MergeUID

User Record Export and Import
31. July 2009
Version 403

Migrating several systems into one, e.g. three K-type systems into one big S-Type system, or migrating from K or S to Itanium, always raises the question:
How can we merge and migrate users from the K-Systems into the new S- or Itanium System?

What about having user records 'on site' but NOT activated, and ready to become introduced when needed, and removed afterwards (this is very helpful for backup systems!)?

What about moving just one user, or a group of users, from one system to another, while keeping ALL user attributes intact, such as the

      password and password history
      all time stamps
      logon counters
etc.

Here is the solution. The two programs:
      EXPORT
      IMPORT
of the MergeUID suite from GreenHouse Software does the trick!

EXPORT

The EXPORT program retrieves all user relevant information and stores it in an Entry Sequenced file.
EXPORT processes GUARDIAN as well as Alias users.

Command syntax is:

```
[RUN] EXPORT -H[ELP]
[RUN] EXPORT /OUT <file>/ <user-temp>
[RUN] EXPORT /OUT <file>/ <user-name> COMPLETE
```

where

`-H[ELP]`	causes the EXPORT program to display the command syntax.
`OUT <file>`	defines the file, to which the retrieved information has to be written. In case the OUT file already exists, it has to be a file, matching a previously by EXPORT created OUT file, and it has to be created on the same system! Possible duplicate user entries are sorted out by the IMPORT program. In case of duplicate entries, the newer records are used by the IMPORT program. In case the OUT file does NOT exist, it becomes created by EXPORT as an Entry-Sequenced file. This entry is mandatory.
`<user-temp>`	defines the user(s) to be exported. The template is NOT case sensitive for GUARDIAN users, but IS case sensitive for ALIAS users. Wildcards are supported.
`<user-name>`	fully qualified GUARDIAN or Alias name. Is used together with keyword COMPLETE.
`COMPLETE`	keyword, causing EXPORT to export all users, related to user-name, e.g. the GUARDIAN user TEST.USER and all Alias users, sharing the same user ID.

> *The USERID, LUSERID, USERAX and LUSERAX files do NOT need to be closed:*
> *EXPORT works on open files!*

The created file can easily be transferred to any other Tandem system (Transporting the OUT file).

IMPORT

The IMPORT program reads the OUT file, created by the EXPORT program, and merges the user data into the local USERID and LUSERID files.

Command syntax is:

```
[RUN] IMPORT -H[ELP]
[RUN] IMPORT /IN <file>/ LISTUSERS [<user-temp>]
[RUN] IMPORT /IN <file>/ <user-name> COMPLETE
[RUN] IMPORT /IN <file>/ <user-temp> [!] [PASSWORD <password>]
```

where

-H[ELP]	causes the IMPORT program to display the command syntax.
IN <file>	defines the file to be imported. The file must match the file structure of the OUT file, created by the EXPORT program. This entry is mandatory.
LISTUSERS	causes the IMPORT program to display the user records it finds in the IN file.
<user-temp>	Defines the user(s) to be listed or imported from the IN file. The template is NOT case sensitive for GUARDIAN users, but IS case sensitive for ALIAS users. Wildcards are allowed. When missing, a template of "*", addressing ALL users, is used.
<user-name>	fully qualified GUARDIAN or Alias user name, used with the keyword COMPLETE.
COMPLETE	Keyword; directs IMPORT to import all users, related to <user-name>, that is: All users, sharing the same ID, e.g. a GUARDIAN user and all Alias users, related to this GUARDIAN user. The COMPLETE keyword as well causes IMPORT to delete all users from the system, sharing the requested ID BEFORE the users from the IN file are imported (implicit exclamation mark, see next topic).
! (exclamation mark)	when present causes IMPORT to overwrite an already existing user on the local system with the data from the IN file. When missing, existing users are kept.

`PASSWORD <password>`	Defines the password, that has to be used as an interim password to introduce the user to the system. This is necessary to e.g. pass a password quality SEEP. In case this entry is missing, the password: `Se-uo?i1` is used. This interim password will be overwritten with the original users password when the user is finalized by IMPORT.

> *The USERID, LUSERID, USERAX and LUSERAX files do NOT need to be closed:*
> *IMPORT works on open files!*

The EXPORT and IMPORT programs take care of ALL user attributes, including the:

    The users password, and all user specific password attributes, including time stamps

    Users password history

    Authentication counters

    Remote passwords, even orphaned ones

    Complete ASCII and binary description field

Restrictions
IMPORT and EXPORT do NOT take care of File Sharing Groups. The transport of these SAFEGUARD items has to be done manually by using SAFECOM and its ability, to export data in command format.

