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# **EDCSS Production Site**

v. 1.29.1 User Guide

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# **Table of Contents**

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1 Overview

## 1 Overview

1.1 Overview

The EDC Production Webapp is a web application that hosts a web service as well as a web based user interface for interacting directly. This section desribes the User Interface and its functionality.

2 Login 2

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## 2 Login

#### 2.1 Overview

When a User accesses the webapp, they are presented with the login page as shown below.

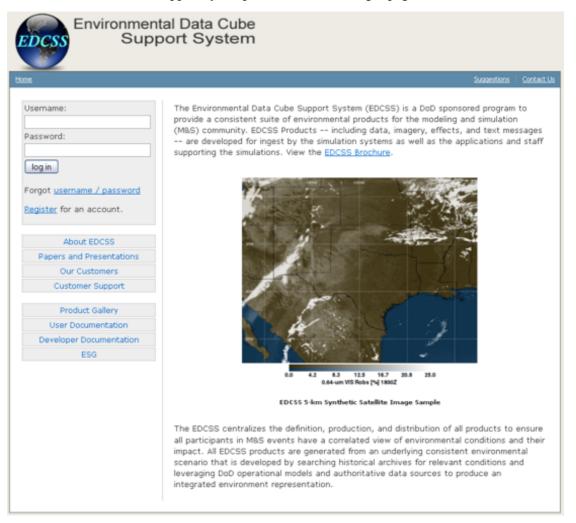


Figure 1. The login page

The Welcome screen displays a Latest News section, an About EDCSS section, a Customer Support section and a Product Gallery section. Click on any of the links under those sections to get more information.

Log into the Production Site by entering a valid username and password on the top left corner of the page. There is a *username/password* link to get help on a forgotten username or password, and a *Register* link for signing up for a new account. All Users belong to one or more of the following groups: User, SME (subject matter expert), and Admin. Permissions are determined by a User's level. Upon a successful login, the User will be taken to the Projects page.

## 3 Projects

#### 3.1 Overview

Create a new Project by navigating to the Project tab and clicking the *Create* link. Provide a name and short description for the new Project and choose a method of Project creation. You may copy an existing Project that is in your Community or you may define an entirely new Project from scratch.

If copying an existing Project, simply provide a name and short description for the copy and a new Project will be created for you, containing all the attributes of the original that was selected.

If defining a totally new Project, provide the requested information in each of the following steps.

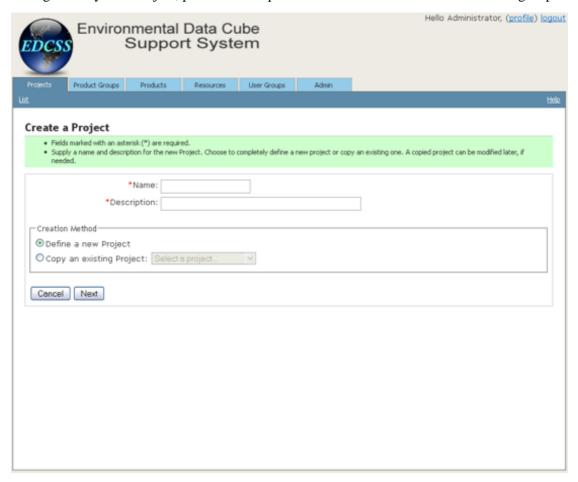


Figure 2. Specify the Project Name, Description, and method of Creation

#### 3.2 Project Basic Information

Specify the customer contact information and, optionally, an alternate POC's info. Select the User Group to which this Project shall belong. This information will be reflected in the resulting Project summary and Project site and is useful in defining requirements of the Project. Specify the due date of the Project in the Request By field.

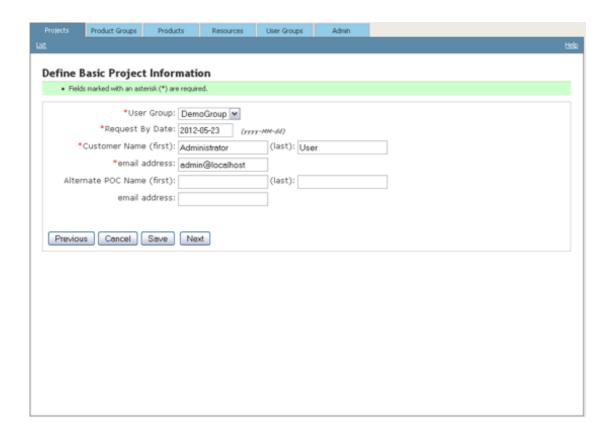


Figure 3. Specify the Project Basic Information

## 3.3 Spatial Requirements

Use the interactive map or text fields to specify the Project's area of interest.

