

ClearPath OS 2200

Software Release Announcement for Release
19.0

July 2020

7848 4565-035

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Section 1

General Description

This Software Release Announcement announces continued support for ClearPath for OS 2200 servers.

This ClearPath OS 2200 release is an integrated package of software products that contains support for the following ClearPath OS 2200 systems.

Note: Beginning with ClearPath OS 2200 Release 19.0, the ClearPath Forward® Dorado 4200 and Dorado 800 series systems are no longer supported. This is the last release which will support the Dorado 4300/6300/8300 systems. References to CMOS systems are included for migration purposes.

1. ClearPath® OS 2200 Software Series 2.0
 - Gold
 - Platinum
 - Developer Studio systems
2. ClearPath Dorado

Nonmetered Systems	Metered Systems
Dorado 4380	Dorado 4350
Dorado 4480	Dorado 4370
Dorado 4580	Dorado 4390
Dorado 6380	Dorado 4470
Dorado 6480	Dorado 4490
Dorado 8380	Dorado 4590
Dorado 8480	Dorado 6390
	Dorado 6490
	Dorado 6590
	Dorado 8390
	Dorado 8490
	Dorado 8590

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In this document the term ClearPath OS 2200 systems refers to ClearPath Dorado Systems and ClearPath OS 2200 Software Series systems.

This release was tested on a product level and system level to ensure that the system and all of its products operate as one cohesive unit. This release includes all the currently supported functional capabilities introduced in previous levels, except as noted in "Discontinued Software Products and Features."

This overview provides essential information required for sites moving from an earlier release to the current ClearPath OS 2200 release. Installation and generation issues, compatibility considerations, and other technical considerations are described in detail.

Documentation Updates

This document contains all the information that was available at the time of publication. Changes identified after release of this document are included in problem list entry (PLE) 19266141. To obtain a copy of the PLE, contact your Unisys service representative or access the current PLE from the Unisys Product Support website:

<http://www.support.unisys.com/all/ple/19266141>

Note: *If you are not logged into the Product Support site, you will be asked to do so.*

Software Release Updates

Software changes identified after release are included in problem list entry (PLE) 19220508. To obtain a copy of the PLE, contact your Unisys service representative or access the current PLE from the Unisys Product Support website:

<http://www.support.unisys.com/all/ple/19220508>

Note: *If you are not logged into the Product Support site, you will be asked to do so.*

New to ClearPath OS 2200 Release 19.0

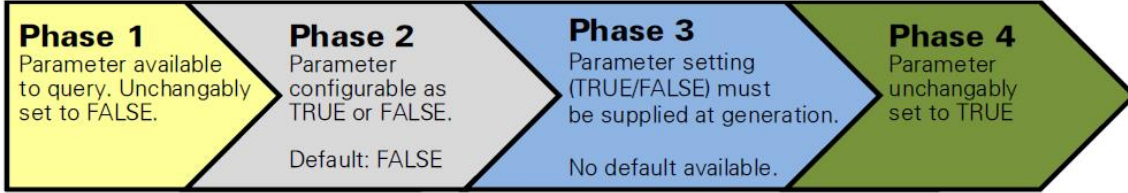
ClearPath OS 2200 continues to build on mission critical leadership in performance, scaling, availability, recovery, security, application agility, and integration.

This software release provides the following major new capabilities.

2028 TDATE\$ Remediation Status

Release 19.0 brings the ClearPath OS 2200 systems one step closer to the completion of the 2028 TDATE\$ Remediation plan. As of release 19.0 - with the appropriate Exec configuration settings - all Unisys products included in the ClearPath release no longer use ER TDATE\$ nor generate any new TDATE\$-based timestamps. All creation of TDATE\$-based timestamps has been either removed or placed under control of the Exec time configuration parameters. All Unisys products included in the ClearPath release continue to process any existing TDATE\$ timestamps as valid timestamps in system data structures.

The Exec time configuration parameters were introduced in a phased approach. The four phases are depicted as follows:



With release 19.0, all Exec Config parameters are in phase 3– with the exception of the ER TDATE\$ OFF Exec configuration parameter. Phase 3 requires that a parameter setting (TRUE/FALSE) must be supplied at Exec Generation time but still allows use of TDATE\$ timestamp when set to FALSE.

Note: The ER TDATE\$ OFF Exec configuration parameter (*er_tdate\$_turned_off* (ERTDATE\$OFF)) remains in phase 2 for release 19.0. This configuration parameter is unique in that it does not control any specific Exec structure or interface. Instead, this configuration parameter controls whether or not the Executive Request (ER) TDATE\$ is available to user applications, programs and utilities.

For an overview on the 2028 TDATE\$ Remediation and Exec time configuration parameter phasing, see Section 9 of the *Time Considerations for ClearPath OS 2200 Systems* (8230 6671) document. For additional details on each time configuration parameter, see Sections 10 – 16 of *Time Considerations for ClearPath OS 2200 Systems* (8230 6671).

The current, past and future phasing of the Exec time configuration parameters by release level is shown below.

Table 1-1. Phasing of Exec Time Configuration Parameters

Exec Configuration Parameter	ClearPath OS 2200 Release				
	17.0	18.0	19.0	Future	Future
MFD (standard)	2	3	3	4	4
MFD (shared)	2	3	3	4	4
Accounting	2	3	3	4	4
Freespace*	2	3	3	4	4
Program Files	1	2	3	4	4
Initial Register R2 + Misc	1	2	3	4	4
Media Manager	NA	2	3	4	4
ER TDATE\$ OFF*	1	1	2	2	2A*

* See the *Time Considerations for ClearPath OS 2200 Systems* (8230 6671) for addition details on these configuration parameters.

Highlights for ClearPath OS 2200 Release 19.0

ClearPath OS 2200 continues to build on mission critical leadership in performance, scaling, availability, recovery, security, application agility, and integration. The following are the new major capabilities for the 19.0 release:

- Python and Java now available as OS 2200 supported languages
Enabled by a new infrastructure called ClearPath Extension Kit for OS 2200, Release 19.0 introduces the ability to utilize both Python and Java as standard OS 2200 supported languages. This initial release of the infrastructure brings access to user files via both Python and Java, as well as industry standard scripting. Optimized access via Java and Python to OS 2200 databases; for example, RDMS to support high performance transaction processing is under development for a later release.
- Ability to set and change the status of NIC interfaces, see Section 2.7 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- Reduced Catalogued File Recovery Time, see Section 2.16 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349-049) document.
- Encrypted RSS file transfer, see Section 2.28 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- Windows Server 2019 support, see Section 5.39, 5.40 and 6.1 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- Digital signing of code files, see Section 5.31, 5.32, 5.39, 5.40 and 5.60 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- SOLAR selection verification, see Section 2.30 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- Ability to use DTPRA in a containerized environment.
- EXPLAIN in stored procedures and triggers, see Section 2.26 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.
- CIFS SMBv2 support, see Section 2.2 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349–049) document.

Software Delivery Information

Digital Delivery

ClearPath OS 2200 19.0 continues software distribution via digital downloads from the Unisys Download Center (UDC).

ClearPath OS 2200 Software

There are three main areas associated with Digital Delivery:

- **Order Fulfillment**

An email is sent to the client notifying them that their order is ready. This email contains the link to UDC and the client's sign-on credentials.

Using these credentials, the client signs into UDC. All of their downloadable orders are available.

- **Using UDC (Download)**

Instructions for using UDC are available from UDC. They are available from the sign-on page, even if the client is not signed on, as well as from the other web pages.

The client selects the order of interest. Depending on the order, they may have one or more collections of files to download.

The client may choose to download the entire contents of a collection or individual items.

Product-specific information regarding preparation for installation is contained in the Welcome Letter(s). The Welcome Letter(s) are prominently displayed at the top of the download screen.

- **Installation of Files**

Depending on the product, the client may need to prepare the files that they downloaded for installation. These instructions are available in the Welcome Letter(s).

