

LCG Monte-Carlo Events Data Base

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on behalf of LCG MCDB
group

MCDB team:

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Motivation for this talk:

- Explain main ideas of this project
- Attract potential users
- Provide short instruction how to use it

Overview of MCDB Project

- **Main Purposes of LCG MCDB**
 - facilitates communication between MC experts and users in experimental collaborations
 - Share sophisticate MC samples between different groups
 - Better validation of MC samples
- **It provides:**
 - **Web Interface for the authors of MC samples easily document new samples, storage for the event samples and communication interfaces with users of these samples**
 - **Web interface for the users who interest in new MC samples to search available MC, read documentation of the events, download the events and communicate with author and other users on the matter of this particular sample.**

Documentation of the Project

- **CMS MCDB [hep-ph/0403100]**
<http://cmsdoc.cern.ch/cms/generators/mcdb/>
 - Only parton level files; AFS storage;
 - Only phonetic search; No SQL
- **LCG MCDB [hep-ph/0404241]**
<http://mcdb.cern.ch>
 - Core software supported by LCG Software Project Infrastructure
 - MySQL; CASTOR (RFIO); CGI; Perl; Apache

Terminology

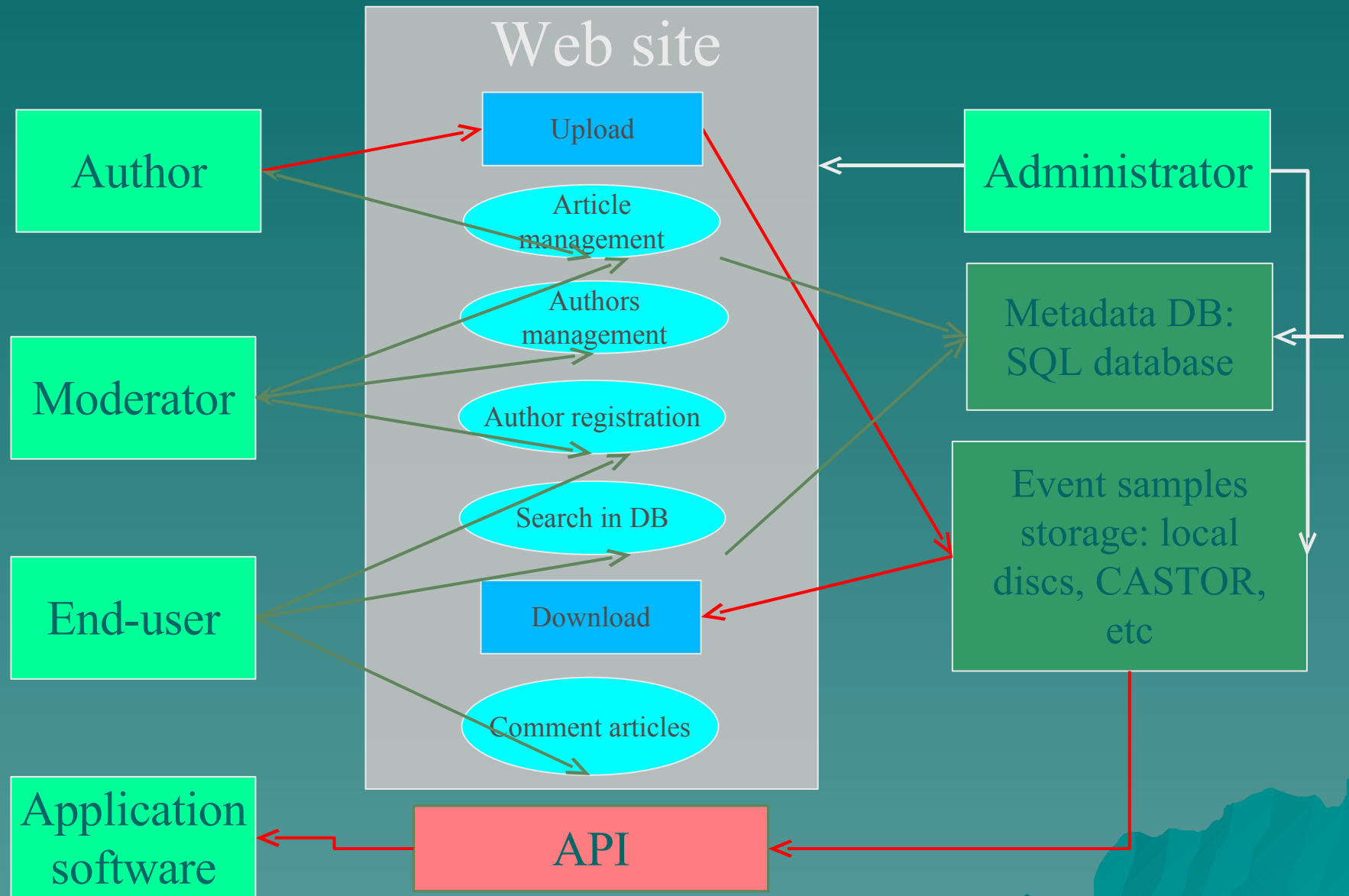
Article – a document describing a set of event samples. The documents are the main Web content of MCDB