Requirement
Both programs require:
- to be started from SUPER.SUPER (read/write access to the system files is required)
- that SAFEGUARD is running

Security Settings
Each piece of software you get should come along with a description of the optimal security settings.

Here are my recommendations for this product:

EXPORT as well as IMPORT should be owned by SUPER.SUPER.

The best GUARDIAN security vector is: "OOOO", or the equivalent ACL.

Both programs do NOT contain PRIV code, thus no licensing is necessary.

To make these programs available for e.g. the Security Administrator, use SECOM.

When the product becomes registered with GreenHouse, you'll get a LicenseToken that suppresses some banner lines. The file is named MERGETOK. It should:

Reside in the same location as MERGEUID

Be owned by SUPER.SUPER

Secured to "OOOO".

Related Tools
The following tools[1] may relate to this product:

CLEANRPW	cleans up superfluous remote passwords
MYUSER	displays all users, related to a GUARDIAN ID
PWCRYPT	encodes all non encoded passwords
PWEXP	displays password expiration dates
REMOTES	displays remote passwords
SETPW	sets the password of a user
SETRPW	sets the remote password of a user
TRASHPW	trashes a users password

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[1] All these tools are FreeWare from GreenHouse and are available at: www.GreenHouse.de

On which systems can EXPORT and IMPORT be used?

Both programs run accelerated (Axcel, OCA), non native code (object file code is 100).
They are compiled on H06.12, and tested on K, S and Itanium system and various releases of GUARDIAN.
Because the used interfaces are non PRIV, the programs should run on all systems with D42/G06.09/H06.08 and better (GUARDIAN procedure calls available with D40/G03/H08 and better are used).
SAFEGUARD versions do not matter, as long as SAFECOM on the export site is compatible with the SAFECOM on the import site (= the SAFECOM output in COMMAND format, created on export site, can be executed on the import site).

User IDs can be exported on Gxx[2], and imported on Gxx, as well as Hxx[3].
The export on Hxx and import on Gxx is NOT supported.

Summary:

Export	Import	Result
Gxx	Gxx	OK
Gxx	Hxx	OK
Hxx	Hxx	OK
Hxx	Gxx	Not supported

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[2] Gxx = GUARDIAN on S-machines e.g. G06
[3] Hxx = GUARDIAN on Itanium machines, e.g. H06

Transporting the OUT file

The OUT file, created by EXPORT, is an Entry-Sequenced file holding binary data as well as ASCII data.
Do not change its contents!

EXPAND

Transporting it by a FUP DUP via EXPAND keeps track of all files attributes.
No special care is required.

FTP

Transporting an EXPORT type file via FTP requires some more care, because a structured ENSCRIBE type file does not survive a BINARY transfer. The best is to use the PAK[4] product to produce an unstructured PAK type file, which can be shipped in BINARY mode by FTP.

Test

To test the functionality on your local system, perform these steps:

1. Introduce a new user to the system
   `SAFECOM ADD USER <user>,<ID>,PASSWORD <password>, ...[ .. ]`
2. Logon to this user to get an entry in the "Last Authentication" field
3. Export this user (or all users)
   `EXPORT/OUT outfile/ <user>`
4. Delete the newly created user from the system
   `SAFECOM DELETE USER <user>`
5. Re-Import this user from the file, created by the EXPORT program
   `IMPORT/IN outfile/ <user>`
6. Logon to this re-imported user to check if the password is OK, and the last authentication timestamp fits.

Reminder
You need to be logged on to SUPER.SUPER to successfully export and import user records!

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[4] PAK is officially available with G06.16. It also can be found at: http://193.65.99.19/kku/tools.html

Typical Session
A typical session is threefold:
1. Users are exported into a file.
2. This file is transferred to the target system.
3. On the target system, the file is optionally listed, and then imported.

Export
The following example shows the export of the GUARDIAN users SA.* and GHS.*, and the Alias user Carlito, into the OUT file GINKGO:

```
$GHS1 MERGEUID 82> export/out ginkgo/sa.*
Export (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
This copy of EXPORT is licensed to: GreenHouse Software & Consulting
GUARDIAN user SA.CARL exported
GUARDIAN user SA.MANAGER exported
GUARDIAN user SA.TEST exported
GUARDIAN user SA.TEST1 exported
GUARDIAN user SA.TEST2 exported
Users in OUT file:        5
Number of exported users: 5
Users exported successfully.
$GHS1 MERGEUID 83>


$GHS1 MERGEUID 83> export/out ginkgo/ghs.*
Export (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
This copy of EXPORT is licensed to: GreenHouse Software & Consulting
GUARDIAN user GHS.CARL exported
GUARDIAN user GHS.CHRISTI exported
GUARDIAN user GHS.GERHARD exported
GUARDIAN user GHS.HARALD exported
GUARDIAN user GHS.JENS exported
GUARDIAN user GHS.MANAGER exported
GUARDIAN user GHS.MANFRED exported
GUARDIAN user GHS.MARTIN exported
GUARDIAN user GHS.NOSECOM exported
GUARDIAN user GHS.READONLY exported
GUARDIAN user GHS.SECOM exported
GUARDIAN user GHS.THEO exported
Users in OUT file:        17
Number of exported users: 12
Users exported successfully.
$GHS1 MERGEUID 84>

$GHS1 MERGEUID 84> export/out ginkgo/Carlito
Export (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
This copy of EXPORT is licensed to: GreenHouse Software & Consulting
Alias user    Carlito exported
Users in OUT file:        18
Number of exported users: 1
Users exported successfully.
$GHS1 MERGEUID 85>
```