The client then installs the product(s) according to the instructions in the standard product documentation.

Additional information will be provided in the Software Digital Delivery Technical Video, which will be available on YouTube. (<http://www.youtube.com/unisysclearpath>)

Product Status Summary

Table 1-2 provides the following information about each product in the current release:

- The first column lists the installation and support name of each product and is sorted alphabetically.

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- The second column lists the full name of each product.
- The third column lists the level of each product.
- The fourth column lists the operating system.
- The last column lists the status of each product. Status can be New Product, New Feature (new feature for an existing product), Feature Update (updated feature for an existing product), Stability Update, or No Change (no change in this release).

Note: To determine the version of Windows that is supported for a product, refer to the specific product documentation.

Table 1-2. Product Status Summary

Installation and Support Name	Product Name	Level	Operating System	Status
ACOB	ASCII COBOL Compiler	7R4A	OS 2200	Stability Update
APEX	Apex	4.1	OS 2200 and Windows Server	Stability Update Includes SECMGR
	SECMGR	4R7		
CIFS	CIFS	9R2	OS 2200	Feature Update
CIPHER-API	CIPHER API	2R4C	OS 2200	No Change
CITA	Communications Interface for Transaction Applications	2R6	OS 2200	Feature Update
CKRS	CKRS	7R8E	OS 2200	Stability Update
CML	CML	1R1J	OS 2200	No Change
CMR	CMR	3R2	OS 2200	No Change
COMAPI	Communications Application Program Interface	9R1	OS 2200	Feature Update
COMUS	COMUS	7R3	OS 2200	Feature Update
CPCComm	Communications Platform	7R1A	OS 2200	Stability Update
CPCCommOS	Communications Platform for Open Systems	5R2	OS 2200	Feature Update
cpFTP	FTP Services for ClearPath OS 2200	5R2	OS 2200	Feature Update
CryptoLib	Cryptographic Library	2R1	OS 2200	No Change
CS2200	Connectivity Services	5R1A	OS 2200	Stability Update
CTS	Conversational Time Sharing	8R2A	OS 2200	Stability Update
CULL	TeamQuest® CULL	5R1F	OS 2200	Stability Update
DAP	DAP	16R2	OS 2200	Feature Update

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Table 1-2. Product Status Summary

Installation and Support Name	Product Name	Level	Operating System	Status
DBAGENT	OS 2200 DB Agent	2.0	OS 2200	No Change
DDP-FJT	DDP-FJT	5R6	OS 2200	Feature Update
DDP-PPC	DDP-PPC	7R5	OS 2200	Feature Update
DEPCON-SERVER	Enterprise Output Manager	14.2	Windows	Feature Update
DEPCON-2200	Enterprise Output Manager for ClearPath OS 2200	14.2	OS 2200	Feature Update
DFP	Define File Processor	2R2C	OS 2200	No Change
DMS	Enterprise Network Database Server	22R4	OS 2200	Feature Update
DMS-RA	DMS-RA	4.2	OS 2200 and Windows/Linux	Feature Update
DPREP1100	DPREP1100	10R7L	OS 2200	Feature Update
DPS	Display Processing System	6R7	OS 2200	No Change
DTI	Distributed Transaction Integration	12.1	Windows	Stability Update
ED	Text Editor	16R2	OS 2200	No Change
ELMS	ELMS	3R2A	OS 2200	Stability Update
ELT	ELT	8R4	OS 2200	No Change
EPORTAL-2200	EPORTAL-2200	10.0	OS 2200	Feature Update
EXEC	Exec	49R5	OS 2200	Feature Update
EXPIPE	Multiple Batch Run Optimizer	2R2B	OS 2200	No Change
EXT-KIT-2200	ClearPath® Extension Kit for OS 2200	1R1	OS 2200	New Product
FAS	FAS	12R2A	OS 2200	Stability Update
FLEX	User Authentication	4R6A	OS 2200	Stability Update
FLIT	FLIT	16R2	OS 2200	Feature Update
FTN	ASCII FORTRAN Compiler	11R4	OS 2200	No Change
FURPUR	FURPUR	33R2	OS 2200	No Change
GSA	GSA	6R3	OS 2200	No Change
HTPIC-2200	HTPIC-2200	9R2	OS 2200	Feature Update
I18NLIB	I18NLIB	2R2A	OS 2200	No Change
INTERCONNECT	INTERCONNECT	1R4D	OS 2200	Stability Update

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Table 1-2. Product Status Summary

Installation and Support Name	Product Name	Level	Operating System	Status
IPF	Interactive Processing Facility	7R3	OS 2200	Feature Update
IRU	Integrated Recovery Utility	25R1	OS 2200	Feature Update
J2EE-CON-OPENDTP	Open Distributed Transaction Processing Resource Adapter for the Java™ Platform	15.1	Windows/Linux	Stability Update
J2EE-CON-OS2200	OS 2200 Transaction Resource Adapter for the Java™ Platform	14.3	Windows/Linux	Stability Update
LA	TeamQuest® LA	9R1	OS 2200	Feature Update
LINK	Linking System	12R4A	OS 2200	Stability Update
LST	LIST	4R2	OS 2200	No Change
LSS	Language Support System	14R6A	OS 2200	Stability Update
MAP	Collector	33R3A	OS 2200	Stability Update
MASM	MASM	6R4A	OS 2200	Feature Update
MCB	MCB	10R2A	OS 2200	Stability Update
MSAR	TeamQuest® MSAR	8R1	OS 2200	Feature Update
MSMANAGER	TeamQuest® MSManager	6R1	OS 2200	Feature Update
MSMQI	MSMQ Interface	2R1E	OS 2200 and Windows	Stability Update
NTSI	Messaging Integration Services	7R3D	OS 2200 and Windows	Stability Update
OLTP-TM2200	Open Distributed Transaction Processing (Open DTP)	12R3	OS 2200	Feature Update
Operations Sentinel (See SP-OPERATION)				
OSAM	TeamQuest® OSAM	8R1	OS 2200	Feature Update
OSI-TP	OSI-TP	9R2	OS 2200	Feature Update
PADS	Programmer's Advanced Debugging System	13R6	OS 2200	No Change
PAR	TeamQuest® PAR	10R2	OS 2200	Feature Update
PCFP	PCFP	4R2	OS 2200	No Change

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Table 1-2. Product Status Summary

Installation and Support Name	Product Name	Level	Operating System	Status
PCIOS	PCIOS	7R2A	OS 2200	Stability Update
PDP	PDP	13R3A	OS 2200	Stability Update
PLUS	PLUS	8R3B	OS 2200	Stability Update
PMD	PMD	32R3A	OS 2200	Stability Update
QLP	QLP	8R2	OS 2200	No Change
RDMS	Enterprise Relational Database Server	23R1	OS 2200	Feature Update
RDMS-JDBC	Relational JDBC Driver	2.12	OS 2200 and Windows/Linux	Feature Update
ROLRUNS	ROLRUNS	4R3A	OS 2200	No Change
RSS	Remote System Support	3R4	OS 2200	Feature Update
SAUTILITIES	TeamQuest® SAUtilities	8R3	OS 2200	Feature Update
SFS	Shared File System	4R1	OS 2200	No Change
SILAS	SILAS	3R5A	OS 2200	Stability Update
SIMAN	TeamQuest® SIMAN	7R4	OS 2200	Feature Update
SLIB	SLIB	2R2A	OS 2200	Stability Update
SOLAR	SOLAR	5R2	OS 2200	Feature Update
SOLAR/E	SOLAR/E	5R2	OS 2200	Feature Update
SORT	Sort/Merge	22R4	OS 2200	No Change
SP-OPERATION	Operations Sentinel	18.0	Windows	Feature Update
SP-OPERATION	Operations Sentinel Basic Edition	18.0CP	Windows	Feature Update
SSG	SSG	24R4A	OS 2200	Stability Update
SYSLIB	SYSLIB	77R2A	OS 2200	Stability Update
TAS	TAS	6R3	OS 2200	Feature Update
TQ-BASELINE	TeamQuest Baseline®	7R7	OS 2200	Feature Update
TQ-D-FRAGGER	TeamQuest® D-Fragger	4R3A	OS 2200	Stability Update
TQ-MODEL	TeamQuest Model®	CP19.0	Windows workstation	Stability Update
TQ-ONLINE	TeamQuest Online®	7R7	OS 2200	Feature Update
TQ-PMLOG	TeamQuest® PMLog	7R7	OS 2200	Feature Update
TQ-PROBES	TeamQuest® Probes	7R7	OS 2200	Feature Update

