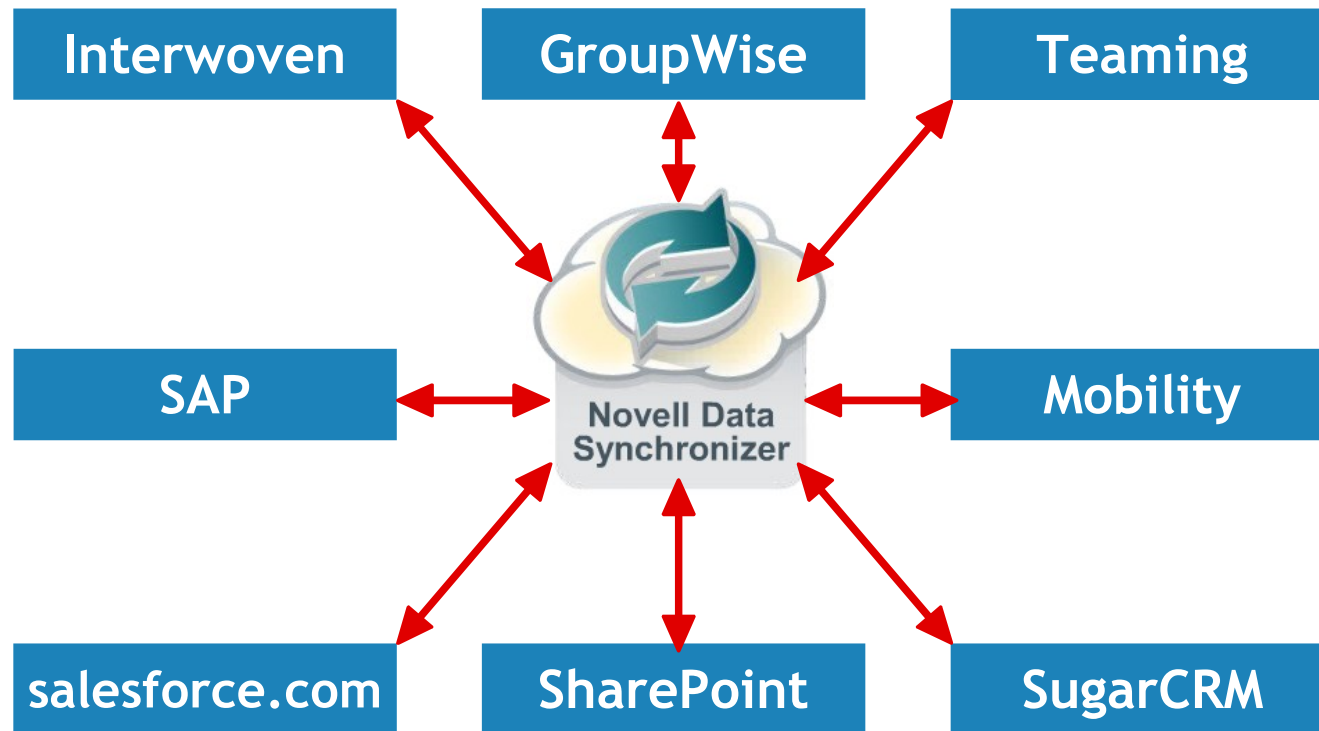
# Geschiedenis

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- Vervanging van GroupWise Mobile Server
- Probleem GroupWise-integratie
- Novacoast: project Datasync, overgenomen door Novell

