Joget Cloud Edition

Overview

Joget Cloud Edition is an enhanced version of Joget Enterprise that supports multi-tenancy, allowing for multiple accounts (tenants) to be hosted on one webapp. Each account appears to be a separate installation.

The architecture is based on a shared webapp connecting to separate databases or schemas. This allows for more cost-effective delivery of services, since many accounts can be hosted on a single app server. At the same time, each account has its own separate database and file upload directory to preserve data isolation.
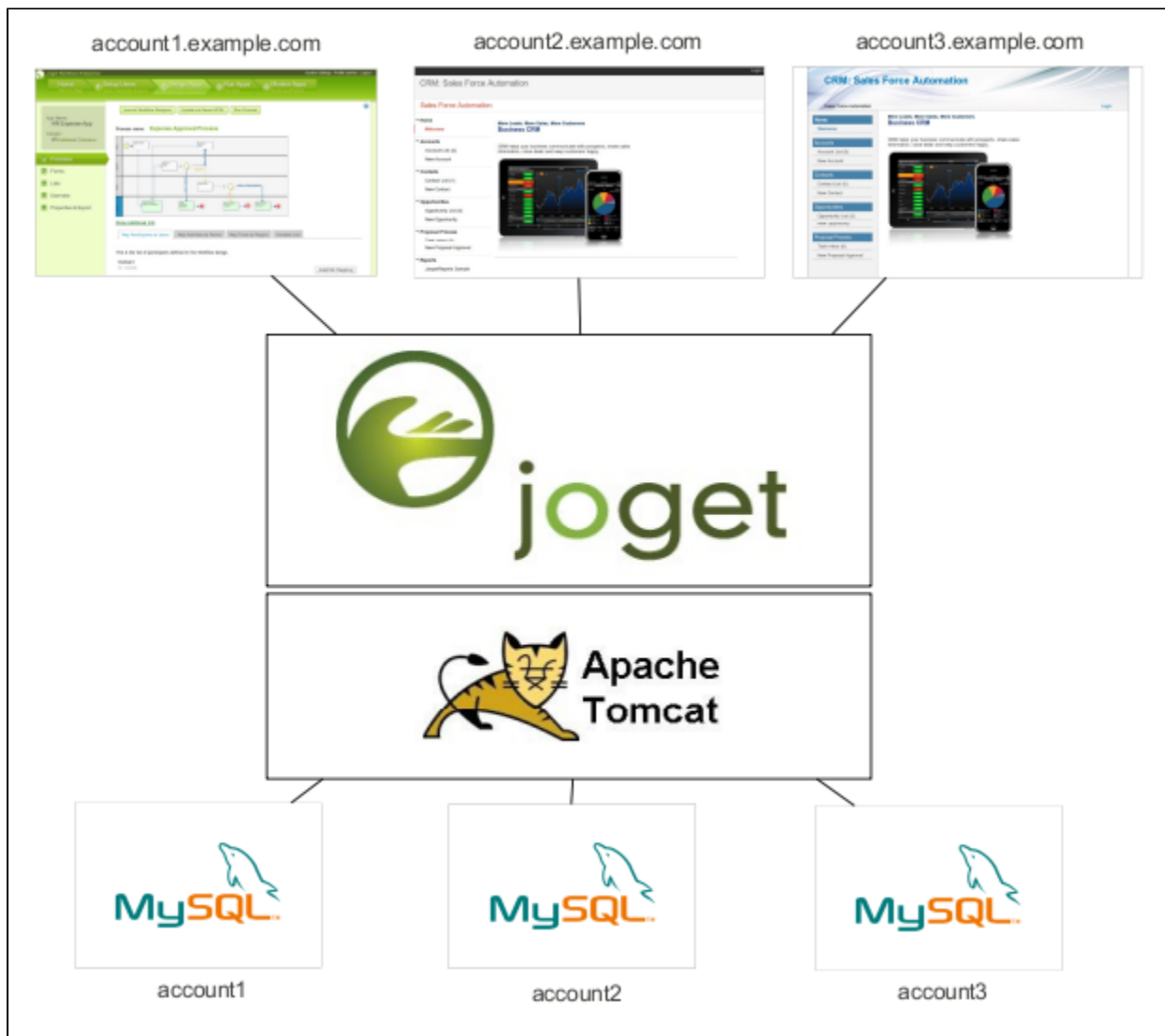
Installation

Prerequisites

- Linux
- Java 8 and above
- MySQL 5.5 and above

Installation Steps

The installation steps are similar to the installation for the standard Joget Enterprise. Refer to the Knowledge Base at Installation using the Linux Bundle for more detailed instructions.

Configuration

DNS Configuration

Each account / tenant is identified by a domain name, so the DNS needs to be configured to point desired domains to Joget. For convenience, it is recommended to use a wildcard DNS record (http://en.wikipedia.org/wiki/Wildcard_DNS_record). For example:

```
*.example.com
```

In this case, requests to all subdomains of example.com (e.g. account1.example.com, account2.example.com, account3.example.com) are directed to Joget.

For local testing purposes, it is possible to just modify the local hosts file http://en.wikipedia.org/wiki/Hosts_(file) . Please note that typically, hosts file configuration does not support wildcards so it will be necessary to add separate entries for each subdomain (e.g., account1.example.com, account2.example.com, etc.).

Profile Configuration

Each account (tenant) is tied to a datasource profile. More info on profiles can be found at Custom Database Configuration.

In the Community or Enterprise Edition, only 1 profile is selected at a time. In the Cloud Edition, this is enhanced such that all accounts and profiles are enabled concurrently.

Open the file **(joget.home)/wflow/app_datasource.properties**. Here's an example of the file content:

```
account1.example.com=jwc_account1
account2.example.com=jwc_account2
currentProfile=default
```

- The key to the left of the equal sign is the domain name, while the value to the right is the profile.

