User Environment

Release Information
E-version

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Preface

The Product

The product described in this booklet is the E-version of User Environment (210518E).

The Manual

This booklet describes the changes in the E-version of User Environment compared to the D-version.

The Reader

This booklet is intended for anyone wishing to use or supervise User Environment.

Related Manuals

This booklet is an update of the following manuals:

User Environment Reference Manual   860194.4
User Environment User Guide   860320.1

Table of Contents

Overview

This section gives a brief overview of the new or changed features of the E-version of User Environment. More detailed descriptions are given in the other sections of this booklet.

The most important changes in the E-version of User Environment are:

Use of the ND-5000

The User Environment server and the login program now run on the ND-5000 part of the system. This implies better performance, particularly when logging in.

Note, however, the following important points:

- The ND-5000 must be running when User Environment is started.
- If the ND-5000 (or the ND-5000 Swapper) stops, it is no longer possible to log in on a terminal using User Environment. You should therefore edit the file (USER-ENVIRONMENT)UE-ENABLE:MODE defining at least one terminal not to use User Environment.

Passwords

The password mechanisms are improved to increase security:

- The old password must now be entered when changing password.
- A supervisor must enter his own password when changing other user's passwords.
- Possibility to prevent changing the password back to the previous password (or some of the later passwords).
- Possibility to get system-generated passwords.
- Possibility to set a minimum time between password changes.
- Possibility to define a list of illegal passwords.

IP address feature

- Log the IP address (of terminal or PC) in the activity log and show it on UE-FUNC,TERMINAL-STATUS.
- Possibility to set access control on IP addresses (similar to terminal numbers).

Remote system ID

Log the remote system ID (when running on a TAD) in the activity log and
show it on UE-FUNC,TERMINAL-STATUS.

Error reporting

All error messages from User Environment are now sent to the SINTRAN III
Watchdog.

Changes pertaining to all users

Changing password – UE-PMAN

- If you answer the question "Do you really want to change your password" with Y, User Environment version E asks for your old password.
  If you are a supervisor changing the password of another user, it asks for your own password.

  As a final check, you is asked to enter the new password again, to ensure that the new password is correct.

- Note that the supervisor can activate an option which makes it impossible to specify a new password equal to one of the few latest password you have used. If this is the case, you get the error message:
  "The password is equal to one of your latest password".

- Furthermore, note that the supervisor can specify a minimum time between password changes. If you try to change your password too aften, you get the error message:
  "Too short time since you last changed your password".

- Finally, note that the supervisor can specify a list of illegal passwords.
  If you try to specify a new password found in this list, you get the error message:
  "The password is not legal according to the illegal password list".

- By using the <<-key, a list containing suggestions for a new password is displayed. The suggestions in this list is based on a password mask defined by the supervisor.

  Use the arrow-keys to navigate in the list, and choose a password by pressing <↵>. If none of the suggestions is suitable, press <EXIT> to stop the changing of password.

Changed requirements for User Environment

SINTRAN

User Environment version E requires SINTRAN III version N or later.

Minimum permanent mass storage

User Environment version D required approximately 2100 pages on the user area USER-ENVIRONMENT, plus space for the database.
User Environment version E requires 2600 pages on the user area USER-ENVIRONMENT.

The UE-500 server requires a 203-page swap segment, and UE-LOGIN (running on the ND-500/5000) requires a 93-page swap segment.

User area UE-DATABASE-USER

In User Environment version E, the default user area for the database is UE-DATABASE-USER, while User Environment version D used USER-ENVIRONMENT as default.

It is still possible to use user area USER-ENVIRONMENT for the database, the procedure is as follows:
- Run the mode file (USER-ENVIRONMENT)UE-USEN-PATCH-E:MODE
- Run the mode file UE-LOAD:MODE
- Start the User Environment server.

Local domains

It is possible in a Local Domain to mix User Environment version D and User Environment version E, but it is recommended to upgrade the master machine to User Environment version E before any other machine in the Local Domain.

If one or more machines in a Local Domain use UE-DATABASE-USER as the database user area, all machines should use User Environment version D04 or later.