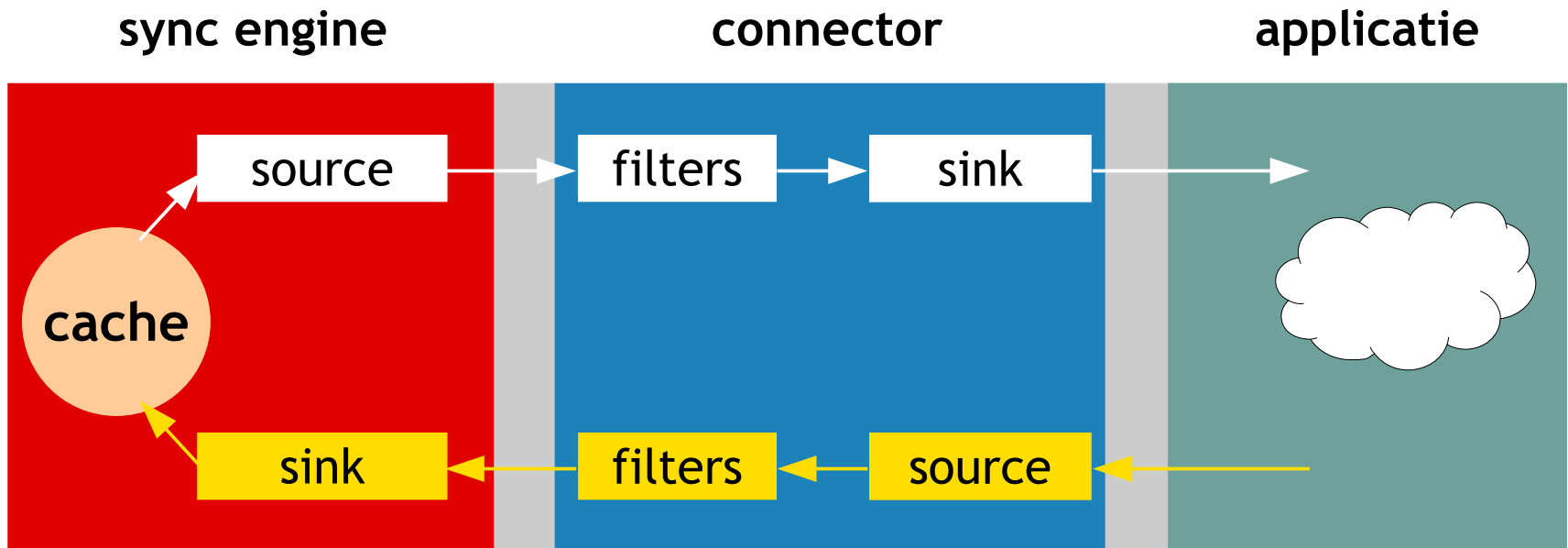
# Architectuur

- Hub-en-spokemodel



# Architectuur

- Applicaties worden gekoppeld met **connectors**
- Connector communiceert met **sync engine** én **applicatie**



# Standaard connectors

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## Groupware

- Novell GroupWise
- Mobility (ActiveSync)

## Collaboration

- Novell Teaming
- Microsoft SharePoint

## CRM

- SugarCRM
- Salesforce
- SAP

## Overig

- InterWoven

# GroupWise-connector

- Synchronisatie via GroupWise web service (SOAP)
- Recente GroupWise-versie nodig ( $\geq 8.0.2$ )
- Synchronisatie van:
  - Adresboek
  - Afspraken
  - Mappen
  - Mail
  - Taken



# Mobility-connector

- ActiveSync
- Voor allerlei mobile devices:  
Windows Mobile, iPhone, Nokia (Symbian), Android
- Synchronisatie van e-mail, agenda en adresboek



# Eigen connectors

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- Mogelijk om zelf connectors te ontwikkelen
- SDK (Software Development Kit) beschikbaar
- Python API
  
- Eigen connectors worden naadloos geïntegreerd met andere connectors
  
- Open architectuur:  
geen beperkingen aan aantal of soort connectors

# Voordelen van Data Synchronizer

- Meteen gekoppeld aan andere connectors
- Modulaire opzet
- Gebaseerd op open protocollen
- Schaalbare architectuur
- Server-side
  - Niet afhankelijk van client-plugins!
- **Novell biedt je vrijheid:**  
Minder afhankelijkheid van één leverancier

# Business cases

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- Integratie Zarafa / Exchange
- Koppeling ERP met PBX
- Groupwise-adresboek met CRM-adresboek

# Techniek

## Sync engine

- Draait op Linux (SLES 11, 64-bits)
  - Op termijn ook OES, Windows...
- Ontwikkeld in Python
- Geleverd als add-on
- Configuratie via YaST (deels) en webinterface

## Authenticatie, autorisatie

- Via eDirectory (LDAP)
- Gebruikers en/of groepen gekoppeld aan connectors
- Configuratie mogelijk tot op gebruikersniveau

# Techniek

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## Connectors

- Connectors staan op server
- Connector is schil tussen applicatie en Data Synchronizer
- Communiceert via SOAP calls met sync engine
- Synchronisatie wordt gedaan met events

## Events

- Events bevatten feitelijke informatie
  - Eventtypes: add, modify, delete
- XML-document
- Met XSLT kan event worden aangepast

