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## DAE Component Model

Package «system» in package 'Model'

Data Asset Explorer (Data Catalog) System Design - Component Model

DAE Component Model  
Version Phase 1.0 Proposed  
created on 12/7/2015. Last modified 12/8/2015

## DAE - App integration View diagram

Component diagram in package 'DAE Component Model'

DAE - App integration View  
Version 1.0  
jinliu created on 12/8/2015. Last modified 12/8/2015

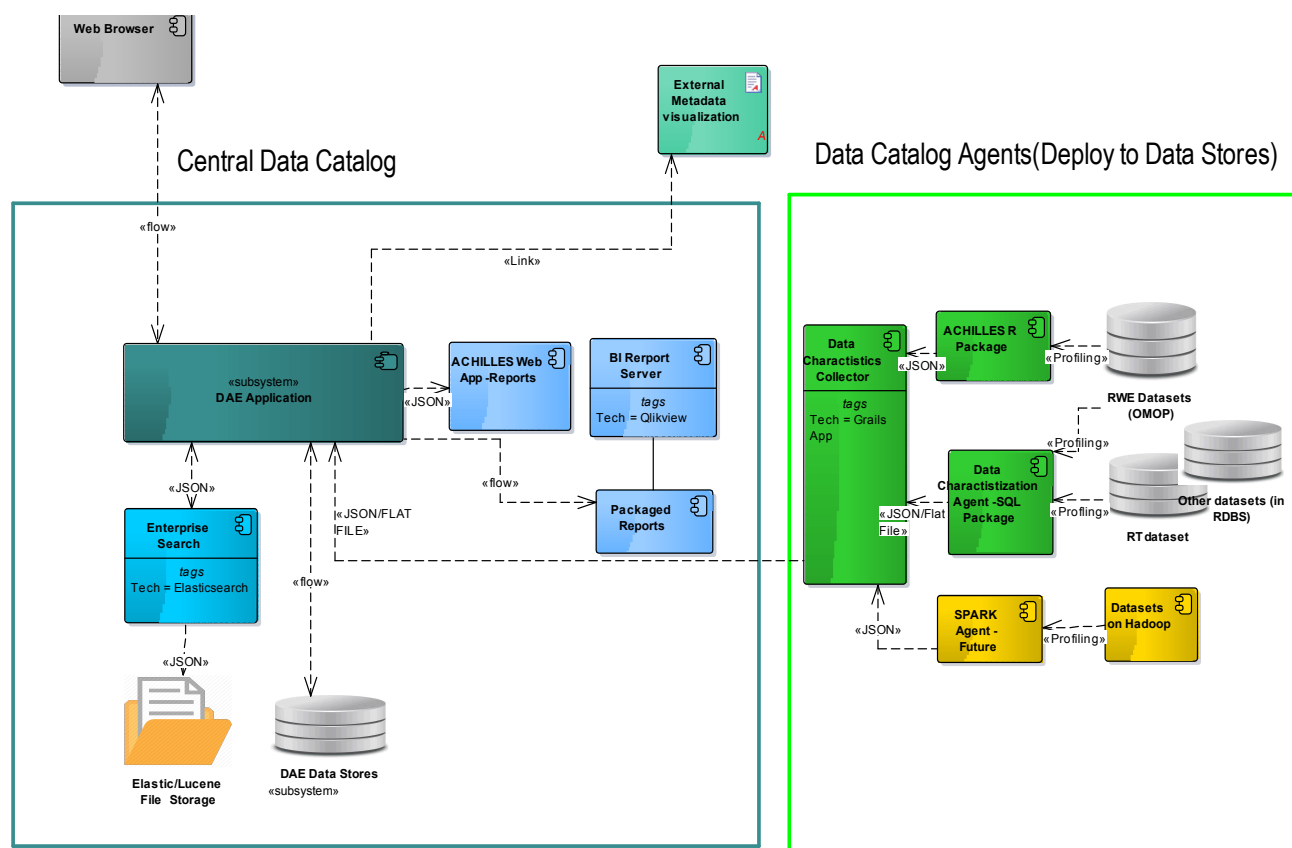


Figure 1: DAE - App integration View

## DAE Application

Component «subsystem» in package 'DAE Component Model'

This is the main DAE application that handles dataset management, request management and workflow management. It should be able accommodate new entity management such as Study etc if necessary.

Tech spec:

Grails application with following plugins:

User Management/Auth - CH Portal Plugin

UI - AngularJS + Bootstrap + Uitable or UI grid

Visualization: D3.js + AngularJS directive nvD3 (<http://krispo.github.io/angular-nvd3/#/>)

Workflow: Activiti Plugin

Search: Integrate with Elastic Search for aggregated filters and search. Note Elasticsearch should be deployed as a standalone app.