Changed supervisor functions – UE-PMAN

New menu choice – IP address

The menu choice "IP address" is similar to the menu choice "Terminal".
The following screen picture is shown:

```
────────────────────────────────────────── Terminal Profile ──────────────
IP address        :
Standard task     :                              Terminal type:

Authorized users :
ID card           :
Time limits       :
XON / XOFF        :
Direct login user
project password :
Legal printers    :
Date of last login :                        Login count :
Number of successive unsuccessful attempts to log in:
```

Each part of the IP address should be padded with leading zeros when
fetching information about it, for example 130.067.001.123.

The following fields may be filled in:
– Authorized users
– Time limits
– Date of last login
– Login count

To get a more detailed description of the fields in this profile, refer to the
documentation of terminal profiles in User Environment version D.

The IP addresses are shown in the command UE-FUNC,TERMINAL-STATUS
and in the activity log.

The command User / Fetch / SINTRAN user areas

It is now possible to update default user area in this menu, by pressing the
<DELETE>-key when the cursor is placed in the field Default user area, and
then key in the new default user area.

If a user area is entered in the list of legal user areas without machine prefix,
the local machine name is assumed.

Changed supervisor functions – UE-FUNC

Functions for the System Supervisor / Local Domain / Protect

Minimum time between password changes:

This function may be used to stop users from changing to a new password and then immediately changing back to the old one again.
The format on this field is years-months-days. Default value is 0000-00-00.

The error message given from UE-PMAN when a user tries to change password too often is:
"Too short time since you last changed your password".

Old passwords to be checked:

This function may be used to stop the users from using only a limited number of passwords, by demanding that the new password should be different from the last x passwords, where x may be in the range from 0 to 30.
Default value is 0.

The error message given from UE-PMAN when a user tries to change the password back to an old password is:
"The password is equal to one of your latest passwords".

```
UE:  Local Domain   Machine   Database   Activity-log   Login count   Server
     Fetch      Protect      Login
                                                 ---- Security ----
Password change interval                   : 0000-02-00
Password expiration interval               : 0000-04-00
Minimum password length                    : 5
Minimum time between password changes      : 0000-00-00
Old passwords to be checked                : 0
Password mask                              : KVKVKSS
Maximum login attempts                     : 7
Time between reset                         : 02:00:00
Extended security                          : 1
Possible for public useres to edit the terminal profile : No
```

Password mask:

It is possible, either mandatory (see "Local Domain/Protect/Extended Security"), or as an option, to get a list of suggestions to your new password when using UE-PMAN or UE-LOGIN to change your password.

The supervisor can define a mask for these password suggestions, where each letter in the mask define what type of character should be used in that position when generating the suggestions.

The password suggestions will be of the length specified in "Minimum password length". Possible letters used in the mask:

K : letter - consonant
V : letter - vowel
S : digit (0-9)
L : any legal character (letter or number – 0-9, A-Z)
N : letter - vowel treating national characters ([\ ] and equvalents) as vowels (in Norwegian and Danish: A, E, I, O, U, Y, Æ, Ø and Å).

Functions for the System Supervisor / Local Domain / Protect / Extended Security

It is possible to close the system from accepting a request from an IP address not known by User Environment, by setting bit 6 (if "Extended security" is 0, it must be set to 64).

To get a list of what IP addresses is known to User Environment, the simplest way is to use the command
@(USER-ENV)UE-PLIB-TEST,LIST-OBJ,TCP,1,,999.999.999.999,, ↵

To make it possible to run old applications using UE-PLIB version D or older when changing password, bit 7 has to be set (if "Extended security" is 0, it must be set to 128).

This has to be done, because User Environment version E uses a new protocol always demanding the old password when changing a password.

To make password generating mandatory, bit 8 has to be set (if "Extended security" is 0, it must be set to 256).

Functions for the System Supervisor / Activity-log

The last field on the output from the Activity Log is changed from "Info" to "Info / IP address / Sys.no.".

The majority of log messages will consist of two lines, the last line containing the IP address (MTAD) or system number (TAD).

In case of an IP address, it will consist of 6 parts, where the two last numbers contains additional information from the device having the IP address given by the first four numbers.

This makes it possible to separate between different lines on a TIU.

Terminal-Status

It is now possible to abort the listing of logged-in users before all pages are displayed, by using the <EXIT> key when the text
"Press any key to continue --->" is displayed.

