CEDA OGC Web Services Framework Documentation

Release 1.6.1

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The CEDA OGC Web Services framework (COWS) is a Python software framework developed at the Centre of Environmental Data Archival for implementing Open Geospacial Consortium web service standards.

COWS emphasises rapid service development by providing a lightweight layer of OGC web service logic on top of Pylons, a mature web application framework for the Python language. This approach gives developers a flexible web service development environment without compromising access to the full range of web application tools and patterns: Model-View-Controller paradigm, XML templating, Object-Relational-Mapper integration and authentication/authorization.

COWS contains pre-configured implementations of WMS, WCS and WFS services designed for serving earth system data using the Climate Science Markup Language, a web-client and cluster-enabled Web Processing Service (WPS) supporting asynchronous data processing.

CHAPTER

ONE

COWS COMPONENTS

- cows core: Framework library and server templates
- cowsserver: WMS/WCS/WFS server
- cowsclient: WMS/WCS web-client
- cows_wps: Web Processing Server

CHAPTER

TWO

UNDER CONSTRUCTION

This new home for COWS is still being developed so you may find incomplete information here. For the latest source visit our developer site.

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3.1 COWS Framework Overview

3.2 Download

You can install cows components using easy_install or pip by specififying the cows download location as follows:

```
# with easy_install
$ easy_install -f http://cows.badc.rl.ac.uk/dist cowsserver

# OR with pip
$ pip install -f http://cows.badc.rl.ac.uk/dist cowsserver
```

3.2.1 Latest Releases

- cows-1.4.1-py2.5.egg
- cowsserver-1.4.0-py2.5.egg
- cowsclient-1.4.0-py2.5.egg

3.3 COWS Core

3.3.1 Introduction

TODO

3.3.2 Installation

Prerequisites setuptools and/or pip.

```
# Install via pip
$ pip install -f http://cows.badc.rl.ac.uk/dist cows

# OR easy_install
$ easy_install -f http://cows.badc.rl.ac.uk/dist cows
```

3.3.3 `cows.model` – OWS-common model classes

cows.model.capabilities
cows.model.common
cows.model.contents
cows.model.data_identification
cows.model.domain
cows.model.exception_report
cows.model.filterencoding
cows.model.operations_metadata
cows.model.service_identification
cows.model.service_provider
cows.model.storedquery

3.3.4 WXS Service Interfaces

cows.service.wxs_iface
cows.service.wcs_iface
cows.service.wfs_iface
cows.service.wms_iface

3.3.5 Pylons Integration

3.3.6 Utilities

3.4 COWSserver

3.4.1 Introduction

3.4.2 Installation

3.4.3 Configuration

3.4.4 Customising Backends

3.5 COWSclient

3.5.1 Introduction

3.5.2 Installation

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3.6 COWS wps

3.6.1 Introduction

3.6.2 Installation

3.6.3 Configuration

Processes

GridEngine

3.6.4 Process Development

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