

CNRS
Centre National de la Recherche Scientifique

INFN
Istituto Nazionale di Fisica Nucleare



The AdV Implementation Plan. Draft Version 0.1

VIR-xxxxx-13. The Virgo collaboration

Editor: Pia Astone
Date : September 4, 2013

Abstract: We present here the “Implementation Plan” which describes technical solutions for the Computing model of AdV

VIRGO Collaboration
EGO - Via E. Amaldi - I-56021 S. Stefano a Macerata, Cascina (Pisa)
Secretariat: Telephone (39) 050 752 511 - FAX (39) 050 752 550 - e-mail perus@ego-gw.it

Contents

I	AdV Implementation Plan	2
1	Implementation Plan for Computing and Data Analysis workflows and data model	3
1.1	Introduction	3
1.2	Commissioning and operation workflows and data model	3
1.3	Detector characterization workflow and data model	3
1.4	Science data analysis workflows and data model	3
II	Implementation Plan for AdV Data management, distribution and access	4
2	Data management and distribution	5
2.1	Data management and archiving at EGO-Cascina	5
2.2	Virgo data distribution at CCs: the Bulk Data Transfer	5
2.3	Data management and archiving at the CCs	5
2.3.1	File catalog	5
2.3.2	Data Bookkeeping	5
2.3.3	File locator Data Base and File Locator Service	5
2.4	Low latency data transfer	5
2.5	LIGO data distribution at the CCs	5
2.5.1	Solution num. 1	6
2.5.2	Solution num. 2	6
3	Data Access implementation plans	7
3.0.3	Local Data Access	7
3.0.3.1	At EGO/Cascina	7
3.0.3.2	At CNAF	7
3.0.3.3	At CCIN2P3	7
3.0.4	Remote Data Access	7
III	Implementation Plan for Software management	8
4	Base and Data Analysis software	9
5	Implementation Plan for User credentials	10
	References	11

Part I

AdV Implementation Plan

Chapter 1

Implementation Plan for Computing and Data Analysis workflows and data model

1.1 Introduction

Pia

1.2 Commissioning and operation workflows and data model

Loic, Elena The Computing model for this item is Part I, Sect. 1.2 and Part II, Sect. 2.2. I put here Loic, DAQ chair, and Elena, who can collect and discuss the needs of DA groups. Don't forget:

how many and which channels in the raw data, how many in the RDS ?

References to web pages for details, pages which we know will always be maintained, are fine.

Why do we need a buffer length of 6 months in Cascina ?

It is very important to have and maintain web pages with detailed info.

1.3 Detector characterization workflow and data model

Elena, Dider

put here the different sections for all the projects where there is some ongoing work, with reference to the open scientific aspects (which pipeline is missing/under review/test..., improvements). Put here something similar to the info in the WP, references are OK

1.4 Science data analysis workflows and data model

DA chairs + Gergely, Pia

put here the different sections for all the projects, with reference to the open scientific aspects (which pipeline is missing/under review/test..) Reference to the WP are fine.

Part II

Implementation Plan for AdV Data management, distribution and access

Chapter 2

Data management and distribution

2.1 Data archiving at EGO-Cascina

Loic, Elena, Didier, Stefano, Giuseppe, Livio

2.2 Virgo data distribution at CCs: the Bulk Data Transfer

Livio (if needed, help by Elena for the Virgo user requirements)

The model and basic rules for this item is described in Part III, section 3.3 of the AdV Computing Model. The software version and milestones are shown in Part IV, section 5.8.2

2.3 Data management and archiving at the CCs

The model for this item is described in Part 3, chapter 4.1 of the AdV Computing Model.

2.3.1 File catalog

Alberto, Gergely, Florent, Livio, Stefano Possible alternatives:

- LFC (“logical file catalog”), based of GRID tools
- DIRAC file catalog
- our own catalog

2.3.2 Data Bookkeeping

Gary, Didier

The Data Base which stores the bookkeeping information for AdV (and for aLIGO) is the LVDB (put here the new name..).

2.3.3 File locator Data Base and File Locator Service

Livio, Stefano, Antonella, Gary (help by Alberto,Gergely,Florent)

2.4 Low latency data transfer

Chris

Describe technical details of the low-latency data transfer

2.5 LIGO data distribution at the CCs

The model and basic rules for this item is described in Part III, section 3.6 of the AdV Computing Model. The software version and milestones are shown in Part IV, sections 5.8.3 and 5.8.4

2.5.1 aLIGO data to AdV clusters

Possible solutions to transfer aLIGO data to AdVclusters, are:

- Solution num. 1 (LIGO data to Cascina and then to CCs)
Livio
- Solution num. 2 (LIGO data directly to CCs)
Alberto, Gergely, Florent

2.5.1.1 Solution num. 1

2.5.1.2 Solution num. 2

2.5.2 AdV data to aLIGO clusters

Livio

Chapter 3

Data Access at EGO and at CCs

The model and basic rules for this item is described in Part III, section 4.2 of the AdV Computing Model. The software version and milestones are shown in Part IV, sections 5.9 and 5.8.4

3.0.3 Local Data Access

3.0.3.1 At EGO/Cascina

Elena

3.0.3.2 At CNAF

Alberto,Gergely

3.0.3.3 At CCIN2P3

Florent,Gergely

3.0.4 Remote Data Access

Gergely

Part III

Implementation Plan for Software management

Chapter 4

Base and Data Analysis software

DA chairs + Pia + Gergely (GWTOOLS) + Florent (official software)

This section describes technical issues, e.g. related to job submissions (e.g. local, remote), any need to test a particular framework or to do some porting of the pipeline from one Architecture to another. E.g. tests with DIRAC..

Regarding the official software it is a complete description (link to the VDAS pages, if needed). Work to be done to be able to run the official software at the CCs. E.g.: run Data Display at CCs, in an efficient way ?

Chapter 5

Implementation Plan for User credentials

The model and basic rules for this item are described in Part IV, section 6.1 of the AdV Computing Model

Antonella.

Bibliography

Bibliography

[1] Virgo coll.

Virgo note VIR-xxxx-13 (October 2013):

[2] mettere l' ultimo. LSC and Virgo coll.

VIR-0271A-12 (May 2012):

<https://tds.ego-gw.it/itf/tds/file.php?callFile=VIR-0271A-12.pdf>