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Table 1-2. Product Status Summary

Installation and Support Name	Product Name	Level	Operating System	Status
TQ-REMD-FRAGGER	TeamQuest® RemD-Fragger	4R3A	OS 2200	Stability Update
TQ-TIP-LA	TeamQuest® TIP-LA	2R1	OS 2200	Feature Update
TUTIL	Tape Labeling Utility	1R1D	OS 2200	Stability Update
UC	C Compiler	10R6A	OS 2200	Stability Update
UCOB	COBOL Compiler	12R4	OS 2200	No change
UCSRYS	Runtime System for Basic Mode Compilers	1R1M	OS 2200	No Change
UDSC	Universal Database Control	23R1	OS 2200	Feature Update
UFTN	FORTRAN Compiler	11R2	OS 2200	No Change
UNIACCESS-ODBC	UniAccess-ODBC	10R3-6	OS 2200	No Change
UPLS	UPLS	8R2A	OS 2200	Stability Update
UREP	Repository for ClearPath OS 2200	19R1	OS 2200	Feature Update
URTS	Runtime System for Extended Mode Compilers	13R5A	OS 2200	Stability Update
URU-OS2200	Utilization Report Utility for OS 2200	10.0	OS 2200 and Windows	Feature Update
WEBTS	Web Transaction Server	6R3A	OS 2200 and Windows	Stability Update
WMO2200	WebSphere MQ version 9 for ClearPath Dorado Servers	9R1	OS 2200 and QProcessor	Feature Update
XRLOAD	Relational Database Fast Load	6R1F	OS 2200	Stability Update

Separately Packaged Exec Features (SPEF)

The following list shows ClearPath OS 2200 release 18.0 levels for separately packaged Exec features.

Feature	Level	Feature	Level
ARC	5R8B	SIIPM	49R1
DMPLIB	9R5	TAVR	49R1
MHFS	49R1	TIPUTIL	49R5
MMGR	49R5	UDUPLEX	49R1
MSCP	3R8G	VTH	49R1
SECOPT1	49R5	XPCEXEC	49R1
SECOPT2	49R1	XTCEXEC	49R1
SECOPT3	49R1		

- The IOPUTIL runstream is included in the RUN\$ file on the Exec boot tape.
- The SPAIR, MFDTIMEUTIL, MFD1FILEUPD, PFTIMEUTIL, PF1FILEUPD, and DCOPY utilities (absolutes) are released as standard software in SYS\$*LIB\$.
- PASSGEN-DES is included in the Exec Release Master.
- Your Exec features (installed through system generation) are delivered on keyed stacked tapes in a SOLAR-installable format. The following are not installed through a system generation: ARC, DMPLIB, MMGR, MSCP, and TIPUTIL. Refer to the *Exec System Software Installation and Configuration Guide* for installation information.
- The SCPRBPLE feature is not normally required nor is it delivered on stacked tapes with other features. Two relocatables are part of SPEF: PCNSCP/RB and SDCSCPCTRL/RB. The PCNSCP and SDCSCPCTRL relocatables are always present in the RO file and are updated only when the SCPRBPLE SPEF is installed for a PLE resolution. Any fixes to SCP converted routines for existing releases will be supplied in relocatable form through the SCPRBPLE SPEF. The SCPRBPLE SPEF does not have to be installed, unless a PLE fix is required.
- Monitor Services Control Program (MSCP) is released on a package tape. It is also in the LIB\$ file on the Exec release master tape.
- Starting in release 18.0 (EXEC level 49R4), IOPCMQ is now packaged as a standard source element and is no longer considered a separate feature. Any changes required to this element are now provided by standard source corrections instead of the former relocatable-only method.

Support

One of your key system requirements is long-term support that allows you to concentrate on your primary goal: filling the information processing needs of your users. ClearPath OS 2200 releases provide that long-term support in these ways:

- Reduced migration interruption
You can move to a single software system rather than changing your software whenever a new release of a product occurs.
- Periodic issues of new software releases
These releases allow you to more effectively take advantage of new software and system functions. The next software release is announced in advance so you can plan your site's needs.
- ClearPath OS 2200 release 19.0 will be supported until 04/30/2025.

Contact your Unisys Support Center for information about resolving problems and submitting User Communication Forms (UCF).

The Unisys Product Support website contains support plans for ClearPath servers. It is updated regularly, and you can access this website at

<http://www.support.unisys.com>

Note: *Security management products provide the primary means of controlling and administering OS 2200 security. They are used by site administrators and by end users. While other products provide various security capabilities, they are not grouped with the term "security management product."*

In this manual, the term "security management product" is a simplified means of referring to one of the following products:

- *Apex for ClearPath OS 2200, including SECMGR*
- *TeamQuest® Site Management Complex (SIMAN)*

Discontinued Software Products and Features

OS 2200 ClearPath Product Support websites display support plans.

Table 1-3 lists the software products and features that are not supported, and cannot be ordered as part of ClearPath OS 2200 release 19.0. The Support Discontinued In column identifies the software release in which the product or feature was discontinued.

Table 1-3. Software Products and Features Not Supported in ClearPath OS 2200 Release 19.0

Product or Feature	Support Discontinued In	Replaced By
JBOSS-2200	ClearPath OS 2200 release 17.0	
JPJVM	ClearPath OS 2200 release 17.0	
OPE	ClearPath OS 2200 release 17.0	
Security-Admin	ClearPath OS 2200 release 18.0	Replaced by APEX, which now includes SECMGR.
TAS MAIL	ClearPath OS 2200 release 18.0	Note: The TAS Mail Processor component is removed from TAS.
INFOACCESS	ClearPath OS 2200 release 18.0	
IOPCMQ	ClearPath OS 2200 release 18.0	IOPCMQ is now packaged as a standard source element.
SCILES	ClearPath OS 2200 release 18.0	SCILES routines have been moved into EXEC element RB\$INT.
DTI-TxI Component	ClearPath OS 2200 release 19.0	Note: Only the support for TxI and OS 2200 outbound has been discontinued, however, these components are part of the ClearPath OS 2200 release 19.0.
DTI- OS 2200 outbound	ClearPath OS 2200 release 19.0	

Future Considerations

Future OS 2200 releases have planned features or changes that might affect customers.

Client Use of TDATE\$ Timestamp Format and ER TDATE\$

Over the past several releases, Unisys has worked toward remediation of the TDATE\$ timestamp format as it will overflow its storage space after 2027. As of release 19.0 - with the proper configuration parameter settings - Unisys has eliminated the generation of new TDATE\$ format timestamps in all of the release 19.0 products. The features and changes introduced in the ClearPath release 19.0 products are a significant step in the process to support the changes required for the TDATE\$ remediation 2028 program.

The TDATE\$ timestamp format will overflow its allotted 36 bits of storage after December 31, 2027, 23:59:59. At this time, the year portion of the format will wrap, resulting in TDATE\$ timestamps which are ambiguous and, therefore, are considered to be invalid. The valid range for the TDATE\$ timestamp format is from January 1, 1964, 00:00:00 to December 31, 2027, 23:59:59. Timestamps outside this range will be processed as if they are within this range. This situation may result in incorrect time display or invalid program logic.