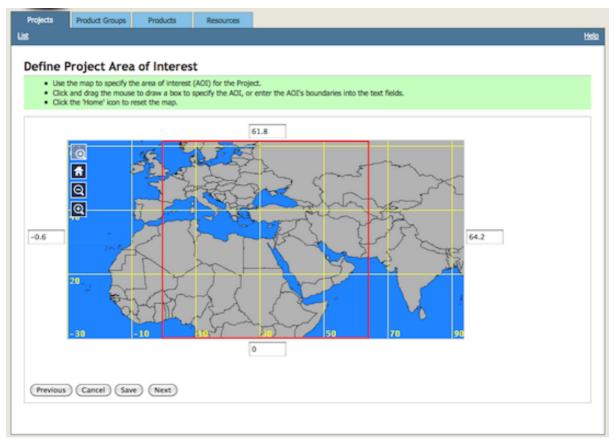


Figure 4. Specify the Spatial and Temporal requirement

#### 3.4 Product Groups

Indicate which Product Groups are participating in the exercise. Product Groups are groups of products that are organized and targeted for a particular consuming application or group (eg. AWSIM simulation, METOC white cell, etc)

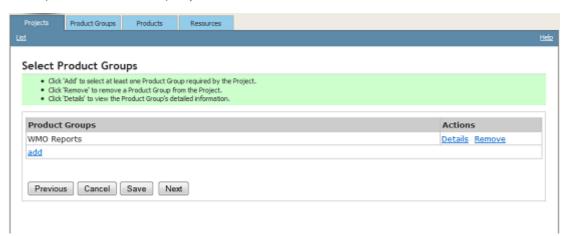


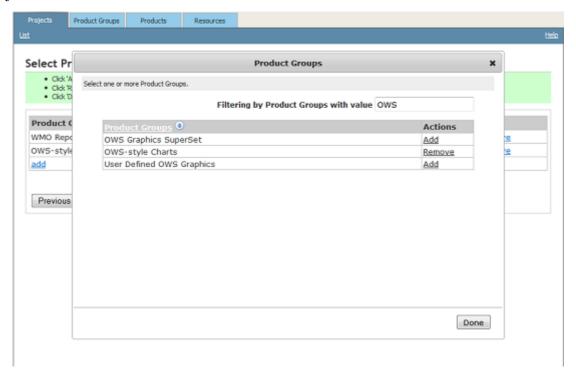
Figure 5. Select Product Groups

#### 3.4.1 Available Actions

- Add
- Details
- Remove the selected Product Group from your project.

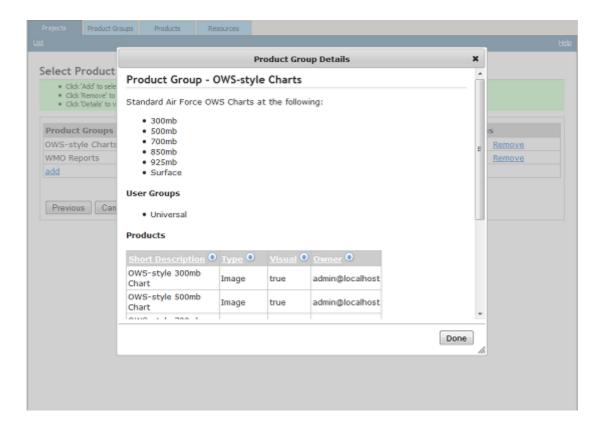
### 3.4.2 Product Group Dialog

From the Product Group Dialog you can search for product groups to add or remove from your project.



#### 3.4.3 Product Group Details Dialog

From the Product Group Details Dialog you can see information about the products included in the product group.



### 3.5 Temporal Requirements

Here, the Project's start and end dates are required. All Products will be time-stamped within this date range. Optionally, the historical reference dates can be provided if they are known. Otherwise, they are left blank and scenario requirements are filled out in the subsequent pages.

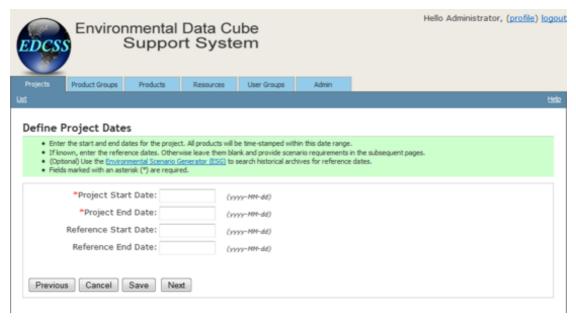


Figure 6. Select Excercise/Reference dates

#### 3.6 Resource Selection

Select a Resource to support the Project. A list of available Resources will appear for you to choose from, each with an indicator of which Products will be supported. There is also an indication of how the resource spatial extent covers the project AOI in the form of a thumbnail map. At least 50% of the project AOI needs to be covered for a resource to be available. Clicking the thumbnail will display a larger map in a pop-up window. Clicking a Resource's name will display it in detail. If a resource is slected which only partially covers a project AOI, a confirmation message is presented to the user that on acceptance, adjusts the project AOI to be entirely within the selected resource.