NFC:

All front and Biz logic communication should be modeled and implemented as REST services

Should be able to customize CRUD UI with JSON templates

Should be able to add new entity associations without changing the application and persistence

DAE Application

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## DAE Data Stores

*Component «subsystem» in package 'DAE Component Model'*

DAE Data Store - designed as a central storage to capture study, dataset catalog, request, workflow, attachment, event etc. It includes following database schema:

1) User, security, menu etc - required for CH-Portal plugin

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4) Data Characteristics schema - A generic data characteristic model to be designed (TBD)

Tech Spec:

For release one - MSSQL 2014 + nvarchar fields as JSON fields.

Future release - add Oracle and Postgres 9.4 support

DAE Data Stores

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## Text

*Text in package 'DAE Component Model'*

Central Data Catalog

Text

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/7/2015

Extends

## Text

*Text in package 'DAE Component Model'*

Data Catalog Agents(Deploy to Data Stores)

Text

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

Extends

## DAE - Sub Component View diagram

Component diagram in package 'DAE Component Model'

DAE - Sub Component View

Version 1.0

jinlliu created on 12/7/2015. Last modified 12/8/2015

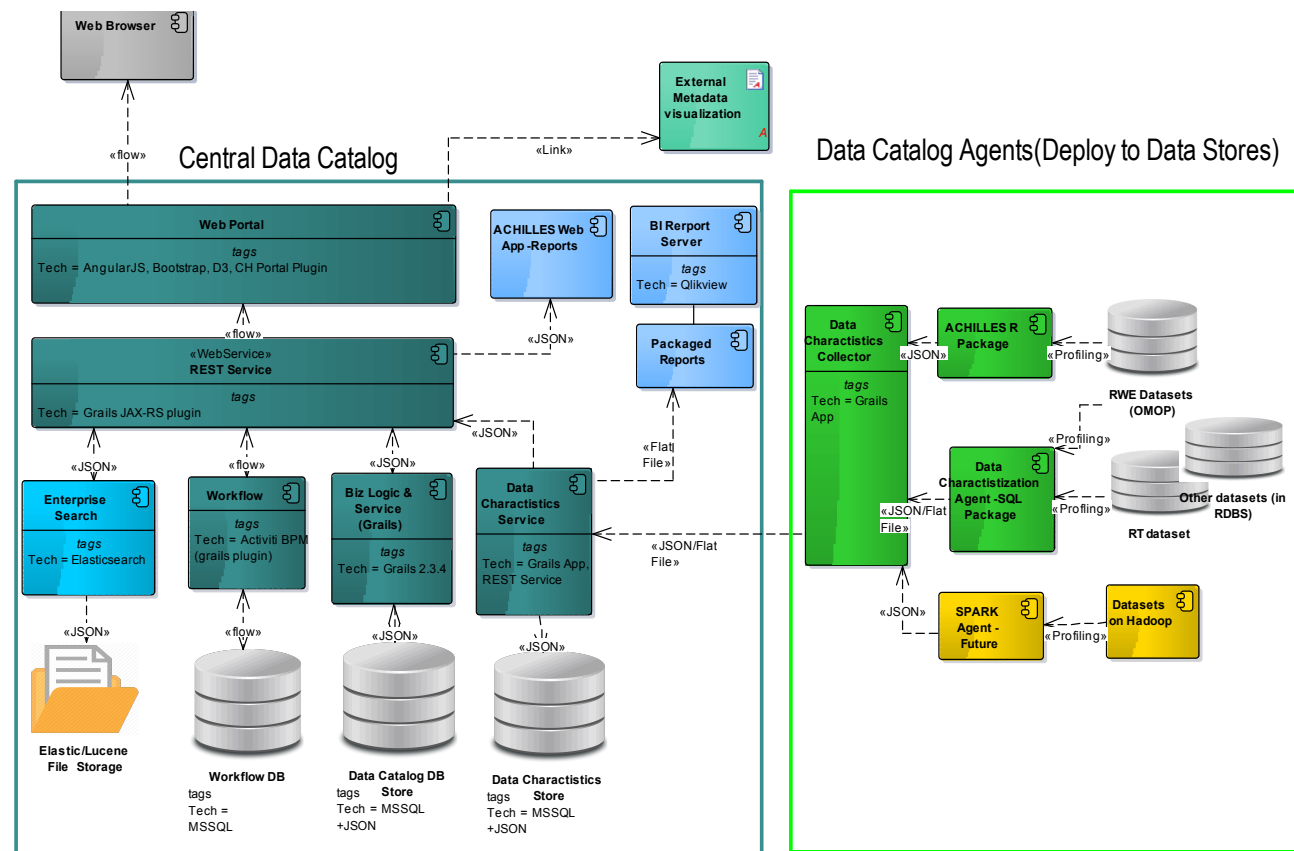


Figure 2: DAE - Sub Component View

### Text

Text in package 'DAE Component Model'