Unisys strongly recommends that you eliminate the generation of new TDATE\$ and TDATE\$-based timestamps from your applications, local code, runstreams, databases, and external interfaces. Existing TDATE\$ timestamps do not need to be changed. They are within the valid TDATE\$ range and will continue to be valid historically.

- If you desire to continue to use local time, switch from interfaces that return TDATE\$ format (for example, ER TDATE\$) to interfaces that return other local timestamp formats (for example, ER DWTIMES\$).
- If possible, Unisys recommends that you switch to UTC time, using interfaces that return UTC time. ER SYS\$TIME or CALL SYSTEM\$TIME return UTC time in the recommended four word TIMEB timestamp format. ER MODSWTIMES\$ and CALL MOD\$SWTIME return UTC time in a one word, second granular timestamp format called Modified-SWTIME.

As of release 19.0, you are allowed to eliminate the creation of new TDATE\$ timestamps via the ER TDATE\$ instruction. This is done through the ER TDATE\$ Exec configuration parameter `er_tdate$_turned_off` (ERTDATE\$OFF) which changes ER TDATE\$ to return an illegal ER contingency. Setting this configuration parameter to TRUE is optional and should be done only after thorough research of your programs and utilities.

Removal of MAP Collector-defined symbols D\$ATE and T\$IME

In a release after ClearPath release 19.0, the MAP Collector-defined TDATE\$-related symbols D\$ATE and T\$IME will no longer be available – regardless of the Exec configuration parameter settings. When this occurs, collections with references to D\$ATE and T\$IME will report "undefined name" errors for those symbols.

This occurs in release 19.0 if the Exec configuration parameter `er_tdate$_turned_off` (ERTDATE\$OFF) is set to TRUE.

Many Unisys products and client programs use these symbols in unison to generate TDATE\$-based timestamps. Unisys recommends that clients replace any TDATE\$-based symbols with an alternate time format.

Various timestamp replacement formats are presented in section 7 of the *Collector Programming Reference Manual* (7830 9887-003) under the topic heading: "Using Collector-Defined Symbols to Generate Timestamp Values." Some sample time format are shown below:

DWTIME format, local base	DWTIME1\$ DWTIME2\$
Modified-SWTIME format	M\$ODSWTIME
TIMEB (SYSTEM\$TIME) format	SYSTIME1\$ SYSTIME2\$ SYSTIME3\$ SYSTIME4\$

Changes to ER TIMEBYINDEX\$ for Index 0

In a release after ClearPath release 19.0, the ER TIMEBYINDEX\$ result for index 0 will only return the current timestamp in Modified-SWTIME timestamp format. This is regardless of the configuration of the Exec configuration parameter setting of `er_tdate$_turned_off` (ERTDATE\$OFF). As noted in a prior section, this occurs in release 19.0 if the above Exec configuration parameter is set to TRUE.

Future 2028 TDATE\$ Time Configuration Changes

- TIPUTIL FREIPS MSWTIM parameter
In a future release, the FREIPS application group configuration parameter will change from a default of FALSE (create Freespace timestamps in TDATE\$ format) to a default of TRUE (create Freespace timestamps in Modified-SWTIME format). In a future release beyond that, all Freespace timestamps will be in Modified-SWTIME format and the FREIPS parameter MSWTIM will be ignored.
- MFD, Accounting, Freespace, Initial Register R2, Program Files and Media Manager
In a future release, the following Exec time configuration parameters will not allow the setting of FALSE (0) which creates TDATE\$ format timestamps. The only setting allowed will be TRUE (1) which creates the Modified-SWTIME format timestamps and/or eliminates the creation of TDATE\$ timestamps.
 - `std_mfd_modified_swtime` (MFDMSWTIME)
 - `shared_mfd_modified_swtime` (MFDSHMSWTIME)
 - `accounting_modified_swtime` (ACCTMSWTIME)
 - `freespace_modified_swtime` (FSMSWTIME)
 - `initial_r2_modified_swtime` (R2MSWTIME)

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- program_files_modified_swtime (PGMFLMSWTIME)
- mmgr_modified_swtime (MMGRMSWTIME)

This is phase 4 for the TDATE\$ configuration parameter phasing. See *Time Considerations for ClearPath OS 2200 systems* for details on the phases and on what is affected by each of the Exec configuration parameters.

- ER TDATE\$ Turned Off

In a future release, the following configuration parameter that allows or disallows ER TDATE\$ will default to TRUE (ER TDATE\$ not allowed). The parameter may be set to FALSE (ER TDATE\$ allowed) after the acceptance of a liability agreement.

- er_tdate\$_turned_off (ERTDATE\$OFF)

EXEC – Future changes to user-id passwords

The Secure Passwords feature is implemented in two phases across ClearPath Release 19.0 and a future release in order to seamlessly transition Exec password storage from Data Encryption Standard (DES) based hashes to Password Based Key Derivation Function 2 (PBKDF-2) based hashes. The Phase 1 user-id record format (version_3) introduced in release 19.0 stores both a DES hash and a PBKDF-2 hash for each password. This dual hash allows the Exec to recover the DES based hash during fallback to release 18.0 (or earlier) without needing to change users' passwords (via use of a release 18.0 crossboot PLE).

Phase 2 of the Secure Password feature will be released in a future ClearPath level and will introduce another user-id record format (version_4) which stores only the PBKDF-2 based hash. This user-id record format will be recoverable during fallback to release 19.0; however, it will be incompatible with release 18.0 and earlier releases since it will not store a DES password hash to recover. On a fallback from the future Phase 2 release to release 18.0 or earlier, a crossboot PLE will be required to convert the user-id records to a release 18.0 format. Unlike the fallback process from Phase 1, this conversion will require the administrators to enter a new password for each affected user-id. Since this may involve many user-ids, Unisys recommends fallback to release 19.0 instead of earlier levels.

Additionally, support for version 1 of the CALL SEC\$USERID\$ encrypt_password (function 7) input buffer will be dropped in Phase 2 of the Secure Passwords feature.

URU – Future Considerations

- In a future release, the URU Windows component will be released with only a 64-bit version and as such must be installed on a 64-bit Windows Operating System.
- In a future release, the URU Service log level of 'None' will be removed. Only log levels of Low, Medium and High will be supported.
- In a future release, the URU OS 2200 background run (URUBKG) configuration parameter ALTPRINTFIL will be removed. Without ALTPRINTFIL, all IRU FSAH (Free Standing Audit Handler) messages are always directed to the URUBKG breakpoint file – URUPRT. Use of a separate file for only the IRU FSAH messages is eliminated.

- In a future release, manual harvests will not be able to use the system logs as a source of usage data. For automatic harvests, URU eliminated the use of system logs in release 19.0.

Deprecation of Java Applet API, used by Web Enabler for DPS

The Java Applet API, used by Web Enabler for DPS, has been deprecated in Java 9. Browser vendors have started to eliminate support for Java Applets. Therefore, Web-enabling DPS applications using WebTS will not be supported in future OS 2200 releases. The Form Assistant component is still available in ClearPath OS 2200 18.0, but will be removed in a subsequent release.

Notice of Intent to Remove Software

This section identifies software, functions, support, and so forth that will be removed in a future release.

- For Release 20.0, the following products are under consideration for support discontinuation:
 - TUTIL
 - FDMLP (DMS component)
 - PDMLP (DMS component)
 - HTPIC-2200
- For Release 20.0, the following features will be removed from Distributed Transaction Integration (DTI):
 - Transaction Integrator (TxI)
 - OS 2200 OutBound
- The levels of Windows that are supported by Unisys's Windows-based components are described in Section 6, Workstation-Based Software Considerations of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0* (7831 0349) document.

For more information on Microsoft Operating System Support Lifecycle refer <http://support.microsoft.com/lifecycle/>.

Notice of Intent to Remove Hardware

For latest information, refer to Hardware Support Plan on the Unisys Product Support website using the following link:

<http://www.support.unisys.com/common/ShowWebPage.aspx?id=1329&pla=D8X&nav=D8X>

Note: If you are not logged into the Product Support site, you will be asked to do so.