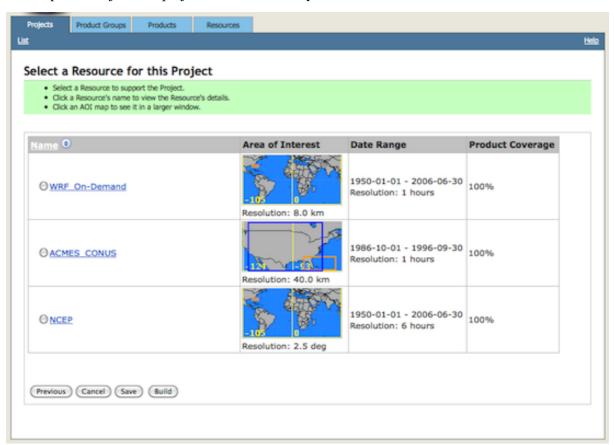


Figure 7. Select a Resource Network

#### 3.7 Scenario Requirements

Specify scenario requirements in the form of impacts to Operations/Systems (see Operations/Systems), Environmental Criteria, or any combination of the two. The system will search historical archives for the best match to the requested scenario. Use the interactive map to indicate the location of the impacts. This area should be small (e.g., the latitude/longitude bounds of a city or military base - no more than 50 points). Otherwise, search results are difficult to interpret, given spatial variation of environmental data. Below this, you must specify at at least one Operations/Systems or Environmental Criteria to include in the searching process.

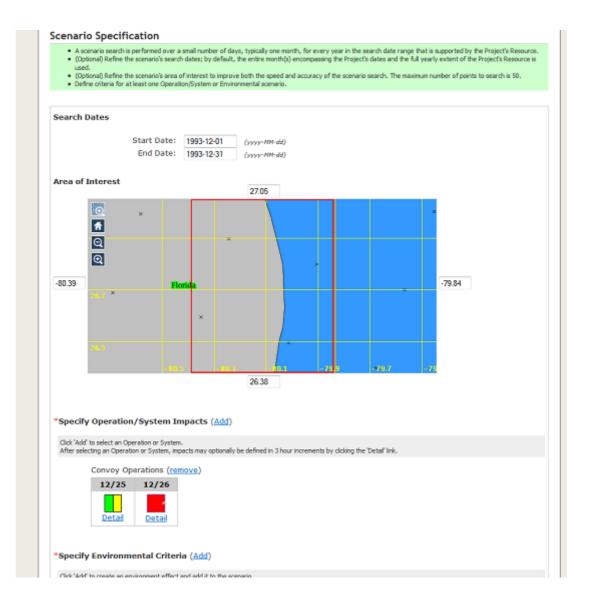


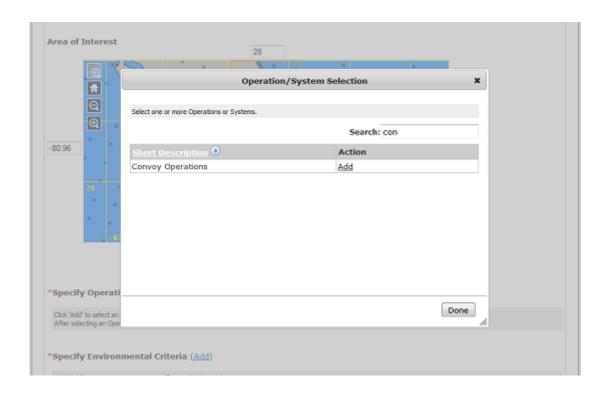
Figure 8. Scenario Specification

#### 3.7.1 Available Actions

- Add Operation/System Impacts
- Operation/System Impacts Detail
- Remove a Operation/System Impacts
- Add or Edit Environmental Criteria
- Environmental Criteria Detail
- Remove a Environmental Criteria

### 3.7.2 Select Operation/System Impacts Dialog

On the Select Operation/System Impacts Dialog you can search for Operation/System Impacts to add to scenario.



