JPL D-37500
Version 1.0

Earth Observing System (EOS)

Tropospheric Emission Spectrometer (TES)

TES L3_Products Release Description Document Release 15

Author: Scott Gluck

Date: March 19, 2019

Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California

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TES L3_Products Release Description Document Release 15

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Change Log

Revision	Date	Description	Author
R10.0 V 1.0	April 16, 2007	Initial Release	S. Gluck
R10.0 V 1.1	April 20, 2007	Updated delivered file description and OSP delivery procedures	S. Gluck
R10.0 V 1.2	May 28, 2007	Updated Monthly file naming convention and computation updates for Dobson unit conversion for ozone columns	S. Gluck
R10.0 V 1.3	July 2, 2007	Updated code to reduce the PNG file produced to a much smaller file size	S. Gluck
R11.0 V 1.0	February 26, 2008	Updated pcf file for new L3 MCFs and content version indicator for output metadata	S. Gluck

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Document Change Log

Release/Version	Description	Section Updated
R10 V1.0	Initial Release	
R10 V1.1	Update ClearCase elements for R10 release	3.2
R10 V1.1	Updated delivery files listing	6.2.2
R10 V1.1	Updated test file listing	6.2.3
R10 V1.1	Updated L3 OPS file listing	6.2.5
R10 V1.1	Updated Release 10 config. Spec.	6.3.2
R10 V1.2	Updated Product Identification for the L3 R10.1 release	2
R10 V1.2	Update ClearCase elements for R10.1 release	3.2
R10 V1.2	Updated Release 10 config. Spec.	6.3.2
R10 V1.3	Updated Product Identification for the L3 R10.2 release	2
R10 V1.3	Update ClearCase elements for R10.2 release	3.2
R10 V1.3	Updated Release 10.2 config. Spec.	6.3.2
R11 V1.0	Update Controlling Documents references	1.6
R11 V1.0	Updated Product Identification for the L3 R11.00.00 release	2
R11 V1.0	Updated Support Software references	2.1
R11 V1.0	Update ClearCase elements for R11.00 release	3.2
R11 V1.0	Updated Release 11 environment variables.	6.3.1
R11 V1.0	Updated Release 11 config. Spec.	6.3.2
R15 V1.0	Update Overview	1.2
R15 V1.0	Update Controlling Documents references	1.6
R15 V1.0	Updated Product Identification for the L3 R15.00.00 release	2
R15 V1.0	Updated Support Software references	2.1
R15 V1.0	Update ClearCase elements for R15.00 release	3.2
R15 V1.0	Updated Release 15 delivery files	6.2.2

R15 V1.0	Updated Release 15 MCF files	6.2.3
R15 V1.0	Updated Release 15 L3 OPS files	6.2.5
R15 V1.0	Updated Release 15 environment variables.	6.3.1
R15 V1.0	Updated Release 15 config. Spec.	6.3.2
R15 V1.0	Updated Release 15 delivery instructions	6.4.5

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TABLE OF CONTENTS

1 INTRODUCTION 1-1

1.1 Identification 1-1
1.2 OVERVIEW 1-1
1.3 DOCUMENT SCOPE 1-1
1.4 METHODS 1-1
1.5 NOTATION AND TERMINOLOGY 1-2
1.6 CONTROLLING DOCUMENTS 1-2
1.7 REFERENCE DOCUMENTS 1-3

2 PRODUCT IDENTIFICATION 2-1

2.1 Support Software 2-2

3 NEW OR CHANGED CAPABILITIES 3-1

3.1 Capabilities 3-1
3.2 CLearQuest Tracking 3-1

4 TEST SUMMARY 4-3

4.1 Unit Test Reports 4-3
4.2 PGE Test Reports 4-3
4.3 SOFTWARE Test TOOL Reports 4-3

5 DEFICIENCIES AND LIENS 5-1

5.1 Generic Deficiencies and Liens 5-1

6 DETAILED DELIVERY CONTENTS 6-1

6.1 Code 6-1
6.1.1 L3 Products PGE Production code 6-1
6.2 Files 6-1
6.2.1 Control Files 6-1
6.2.2 Delivery Files 6-2
6.2.3 MCF Files 6-4
6.2.4 Test Files 6-5
6.2.5 Level 3 Operational Support Files (OSP) 6-5
6.3 BUILD ENVIRONMENT 6-6