A new field containing the IP address is introduced in the Terminal-Status output. If the terminal is a TAD used from a remote system, the system number is displayed.

User Environment P-server

The User Environment P-server is moved from the ND-100 to the ND-500/5000.

The files UE-PSER-MAIN-D:PROG, UE-PSER-BASE-D:PROG and UE-PSER-DATA-D:PROG is replaced by the files UE-500-E00:DOM and UE-START-E00:PROG, where UE-START-E00:PROG is dumped as the RT-program UEXPS. When User Environment is started, UEXPS starts the ND-500/5000 domain UE-500-E00:DOM.

Moving the server to the ND-500/5000, gives better performance, but if the ND-500/5000 part of the machine stops or hangs, it will not be possible to log into User Environment, and it will be impossible to log on to all terminals where User Environment is enabled.

We therefore recommend that you disable User Environment on the console (see the SINTRAN command @UE-AUTOMATIC-LOGIN and the file (USER-ENVIRONMENT)UE-ENABLE:MODE).

Moving the server to the ND-500/5000, may also require some changes to the file LOAD-MODE:MODE. @UE-FUNC,START must be performed after the ND-500/5000 is started.

User Environment Login – UE-LOGIN

Two versions of UE-LOGIN is delivered with User Environment version E; one version for the ND-500/5000 (U5-LOGIN:DOM), and one version running on the ND-100 (UE-LOGIN-E00:PROG). Normally, the ND-500 version is defined as a standard domain as UE-LOGIN-E.

To assign the language to be defined as the default language to the ND-500 version of UE-LOGIN, the file U5-LOGIN-XX-E00:SEG found on user area USER-ENVIRONMENT should contain this language.

To accomplish this, the contents of the file UE-LOGIN-<LG>-E00:SEG (<LG> is the language code, e.g. EN for English) should be copied to this file.

The file U5-LOGIN-XX-E00:SEG must have public read access (use the command @SET-FILE-ACCESS,U5-LOGIN-XX-E00:SEG,R,,,).

UE-LOGIN on ND-500/5000 uses VTM version G, while the ND-100 version uses VTM version E. The list of available terminal types shown when logging on to the system may thus be different from previous versions of User Environment. To change this menu, the file (SYSTEM)DDBTABLES-G:VTM must be changed.

If the ND-100 version of UE-LOGIN is used, the User Environment scratch file will be opened as file number 101, instead of number 127 used in earlier versions. The ND-500 version still uses file number 127.

Other changes

List of illegal passwords

It is possible to make a list of illegal passwords, that is, words not to be used as passwords.

If a the file UE-ILLEGAL-PWD:DATA is created on the same user area as the User Environment database (default: UE-DATABASE-USER), the User Environment server will compare all passwords against the contents of this file, and reject all matching passwords.

The file should be edited with PED or a similar editor.
If you use NOTIS-WP, the file must be stored in 7-bit format.

When a user tries to change the password to one of the passwords found in this file, the following error message is given:
"The password is not legal according to the illegal password list".'

Changing the CPU number

User Environment will no longer do an automatic change of CPU number on its database if the CPU number is changed (or the database are moved to a different system). If the CPU number is to be changed, or the database is moved from one system to another, the program UE-CHCPU is required. UE-CHCPU is copied to user area USER-ENVIRONMENT during installation.

Note that you must run this program prior to starting the User Environment profile server.

The program asks for the name of the database, the name and CPU number of the old system. It then converts all information related to the old system, to correspond to the current system (the machine the program is running on).

You must be logged in as user area SYSTEM to run the UE-CHCPU program.

Starting User Environment without taking backup

In User Environment version E00 it is possible to shorten the start-up time of the User Environment server by not taking any backup of the User Environment database (the file UE-DATABASE:DATA) when the server is started. This is described in the UE-PATCH:MODE file. If this is done, you must ensure that a backup of the UE-DATABASE:DATA file is taken regularly in some other way.

Other products

Remote shell

Using User Environment version E, it is possible to use Remote shell, even if you are using accounting and project passwords on your machine. The project password must be given as the third column in your RHOSTS:SYMB file.