Select Operation/System Impacts Dialog

### 3.7.3 Operation/ System Impacts Detail Dialog

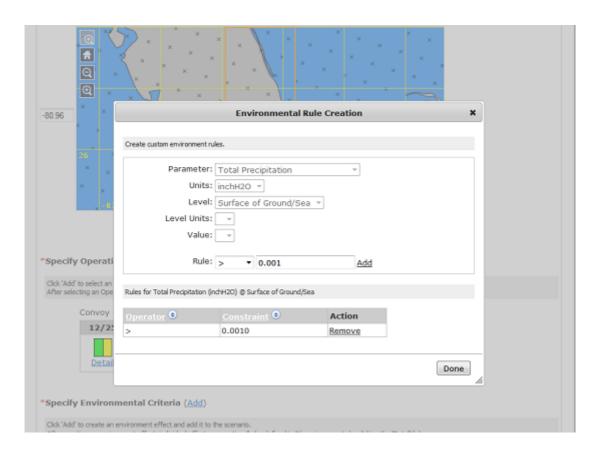
Optionally, impacts for each Operation/System may be further specified for each three-hour timestep by clicking the "Detail" hyperlink under each day's impact value.



Figure 9. Specifying 3-hour Impacts

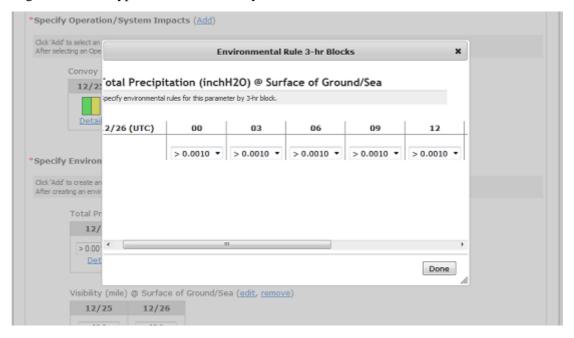
### 3.7.4 Select Environmental Criteria Dialog

On the Environmental Criteria Dialog you can add and remove environmental criteria you want to search for in your scenario search. Environmental criteria can over ride operational impacts. For example if you want unfavorable effects for fixed wing aircraft but specify no wind or precipitation with 5 mile visibility it will be unlikely for the system to return any results that are unfavorable for fixed wing aircraft.



#### 3.7.5 Environmental Criteria Details Dialog

Optionally, the criteria for the environment may be further specified for each three-hour timestep by clicking the "Detail" hyperlink under each day's value.



#### 3.8 Project Details

Upon completion of a Project definition, the User is taken to the Project Details page, which displays a summary of the Project information. Click any of the *edit* links to change any of the information.

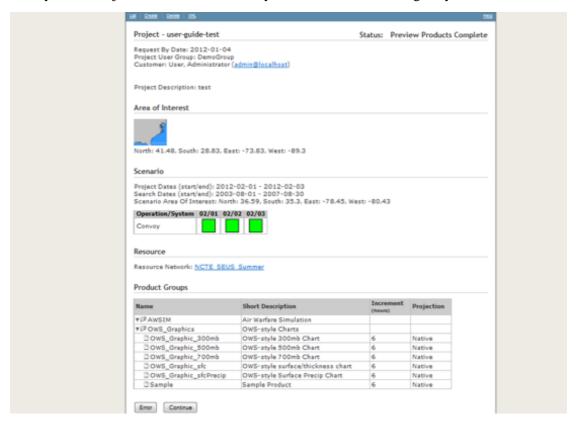


Figure 10. The Project Details page

Once everything has been defined for the Project, the Project Details page will supply all the information for review. This page also serves as the base page from which the Project can be edited or advanced to its next step in the workflow. This can be accomplished by using the buttons at the bottom of the page.

#### 3.9 Project Workflow

Once a Project is defined it must be stepped through the EDC Production workflow to generate the exercise Products. The current status is displayed in the upper right-hand corner of the Project page, and available actions are displayed in the adjacent buttons. Email notifications are sent at each transition of a Project's state. The possible Project state transitions may take one of three forms:

- 1. Open > Building Resources > Building Products > Complete
- 2. Open > Searching > Search Complete > Building Resources > Building Products > Complete
- 3. Open > Searching > Search Complete > Building Preview Resources > Building Preview Products > Preview Products > Complete > Building Resources > Building Products > Complete

**Open:** A Project always starts in Open state. At this stage the User making the request has an opportunity to define and adjust Project requirements before performing a Scenario Search or building the requested Products. You may move your Project to the Searching state if you'd like to perform a

Scenario Search or to the Building Resources state if you've already specified reference dates from which your selected Products may be built.

**Searching:** During Searching, EDC Production finds the historical dates that best match the impacts specified during Scenario Specification. Once the search is complete, EDC Production automatically moves the Project into the Search Complete state.

