

814-EMD-001

EOSDIS Maintenance & Development (EMD) Project

SCF Toolkit 5.2.15 for the EOSDIS Core System (ECS)

Release Notes

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Revision 05

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Riverdale, Maryland

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1. Introduction

1.1 Purpose

The SDP Toolkit and related software have been developed by Raytheon Systems Company (RSC) in support of the EOSDIS Core System (ECS) project and will be used by data production software developers and scientists as a part of code development at their Science Computing Facilities (SCF) and later will encapsulate that code in Distributed Active Archive Center (DAAC) computing facilities. The HDF-EOS libraries will also be used by consumers of EOS products to access and manipulate data structures. These products range from calibrated Level 1 to Level 4 model data.

SDP Toolkit 5.2.15, HDF-EOS 2.15, and HDF-EOS 5.1.11 are versions that match ECS Software, Drop 7.21, installed at DAAC facilities.

1.2 Scope

This document describes the contents of the package delivery for SCF Toolkit 5.2.15 for the ECS Project; matching functionality in ECS Drop 7.21. The document identifies the baseline and patch level of the delivery. It also provides an inventory of the delivery, list fixed NCRs, and special operating instructions where applicable.

1.3 Impact if Not Installed

Using obsolete Science development software (Toolkit-related software) may adversely affect the running of Science Computing Facility software in the ECS system through incompatibilities.

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2. Related Documentation

2.1 ECS Baseline Document

- | | |
|--------------------|--|
| 333-EMD-001, Rev 5 | Release 7 SDP Toolkit User's Guide for the EMD Project |
| 170-EMD-001, Rev 5 | HDF-EOS Library User's Guide for the EMD Project, Volume 1:Overview and Examples |
| 170-EMD-002, Rev 5 | HDF-EOS Library Users Guide for the EMD Project Volume 2: Function Reference Guide |
| 175-EMD-001, Rev 5 | HDF-EOS Interface Based on HDF5, Volume 1: Overview and Examples |
| 175-EMD-002, Rev 5 | HDF-EOS Interface Based on HDF5, Volume 2: Function Reference Guide |

2.2 Vendor Documents

N/A

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3. General Package Description

3.1 General Product

This document accompanies the delivery of the Release 7.21 Science Data Production (SDP) Toolkit Version 5.2.15 and of the Hierarchical Data Format-Earth Observing System (HDF-EOS), Versions 2.15 and 5.1.11, software to the science user community. These versions contain fixes for problems found during the use of earlier versions. These releases also roll-up and include previously release patches (SCF Toolkits 5.2.15 and associated HDF-EOS releases).

3.2 New/Added Capabilities or Major Fixes

The following NCRs should be of special note to Instrument Team users for this release (note that some of those resolved were so resolved with prior patch releases):

HDF5 based HDF-EOS:

8045170 - Added capability to install Toolkit/HDF-EOS in 32 or 64-bit mode in 64-bit linux platforms

8047325 - Modified accuracy check delta for quaternion in CSC tools from 1.E-7 to 1.E-6 to accommodate less accurate attitude data produced during 2007 data anomaly for AQUA and AURA spacecrafts.

8047388 - Made SZIP installation as default

8044351 - Corrected writing HDFEOSVersion in HDF-EOS5 avoiding extra garbage characters

8044329 - Resolved problem in linkage between levels in HDF-EOS5's POINT structure

8044781 - Added SZIP compression to HDF4 based HDF-EOS

8044782 - Auto-Configuring HDF-EOS2

8046069 - Auto-Configuring HDF-EOS5

8046923 - Resolved conflict between netCDF embeded in HDF4 distribution and external netCDF library use

8047375 - added GDij2ll and GDll2ij APIs to HDF-EOS and HDF-EOS5

3.3 Affected Subsystem(s)

SDP Toolkit and HDF-EOS.