For example: MY-SYSTEM MY-USER-NAME MY-PROJECT-PASSWORD, gives the user MY-USER-NAME on system MY-SYSTEM access to your user on this system, using the project password MY-PROJECT-PASSWORD.

In order to integrate Remote Shell and User Environment, some patches must be made to User Environment. These patches are described in the file UE-PATCH:MODE.

The three files U5-LOGIN:DOM, UE-500:DOM and UE-LOGIN-E:PROG should be patched.

Operator-Environment

When starting User Environment (@UE-FUNC Start), the starting process (usually a warm start mode file (LOAD-MODE:MODE)) will automatically be logged in to User Environment with Operator access. The automatic login into User Environment may cause problems when trying to start Multi-Machine Operator Environment, and we therefore recommend that you include the following line before starting Operator Environment:

@(USER-ENVIRONMENT)UE-PLIB-TEST,LOGOUT

Use of the SINTRAN III Watchdog

User Environment version E00 uses the SINTRAN III Watchdog for all messages that was previously sent directly to the error device.

Note that error reports from User Environment version E always consist of two error mesages; the first message showing the origin of the error and the second message shows the actual error condition. For example:

ERROR   *   161B.66B * 1992-12-15 14:47:35 * UEXPS.127430B
                  User Environment
                  UE P.server
                  Error in:
                  No backup taken (serBackup calling TakeBackup)

ERROR   *   161B.71B * 1992-12-15 14:47:35 * UEXPS.127430B
                  User Environment
                  UE P.server
                  No more pages available for this user

Managing the UE database

The programs UE-D-SIP:PROG and UE-EX-VER:PROG on user area
USER-ENVIRONMENT can be used to maintain the correctness of the User
Environment database. Both programs should be run from user area
SYSTEM.

UE-D-SIP:PROG

The only input to this program is a file name.

   @(USER-ENVIRONMENT)UE-D-SIP↵
   Name of database: **(UE-DATABASE-USER)UE-DATABASE**↵

UE-EX-VER:PROG

When starting this program, you are asked to give a file name.

If the program finds inconsistency between the object entry of the file and the
actual file size, or if the question to run UNLOAD/LOAD is answered by
Yes, the program will ask for another file name, with default extension
:UNLO.
Use double quotes (") around the file name to create it.

@(USER-ENVIRONMENT)UE-EX-VER ↵

Name of database file (default is (UE-DATABASE-USER)UE-
DATABASE:DATA):↵

File is OK!
Pages according to object entry :   491
Pages on file   :   491

The page count on the file is correct, but if you want to use this program to do
UNLOAD/LOAD of your database (which may make it smaller), answer yes
here..

Do you want to unload/load (Default = No): **yes** ↵

This file has variable record length.
Record length in bytes   :   46
Actual number of records :   733
Data and indexes on 1 SINTRAN file.
2000 pages are reserved for indexes.
This file was created by ISAM version K.

Defined keys (out of 6):

Key-no	Byte-start	Byte-length	Duplicates	Keytype
1	8	32	Yes	Subkey01
2	0	8	Yes	Subkey02
3	8	32	Yes	Standard
4	0	8	Yes	Standard
5	0	40	No	Standard
6	Subkey01	Subkey02		Groupkey

Status after izopen   :   -1

Unload File name: **"UNLOAD-FILE"** ↵

    Number of records unloaded: 733

Status after izunload   :   0
    Number of records loaded :   733

Status after izload   :   0

It is recommended to use (USER-ENVIRONMENT)UE-EX-VER:PROG regularly (for example once every month), to ensure that the file is ok.

It is **strongly recommended** to use this program in case of an uncontrolled stop of the User Environment P.server.

At least twice a year, it is recommended to run @(USER-ENVIRONMENT)UE-D-SIP:PROG, followed by @(USER-ENVIRONMENT)UE-EX-VER:PROG with Yes as answer on the UNLOAD/LOAD question.

This should be done to keep the database as small as possible, and thereby reduce the risk of errors, and also the search time.

If UE-DATABASE:DATA is checked with UE-EX-VER:PROG, these programs may be used on a fresh backup of the database while User Environment is running.

But beware that changes made to the database during this clean-up will be lost when entering the result of this clean-up as the new database.