Central Data Catalog

Text

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/7/2015. Last modified 12/7/2015

Extends

### Text

Text in package 'DAE Component Model'

Data Catalog Agents(Deploy to Data Stores)

Text

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/7/2015. Last modified 12/8/2015  
Extends

## DAE App Diagram diagram

*Component diagram in package 'DAE Component Model'*

DAE App Diagram  
Version 1.0

jinlliu created on 12/8/2015. Last modified 12/8/2015

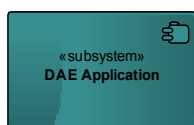


Figure 3: DAE App Diagram

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DAE Application  
Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## Components

*Package in package 'DAE Component Model'*

Components  
Version 1.0 Phase 1.0 Proposed  
created on 12/7/2015. Last modified 1/5/2006

## Components diagram

*Component diagram in package 'Components'*

Components

Version 1.0

jinlliu created on 12/7/2015. Last modified 12/7/2015

Figure 4: Components

## Data Asset Explorer diagram

*Component diagram in package 'Components'*

Data Asset Explorer

Version 1.0

jinlliu created on 12/7/2015. Last modified 12/7/2015

Figure 5: Data Asset Explorer

## Connections

*Package in package 'DAE Component Model'*

Connections  
Version 1.0 Phase 1.0 Proposed  
created on 12/7/2015. Last modified 1/5/2006



## Internal Structures

*Package in package 'DAE Component Model'*

Internal Structures  
Version 1.0 Phase 1.0 Proposed  
created on 12/7/2015. Last modified 1/5/2006

## Internal Structures diagram

*CompositeStructure diagram in package 'Internal Structures'*

Internal Structures  
Version 1.0  
jinlliu created on 12/7/2015. Last modified 12/7/2015

The Internal Structures package contains models of how components are internally wired to provide both internal and external services. These composite structure diagrams detail the connections and dependencies within components, usually between classes (objects or parts) and supported interfaces (services).

This illustrates how the services offered by this component are internally delegated to a specific object.

Figure 6: Internal Structures

## Note

*Note in package 'Internal Structures'*

The Internal Structures package contains models of how components are internally wired to provide both internal and external services. These composite structure diagrams detail the connections and dependencies within components, usually between classes (objects or parts) and supported interfaces (services).

Note  
Version 1.0 Phase 1.0 Proposed  
created on 12/7/2015. Last modified 1/11/2006  
Extends

## DAE Application

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DAE Application

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

LINKS TO OTHER PACKAGES	
 Information Flow from 'DAE Application' Component «subsystem» to 'ACHILLES Web App -Reports' Component	Direction: Source -> Destination
 Information Flow from 'DAE Application' Component «subsystem» to 'Packaged Reports' Component	Direction: Source -> Destination
 Information Flow from 'DAE Application' Component «subsystem» to 'Web Browser' Component	Direction: Bi-Directional
 Information Flow from 'DAE Application' Component «subsystem» to 'External Metadata visualization' Artifact «Document»	Direction: Source -> Destination
 Information Flow from 'Data Characteristics Collector' Component to 'DAE Application' Component «subsystem»	Direction: Source -> Destination
 Information Flow from 'Enterprise Search' Component to 'DAE Application' Component «subsystem»	Direction: Bi-Directional
 Information Flow from 'DAE Data Stores' Component «subsystem» to 'DAE Application' Component «subsystem»	Direction: Bi-Directional

## DAE Application diagram

Component diagram in package 'DAE Application'

DAE Application

Version 1.0

jinlliu created on 12/8/2015. Last modified 12/8/2015

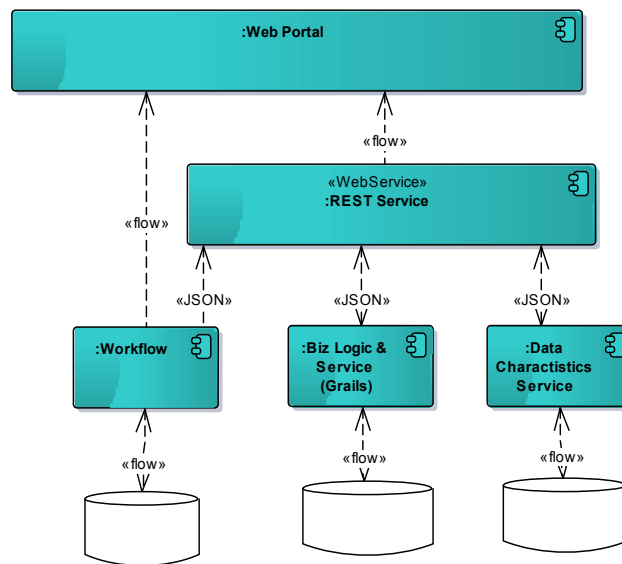


Figure 7: DAE Application

## Data Catalog Store

Cylinder «cylinder» in package 'DAE Application'