**Search Complete:** In this state, the User is given an opportunity to view the best-match historical dates found by EDC Production in a side-by-side comparison matrix. The Search Results page presents the User with visual comparisons between the expected and actual search results, allow the User to choose the best search result for the scenario.

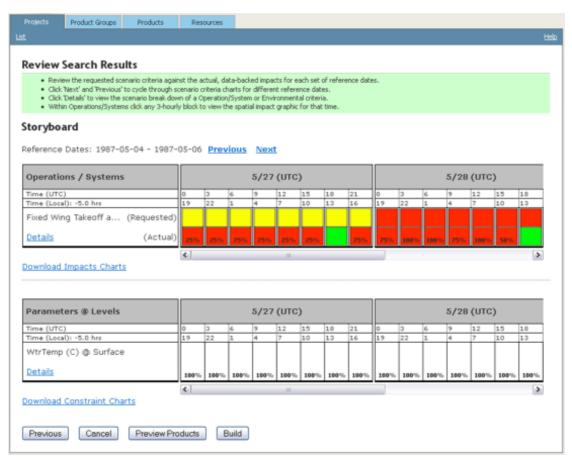


Figure 10. Search Results

Impact comparisons for each timestep are represented by two rectangles, the top being the requested impact and the bottom being the impact from the current search result. To switch between different search results, click the "Next" and "Previous" hyperlinks. Clicking an impact comparison shows the spatial view of the impact in a pop-up window. Further, a detailed view of each entity's impacts within the Operation/System can be viewed by clicking the "Details" hyperlink. Also, the impact images can be downloaded via the "Download Impacts" hyperlink.

From this state, the Project may build its Products or the User can choose to have Preview Products built.

If you choose to build Preview Products, you will be taken to the Preview Products Selection page where you must choose which visual Products will be built.

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	eview Products to build. Each Product will be built using the Project's AOI and Resource Network. Products that orted by the Resource Network are disabled.
OWS-sty	le 300mb Chart SuperSet
OWS-sty	le 500mb Chart SuperSet
OWS-sty	le 700mb Chart SuperSet
OWS-sty	le 850mb Chart
OWS-sty	le 850mb Chart SuperSet
OWS-sty	le 925mb Chart
OWS-sty	le 925mb Chart SuperSet
OWS-sty	le Cloud Cover Chart
OWS-sty	le Surface Precip Chart SuperSet
OWS-sty	le surface/thickness chart SuperSet
300mb W	leather Chart
500mb V	leather Chart
700mb W	leather Chart
850mb W	feather Chart
925mb V	leather Chart
Cloud Co	ver Chart
Surface 1	Veather Chart
Surface I	recip Chart
✓ NCTE sty	le 300mb Chart
☑ NCTE sty	le 500mb Chart
✓ NCTE sty	le 700mb Chart
✓ NCTE sty	le 850mb Chart
	le Surface Chart
OWS-sty	le 300mb Chart
OWS-sty	le 500mb Chart
	le 700mb Chart
✓ OWS-sty	le surface/thickness chart
	le Surface Precip Chart
Spatial 1	mpact Charts
Day in a	
Previous	Cancel Build

Figure 11. Preview Products Selection

**Building Preview Resources:** During the Building Preview Resources state, suitable Resources must be assembled to support those Products the User wishes to preview prior to building all Products for their Project.

**Building Preview Products:** Once appropriate preview Resources are in place, a Project is automatically moved to Building Preview Products and EDC Production begins to execute and build the previewable Products specified in the User's Profile. A User's Profile may contain desired preview Products that aren't in their Project. Depending on the size, temporal extent, number and type of Products, this may take several minutes to several hours.

**Preview Products Complete:** At this state, the User is able to view the previewable Products' data and make a decision as to whether to reject the previewable Products and try again with different reference dates or accept the Products and continue on to build all Products in the Project.

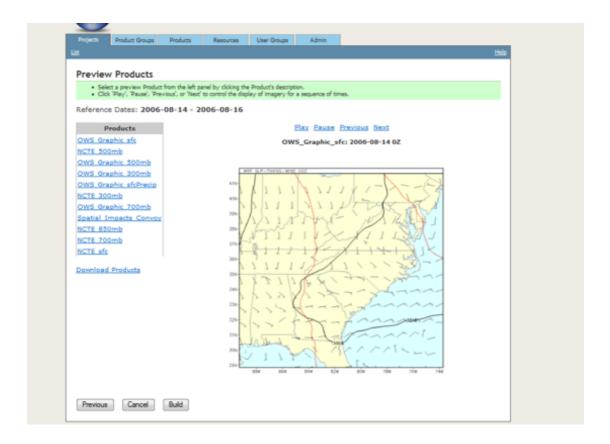


Figure 12. Preview Products

An animation for each Preview Product that was built is presented. Use the slide show controls to move the animation. Click a Product's name in the left side menu to view its animation. You may also download the Preview Products by clicking the "Download Products" hyperlink.