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Section 2

New Products and Updated Features

This section lists new products and updated features to existing products.

Notes:

- *For more detailed information about a specific product, refer to the documentation for that product.*
- *For detailed feature information about a specific product, refer to the ClearPath OS 2200 Series Release 19.0 Software Planning and Migration Overview.*
- *For Exec software migration and compatibility considerations and OS 2200 software products migration and compatibility considerations, refer to the ClearPath OS 2200 Series Release 19.0 Software Planning and Migration Overview.*

APEX Level 4.1

- Exec Password Feature Support
- Removal of Clear Text Passwords
- 2028 TDATE\$ - OS 2200 Exec Configuration Parameter Updates
- Improved Copyright Support

CIFS Level 9R2

- SMBv2 server support
- Full ClearPath Extension Kit support

CITA Level 2R6

- Client Authentication

CKRS Level 7R8E

- 2028 TDATE\$ - Adapt for MFD and Program Files
- Maintenance updates for TDATE\$ issues

COMAPI Level 9R1

- Diagnostic Improvements
- IO Statistics User Commands

COMUS Level 7R3

- Improve Copyright Infrastructure

CPCCommOS Level 5R2

- Ability to Set and Change the Status of NIC Interfaces
- Flexible Configuration of Trusted Certificates
- Enhanced Status Reporting for NIC Interfaces
- ARP Cache Commands
- Reporting of the SAIL Level

CPFTP Level 5R2

- STATUS Command Adds an Information of cpFTP Installation Mode and CPCComm/CPCCommOS Installation Mode

DAP Level 16R2

- 2200/1020 and 2200/9030 Hardware Adapt

DDP-FJT Level 5R6

- 2028 TDATE\$

DDP-PPC Level 7R5

- 2028 TDATE\$

DEPCON ClearPath OS2200 Level 14.2

- Create PDF with Various Resolutions using Enterprise Output Manager Integrated PDF Writer
- Create Black and White and Gray Scale TIFF files
- Enhance Print Attribute to Modify Carriage Control for Continuous Feed Forms
- Include the Name of Backup Attribute Used for the Backup Job in Output Manager Logs

DMS-RA Level 4.2

- Year 2028 Adapt
- SEC\$USERID\$ call interface support
- Adapt for JBoss EAP 7.2

Stability Updates

- DMS-RA now supports OpenJDK JAVA 8 runtime environment.
- DMS-RA is compatible with OpenJDK Java 11 runtime. The user must configure the classpath to include the necessary CORBA and JAXB jar files.

DPREP Level 10R7L

This release contains new feature changes that support the new expand pack format.

ePortal 2200 Level 10.0

- Support for OS 2200 HTTP Client Interface API Library

EXEC Level 49R5

Exec Support Product Level Summary:

	ID	LEV
ARC	5R8B	5.19
CONFIG\$	2R3A	2.5
CONSOL	49R5	2.80
CONSOL2	49R5	2.80
DCL	2R1O	2.1.13
DCOPY	3R1A	3.1.6
DMPLIB	9R5	9.91
E\$ORMSG	49R5	6.20
IOPUTIL	1R2G	1.21
MASSCR	1R1	1.2
MFD utils	1R1A	1.1.6
MICLP	6R2	6.8
MILES	1R5A	1.20
MMGR	49R5	43.69
MSCP	3R8G	3.24
OMKEYIN	5R4A	5.4.2
PASSGEN	2R3	2.5
PF utils	1R2	1.2.2
RLIB\$	49R5	1.91
SECMGR	4R7	4.28
SPAIR	6R4C	6.7
TCOPY	1R4	1.4.1
TIPUTIL	49R5	49.38

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TRACE utils	1R1	1.1.2
UPDATERUN\$	49R5	2.80
VIPR	1R4	1.10
XDCL	2R2T46	2.2.46
RUN\$	49R5	2.80

- 2028 TDATE\$ - TPM TDATE\$ Log Entry
- Add Sector 1 Version to MSALL\$
- 2028 TDATE\$ - ER TDATE\$ Turned Off Phase 2
- 2028 TDATE\$ - Initial Register R2, et al Phase 3
- 2028 TDATE\$ - Program File Element Table Phase 3
- 2028 TDATE\$ - CALL MEDIA\$MGR and MMGR ILES Phase 3
- VTBUTL Logging
- Scaling Audit Transfer Maximum
- AUDIT\$INFO Enhancements
- Secure Passwords Phase 1
- 2028 TDATE\$ - Remove Exec SIP's use of TDATE\$
- Reduce Catalogued File Recovery Time
- Artificial UD Delay

EXT-KIT-2200 Level 1R1

The ClearPath Extension Kit for OS 2200 provides the Native Extension environment which enables the ability to launch and control Linux x86-64 programs securely from within OS 2200.

Detailed Description:

Tight security constraints are imposed such that each executing Linux program runs with exactly the same attributes and privileges as the OS 2200 user that launched it. Only resources already accessible by the initiating OS 2200 user are available to such Linux programs. The Native Extension environment employs the technology underlying Linux containers to prevent any unauthorized access, while also disabling the use of Linux privileges, most importantly, superuser execution.

Included in the initial release are processors that allow for the use of the modern scripting and programming languages Python and Java. Also provided are processors that permit the use of standard Linux tools like bash, grep, and make within OS 2200 batch and demand runs. Processors that bring industry-standard source control and repository systems (e.g., Git, Subversion) are provided in the first release as well.

C Application Program Interfaces (APIs) to enable OS 2200 programs to execute and terminate Linux x86-64 programs and send and receive data are provided in the first release.

The initial release includes:

- a Python module, `ssg.py`, that provides a standard SGS parser
- the PYADD processor that invokes specified Python scripts that generate addstreams and automatically executes them
- the NXLINK processor which provides the ability to construct an OS 2200 program that launches a specified Linux x86-64 program.

FLEX Level 4R6A

- Exec Password Feature Support

FLIT Level 16R2

- 2200/1020 and 2200/9030 Hardware Adapt.

HTPIC-2200 Level 9R2

- IPV6 support
- Logging and Tracing Feature

IPF Level 7R3

- Addition Console Message on IPF crash
- IPF SQL Unload output count/statement

IRU Level 25R1

- REPORT SYSTEM CONFIG Command
- FSAH Sample Program UC
- CSN Expansion
- IAP Updates
- VERIFY SHORT for TPM and COD
- Increased Maximum Audit Block Size

MASM Level 6R4A

- Random Number Generator Instructions
- 2200/9030 and 2200/1020 Adapt

OLTP-TM2200 Level 12R3

- OpenDTP Distributed Tracing

OSI-TP Level 9R2

- IPV6 support
- Logging and Tracing Feature

RDMS Level 23R1

- Aggregate of Aggregate or Distinct Views
- Outer join of derived tables
- Outer join of views
- ALTER TABLE ADD COLUMN DEFAULT NOT NULL
- EXPLAIN in Stored Procedures and Triggers
- Improved Performance of Derived Table/CTE Hash Join
- SELECT DISTINCT Can Now Be Performed Against DISTINCT Views
- Scale ABINIT Bypass
- Enhanced UPDATE Searched – UPDATE Set Synchronize
- Enhanced UPDATE Searched - UPDATE Set From Derived Table

RDMS-JDBC Level 2.12

- Year 2028 Adapt
- SEC\$USERID\$ call interface support
- Adapt for JBoss EAP 7.2

Stability Updates

- RDMS-JDBC now supports OpenJDK JAVA 8 runtime environment.
- RDMS-JDBC is compatible with OpenJDK Java 11 runtime. User need to configure the classpath to include the necessary CORBA jar files.
- Display of RDMS-JDBC error messages was updated from 12 lines to 36.