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6.3.1 Environment Variables 6-6
6.3.2 ClearCase Configuration Specification (Config Spec) 6-6
6.4 BUILD INSTRUCTIONS 6-10
6.4.1 Instructions for ClearCase (on TES test beds) 6-10
6.4.2 Instructions for rebuilding Framework 6-10
6.4.3 Instructions for rebuilding the Shared subsystem 6-10
6.4.4 Instructions for building L3 Products PGE 6-10
6.4.5 Instructions for delivering L3 Products PGE to SIPS 6-11
6.4.6 Instructions for delivering L3 Products OSP to SIPS 6-12

APPENDICES

A. RDD ACCEPTANCE CRITERIA **A-1**

B. TABLE OF FUNCTIONAL REQUIREMENTS **B-1**

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1 INTRODUCTION

1.1 IDENTIFICATION

This document describes the Tropospheric Emission Spectrometer (TES) Science Data Processing System (SDPS) Level 3 software package developed by the Science Software Systems group of the Earth Science Data Systems section at JPL.

The acceptance criteria for this document can be found in Appendix A.

1.2 OVERVIEW

The TES Level 3 software is a collection of classes designed to process collections of Level 2 data to produce Level 3 gridded output generated for daily, 8-day and monthly global maps of atmospheric parameters for browsing or quick looks of the TES observation results.

Release 10.01 represents the initial Level 3 subsystem functionality for daily and monthly product generation. Release 15 updates the species output products description and the SDP Toolkit version.

1.3 DOCUMENT SCOPE

This document provides detailed specifications for all Level 3 TES science processing software delivered during the TES Release 15 timeframe. This document includes the new or changed capabilities of the L3 subsystem, deficiencies and liens, delivery contents, and build and runtime instructions.

1.4 METHODS

The TES Science Data Processing Software is designed and implemented using object-oriented concepts and the C++ and IDL programming languages. The software design and specification for TES Level 3 PGE is coded in C++ is documented through the use of the Unified Modeling Language (UML). The Rational Rose software tool will provide the means for this documentation.

The C++ software for the TES Science Data Processing (SDP) Level 3 subsystem uses a set of common, reusable functions termed a framework. Frameworks are partially completed applications that may be extended to form the desired piece of

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software. It is intended for the framework to provide those software application segments that may be reused by several TES subsystems, and to provide a level of data abstraction to the subsystems (logical to physical I/O is one such example).

1.5 NOTATION AND TERMINOLOGY

The following acronyms are referenced in this document:

APID	Application Process ID
CM	Configuration Management
DN	Data number
EDS	Expedited Data Sets
EOS	Earth Observing System
EOSDIS	EOS Data and Information System
HDF	Hierarchical Data Format
L3	Level 3
MCF	Metadata Configuration File
PCF	Process Control File
PDS	Production Data Sets
PGE	Product Generation Executive
R15	Release 15
RDD	Release Description Document
SCF	Science Computing Facility
SDP	Science Data Processing
SDPS	Science Data Processing System
SIPS	Science Investigator-led Processing System
SIS	System Interface Specification
TES	Tropospheric Emission Spectrometer
UML	Unified Modeling Language

1.6 CONTROLLING DOCUMENTS

1. *TES Level 3 Software Requirements Document*, JPL D-37019, Release 1.2, November 2006

2. *TES Level 3 PGE Specification, Release 15*, JPL D-37501, Version 1.0, March 2019

3. *Level 3 Algorithms, Requirements & Products,* JPL D-26534, Version 2.0, April 2005

4. *TES Ground Data System Database Definition Document,* JPL D-23034, Version 9.0, October 2006