3.4 Impacts to other COTS Products

Supported HDF versions: HDF4.2r3 and HDF5-1.6.7

3.5 License Impacts

N/A

3.6 Vendor Known Bugs

N/A

4. Inventory

4.1 Tar File Listing

This release contains the following tarfiles:

<u>Checksum</u>	<u>Blocksize</u>	<u>Filename</u>
2206109539	11780923	SDPTK5.2.15v1.00.tar.Z
4287912176	2473405	SDPTK5.2.15v1.00_TestDrivers.tar.Z
674087005	7734817	HDF-EOS2.15v1.00.tar.Z
1423402646	212419	HDF-EOS2.15v1.00_TestDriver.tar.Z
2248797310	7941499	HDF-EOS5.1.11.tar.Z
3549027025	360209	HDF-EOS5.1.11_TESTDRIVERS.tar.Z
4287912176	2473405	HDF-EOS5.1.11_TESTDRIVERS.tar.Z
3582323393	3898572	HDF4.2r3.tar.gz
326118830	5299219	hdf5-1.6.7.tar.gz
2838520006	395758	szip-2.1.tar.gz
3328817893	48164	zlib-1.2.1.tar.gz
2246787493	951397	jpegsrc.v6b.tar.Z

4.2 Physical Media

N/A

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5. Non-Conformance Status

5.1 NCR(s) Included in Release

The following NCRs are those affecting the SCF Toolkit and HDF-EOS.

Number	Severity	Status	Product	Submitter Site	Summary	Verification Site
8041612	3	T	OPS_Toolkit_SCF	EDF	Need to replace an error report function to get rid of a repeated warning	EDF
8044185	3	T	OPS_Toolkit_SCF	EDF	Possible problem with installing TOOLKIT in SGI64, when /bin/cc not found	EDF
8044438	3	T	OPS_Toolkit_SCF	SCF	Possible problem during compilation of TOOLKIT in Linux enterprise	EDF
8046070	5	T	OPS_Toolkit_SCF	EDF	TOOLKIT: Need Mac Intel porting of HDF-EOS2 &5 and Toolkit	EDF
8046075	5	T	OPS_Toolkit_SCF	EDF	TOOLKIT: Update TOOLKIT Users Guide for 5.2.15 release	EDF
8044249	3	C	OPS_Toolkit_SCF	SCF	Possible problem with a CSC conversion tool	EDF
8044273	3	C	OPS_Toolkit_SCF	EDF	Problem with char field inquiry in the POINT object of HDF-EOS5	EDF
8041810	3	C	OPS_Toolkit	EDF	Need to test TOOLKIT with new LINUX RedHat Enterprise	EDF
8043067	3	T	OPS_Toolkit	SCI	Possible installation problem in linux using pgf77 instead of g77	EDF
8043068	3	C	OPS_Toolkit	SCI	Possible Installation problem in linux because of lack of yacc	EDF
8044434	3	C	OPS_Toolkit	EDF	Possible problem with HDF5/HDF-EOS5 compiled in 64bit SGI architect...	EDF
8045170	3	C	OPS_Toolkit	EDF	Installation script changes for Linux to select 32 or 64 bit mode	EDF

Number	Severity	Status	Product	Submitter Site	Summary	Verification Site
8046019	2	T	OPS_Toolkit	PVC	unsupported platforms has to be removed from toolkit installation scripts.	EDF
8046090	2	T	OPS_Toolkit	EDF	TOOLKIT: A correction needed in orbsim.c file	EDF
8047325	2	T	OPS_Toolkit	EDF	Toolkit: Need to modify accuracy check delta for quaternion in CSC tools	EDF
8047388	3	T	OPS_Toolkit	SCF	Need to make zlib and szip installation as defult.	EDF
8044329	3	T	OPS_HDF_EOS	EDF	Possible problem in linkage between levels in HDF-EOS5's POINT structure	EDF
8044351	3	T	OPS_HDF_EOS	SCF	Possible problem with writing HDFEOSVersion in HDF-EOS5.1.9	EDF
8044478	3	T	OPS_HDF_EOS	EDF	HDF-EOS5: Installing HDF5-1.6.5 in SGI need setting LD_LIBRARY_PATH	EDF
8044585	3	T	OPS_HDF_EOS	EDF	HDFEOS5: getaliaslist Testdrivers need to be updated and tested	EDF
8044781	3	C	OPS_HDF_EOS	GSFC	SZIP is needed in HDF4 based HDF-EOS	EDF
8044782	3	C	OPS_HDF_EOS	EDF	Automation tools for testing HDF-EOS	EDF
8045049	3	T	OPS_HDF_EOS	SCF	HDF-EOS5: problem with writing H5T_STRING data to output in swath	EDF
8045116	2	C	OPS_HDF_EOS	GSFC	GSFC/SMC: HDFEOS/5 auto szip library compile	EDF
8045275	3	C	OPS_HDF_EOS	SCF	HDF-EOS5: Dataset handle leak in Profile routines	8045275
8045919	2	V	OPS_HDF_EOS	NSIDC	need HDF-EOS routine to dump lat/lon arrays for grids	EDF
8046069	5	T	OPS_HDF_EOS	EDF	HDF-EOS: Auto Configure for HDF-EOS2	EDF
8046076	5	T	OPS_HDF_EOS	EDF	HDF-EOS: Need to update HDF-EOS and HDF-EOS5 Users Guides for 5.2.15 release	EDF