RSS Level 3R4

- Support for Large Files
- 2028 TDATE\$

SLIB Level 2R2A

- 2028 TDATE\$ - Additional TDATE\$ adapt

SOLAR Level 5R2

- Identify Installation Runstream
- Runstream Clearance Level
- Labeled Library Tape Default
- Improve Copyright Infrastructure
- Selection Check

SOLAR/E Level 5R2

- Identify Installation Runstream
- Runstream Clearance Level
- Labeled Library Tape Default
- Improve Copyright Infrastructure
- Selection Check

SP-OPERATION Level 18.0

- Lock ADBM Database File (bld file)
- Eliminating Remote Registry Reads
- Installation Options
- Log Viewer Auto-Refresh
- Log file Scroll Operation
- ClearPath OS 2200 Software Series Configuration Wizard
- SAIL-based System Configuration Wizard for Dorado x500 Servers
- SAIL-based System Configuration Wizard for Dorado x300/x400 Servers

SP-OPERATION Level 18.0CP

- Lock ADBM Database File (bld file)
- Eliminating Remote Registry Reads
- Installation Options
- Log Viewer Auto-Refresh
- Log file Scroll Operation
- ClearPath OS 2200 Software Series Configuration Wizard
- SAIL-based System Configuration Wizard for Dorado x500 Servers
- SAIL-based System Configuration Wizard for Dorado x300/x400 Servers

TAS Level 6R3

- 2028 TDATE\$

TeamQuest Products

TeamQuest Baseline® Level 7R7

- 2028 TDATE\$ - Support Modified-SWTIME format in SIP and I/O Trace Files

TeamQuest® Log Analyzer (LA) Level 9R1

- 2028 TDATE\$
- LA supports 4 digit year syntax
- 4 digit year display in LA reports
- Scaling Audit Transfer Maximum Restriction
- Add counter selection to PROGRAM SPECIAL COUNTERS report
- Support modified system log files

TeamQuest® Mass Storage Analysis and Relocation (MSAR) Level 8R1

- 2028 TDATE\$
- 4 digit year display in MSAR reports

TeamQuest® MSMANAGER Level 6R1

- 2028 TDATE\$
- Change Indefinite Date Value

TeamQuest® OSAM Level 8R1

- 2028 TDATE\$ - Support Modified-SWTIME Format in SIP and I/O Trace Files
- 2028 TDATE\$
- OSAM Supports Large UDS Configuration

TeamQuest® Online Level 7R7

- 2028 TDATE\$ - Support Modified-SWTIME format in SIP and I/O Trace Files

TeamQuest® PAR Level 10R2

- Exec Decommit of IPJAVA SIP Array
- Support Modified-SWTIME Format in SIP and I/O Trace Files

TeamQuest® SAUtilities Level 8R3

- 2028 TDATE\$
- Date and Time Services Enhancements

TeamQuest® Site Management Complex (SIMAN) Level 7R4

- 2028 TDATE\$
- Support for Secure Passwords Phase 1

TeamQuest® TIP Log Analyzer (TIP-LA) Level 2R1

- 2028 TDATE\$ - TPM TDATE\$ Record Support

UDSC Level 23R1

- SUDS AR command update

UREP Level 19R1

This release of UREP contains internal changes to support the following Enterprise Relational Database Server (RDMS 23R1) features:

- Scale ABINIT Bypass
- EXPLAIN in Stored Procedures and Triggers
- ALTER TABLE ADD COLUMN DEFAULT NOT NULL

See the RDMS 23R1 description of these features in the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0 (7831 0349–049)* for more information.

URU-OS2200 Level 10.0

- Automated Error Handling for COD Audit Trail Errors

WMQ2200 Level 9R1

WMQ2200 level 9R1 is based on IBM MQ 9.1.0. WMQ2200 level 9R1 Interoperates with other IBM MQ and WebSphere MQ products on other platforms.

WMQ2200 9R1 is paired with QProcessor 3.0, QProcessor 4.0, and QProcessor 5.0.

Refer to the System Release Profile (SRP) for QProcessor 3.0, QProcessor 4.0 or QProcessor 5.0 on the support website for WMQ2200 ordering information.

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WMQ2200 9R1 requires Interconnect 1R4D or later on the OS 2200. You can download the latest Interim Correction for Interconnect (version 1R4D) or later. See the Interconnect PVP for download instructions and other information.

Some of the new features in the WMQ2200 level 9R1 release are as follows:

- Logging Improvements
- Syncpoint performance enhancement
- New queue managers attribute
- `crtmqdir` command
- Changes to the `strmqm` command

Section 3

ClearPath OS 2200 Release 19.0 Information

This section identifies the important considerations, plateau and TeamQuest license key information for ClearPath OS 2200 release 19.0.

Master Document Problem List Entry (PLE)

Refer to the master PLE 19220508 for information about critical problems and restrictions that became available after this document was published.

This is the master PLE for the ClearPath OS 2200 release 19.0. All PLEs that are considered critical for this release will be linked to it.

Use the SRP-TO-CRITICAL-PLE field in the System Release Profile (SRP) (CP-OS-2200-19.0) to identify critical problems, if any.

This subsection lists several considerations that you should be aware of when you migrate. These considerations are organized by release.

Important Considerations

ClearPath OS 2200 Release 19.0

Exec Considerations

Over the past several releases, Unisys has worked toward remediation of the TDATE\$ timestamp format as it will overflow its storage space after 2027. As of CP 19.0 - with the proper Exec time configuration parameter settings - the generation of new TDATE\$ format timestamps has been eliminated for all OS 2200 products included in the ClearPath release. The features and changes introduced in the ClearPath release 19.0 products are a significant step in the process to support the changes required for the 2028 TDATE\$ remediation program.

- 2028 TDATE\$ Configuration Changes

With release 19.0, there are changes to several of the EXEC time configuration parameters:

- The Initial R2 + Misc, Program Files and MMGR configuration parameters must be specified in the Exec build – there is no longer any default for these parameters. Although both TRUE and FALSE settings are still allowed, these configuration parameters must be supplied in the Exec build.

- The ER TDATE\$ configuration parameter to turn off ER TDATE\$ may now be set to TRUE. Either TRUE or FALSE are allowed with the default of FALSE. Also the ER TDATE\$ parameter has been changed to a dynamic parameter which allows it to be changed without an Exec reboot.

Details and migration considerations for all of the above are discussed in *Time Considerations for OS 2200 Systems* (8230 6671).

- MAP Collector-defined symbols D\$ATE and T\$IME

In ClearPath release 19.0, if the Exec configuration parameter `er_tdate$_turned_off` (ERTDATE\$OFF) is set to TRUE, the MAP Collector-defined TDATE\$-related symbols D\$ATE and T\$IME are no longer available. When this occurs, collections with references to D\$ATE and T\$IME will report "undefined name" errors for those symbols.

Many Unisys products and client programs use these symbols in unison to generate TDATE\$-based timestamps. Unisys recommends that clients replace any TDATE\$-based symbols with an alternate time format.

Various timestamp replacement formats are presented in section 7 of the *Collector Programming Reference Manual* (7830 9887-003) under the topic heading: "Using Collector-Defined Symbols to Generate Timestamp Values." Some sample time formats are shown below:

DWTIME format, local base	DWTIME1\$
	DWTIME2\$
Modified-SWTIME format	M\$ODSWTIME
TIMEB (SYSTEM\$TIME) format	SYTIME1\$
	SYTIME2\$
	SYTIME3\$
	SYTIME4\$

- TIP Freespace Timestamp Format and FREIPS parameter MSWTIM

In ClearPath release 19.0, if the Exec configuration parameter `er_tdate$_turned_off` (ERTDATE\$OFF) is set to TRUE, then all Freespace application groups create new timestamps in Modified-SWTIME format. This is regardless of the settings of the Exec parameter `freespace_modified_swtime` (FSMSWTIME) or the FREIPS application group level setting of parameter MSWTIM.