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5. *ClearQuest items designated L3 R15 delivery, as of March 2019*

6. *TES Science Data Processing Software Error Policy,* JPL D-23136, Version 1.1, April 2002

7. *Data Product Specification,* JPL D-22993, Version 15.0, February 2019

1.7 REFERENCE DOCUMENTS

8. *TES Software Management Plan, JPL D-13214, Version 2.2, April 2002*

9. *TES Science Data Processing System C++ Coding Standards, JPL D-20315, Version 1.2.1, July 2002.*

10. *TES Science Data Processing System Framework Programmer's Guide, JPL D-20207, Version 5.0, January 2004*

11. *Interface Control Document Between the EOS Data and Operations System and the EOS Ground System Element, TRW document number 2311 8301.01, GSFC document number 510-ICD-EDOS/E*

12. *TES Science Data Processing Software Error Policy, TES DFM #236-6.1, Version 1.1, April 2002*

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2 PRODUCT IDENTIFICATION

This R15.00 release of the Level 3 PGE is built on Linux operating systems.

- Compiler: GNU C/C++ 4.5.2_64
  (/pkg/lang/gcc-r.5.2_64/bin/g++)
- Languages: C++ 3.4.5
  IDL 8.0
- Build ID: L3PR-11400.00-Delivered
  Date: March 21, 2019

This R11.00 release of the Level 3 PGE is built on Linux operating systems.

- Compiler: GNU C/C++ 3.4.5_64
  (/pkg/lang/gcc-3.4.5_64/bin/g++)
- Languages: C++ 3.4.5
  IDL 6.3
  Perl v5.8.5
- Build ID: L3PR-11.00.00-Delivered
  Date: Feburary 18, 2008

This R10.02 release of the Level 3 PGE is built on Linux operating systems.

- Compiler: GNU C/C++ 3.4.5_64
  (/pkg/lang/gcc-3.4.5_64/bin/g++)
- Languages: C++ 3.4.5
  IDL 6.3
  Perl v5.8.5
- Build ID: L3PR-10.02.00-Delivered
  Date: July 2, 2007

This R10.01 release of the Level 3 PGE is built on Linux operating systems.

- Compiler: GNU C/C++ 3.4.5_64
  (/pkg/lang/gcc-3.4.5_64/bin/g++)
- Languages: C++ 3.4.5
  IDL 6.3
  Perl v5.8.5
- Build ID: L3PR-10.01.00-Delivered
  Date: May 28, 2007

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2.1 SUPPORT SOFTWARE

Oracle version 10	/pkg/ora10g/1020client (Linux)
SDP TOOKIT version 5.2.18	/pkg/pgs/SDPTK5.2.18
HDF 5 version	/pkg/pgs/hdf5-1.8.8
HDFEOS 5 version 5.1.14	/pkg/pgs/hdfeos5.1.14
HDF version 4.2r1	/pkg/pgs/hdf4.2r1
Framework Libraries	/vobs/Framework (FWXX-14.00.00-Delivered)
Shared Libraries	/vobs/Shared (ShFW-14.00.00-Delivered)
IDL version 8.0	/pkg/rsi/idl_8.0
ClearCase 2014.05.02	/pkg/rational/releases/atria
ClearQuestClient 2014.05.02	/pkg/rational/releases/
Image Magick 6.3.2	/pkg/local/ImageMagick-6.3.2/lib
Perl	/usr/bin/perl
Rational Rose (Unix) 2002.05.00	/pkg/rose
Rational Rose (PC) 2002.05.00	\\bologna\tes-csm\shared stuff\rational\V2002\ RationalRoseProfessionalCEditionforWindows. 2002.05.00.305.000

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3 NEW OR CHANGED CAPABILITIES

The Level 3 subsystem is composed of one executable. The Release 15 version of the L3 Products PGE produces the Level 3 gridded, dot plot and ESDT output product files.

3.1 CAPABILITIES

For Release 15.00.00, the L3 Products PGE includes the daily and monthly output productes for Level 3 processing. This includes HDF output to be delivered to the DAAC in addition to gridded and dot plots.