Number	Severity	Status	Product	Submitter Site	Summary	Verification Site
8046079	2	C	OPS_HDF_EOS	EDF	HDF-EOS5: Possible wrong "Order" value for Point structure in the Structure Metadata	EDF
8046083	5	T	OPS_HDF_EOS	EDF	HDF-EOS: The binary files nad1927 and nad1983 are not usable for linux platform	EDF
8046106	2	T	OPS_HDF_EOS	EDF	HDF-EOS: Core dump in GDwrrdfield	EDF
8046809	2	T	OPS_HDF_EOS	EDF	HDF-EOS:A few sample test codes for HDF-EOS core dump in linux and sun5.10	EDF
8046923	2	T	OPS_HDF_EOS	EDF	HDF-EOS: netCDF embeded in HDF4 distribution interferes with external netCDF library use	EDF
8047375	2	T	OPS_HDF_EOS	EDF	HDF-EOS: Need to add GDij2ll and GDll2ij APIs to hdf-eos	EDF

5.2 Open NCR(s) Against This Release

Number	Severity	Status	Product	Submitter Site	Summary
8041917	3	O	OPS_HDF_EOS	EDF	HDF-EOS fails to subset MISR data correctly.
8046081	5	O	OPS_HDF_EOS	EDF	HDF-EOS5: HDF-EOS library must validate correctness of "Latitude" and "Longitude" field names.
8044623	3	O	OPS_HDF_EOS	SCI	HDF-EOS5: Possible purify problems found by HIRDLS Instrument team
8046099	2	O	OPS_HDF_EOS	EDF	HDF-EOS5: Problem with HDF5 installation in some sgi platforms when using Toolkit Install script
8046080	2	O	OPS_HDF_EOS	EDF	HDF-EOS: Need a validation utility for HDF-EOS2 and HDF-EOS5
8042640	3	O	OPS_HDF_EOS	EDF	possible problem in SWextractregion reading a MOD021KM data file.
8041807	3	O	OPS_HDF_EOS	EDF	Possible problem with HDF-EOS when compiling with c++
8044650	3	O	OPS_HDF_EOS	SCI	Problem in HDF4 while installing TOOLKIT and HDF-EOS