# Techniek

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## Database

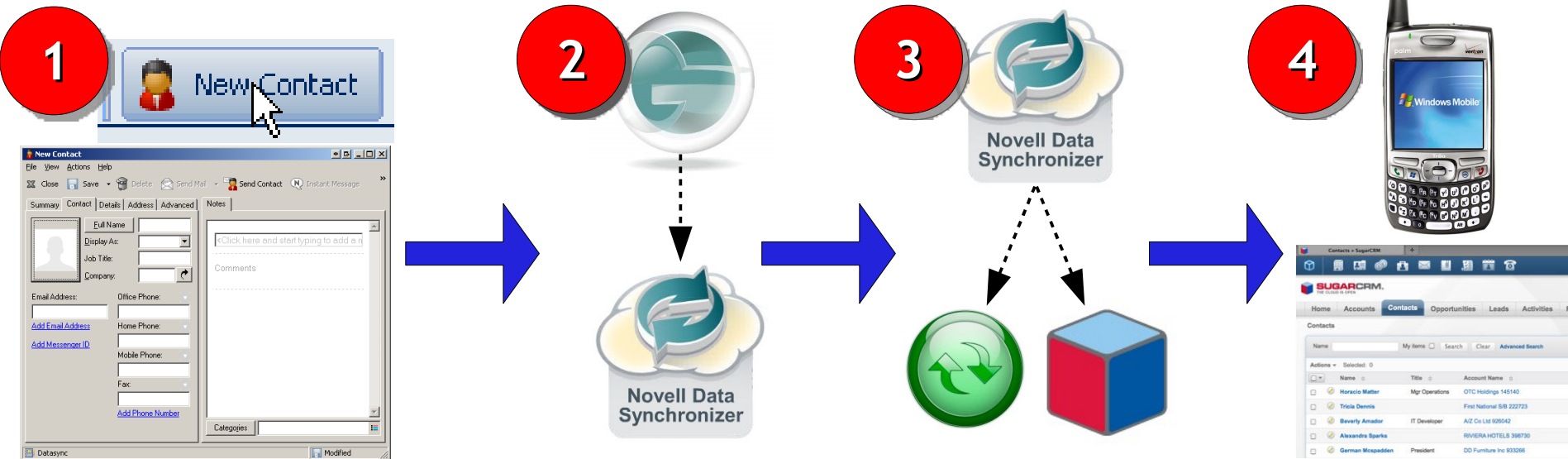
- Events worden bijgehouden in database
- PostgreSQL
- Op termijn: MySQL, Oracle
- Database nodig voor caching

## Caching

- Cachen van events is optioneel
- Event wordt altijd geprobeerd af te leveren als connector ingeschakeld is

# Events in detail

1. Nieuw adres toegevoegd in GroupWise
2. Connector stuurt event naar sync engine
3. Sync engine repliceert event
4. Adres toegevoegd op mobiel device en in CRM-systeem



# Voorbeeld van event

metadata

```
<?xml version="1.0"?>
<event version="1">
  <metadata>
    <objectID>id-1</objectID>
    <sourceType>user</sourceType>
    <sourceName>geert</sourceName>
    <type>add</type>
  </metadata>
```

item

```
<item type="Contact">
  <name>Geert Wirken</name>
  <fullName>
    <displayName>Geert Wirken</displayName>
    <firstName>Geert</firstName>
    <lastName>Wirken</lastName>
  </fullName>
  <phoneList>
    <phone type="Office">0102919610</phone>
  </phoneList>
</item>
</event>
```

# Webadmin 1/6

The screenshot displays the Novell Data Synchronizer webadmin interface. At the top, it says "Novell® Data Synchronizer" and "Logged in as: admin". The interface is divided into two main sections: "Manage Connectors" and "Manage Engines".

**Manage Connectors**

Name	Type	Engine	Status	Actions
groupwise	GroupWise (v0.01)	default	Running	[Stop] [Edit] [Delete] [Refresh]
abs-test5	Abs (v0.02)	default	Running	[Stop] [Edit] [Delete] [Refresh]
mobility	Mobility	default	Stopped	[Start] [Edit] [Delete] [Refresh]

+ Add Connector

**Manage Engines**

Name	IP Address	Status	Actions
default (v1.0)	127.0.0.1	Running	[Edit] [Refresh] [Stop]

# Webadmin 2/6

The screenshot displays the Novell Data Synchronizer webadmin interface. At the top, the logo 'Novell® Data Synchronizer' is visible on the left, and 'Logged in as: admin' with navigation icons is on the right. The main heading is 'Connector Configuration: default.pipeline1.groupwise > Manage Settings'. Below this is a breadcrumb trail: '< Home' followed by 'Connector Settings', 'Users', 'Groups', 'Profiles', and 'Audit Users'. The 'Connector Settings' section includes an 'Edit XML Source' button. The configuration fields are as follows:

- GroupWise Trusted Application Name:
- GroupWise Trusted Application Key:
- GroupWise POA SOAP URL:
- GroupWise Connector Server IP Address:
- GroupWise Connector Server Listening Port:
- GroupWise Items to Sync: Select the items that should be made available for end users to sync.
  - Address Book
  - Appointment
  - Contact
  - Folder
  - Mail
  - Reminder Note
  - Task

At the bottom of the settings area, there is a 'Save Custom Settings' button and a red warning message: 'Warning: This connector requires a restart for any changes to take effect.' A link for 'Advanced' settings is also present.