Category – a class of articles and physics models concerned a particular type of physical processes. It corresponds to leaves in MCDB Web catalog

Author – an expert in Monte-Carlo generators. (S)he can upload new event samples to MCDB and describe them in corresponding articles

Moderator – a person who has privileges to manage author profiles and moderate any information in the database

MCDB Scheme



Short MCDB Status

Articles Management	(done)
Event Files management	(done)
Authors management	(done)
Users comments management	(done)
Authorization block	(done 95%)
Search engine	(done 30%)
Documentation	(done 20%)

**Ready for use by new
authors and users**

End-users: browse catalogs, read articles

Monte-Carlo Data Base - Mozilla

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop <https://pcitapi26.cern.ch/> Go Search Print

Home Bookmarks Red Hat Network Support Lingvo sms A PayAce - The Ace O... .TELE2 WebMoney Keeper...

MCDB - MonteCarlo Database

Search this site Go!

Main MENU

- TOP
 - Single top
 - ttbar
 - Higgs
 - Wjets

my first article

Author(s): Sergey Belov
Date of publication: 2004-08-24 18:44:17
Last correction:
Categories: Single top, ttbar
Article ID: 1

Abstract:
Some abstract

Author comments:

Process: pp --> gamma jet jet jet

Model: [Standard hash](#)

Generator: CompHEP, version: 4.4.0

Other information:
Structure functions: CTEQSL
QCD constant scale: 1.185000E-01

Model parameters:
 $G_f = 0.00006$
 $\alpha_s = 0.118$

Cuts:
no cuts

Event files
[View/post comments on article](#)

MCDB home page

MCDB © 2005 Monte-Carlo Generators group, LCG, CERN

End-users: Search for articles

The screenshot displays the MCDB - MonteCarlo Database website interface. At the top, a dark blue header contains the text "MCDB - MonteCarlo Database". Below this, on the left side, is a search box labeled "Search this site" with the text "higgs" entered and a "Go!" button. A "Main MENU" is also visible, listing "TOP", "Single top", "tbar", "Higgs", and "Wjets". The main content area shows a search result for "Higgs t t T" with the text "some abstract" and a publication date of "published: 2004-09-01 16:35:45 | author(s): Test Author, Ivan Ivanov, Jack Jackson". A large white scribble obscures the main content area. On the right side, there are links for "Login and r", "Enter to MCD", "Register as M", "Help and s", and "Contact us". The footer of the page reads "MCDB © 2005 Monte-Carlo Generators".

End-users: Download event files

MonteCarlo Database

Generator: AlpGen, version: 1.3.2

Other information:
Structure functions: CTEQ6L1
QCD constant scale: M_h

Model parameters:

- $m_s = 0.117$
- $m_b = 4.85$
- $GG = 1.21358$
- $m_t = 1.77699$
- $S_W = 0.48076$
- $M_{mass} = 115$
- $s_{12} = 0.2229$
- $m_c = 1.65$
- $M_{top} = 174.3$
- $EE = 0.31345$
- $s_{23} = 0.0412$
- $m_\mu = 0.10566$
- $s_{13} = 0.0036$
- $M_Z = 91.1876$

Cuts:
no cuts

Event files

- 10000 events, cross section: 0.0001, file size: 15268647 bytes
[1-1-2.dat](#)
- 7000 events, cross section: 0.00011, file size: 1124599 bytes
[2-1-0.dat](#)
- 4000 events, cross section: 9e-05, file size: 5515496 bytes
[3-4-5.dat](#)

[View/post comments on article](#)

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Opening 1-1-2.dat

The site has suggested that "1-1-2.dat" be handled as an attachment. It is of type application/x-eventfile and located at:
<https://pcitapi26.cern.ch/cgi-bin/>

What should Mozilla do with this file?

Open it with Choose...

Save it to disk

Always perform this action when handling files of this type

OK Cancel

End-user: leave comments on articles

MCDB - MonteCarlo Database

Some comments about

Search this site

Go!

Main MENU

- TOP
 - Single top
 - ttbar
 - Higgs
 - Wjets

MY FIRST ARTICLE

Some abstract

published: 2004-08-24 18:44:17 | author(s): Sergey Belov

Comments: [Moderate]

Comment by [John Johnson](#) on 26/12/2004 20:22 IP Logged

Test comment:
all works fine

Your name:

E-mail:

Comments:

Send!