3.2 CLEARQUEST TRACKING

The following ClearQuest items have been entered for L3 subsystem PGE through Release 15.00.

ClearQuest Number	Release	Description
CR4234	11.1	Correct GridSpan attribute
CR 4422	11.2	Add calibration scheme designator
CR 4276	11.2	Update content version ids
CR 4310	12.0	Dimension ordering of temperature array
CR4311	12.0	Add HCOOH (Formic Acid) product
CR 4392	12.0	Update control files for new ESDTs
CR4133	12.0	Update L3 plotting code
AR4308	12.0	Update temperature field mnemonic
IAR4473	12.0	Update dimension ordering in HDF reader
CR4758	14.0	Update MCFs and release versioning
CR4913	14.0	Add Digital Object Identifiers
CR4795	14.0	L3 Products conversion to 64-bit

R11-15 Development has been done on branches in ClearCase

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[ClearQuest ID] ClearCase Branch	Directory	Description
CR4234 madatyan_CR4234_gridSpan_fix	/vobs/L3_Products	Correct GridSpan attribute
CR 4422 madatyan_CR4422calSchema	/vobs/L3_Products	Add calibration scheme designator
CR 4276 madatyan_CR4276_version_update	/vobs/L3_Products	Update content version ids
CR 4310 madatyan_CR4308_4310_Temperature_Dim_fix	/vobs/L3_Products	Dimension ordering of temperature array
CR4311 madatyan_CR4308_4311_HCOOHProduct	/vobs/L3_Products	Add HCOOH (Formic Acid) product
CR 4392 madatyan_CR4392_MCF_version	/vobs/MCF	Update control files for new ESDTs
CR4133 akopyan_CR4133_updateL3plots	/vobs/L3_Products	Update L3 plotting code
AR4308 madatyan_CR4308_4310_Temperature_Dim_fix	/vobs/L3_Products	Update temperature field mnemonic
IAR4473 madatyan_IAR4473_HDF_Reader_update	/vobs/L3_Products	Update dimension ordering in HDF reader
CR4758 wood_CR4758_Update_MCF	/vobs/MCF	Update MCFs and release versioning
CR4913 wood_CR4929_L3_Prod_Update_MCF	/vobs/L3_Products	Add Digital Object Identifiers
CR4795 danyu_CR4795_L3Prod_64bit_R14	/vobs/L3_Products/delivery	L3 Products conversion to 64-bit

R11 Development has been done on branch in ClearCase

[ClearQuest ID] ClearCase Branch	Directory	Description
[CR4228] madatyan_CR4228_version_update	/vobs/L3_Products	Update format version in L3 Products output files

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4 TEST SUMMARY

An overview, test summary and test report information can be found in the 'L3 PGE Test Plan', [ref. TBD].

4.1 UNIT TEST REPORTS

TBD

4.2 PGE TEST REPORTS

TBD

4.3 SOFTWARE TEST TOOL REPORTS

Valgrind was successfully performed on the L3 PGE for the Release 15 development period.

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5 DEFICIENCIES AND LIENS

5.1 Generic Deficiencies and Liens

N/A for Release 15.00

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6 DETAILED DELIVERY CONTENTS

6.1 CODE

The code listed below resides in ClearCase and thus the directories reflect the ClearCase directory structure.