- Each profile has a corresponding file **app_datasource-(profile).properties** which contains the database settings.

- When a request is received, any matching domain name will use the associated profile.

- **currentProfile** is a special key to indicate the default profile to use if there are no matching domains.

- In terms of file uploads and system generated files, each profile stores its files in the subdirectory **(joget.home)/wflow/app_profiles/(profile)**.

Account Provisioning

There are a few approaches to provision (create) an account.

Manual Provisioning

As described in the previous Accounts Configuration section, each account is essentially a datasource profile. So an account can be manually created as follows:

1. Create a new Joget database using the script provided in **(joget.home)/data/jwdb-cloud.sql**, or any other custom scripts.

2. Create a new profile file **(joget.home)/wflow/app_datasource-(profile).properties** by copying from app_datasource-default.properties and changing the values accordingly.

3. Add an entry into **(joget.home)/wflow/app_datasource.properties**. The entry would be (domain name)=(profile).

4. The profile is active immediately, and no restart is necessary.

Scripted Provisioning

There is also an Ant build file and script available that simplifies account creation.

1. Execute the file **(joget.home)/cloud-provision-account.sh**.

2. When prompted for Account Profile Name, enter the required account name (e.g., demo).

3. The next prompt is for the Main Domain Name. Enter the main domain (e.g., example.com).

4. Subsequent inputs will have default values that you can just enter and accept, or change before submitting.

5. Upon submission of all the inputs, the script will create the database and perform the necessary configuration for the account. The inputs are as follows:

Account Profile Name	Desired account name (e.g., demo)
Main Domain	Main domain (e.g., example.com)
Account Domain Name	Account domain (e.g., demo.example.com)

Account Database Name	Database name for the account (e.g., jwc_demo)
Account Database User	Database user for the account (e.g., jwc_demo)
Account Database Password	Database password for the account (e.g., jwc_demo)
Home Directory	Joget home directory; defaults to current directory
wflow Directory	Joget configuration directory; defaults to ./wflow
MySQL host name	Database server host name
MySQL port	Database port
MySQL username	Database admin user (with permission to create database)
MySQL password	Database admin password

Cloud Admin App

For convenience, a simple Joget app is provided to automate the account request approval and provisioning process.

1. Import the app in **(joget.home)/lib/APP_cloud-xxxx.zip** into Joget.

2. Go to Properties & Export and set the "domain" to the appropriate value for the main domain (e.g., example.com).

3. Publish the app.

4. Access the app at http://localhost:8080/jw/web/userview/cloud/admin/.

5. Login to view the Account List.
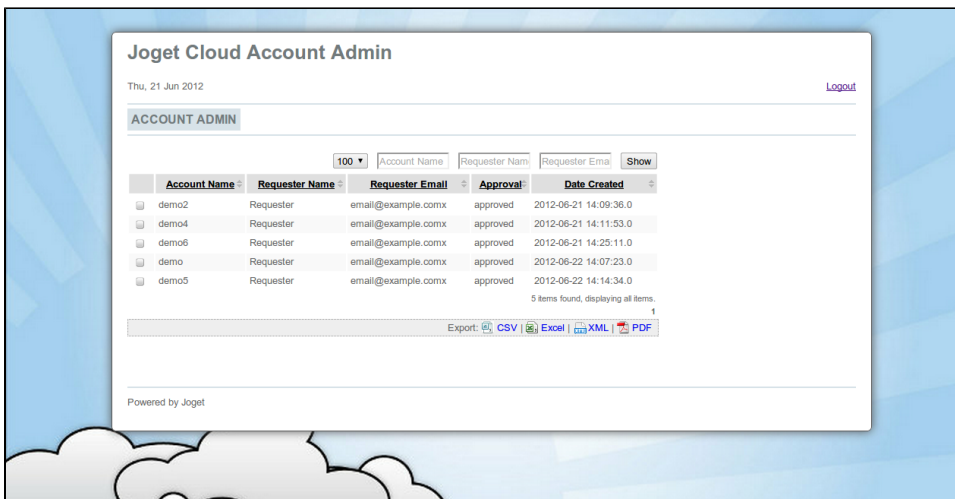
6. Select New Account from the drop-down menu to request for a new account.

7. When a request is submitted, it needs to be approved. Approve the request; a BeanShell tool will be executed to provision the account.

8. Verify that the account is created at the requested domain (e.g., demo.example.com).

9. Modify the app where necessary:

- Go to Processes > Map Participants to Users to map the participants accordingly.
- Go to Processes > Map Tools to Plugins and configure the Email Tools to key in the appropriate email settings and email messages.
- Edit Forms > Account Request Form to modify the form contents where necessary.

In a production environment, it is recommended for security purposes that this app be installed on a specific profile instead of the default profile.

Account Removal

Manual Removal

To disable an account, perform the following:

- Remove the profile entry from **(joget.home)/wflow/app_datasource.properties**. This effectively disables the account.

To fully delete the account:

- Remove the profile entry from **(joget.home)/wflow/app_datasource.properties**.

- Delete the profile properties file **(joget.home)/wflow/app_datasource-(profile).properties**.

- Delete the associated account database.

- Delete the associated account profile directory **(joget.home)/wflow/app_profiles/(profile)**.

- If the Cloud Admin App is used, delete the record from the db table **app_fd_cloud_account**.

Maintenance

Logging

As with a standard Joget installation on Apache Tomcat, the log file is at **(joget.home)/apache-tomcat-xxxx/logs/catalina.out**.

Updates

Updates to WAR files are done as per standard Joget installation.

Backup

Backups should be done for all MySQL databases as well as configuration and data files in **(joget.home)/wflow**.