You may choose to accept the current search result and build the Project's Products by selecting the "Build" button at the bottom of the page. If you are not satisfied with the result, select "Previous" and choose a different search result.

**Building Resources:** During the Building Resources state, suitable Resources must be assembled to support all Products of a Project.

**Building Products:** Once appropriate Resources are in place, a Project is automatically moved to Building Products and EDC Production begins to execute and build all Products specified for the Project. Depending on the size, temporal extent, number and type of Products, this may take several minutes to several hours.

**Complete:** When all Products have been successfully built, a Project moves to Complete state. In Complete state, you may review your successfully built Products by clicking the Review button.

4 Products

## 4 Products

#### 4.1 Overview

Details of each Product are defined in the Product tab. In order to create a new Product, a User must have permissions as a SME or Admin. To create a new Product, click the *Create* button at the top of the frame.

There are currently four types of Products: Data, Effects, Images, and Text. Click on the link corresponding to the type of the new Product. In the resulting page, provide the requested information including the Project name, owner, description, and spatial and temporal options. Click Save to move to the next step.

The specification fields may be used to indicate the Product's required content, i.e., parameter and level combinations. If no information is provided, these details must be configured at the EDC Provider Site.

Select the appropriate Date Change Service and upload any necessary extensions. A Date Change Service is necessary to roll Products from historical Resource dates to the exercise dates. For example, Products might be generated from a 1995 archive but rolled forward and played in a 2010 exercise. A number of Date Change Services are registered with EDCSS. Use the drop-down box to select the service appropriate for the Product. Next, provide the Date Change Extension. This is in the form of an XML document that describes the mapping of dates in the Product. For example, dates may simply be inferred in the Product's file names, for which the File Rename Service would rename files to map them from historical to exercise dates.

Click the question mark (?) icon for help on the inputs. Click the *Save* button to move to the next step.

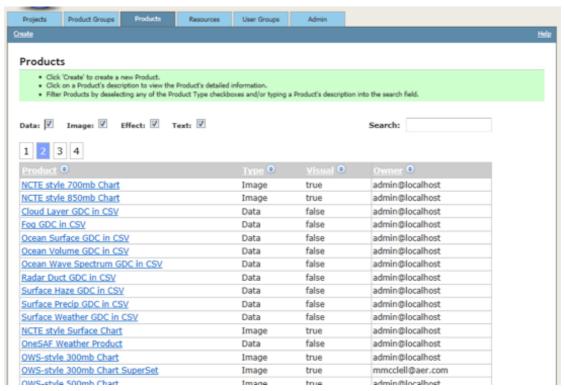


Figure 13. Listing of Products

Figure 11 above shows the listing of the available products. By default all types of products are selected. Use the check boxes to filter the desired product types, or type in the string (case-

4 Products

independent) in the Search box to match the product's short description. Note: do not hit the Enter key in the Search box as it may produce undesired results.

5 Product Groups

## **5 Product Groups**

#### 5.1 Overview

Details of each Product Group are defined in the Product Groups tab. In order to create a new Product Group, a User must have permissions as a SME or Admin. To create a new Product Group, click the *Create* link at the top of the frame. Required input includes a name, a description, an owner and one or more User Groups. It is possible to associate one or more Products with a single Product Group.

Click the Save button to save the entered information.

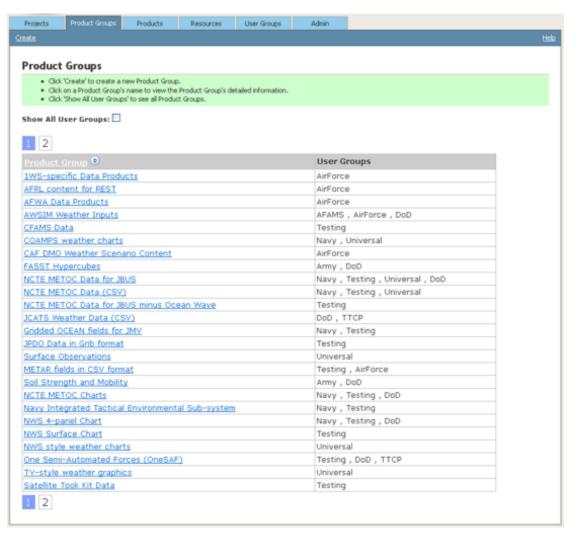


Figure 14. Listing of Product Groups

6 Resources

## 6 Resources

#### 6.1 Overview

Resource Networks are an association of specific Resources from up to four environment domains: atmosphere, ocean, space, and terrain. Implicit in their association is the certification that, as a group, the selected Resources represent a consistent, integrated environment representation. Each Project must be associated to one Resource Network from which all Products will be generated.