- New Version of LIB\$ file

One of the changes delivered in the release 19.0 LIB\$ file is a new version of the PASSGEN-DES absolute. You must perform a JK-4 boot so that the new PASSGEN absolute is installed. If you fail to pick up this version of PASSGEN-DES, you will not be able to sign into your system after booting EXEC level 49R5.

- Secure Passwords

This feature changes the Exec's default password hashing algorithm from Data Encryption Standard (DES) to Password Based Key Derivation Function 2 (PBKDF-2). As user-ids sign-on to the system or change their passwords, they are automatically upgraded to use the new hashing algorithm. This feature is phased in across two releases to minimize the impact of the incompatibilities across migrations and fallback as the user-id records are upgraded to use PBKDF-2. Release 19.0 contains Phase 1 of this feature.

The new PBKDF2 algorithm uses a configurable number of iterations to hash user passwords. The default value of 10,000 may cause noticeable delays to user sign-on. Unisys recommends you tune this parameter to meet your site's needs of performance and security. See Section 4.2.1 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0 (7831 0349 -049)* document for more information.

- Migration Planning Documentation

Migration to release 19.0 is described in Section 7 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0 (7831 0349 -049)* document. The *Time Considerations for ClearPath OS 2200 Systems (8230 6671)* has been updated with information pertinent to the TDATE\$ Remediation Exec time configuration parameters for release 19.0. This document details time concepts and changes that Unisys has done for the TDATE\$ Remediation. It also describes time sources, time-related library routines, best practices for time handling, and migration details specific to the Exec time configuration parameters.

Product Considerations

- APEX

Apex level 4.1 is required with Exec level 49R5 to support the Exec Secure Passwords feature. Apex level 4.1 also works with previous supported Exec levels.

- FLEX

User Authentication (Flex) level 4R6A is required with Exec level 49R5 to support the Exec Secure Passwords feature. User Authentication 4R6A also works with previous supported Exec levels.

- COMAPI Logging and Tracing Enhancements

With this release, COMAPI provides enhanced logging and tracing capabilities, as well as many other code changes that provide for more useful and robust diagnostic capabilities. Much of the COMAPI and application diagnostic information formerly placed in print\$ files is now placed in new log and trace files. In addition, with this release the *COMAPI User's Guide (7851 5749)* is restructured, with new sections added and many changes made to existing sections. Refer to section 5.7 of the *ClearPath OS 2200 Software Planning and Migration Overview for Release 19.0 (7831 0349-049)* for more detailed information.

Note: *COMAPI introduces a symbolic update in this release. If you have local code in the COMAPI product, update the local code before beginning the migration process.*

- TAS Installation Mode Change

TAS 6R3 no longer supports the SMTP mail component. The modes A, B, C, D, E and F that support the SMTP component have been removed. The installation modes G, H and J remain supported. Mode H is the default mode. The functionality of modes G, H and J remain unchanged.

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- TeamQuest PAR Compatibility

When upgrading to Exec 49R5, PAR 10R2 is required to execute with the Exec 49R5 SIP file. Alternately, if you are running PAR 10R1, apply PAR change 00234-00761-PCR to PAR 10R1.

TeamQuest PAR level 10R2 also works with previous supported Exec levels.

- TeamQuest BASELINE Compatibility

TeamQuest Baseline level 7R7 is required with Exec level 49R5 due to the SIP and I/O Trace file updates. TeamQuest Baseline level 7R7 also works with previous supported Exec levels.

- TeamQuest LA

LA has a restriction in that it cannot read system log files with large I/O data block size. LA will display the following I/O error message:

```
*ERROR 3094 File being read is not in audit trail format; file ignored.
```

TeamQuest LA level 9R1 also works with previous supported Exec levels.

- TeamQuest MSManager

MSManager Database Conversion

Any file that has Save Indefinite indicator would have the indefinite date set to 12/27/2027 in existing MSManager databases.

Users can use the FDB command:

```
CONVERT INDEFINITE DATE
```

to convert this indefinite date to 05/28/2444.

TeamQuest MS Manager level 6R1 also works with previous supported Exec levels.

- TeamQuest OSAM Compatibility

TeamQuest OSAM level 8R1 is required with Exec level 49R5 due to the SIP and I/O Trace file updates. TeamQuest OSAM level 8R1 also works with previous supported Exec levels.

TeamQuest OSAM calls MCB with the STAT\$\$function when configured to collect MCB statistics. MCB PLE 19275914 updates STAT\$\$ internal structures. These updates require TeamQuest OSAM level 8R1 or OSAM PLE 19278760.

- TeamQuest SIMAN Compatibility

TeamQuest SIMAN level 7R4 is required with Exec level 49R5 due to the secure password feature updates. TeamQuest SIMAN level 7R4 also works with previous supported Exec levels.

Software Packaging Changes

- Exec Master Delivery
Beginning with ClearPath OS 2200 Release 19.0, the Version3E Exec master is delivered to support the Sail-based systems. This change permits the user to perform a CONFIG, not a FULL Gen, to build the Exec for SAIL-based systems. A FULL Gen can be done if desired.

ClearPath and Plateau Interdependencies

Plateau media must be ordered and installed by your Unisys service representative. ClearPath OS 2200 release 19.0 was tested as an integrated package on ClearPath.

Table 3-1 and Table 3-2 lists the Initial Plateau Release level for a system, the current supported plateau release level, and plateau levels that are required to support the latest release.

Note: Refer to the appropriate system plateau customer reference manual for detailed information.

Table 3–1. ClearPath Dorado Plateau Interdependencies without XPC-L Support

Dorado System (without XPC-L support)	System Plateau Release Level Current	Release 19.0 Dependency
Dorado 4300/6300	2.3	Requires Dorado 4300/6300 Plateau 2.3
Dorado 8300	2.1	Requires Dorado 4300/6300 Plateau 2.1
Dorado 4400/6400/8400	3.0	Requires Dorado 4300/6300 Plateau 3.0
Dorado 4500, 6500, 8500	2.0	Requires Dorado 4500/6500/8500 Plateau 2.0
Dorado 800	3.6	Requires Dorado 800 Plateau 3.6

Note: Dorado Plateaus includes SIOP/XIOP/CIOP firmware that is required to be loaded.

Table 3–2. ClearPath Dorado Plateau Interdependencies with XPC-L Support

Dorado System (with XPC-L support)	System and CPC-L Plateau Release Level Current	Release 19.0 Dependency
XPC-L Support on Dorado 4380, 4390 XPC-L-3 XPC-L-4	Dorado Plateau	Requires Dorado 4300 Plateau 2.3
	2.3	
	XPC-L Plateau	
	3.4	
	4.1	
XPC-L Support on Dorado 4480, 4490 XPC-L-4 XPC-L-5	Dorado Plateau	Requires Dorado 4400 Plateau 3.0
	3.0	
	XPC-L Plateau	
	4.1	
	5.1	
XPC-L Support on Dorado 6380, 6390 XPC-L-3 XPC-L-4	Dorado Plateau	Requires Dorado 6300 Plateau 2.3
	2.3	
	XPC-L Plateau	
	3.4	
	4.1	
XPC-L Support on Dorado 6480, 6490 XPC-L-4 XPC-L-5	Dorado Plateau	Requires Dorado 6400 Plateau 3.0
	3.0	
	XPC-L Plateau	
	4.1	
	5.1	
XPC-L Support on Dorado 8380, 8390 XPC-L-4	Dorado Plateau	Requires Dorado 8300 Plateau 2.1
	2.1	
	XPC-L Plateau	
	4.1	

Table 3–2. ClearPath Dorado Plateau Interdependencies with XPC-L Support

Dorado System (with XPC-L support)	System and CPC-L Plateau Release Level Current	Release 19.0 Dependency
XPC-L Support on Dorado 8480, 8490 XPC-L-4 XPC-L-5	Dorado Plateau	Requires Dorado 8400 Plateau 3.0
	3.0	
	XPC-L Plateau	
	4.1	
	5.1	
XPC-L Support on Dorado 860, 870, 880, 890 XPC-L-3 XPC-L-4	Dorado Plateau	Requires Dorado 800 Plateau 3.6
	3.6	
	XPC-L Plateau	
	3.4	
	4.1	
XPC-L Support on Dorado 4500, 6500, 8500 XPC-L-5	Dorado Plateau	Requires Dorado 4500/6500/8500 Plateau 2.0
	2.0	
	XPC-L Plateau	
	5.1	

Notes:

- For current system plateau information, see the releases section of your specific hardware on www.support.unisys.com.
- Dorado Plateaus includes SIOP/XIOP/CIOP firmware that is required to be loaded.