Number	Severity	Status	Product	Submitter Site	Summary
8043195	3	O	OPS_HDF_EOS	EDF	Problem in subsetting grid in SIN projection
8043070	3	O	OPS_HDF_EOS	EDF	SWregioninfo/SWextractregion may overflow the output buffer
8044738	3	O	OPS_HDF_EOS	EDF	HDFView Plug-in for HDFView core dumps for HDF-EOS5 Point objects
8044777	3	T	OPS_HDF_EOS	NSIDC	HDFView does not show Lat/Lon for some AMSR-E products
8044788	3	O	OPS_HDF_EOS	NSIDC	HDFView: "Show Properties" for data fields shows SDgetinfo error
8044932	3	T	OPS_HDF_EOS	EDF	HDFView: an script is needed for installation of HDF-EOS plug-in
8042413	3	O	OPS_HDF_EOS	EDF	HDFView: Does not read field data correctly if dims ordered differently
8042416	3	C	OPS_HDF_EOS	EDF	HDFView: For HDF-EOS2 files we need to show local attributes
8044988	2	T	OPS_HDF_EOS	NSIDC	HDFView: HDF-EOS plugin does not support Mac OS
8046074	2	F	OPS_HDF_EOS	NSIDC	HDFView: The HDF-EOS plug-in for HDFView needs to be updated for HDFView 2.4 release
8047173	2	O	OPS_HDF_EOS	EDF	HDF-EOS plug-in for HDFView 2.4 is needed for release in supported platforms
8044779	3	F	OPS_HDF_EOS	NSIDC	Modification of User's Guide for HDF-EOS plug-in for HDFView lat/lon
8043089	3	O	OPS_HDF_EOS	EDF	MTD TOOLKIT environment setting files require modifications
8046078	5	O	OPS_MTD_TK	EDF	TOOLKIT: Need to prepare MTD toolkit for new release 5.2.15
8014424	4	O	OPS_Test_Drivers	EDF	PGS_TD_SCtime_to_UTC_Driver_f.f and PGS_TD_UTC_to_SCtime_Driver_f.f have
8043066	5	O	OPS_Toolkit	EDF	Major modification needed for future HDF4 release HDF4.2r2
8040083	5	O	OPS_Toolkit	EDF	Reading HDF-EOS type ephem/attit files is slower than reading binary typ
8044352	3	O	OPS_Toolkit_SCF	SCF	Toolkit installation problem with f90 in Mac OSX platform
8046068	5	O	OPS_Toolkit_SCF	EDF	TOOLKIT: Auto configure Toolkit

6. Machines Impacted

6.1 Machines Impacted

Supported Platforms[†] and OS and compiler versions:

PLATFORM	O/S	***** C O M P I L E R S *****		
		C	F77	F90
DEC	Digital UNIX 4.0d	4.10	4.10	--
HP	HP-UX 11.0	11.02.02	--	11.01.27
IBM	AIX 4.2	3.1.4	3.2.5	--
SGI	IRIX 6.5.9	7.3.1.3m	7.3.1.3m	7.3.1.3m
SGI	IRIX 6.5.9	7.4.2m	7.4.2m	7.4.2m
SUN	Solaris 5.8	5.2	5.2	6.1 (F95)
SUN	Solaris 5.9	5.3	5.3	6.2 (F95)
SUN	Solaris 5.10	5.3	5.3	6.2 (F95)
LINUX*	LINUX 2.4.21-4.ELSmp	3.2.3-53 (gcc)	3.2.3-53 (g77)	5.1-6 (pgf90)
LINUX 64-bit (Opteron)	RedHat Enterprise	3.4.6-8 (gcc)	3.4.6-8 (g77)	
LINUX 64-bit (Itanium)‡	SUSE Linux	4.12 (gcc)	intel ifort 10.0	
MACINTOSH	8.10.0 Darwin	4.0.1 (gcc)	4.3.0 (gfortran), 4.0.3 (g95)	
INTEL MAC	8.10.1 Darwin	4.0.1 (gcc)	4.3.0 (gfortran), 4.0.3 (g95)	
Windows	XP MS VS .net 2003	Visual C++	Intel 8.1 Fortran	

* Packaged as Red Hat Linux Enterprise

‡ IA64 platforms does not support -m32 flag. Therefore HDF-EOS/TOOLKIT cannot be installed in 32-bit mode in these machines.

† Officially DEC, IBM, HP, Sun5.8, and old 32 mode in SGI are not supported any more and they were not tested for this release. HDF-EOS and HDF-EOS5 are supported on windows XP but not Toolkit

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7. Installation Instructions

7.1 Prerequisites

Estimated Installation Time: 3 hours for an experienced operator, novice, etc.