To create a new Resource Network, click the *Create* link on the Resources tab. In the resulting page, provide a name for the network then click a link to one of the domains. The page will update to return a list of all available Resources for that domain. These Resources are hosted at one or more EDC Provider sites that have registered their Resources with the EDC Production Site. Click the link of the desired Resource to select it, and the page will update to reflect the selection. Repeat the process for other domains as appropriate, then click *Save*.



Figure 15. Listing of Resource Networks

Scenario searching is performed using specific Resources called Search Resources. If a Resource Network is to be searchable, a Search Resource must be specified. To do this, select the Resource Network and click the "Associate Search Resource" hyperlink with the domain to which you would like to add the Search Resource.

7 User Groups 21

## 7 User Groups

#### 7.1 Overview

User Groups provide a mechanism for grouping Users of a common theme. All Users belong to one or more User Groups and each Project, Product and Product Group belongs to one and only one User Group. A User will see only those Projects, Products, and Product Groups that belong to his or her User Groups.

Use the User Groups tab to create or edit a User Group. To define a new User Group, simply click the *Create* link, enter the name of the User Group, and click *Save*.



Figure 16. Listing of User Groups

## 8 Administration

#### 8.1 Overview

A User with administrative privileges to the EDC Production Site has a number of additional controls available as described below.

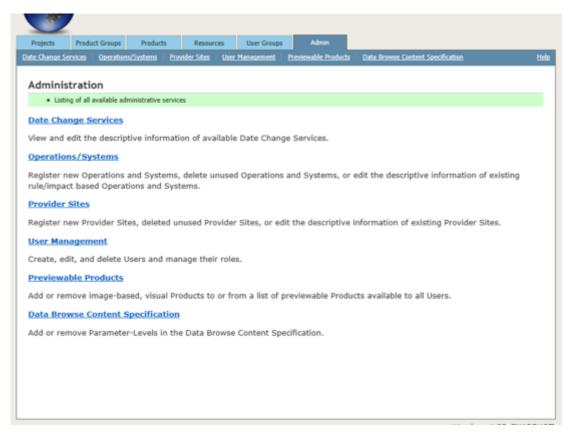


Figure 17. The Admin page

### 8.2 Date Change Services

Date Change Services are processes that map historical data and Products to exercise dates. This tab lists the available services and allows an Admin User to activate or de-activate an available service.

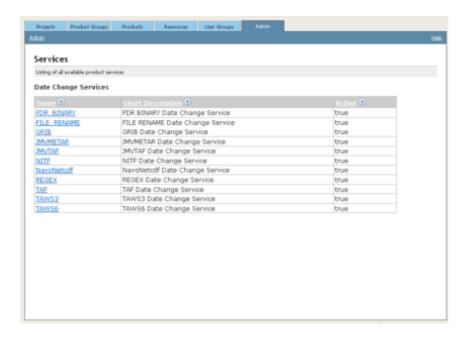


Figure 18. Listing of Date Change Services

## 8.3 Operations/Systems

This tab provides an interface for defining or editing Operations/Systems, which are operational areas that are impacted by a particular set of rules. For example, the Operation/System *Fixed\_Wing* might include rules for Ceiling Height, Visibility, Wind speed and Precipitation Intensity.

To define a new Operation/System click the Create link and then enter a name and description. Use the Entities section to select rules that define the Operation/System. Click the *Add row* link, then either use the search icon or begin typing in the text field to see available rules. Repeat this process until all rules for the Operation/System are defined, then click Save.

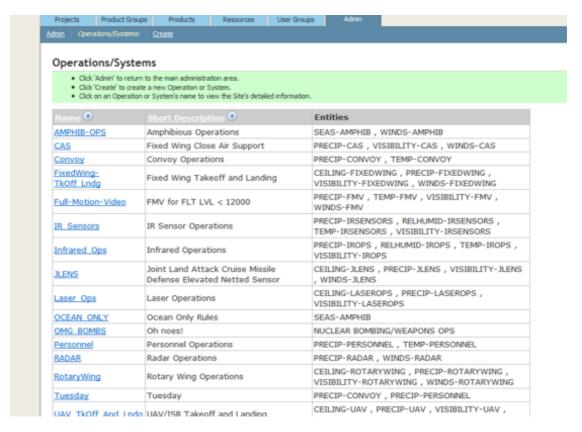


Figure 19. Operations/Systems

#### 8.4 Provider Sites

EDC Provider sites make their Resources and Product generation capabilities available to the EDC Production Site. This tab provides an interface for an administrator to register a new Provider Site or edit descriptive information of an existing one. All Production Sites must have at least one Provider Site registered to it.