Listuser

The IMPORT LISTUSER command displays all users from the IN file in ascending order. Duplicates are automatically ignored, and the youngest user records are taken into account:

```
$GHS1 MERGEUID 71> import/in sequoia/ listusers
Import (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
The following users are in file:  \GINKGO.$GHS1.MERGEUID.SEQUOIA
Users are from system:            \GINKGO
Exported from OSVersion:           H
   Carlito
   GHS.CARL
   GHS.CHRISTI
   GHS.GERHARD
   GHS.HARALD
   GHS.JENS
   GHS.MANAGER
   GHS.MANFRED
   GHS.MARTIN
   GHS.NOSECOM
   GHS.READONLY
   GHS.SECOM
   GHS.THEO
$GHS1 MERGEUID 72>
```

Import

The import of the GUARDIAN user test.user from file TESTUSER to the current system looks like this:

```
$GHS1 MERGEUID 74> import/in testuser/test.user
Import (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
Do you want to import all users, matching template: test.user
Do you want to continue? (yes/no): y
IN file is from system:  \GINKGO
User imported:           TEST.USER
$GHS1 MERGEUID 75>
```

To import all users, sharing the same ID, that is: A GUARDIAN user and all related Alias users, use this command:

```
$GHS1 MERGEUID 79> run import/in alles/complete TestUser
Import (400) - T7172H06 - (15Apr2008)   System \GINKGO, running NSK H06
Copyright (c) GreenHouse Software & Consulting 2002-2008
All GUARDIAN as well as Alias users, mapped to:
   TEST.USER (3,1)
will be deleted, and replaced by these ones:
   TEST.USER
   TestUser
Do you want to continue? (yes/no): y
Alias TestUser related to TEST.USER deleted
GUARDIAN user TEST.USER deleted
IN file is from system:  \GINKGO
User imported:           TEST.USER
User imported:           TestUser
$GHS1 MERGEUID 80>
```

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Changes

Version 402, 15Jan2009	OUT in IMPORT and IN in EXPORT are no longer checked; enables both programs work with NetBatch.
Version 403, 31Jul2009	Support of Creator added. Programming glitch fixed.

FAQs

Q: Can I export different single users into the same OUT file?
A: *Yes: The OUT file can be re-used to hold more than one set of users, created by several*
        EXPORT sessions.
        Also see next topic.

Q: When I perform several EXPORT commands using the same OUT file, e.g.
        run export/out today/ *
        run export/out today/ ghs*
        run export/out today/Christian
        What happens to duplicate entries in the OUT file?
A: *Duplicate entries are stored in the OUT file. Each set of user records has a unique entry*
        number, which is assigned in ascending order. All duplicate entries in the OUT file are
        ignored by the IMPORT program, and only the most recent entries are taken into
        account.

Q: I like to export all users, sharing the same ID, that is: a GUARDIAN user and all its Alias
        users at once. Can this easily be done?
A: *Yes: EXPORT can be directed to export only those users, sharing the same ID. This is*
        done by using the key word COMPLETE.
        To export all users, related to SUPER.SUPER, use this command:
        ```
        EXPORT /OUT <file>/ super.super COMPLETE
        ```

Q: We have exported all users to one big file. Can we import all users, sharing the same ID,
        with one command?
A: *Yes: The IMPORT program can be directed to import only those users, sharing the same*
        ID.
        To e.g. import all users, related to SUPER.SUPER, use this command:
        ```
        IMPORT /IN <file>/ super.super COMPLETE
        ```

Q: Does the OUT file of the EXPORT command contain the users password?
A: *Yes: The password is part of the binary records of each user.*
        In case the users password was encoded at EXPORT time, it still is encoded.
        In case the password was in the clear at EXPORT time, it still is in the clear!
        EXPORT and IMPORT do NOT process the password in any way.

Looking forward to hear from you!

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