Obtaining the Software by FTP-site access:

DOWNLOAD SEQUENCE FOR TOOLKIT 5.2.13 AND HDF-EOS 2.13 FILES:

>ftp edhs1.gsfc.nasa.gov	(begin ftp session)
username> anonymous	(login as anonymous)
password> user@my.site	(enter email address as password)
ftp>quote site group sdptk	(change group to sdptk)
ftp>quote site gpass *****	(enter password for sdptk group)
ftp>cd sdptk	(change to toolkit directory)
ftp>binary	(set transfer mode to binary)
ftp> get SDPTK5.2.15v1.00.tar.Z	
ftp> get SDPTK5.2.15v1.00_TestDrivers.tar.Z	
ftp> get [any of the documents desired]	

DOWNLOAD SEQUENCE FOR THE HDF-EOS 2.13 SOFTWARE AND USER'S GUIDE

ftp> cd ..//hdfeos	
ftp> binary	
ftp> get HDF-EOS2.15v1.00.tar.Z	
ftp> get HDF-EOS2.15v1.00_TestDrivers.tar.Z	
ftp> get HDF4.2r3.tar.gz	
ftp> get jpegsrc.v6b.tar.Z	
ftp> get zlib-1.2.1.tar.gz	
ftp> cd docs	
ftp> get [any of the documents desired]	

DOWNLOAD SEQUENCE FOR THE HDF-EOS5 SOFTWARE AND USER'S GUIDE

ftp> cd ..//hdfeos5	
ftp> binary	
ftp> get HDF-EOS5.1.11.tar.Z	
ftp> get HDF-EOS5.1.11_TESTDRIVERS.tar.Z	
ftp> get hdf5-1.6.7.tar.gz	
ftp > get szip2.1.tar.gz	
ftp> cd docs	
ftp> get [any of the documents desired]	
ftp> bye	

----- WHAT TO DO IF YOU HAVE PROBLEMS -----

The procedures above have been tested to verify their integrity. If you do have problems, please check with your local system administrator first. If the problem cannot be resolved, send a reasonably detailed e-mail message to landover_pgstlkit@raytheon.com.

If you have a problem or suggestion regarding the use of the Toolkit or HDF-EOS, use the same e-mail address. Please note that your comments and suggestions will be easier to document and keep track of if you use e-mail.

We expect you to follow up your message with the form provided in the e-mail feedback procedure (see the file Feedback_proc.txt) so that it can be tracked.

7.2 Installation Instructions

Installation instructions can be found in the associated User's Guide for the product.

7.3 Back-Out Instructions

N/A

Appendix A. Test Verification

A.1 Test Procedures

The principal machine used for ECS verification is the SGI platform. This release was tested on all of the supported platforms prior to release; and an additional full delivery sequence was conducted on the SGI platform.

1. EDHS FTP site accessed
2. Required files downloaded
3. All files installed
4. Test drivers run and output checked for validity.

A.2 Test Report

Passed successfully.

A.3 Evaluation Package

N/A

EDF Evaluation Plan/Report

Technology Area: Software Development	Date:
Requester:	Report No:
Proposed Evaluation Group	
Applicability to ECS: Baseline Upgrade	
Reason Needed (Issue, need or risk): Vendor supported version of multi-threaded Open Client for SUN AND HP to replace beta version currently in baseline.	
DDM _____	
Office	Office Manager: _____ Signature _____ Date _____
1. Product Description: Sybase Open Client 12.0.0	
1.1 Hardware/Platform Requirements③consider operating system revision level) SUN AND HP	
1.2 Media Requirements:	
2. Vendor: (company name, address, etc.)	
2.1 Company Background:	

2.2 Point of Contact:	2.3 Phone Number:				
2.4 Fax Number	2.5 Email Address				
3. Evaluation Plan					
3.1 Date Needed:					
3.2 Length of Evaluation: (please check one)					
15 Days <input type="checkbox"/>	45 Days <input type="checkbox"/>	60 Days <input type="checkbox"/>	90 Days <input type="checkbox"/>	Other <input type="checkbox"/>	
3.3 Product Price:					
3.4 EDF hardware, software and network requirements: Unix workstation set-up within an DCE cell.					
3.5 Schedule:					
3.6 Projected number of hours to be charged by each evaluator:					
3.7 Evaluation Criteria:					
4. Assessment of Product					
4.1 Evaluation Against Criteria					
5 Summary of Results					
ResultsReview Committee Comments:					
Priority:					
Disposition					

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