# Webadmin 3/6

Connector Startup

Connector Startup  Automatic  Manual  Disabled

Note: Connector in 'Disabled' State will not cache events, regardless of cache setting.

[Save Connector Status](#)

Filters

Application to Engine ?

Filter Name	Type	Actions
applicationSource	engine.filter.xslt	
schemamap	engine.filter.xslt	
eventFilter	engine.filter.xslt	
usermapfilter	engine.filter.targetFromAI	
folderTracker	engine.filter.folderTracker	

Engine to Application ?

Filter Name	Type	Actions
engineSource	engine.filter.xslt	
eventFilter	engine.filter.xslt	
usermapfilter	engine.filter.targetToAI	
folderTracker	engine.filter.folderTracker	
schemamap	engine.filter.xslt	

# Webadmin 4/6

The screenshot shows the Novell Data Synchronizer webadmin interface. At the top, it says "Novell® Data Synchronizer" and "Logged in as: admin". The main heading is "Connector Configuration: default.pipeline1.groupwise > Manage Users". Below this is a breadcrumb trail: "< Home Connector Settings Users Groups Profiles Audit Users". The "Manage Users" section has a search bar labeled "Search Users". A table lists two users:

LDAP Dn	Last Name	First Name	Application User Name	Actions
cn=geert,ou=users,o=interexperts	Wirken	Geert	geert	
cn=Wiljo,ou=Users,o=InterExperts	Tiele	Wiljo	Wiljo	

Below the table is a button "+ Add Users to Connector" and a pagination control showing "<< 1 of 1 >>".

# Webadmin 5/6

Add User to Connector: default.pipeline1.groupwise

Close window ✕

Search Users

Select Users **Search results for "wiljo" (Showing 1-1 of 1 entries):**

LAST NAME	LDAP DN	USERNAME	APPLICATION USER NAME
<input type="checkbox"/> Tiele	cn=Wiljo,ou=Users,o=InterExperts	Wiljo	<a href="#">Click to set</a>

Select All << 1 of 1 >>

Apply Profiles

# Webadmin 6/6

## Edit User

Close window ✕

Edit XML Source

Select (Multiple\*) Address Book(s):

Frequent Contacts  
Datasync  
Geert Wirken

\* Hold down ctrl key and click with mouse to select multiple OR Hold down shift and click with mouse to select a group.

### Direction Of Syncable Items

	Engine To Connector	Connector To Engine
Address Book Item:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Appointment:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Contact:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Folder:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Mail:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Reminder Note:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Task:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Save

# Webinterface voor gebruikers

The screenshot shows the Novell Data Synchronizer web interface. At the top, it says "Novell® Data Synchronizer" and "Logged in as: geert". Below this is a "Welcome to Data Synchronizer User Options" section with a "Close Help" button. The main content area contains a welcome message and instructions on how to manage connectors. Below the instructions is a "Manage My Connectors" section with a search bar and a table of connectors.

Novell® Data Synchronizer

Logged in as: geert

## Welcome to Data Synchronizer User Options

Close Help

As a Data Synchronizer user, you can configure how and if your data is synchronized through "connectors," which control the type of data to sync and which devices/services to include.

This page allows you to:

**Manage Your Connectors »**

Below is a list of the data connectors that control how your data is sync'ed.

- Start by clicking on the connector name or the edit icon in the Actions column.
- On the Connector Options page, choose your data flow direction for specific apps.

### Manage My Connectors

Name	Type	Status	Actions
abs-test5	Abs	Running	
mobility	Mobility	Stopped	
groupwise	Groupwise	Running	

# Demonstratie

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# Planning

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- Volgens laatste planning:  
release **halverwege deze zomer**
- Gratis voor klanten met maintenance  
voor GroupWise
- **Mobility Pack:**
  - Data Synchronizer
  - GroupWise-connector
  - Mobility-connector

# Vragen en antwoorden

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