6.1.1 L3 Products PGE Production code

/vobs/L3_Products

L3_A_OutputData.cpp	L3_A_OutputData.h
L3_A_Product.cpp	L3_A_Product.h
L3_C_AveragedOutput.cpp	L3_C_AveragedOutput.h
L3_C_AveragedProduct.cpp	L3_C_AveragedProduct.h
L3_C_ControlParamInput.cpp	L3_C_ControlParamInput.h
L3_C_DailyOutput.cpp	L3_C_DailyOutput.h
L3_C_DailyProduct.cpp	L3_C_DailyProduct.h
L3_C_DatabaseInput.cpp	L3_C_DatabaseInput.h
L3_C_FileLevelData.cpp	L3_C_FileLevelData.h
L3_C_InputData.cpp	L3_C_InputData.h
L3_C_OSPInput.cpp	L3_C_OSPInput.h
L3_C_PlottingOSPInput.cpp	L3_C_PlottingOSPInput.h
L3_C_Products_AI.cpp	L3_C_Products_AI.h
L3_C_Products_Algor.cpp	L3_C_Products_Algor.h
L3_Products_Main.cpp	L3_S_GMTUtility.h
L3_S_GMTUtility.cpp	L3_S_PlottingUtility.h
L3_S_PlottingUtility.cpp	L3_S_TemplateInterpreter.h
L3_S_TemplateInterpreter.cpp	Makefile.local.in

6.2 FILES

All files listed below also reside in ClearCase**.**

6.2.1 Control Files

/vobs/L3_Products/control_files

setup_env
L3_Products_def.dat
L3_prodcut.pcf

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6.2.2 Delivery Files

(symbolic links)
/vobs/L3_products/delivery
/bin
L3_Products_Main
libL3_Products.a

/control_files
L3_product.pcf
L3_Products_def.dat
setup_env
error_code.h

/control_files/im_config
coder.xml
configure.xml
english.xml
log.xml
thresholds.xml
type-solaris.xml
type.xml
colors.xml
delegates.xml
locale.xml
magic.xml
type-ghostscript.xml
type-windows.xml

/control_files/share
gmt.conf

/control_files/share/coast
binned_border
c.cdf
binned_border_l.cdf
binned_GSHHS_i.cdf
binned_river_c.cdf
binned_river_l.cdf
binned_border_i.cdf
binned_GSHHS_c.cdf
binned_GSHHS_l.cdf
binned_river_i.cdf

/control_files/share/cpt
GMT_cool.cpt
GMT_globe.cpt
GMT_jet.cpt
GMT_rainbow.cpt
GMT_seis.cpt
GMT_copper.cpt
GMT_gray.cpt
GMT_no_green.cpt
GMT_red2green.cpt

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GMT_split.cpt
GMT_drywet.cpt
GMT_haxby.cpt
GMT_ocean.cpt
GMT_relief.cpt
GMT_topo.cpt
GMT_gebco.cpt
GMT_hot.cpt
GMT_polar.cpt
GMT_sealand.cpt
GMT_wysiwyg.cpt

/control_files/share/pslib

ISO-8859-10.ps
ISO-8859-1.ps
ISO-8859-5.ps
ISO-8859-9.ps
PSL_label.ps
Standard+.ps
ISO-8859-13.ps
ISO-8859-2.ps
ISO-8859-6.ps
ISOLatin1.ps
PSL_prologue.ps
ISO-8859-14.ps
ISO-8859-3.ps
ISO-8859-7.ps
ISOLatin1+.ps
PSL_text.ps
ISO-8859-15.ps
ISO-8859-4.ps
ISO-8859-8.ps
PS_font_info.d
Standard.ps

/control_files/share/time

br.d
cn2.d
dk.d
es.d
fr.d
hu.d
il.d
it.d
nl.d
pl.d
ru.d
sg.d
tr.d
us.d
cn1.d
de.d
eh.d
fi.d

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gr.d
ie.d
is.d
jp.d
no.d
pt.d
se.d
to.d
uk.d

/MCF
TES.MCF
TL3ACETM.006.MCF
TL3ACETD.006.MCF
TL3ATM.006.MCF
TL3CH4D.006.MCF
TL3COD.006.MCF
TL3H2OD.06.MCF
TL3HCND.006.MCF
TL3HCNM.006.MCF
TL3HDOD.006.MCF
TL3O3D.006.MCF
TL3ATD.006.MCF
TL3CH4M.006.MCF
TL3COM.006.MCF
TL3H2OM.006.MCF
TL3HDOM.006.MCF
TL3O3M.00\6.MCF