Software Release Announcement

Section 4

Support

Unisys brings together powerful hardware and software, satellite links, multi-language support, and 20,000 professionals to deliver round-the-clock, global service. Unisys understands that your business simply cannot afford to wait for support. That is why all Unisys support services are fully integrated to provide you with real-time access to the critical information you need.

Contacting the Unisys Support Center

Support for your ClearPath server is provided by your Unisys Support Center. To initiate a support request, do either of the following:

- Submit a request online at <http://www.serviceonline.unisys.com>. After you log on or register, click Create Service Incident, and then follow the on-screen instructions. Enter the required information in the Support Request entry form.
- Contact the Unisys Call Reception Center (CRC). Access the Unisys Support website at <http://www.unisys.com/unisys/support/index.jsp?id=3400003>. The site provides links to various types of support. It also includes a link to a Video Demonstration of the Unisys e-Service Portal, where you will see how to effectively use this easy web-based tool to access product documentation and submit support requests for Unisys-supported products.

Open Source and Third-Party Components

Important licensing information concerning third party and/or open source software incorporated with the solution is located on the Unisys Product Support website at <http://public.support.unisys.com/common/ShowWebPage.aspx?id=6316&pla=ps&nav=ps>. Your download, installation, copying or use of this product constitutes acceptance of the terms in the corresponding License and Attribution Document.

Direct Telephone Support

Direct telephone support is yet another support option offered by Unisys. If you are located within the continental United States or Canada, you can call one of the following toll-free numbers during the times indicated in your service agreement:

- United States 800.328.0440
- Canada (English) 800.387.6181
- Canada (French) 800.361.8097

Software Release Announcement

Customers outside the continental United States or Canada should contact their support organization using the information available at:

<http://www.unisys.com/products/support/index.htm>

Section 5

Customer Product Information

Documentation

The *ClearPath OS 2200 Product Documentation Library* (7848 4482-035) contains all documents associated with the ClearPath OS 2200 release 19.0. It allows you to install and use documents from either a Windows or web browser interface. Before you install, follow the instructions provided in the subsections below:

Installing and Opening the Product Documentation Zip file

In place of the CD Lib Manager files that were provided with the ISO image for past releases, a zip file containing the Product Documentation Library (7848 4482) is now available. Install the Product documentation on your workstation in one of the following ways:

- From the ClearPath OS 2200 product documentation library media (ClearPath OS 2200 Release xx.x)
- From the documentation page for the desired release on the Product Support website (<https://public.support.unisys.com/>)

Note: Click the link that follows the list of document categories to download the release product documentation library ISO image.

Extract the Product Documentation zip file in order to view the compressed files. The zip includes the following:

- HOME.PDF file that lists all the documents in the library. Click the file name or part number to open the document.
- An html interface for browsing the documentation. Double-click the index.html file to launch this interface.

Performing a Search

The zip file includes an Adobe Acrobat Catalog Index File, called 00_home.pdx that you can use to quickly search for key terms in all of the PDF documents. To use this search feature, do the following:

1. Double-click **00_home.pdx** in the extracted zip files.
2. If you receive a Security Warning, click **Allow** to continue. Adobe Reader opens.
3. Click **Edit** and then click **Advanced Search**. Adobe Reader displays a Search pane. Do not change the search location.
4. Enter the search terms and click **Search**. A list of documents containing the search term, as well as links to each reference, displays when the search completes.
5. Select a document name or a link to open the document to the selected reference.

Note: To ensure that the search results display correctly, verify that the folder you are searching is included in the Adobe Reader Privileged Locations list. To do this, click **Edit** and select **Preferences**. On the **Preferences** dialog, select **Security (Enhanced)**. Under **Privileged Locations**, click **Add Folder Path**, and browse to the folder that includes the documentation library, then click **OK**.

Documentation Changes

Beginning with ClearPath OS 2200 release 14.0 each of the document PDF files contains hypertext links that show up as blue underline. The hypertext links open the Master Glossary to the page the term is on.

Accessing the Master Glossary

You can access the *OS 2200 Master Glossary* from either the

- ClearPath OS 2200 product release library on the media or the Product Support website.

The *OS 2200 Master Glossary* is in the **Release Information** category.

- Bookmarks of an individual document that you are viewing online.

Click **Master Glossary** in the bookmarks pane of the document viewer to open the glossary and locate the desired term.

- If you open the document PDF files from the Product Support website, the hypertext links will open the Master Glossary to the page the term is on. If you download one or more PDF files from the Product Support website, you need to also download the Master Glossary (3850 6523-006) and put it in the same folder as the documents you downloaded in order for the hypertext links to work.

Section 6

Ordering Procedure

This section contains a high-level overview of the ordering procedure for ClearPath servers. ClearPath servers consist of many hardware and software components. Several steps are required to order, as each of the components must be ordered individually. For orders, inquiries, and information regarding ClearPath servers, contact your local Unisys service representative.

Updating from Previous Releases to ClearPath OS 2200 Release 19.0

For clients in the United States, Unisys provides a software ordering procedure that is quick and easy to use. It allows you to telephone, fax, or email an order to update your current ClearPath OS 2200 software to release level 19.0. This procedure requires the use of the Update Service Request (USR) form. Clients outside the United States should contact their local Unisys service representative for ordering information.

Updating Your ClearPath System

Software maintenance and a subscription SSU license is required to receive the latest software release. By acquiring software maintenance and a subscription SSU license, the client is guaranteed the availability of all new releases for the ClearPath server that they have licensed, regardless of how often they are released. The software maintenance and subscription SSU must be licensed at the time you acquire the initial system software license for the Integrated Operating Environment (IOE)/Unisys Operating Environment (UOE).

Business Information Server (MAPPER) Information

Business Information Server (BIS) for ClearPath OS 2200 products continue to be available for ClearPath systems but are not released with the ClearPath system releases. Business Information Server Update Server Request (USR) letters will continue to be released announcing product content and availability dates for new releases. The current release information is available on the BIS corporate website:

<http://www.support.unisys.com/common/welcome.aspx?pla=MAP&nav=MAP>

Enterprise Output Manager and Operations Sentinel Ordering Information

Components of the Enterprise Output Manager and Operations Sentinel products are included in the ClearPath OS 2200 releases. These products also have additional products and features that are ordered and distributed outside of the ClearPath release. To take advantage of these products, a separate new or upgrade order request is required.

See the following documents for specific ordering information:

- *Enterprise Output Manager Software Release Announcement (7845 0392)*
- *Operations Sentinel Software Release Announcement (7862 6512)*

UniAccess ODBC Server

A limited user license of UniAccess ODBC Server is bundled with the OS 2200 software release. The bundled license is provided to encourage the prototyping of applications using ClearPath as a database server. With the evolution from two-tier to three-tier architectures, the UniAccess ODBC Driver is now most often deployed on the middle-tier server in such a way that fewer bundled sessions are required to successfully complete a proof of concept. Therefore, the bundled capability was reduced to 2 concurrent threads in Release 9.0 and later releases. Stepped packaging in increments of 5 or 10 concurrent threads is being introduced in lieu of requiring customers using the ODBC Server to purchase a full use license. Please contact your Unisys service representative for more specific ordering information.

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Printed in USA



7848 4565-035