Click the name of an existing Provider to edit it, or click Create link to register a new one. Provide the name, description, and web service URL of the Provider and then click Save.



Figure 20. Listing of the Provider Sites>

## 8.5 User Management

This tab provides an interface for managing user accounts. Required information for a user account includes the email address and the user's first and last name. A Phone number and password may also be provided. The user may also be assigned Roles and User Groups.

Click the name of an existing user to edit it, or click Create link to register a new one. Provide the name, description, and web service URL of the Provider and then click Save.



Figure 21. Listing of the Users>

#### **8.6 Preview Products**

This tab provides an interface for managing the Preview Products which are products that are eligible to be used in generation of preview products by any user.

Click the name of an existing product to see its description. Click the checkbox to the right of the product to mark that product as a previewable one or not. When done click the Save button or click the Cancel to discard all changes.

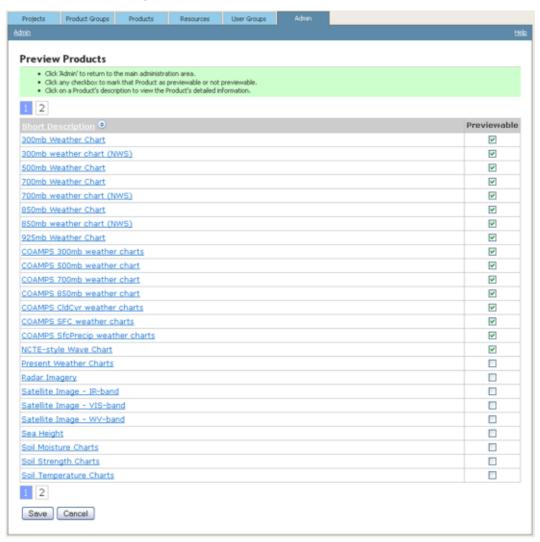


Figure 22. Listing of the Preview Products>

## 8.7 Data Browse Content Specification

This tab provides an interface for managing the Data Browse Content Specification. The data of the selected parameters and levels may be closely examined at the Distributor site once the project has successfully built. The list applies to all users.

Click the Edit link to add or remove parameter and levels. Click Save when done or Cancel to discard all changes.

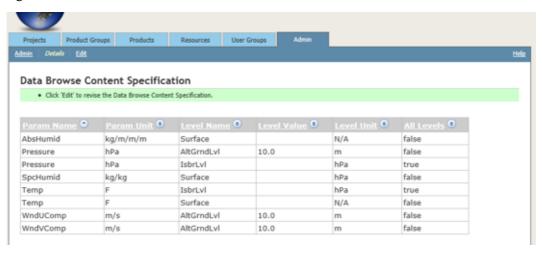


Figure 23. Listing of the Data Browse Content Specification>

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## 9 Terminology

### 9.1 Terminology

**EDC Production Site:** the main EDC web application which end-users access to define and submit Projects and define requirements for Products and Product Groups.

**EDC Provider Site:** an EDC web application and backing framework responsible for resource management and product generation. An EDC Provider Site receives and responds to resource and product requests from the EDC Production Site.

**EDC Distributor:** an EDC web application for hosting completed projects and providing products via web services and a browsable web site.

**Environmental Domain:** one of the domains of the natural environment: atmosphere, ocean, terrain, or space.

**Product:** environmental information packaged as data, text, imagery, or pre-computed environmental effects.

**Product Group:** a collection of Products that are targeted to an exercise participant.

**Project:** a representation of a desired exercise; composed of a set of Product Groups, which in turn contain Products, for a given area of interest and temporal extent.

**Operation/System:** real-world objects that participate in some exercise such as a sortie. A System is also a collection of real-world objects but is used primarily in a support capacity, for example, a collection of sensor arrays.

**Resource:** a data source composed of archive or on-demand model data for a particular area, time, and environmental domain, e.g., WRF atmospheric data for southeast US for September 1999.

**Resource network:** a logical grouping of resources that represent the natural environment across multiple environmental domains for a particular area and time, e.g., WRF atmospheric data, Wavewatch 3 ocean surface data, and NCOM ocean volume data for southeast US for September 1999. Every Project is supported by one Resource Network.

**SME:** a subject matter expert.

**User Group:** a collection of users that may be associated with common Projects, Product Groups, and Resources.