/scripts
archive_target

/test
in
L3_Products_test_run2147.sh
L3_Products_def.dat
out
tmp

6.2.3 MCF Files

/vobs/L3_Products/MCF
TES.MCF

(symbolic links)
TES.MCF
TL3ACETM.006.MCF
TL3ACETD.006.MCF
TL3ATM.006.MCF
TL3CH4D.006.MCF
TL3COD.006.MCF
TL3H2OD.06.MCF

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TL3HCND.006.MCF
TL3HCNM.006.MCF
TL3HDOD.006.MCF
TL3O3D.006.MCF
TL3ATD.006.MCF
TL3CH4M.006.MCF
TL3COM.006.MCF
TL3H2OM.006.MCF
TL3HDOM.006.MCF
TL3O3M.00\6.MCF

6.2.4 Test Files

/vobs/L3_products/test

L3_Products_test_run2147.sh
clean_test_dir.sh
L3_Products_test_monthly_byMonth.sh
L3_Products_test_daily_byRun.sh
L3_Products_test_monthly_byRun.sh

(symbolic link)
L3_Products_def.dat

/vobs/L3_products/test/in

Aug06_CO_681hPa_monthly.asc
run4413_CO_681hPa_daily.asc
run4413_CO_681hPa_dot.asc
run4413_CO_681hPa_triangles.asc
valgrind.supp

(symbolic links)
L3_product_pcf
L3_Products_def.dat

6.2.5 Level 3 Operational Support Files (OSP)

For the following OSP tables, **${L3_OSP_PATH}** designates **/vobs/Support/osp/L3**.
The OSP files are delivered using scripts in /vobs/Support/osp/L3/delivery/OSP-13.01.00.

L3_Algorithm_OSP.asc	File contains the pre-computed constraints for O3 (Nadir)
L3_Color_Table_OSP.cpt	File contains the L3 plot color table parameters
L3_Plotting_OSP.asc	File contains the L3 pressure levels, VMRs, TATM and other pre-computed constraints and thresholds.
L3_TemplateNamingMap_OSP.asc	File contains the L3 file naming template parameters.

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6.3 BUILD ENVIRONMENT

6.3.1 Environment Variables

Below is a table listing of the environment variables used to build and run for Release 15.00.00.

VARIABLE	VALUE
ORACLE_BASE	/pkg/ora10g/1020client
ORACLE_HOME	/pkg/ora10g/1020client
ORACLE_DOC	/pkg/ora10g/1020client/doc
ORACLE_PATH	/pkg/ora10g/1020client/bin
SID	<your id>
ORACLE_SID	<your oracle id>
DB_USER	<your db user id>
DB_PWD	<your db password>
L3_OSP_PATH	<path to L3 OSP files>
GMTHOME	<path to L3 control_files/share directory>
FWErrorFile	./error_file.dat
FFTWHOME	/pkg/local/fftw3.1-32E4
PGSHOME	/pkg/pgs/SDPTK5.2.14v1
PGSLIB	/pkg/pgs/SDPTK5.2.14v1/lib/linux
MAGICK_CONFIGURE_PATH	<path to L3 control_files/share/im_config directory>
PGS_PC_INFO_FILE	"<dir_path_where_PCF_resides>"
ErrorCodeFile	"<dir_path for error_code.h>" (found on dev. System at /vobs/Framework/Exception/error_code.h)
LM_LICENSE_FILE	"port@runtime_IDL_license_server" (i.e. – 8200@BORGO)
DEVICE_NULL	YES (disables X display for parallel runs)
LD_LIBRARY_PATH	/pkg/lang/gcc-3.4.5_64/lib:/usr/lib:$ORACLE_HOME/lib32:$ORACLE_HOME/lib:/pkg/local/ImageMagick-6.3.2/lib

6.3.2 ClearCase Configuration Specification (Config Spec)

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R15.00.00.