Data Catalog Store

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## Data Characteristics Store

Cylinder «cylinder» in package 'DAE Application'

Data Characteristics Store

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## Workflow DB

Cylinder «cylinder» in package 'DAE Application'

Workflow DB

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

## DAE Data Stores

Package «subsystem» in package 'DAE Component Model'

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For release one - MSSQL 2014 + nvarchar fields as JSON fields.

Future release - add Oracle and Postgres 9.4 support

DAE Data Stores

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/8/2015. Last modified 12/8/2015

LINKS TO OTHER PACKAGES	
 Information Flow from 'DAE Data Stores' Component «subsystem» to 'DAE Application' Component «subsystem»	Direction:      Bi-Directional

## DAE Data Stores diagram

Component diagram in package 'DAE Data Stores'

DAE Data Stores

Version 1.0

jinlliu created on 12/8/2015. Last modified 12/8/2015

Figure 8: DAE Data Stores

## ACHILLES R Package

Component in package 'DAE Component Model'

ACHILLES R Package

Version 1.0 Phase 1.0 Proposed

jinlliu created on 12/7/2015. Last modified 12/7/2015

## ACHILLES Web App -Reports

Component in package 'DAE Component Model'

ACHILLES Web App -Reports  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## BI Rerport Server

*Component in package 'DAE Component Model'*

BI Rerport Server  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

ASSOCIATIONS	
 Association (direction: Unspecified)	
Source: Public (Component) Packaged Reports	Target: Public (Component) BI Rerport Server

## Biz Logic & Service (Grails)

*Component in package 'DAE Component Model'*

Biz Logic & Service (Grails)  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Data Catalog DB Store

*Component in package 'DAE Component Model'*

Data Catalog DB Store  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Data Characteristics Collector

*Component in package 'DAE Component Model'*

Data Characteristics Collector  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Data Characteristics Service

*Component in package 'DAE Component Model'*

Data Characteristics Service  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Data Characteristics Store

*Component in package 'DAE Component Model'*

Data Characteristics Store  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Data Characteristization Agent -SQL Package

*Component in package 'DAE Component Model'*

Data Characteristization Agent -SQL Package  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Datasets on Hadoop

*Component in package 'DAE Component Model'*

Datasets on Hadoop  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Elastic/Lucene File Storage

*Component in package 'DAE Component Model'*

Elastic/Lucene File Storage  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Enterprise Search

*Component in package 'DAE Component Model'*

Enterprise Search  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Other datasets (in RDBS)

*Component in package 'DAE Component Model'*

Other datasets (in RDBS)  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Packaged Reports

Component in package 'DAE Component Model'

Packaged Reports  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

ASSOCIATIONS	
 Association (direction: Unspecified)	
Source: Public (Component) Packaged Reports	Target: Public (Component) BI Rerport Server

## REST Service

WebService «WebService» in package 'DAE Component Model'

REST Service  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## RT dataset

Component in package 'DAE Component Model'

RT dataset  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## RWE Datasets (OMOP)

Component in package 'DAE Component Model'

RWE Datasets (OMOP)  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## RWE datasets (OMOP)

Component in package 'DAE Component Model'

RWE datasets (OMOP)  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## SPARK Agent - Future

Component in package 'DAE Component Model'

SPARK Agent - Future  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Web Browser

*Component in package 'DAE Component Model'*

Web Browser  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Web Portal

*Component in package 'DAE Component Model'*

Web Portal  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Workflow

*Component in package 'DAE Component Model'*

Workflow  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## Workflow DB

*Component in package 'DAE Component Model'*

Workflow DB  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## External Metadata visualization

*Artifact «Document» in package 'DAE Component Model'*

External Metadata visualization  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/7/2015. Last modified 12/7/2015

## DAE Application

*UMLDiagram in package 'DAE Component Model'*

DAE Application  
Version 1.0 Phase 1.0 Proposed  
jinlliu created on 12/8/2015. Last modified 12/8/2015  
Extends