Search

Non authorized

Administ

Moderat

News

Logi

Enter to

Author authentication and access control system

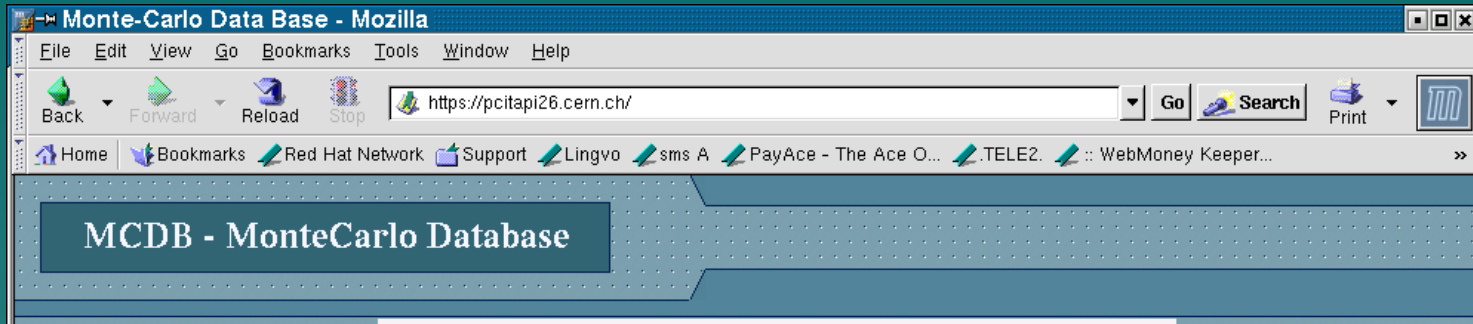
Based on CERN AFS passwords

Checks whether author is registered in system and user's privilege (author/moderator)

Moderator is able to block author accounts if necessary

- * Grid-certificates based authorization: in the future

Registration as MCDB author



A screenshot of a Mozilla browser window titled "Register as MCDB Author - Mozilla". The page content includes the heading "MCDB registration" and the instruction "Please provide following information to register All fields are required". The form contains the following fields:

- First name:
- Last name:
- CERN AFS login:
- Experiment:
- Group:
- Organization:
- E-mail:

At the bottom of the form are two buttons: "Register" and "Cancel".



Article management

The article management system provides a clear Web interface to document event samples

Allows to use pre-entered information (templates) to describe MC generators, physics models, cuts, etc. in each article

Permits to edit previously created articles

Preview and then publishing documents to the Web

Articles are presented in a very structured way



Article creating New generator New process New model New cut

General information Event files Generator Model Process Cuts Preview/save

ARTICLE TITLE:

Upload test

CATEGORIES:

- WW and jets
- Z and jets
- ZZ and jets
- Higgs physics
- H and jets
- H and Z/W
- QCD
- B physics
- multijets
- Requests
- Software
- Top physics
- Exotic production
- QCD tt
- Single top

GROUP:

EHEP

EXPERIMENT:

OTHER GROUP:

RESPONSIBLE PERSON:

GROUP DESCRIPTION:

CO-AUTHORS:

Alexander Sherstnev, SINP MSU
 Filippo Ambroglini, University and INFN Perugia
 Harinder Singh Bawa, Panjab University Chandigarh
 Sergey Belov, JINR

ABSTRACT:

Test of uploaded files

AUTHOR COMMENTS:

Event Files Management

Event files are stored on CASTOR

Upload and download are realized through the Web

MCDB uses server local discs for files caching
(to/from CASTOR)

GRID and API interfaces (in the future)

Article creating

New generator

New process

New model

New cut

General information

Event files

Generator

Model

Process

Cuts

Preview/save

EVENT FILE TO UPLOAD:

NEW NAME OF FILE:

UPLOADED FILES:

comphep-4.4p3.tgz,

3729922 bytes

EVENTS NUMBER:

CROSS SECTION:

CROSS SECTION ERROR:

COMMENTS:

test2

GambitFromXan.avi,

733861888 bytes

EVENTS NUMBER:

CROSS SECTION:

CROSS SECTION ERROR:

COMMENTS:

Gambit

Summary

LCG MCDB is ready for authors/users

- Deployed at <http://mcdb.cern.ch>
- Basic functionality is done
- Event files stored on Castor

Feedback is welcome, interface is provided at the main web page

Future plans

Documentation (end-users, developers)

Model conception refining (physical models, generator models, variable parameters, etc.), based on feedback

Application Package Interface

- API for collaborations software
- Grid interfaces (POOL, Grid users' certificates)

Development uniform event format
(HEPML realization, based on XML)