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Release 15.00.00:

#element * CHECKEDOUT

Documents
element /vobs/doc/… L3PR-15.00.00-Delivered

Framework
element /vobs/Framework/… FWXX-14.00.00-Delivered

Shared libraries
element /vobs/Shared/… ShFW-14.00.00-Delivered

Operational Support Files
element /vobs/Support/osp/L3/… L3PR-13.01.00-Delivered

MCF files
element /vobs/MCF/… TESX-15.00.00-Delivered

L3_Products PGE
element /vobs/L3_Products/… L3PR-15.00.00-Delivered

#element * /main/LATEST

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R11.00.00.

Release 11.00.00:

#element * CHECKEDOUT

Documents
element /vobs/doc/… L3PR-11.00.00-Delivered

Framework
element /vobs/Framework/… FWXX-11.00.00-Delivered

Shared libraries

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```
element /vobs/Shared/…              ShFW-11.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/…   L3PR-10.01.00-Delivered

# MCF files
element /vobs/MCF/…                 TESX-11.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/…       L3PR-11.00.00-Delivered

#element * /main/LATEST
```

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.02.00.

Release 10.02.00:

```
#element * CHECKEDOUT

# Documents
element   /vobs/doc/…                L3PR-10.01.00-Delivered

# Framework
element /vobs/Framework/…         FWXX-10.00.00-Delivered

# Shared libraries
element /vobs/Shared/…              ShFW-10.00.00-Delivered

# Operational Support Files
element /vobs/Support/osp/L3/…   L3PR-10.01.00-Delivered

# MCF files
element /vobs/MCF/…                 TESX-10.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/…       L3PR-10.02.00-Delivered

#element * /main/LATEST
```


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The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.01.00.

Release 10.01.00:

#element * CHECKEDOUT

Documents
element /vobs/doc/… L3PR-10.01.00-Delivered

Framework
element /vobs/Framework/… FWXX-10.00.00-Delivered

Shared libraries
element /vobs/Shared/… ShFW-10.00.00-Delivered

Operational Support Files
element /vobs/Support/osp/L3/… L3PR-10.01.00-Delivered

MCF files
element /vobs/MCF/… TESX-10.00.00-Delivered

L3_Products PGE
element /vobs/L3_Products/… L3PR-10.01.00-Delivered

#element * /main/LATEST

The following is how the configuration specification file should be set in order to view and access the directories and files needed for L3_Products PGE in ClearCase for R10.00.00.

Release 10.00.00:

#element * CHECKEDOUT

Documents
element /vobs/doc/… L3PR-10.00.00-Delivered

Framework
element /vobs/Framework/… FWXX-10.00.00-Delivered

Shared libraries
element /vobs/Shared/… ShFW-10.00.00-Delivered

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```
# Operational Support Files
element /vobs/Support/osp/L3/…    L3PR-10.00.00-Delivered

# MCF files
element /vobs/MCF/…               TESX-10.00.00-Delivered

# L3_Products PGE
element /vobs/L3_Products/…       L3PR-10.00.00-Delivered

#element * /main/LATEST
```

6.4 BUILD INSTRUCTIONS

6.4.1 Instructions for ClearCase (on TES test beds)

Set ClearCase view: `cleartool setview <user_view>`
(see ClearCase Cookbook)

Update ClearCase configuration setup: `cleartool edcs`
(see previous section 6.3.2)

6.4.2 Instructions for rebuilding Framework

Change directory to "Framework": `cd /vobs/Framework`

Clean the vob: clearmake –C gnu clean

Run the top level make script by typing: ./`buildFW_gmake`

6.4.3 Instructions for rebuilding the Shared subsystem

Change directory to "Shared": `cd /vobs/Shared`

Build the Shared library: **./buildShared**

6.4.4 Instructions for building L3 Products PGE

Change directory to: `cd /vobs/L3_Products`

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Compile the source code: `clearmake -C gnu -u lib`
Build L3_Products main program: `clearmake -C gnu -u HOW=opt main`

This will build the L3 Products PGE. Confirm existence of L3 Products file executable:

```
ls -l  bin/L3_Products_Main
```

To run L3_Product PGE refer to "TES L3 Products PGE Specification" section 2.3.

6.4.5 Instructions for delivering L3 Products PGE to SIPS

After successfully building Framework, Shared, and L3_Products_Main PGE, create the delivery package.

Change directory to the L3 Products_Main delivery area:
cd /vobs/L3_Products/delivery/scripts

Run the recursive archival script by typing: ./**archive_target**

Two new files are created:

/vobs/L3_Products/delivery/unpack_L3_Products
/vobs/L3_Products/delivery/receipt_L3_Products

The archive receipt "receipt_L3_Products_receipt" is created during the archival process to allow version mapping of the files once they leave ClearCase. The file contains the subsystem name, date stamp, ClearCase config spec used, long listing of the source file used (showing which files were taken out of ClearCase via symlinks) and the target file listing (showing all the files on the delivery end without symlinks). Additionally, two files are generated in the "../docs" directory.

1) delivery_config_specs.txt – config spec used to create delivery package
2) PGE_config_records.txt – configuration record of delivered PGE executable

Transfer these files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

<u>Unpacking the Archive</u>

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Transfer the delivery files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Change directory to the working directory for SIPS.

cd <SIPS_working_directory>

Copy the following files to your directory on the testing system:

cp /vobs/L3_Products/delivery/15.00.00-Delivered/unpack_L3PR_R15.00.00 ./
cp /vobs/L3_Products/delivery/15.00.00-Delivered/receipt_L3_Products ./

Then execute the unpack_L3_Products script to verify the build and unpack the archive:

./unpack_L3PR_R15.00.00

6.4.6 Instructions for delivering L3 Products OSP to SIPS

Change directory to the L3 OSP delivery area:
cd /vobs/Support/osp/L3/delivery/scripts

Run the recursive archival script by typing: ./**archive_target**

Two new files are created:

/vobs/ Support/osp/L3/delivery/unpack_L3_OSP
/vobs/ Support/osp/L3/delivery/receipt_L3_OSP

The archive receipt "receipt_L3_OSP" is created during the archival process to allow version mapping of the files once they leave ClearCase. The file contains the subsystem name, date stamp, ClearCase config spec used, long listing of the source file used (showing which files were taken out of ClearCase via symlinks) and the target file listing (showing all the files on the delivery end without symlinks). Additionally, two files are generated in the "../docs" directory.

3) delivery_config_specs.txt – config spec used to create delivery package
4) PGE_config_records.txt – configuration record of delivered PGE executable

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Transfer these files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Unpacking the Archive

Transfer the delivery files to the target machine, ensuring they reside in the same directory. Log into the target machine and change the working directory to that where the delivered files reside.

Change directory to the working directory for SIPS.

cd <SIPS_working_directory>

Copy the following files to your directory on the testing system:

cp /vobs/Support/osp/L3/delivery/unpack_L3_OSP ./
cp /vobs/Support/osp/L3/delivery/receipt_L3_OSP ./

Then execute the unpack_L3_OSP script to verify the build and unpack the archive:

./unpack_L3_OSP

[NOTE: Ensure that the L3 OSP directory has been installed before continuing.]

ln –s <SIPS_working_directory>/OSP-14.00.00
Verify that the L3 OSP directory has been installed.

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APPENDICES

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APPENDIX A RDD ACCEPTANCE CRITERIA

The following acceptance criteria shall be used in reviewing the RDD:

1. The RDD contains a description of all capabilities originally planned for this version. Any liens to the subsystem release plan are enumerated as well. Operations procedures, constraints, workarounds or other idiosyncrasies relevant to this release are clearly defined in the RDD.
2. All referenced test results and test reports are documented and have been catalogued in the configuration management system.
3. Machine-specific build requirements are specified in the RDD.
4. Runtime environment computer resources are specified in the RDD.

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APPENDIX B TABLE OF FUNCTIONAL REQUIREMENTS

The table of Functional Requirements lists all requirements satisfied by L3 Products PGE for Release 15.0. The Requirements column contains the requirement number followed by a description of the requirement.

[Not Available]

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