ITUG SUMMIT 2004

# Update on GreenHouse

NonStop Server
Security and Operations

# Free- and ShareWare Tools

Carl Weber

05Oct2004, P-1-U, Marriott Salon 2

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# Operations and Security
# Free- and ShareWare Tools

Welcome to this technical early bird session.



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# Operations and Security
# Free- and ShareWare Tools

- Developed during the past 12+ years
- Based on GreenHouse needs and GreenHouse customer requests
- Fill gap of missing functions and tools
- Make life with NSK much easier and more secure

## Operations and Security
## Free- and ShareWare Tools

# Why Free- and ShareWare?

- Why not!
- Why charging for every bit and piece?
- Why not sharing meaningful utilities?
- And finally: What is wrong about gifts?
  **(except that the German word Gift translates to poison)**

# Operations and Security
# Free- and ShareWare Tools

- Developed on K122 (D48.02)
  EXPANDed to S7000 (G06.23)
- Written in TAL and/or pTAL
  (NO TACL Macros)
- Available as code 100 and/or code 700 object files
- Run on all hardware platforms <= S
- Require D40/G03 or better

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## Operations and Security
## Free- and ShareWare Tools

- Use SPI when applicable
  e.g. with SAFEGUARD, TCP/IP etc.
- Support extended wildcard where meaningful
- Obey ALL security rules

## Operations and Security
## FreeWare Tools - Summary

### FreeWare changes since ITUG 2003

- Available: 79
- Enhanced: 18
- Renamed: 1
- New: 13
- Migrated to ShareWare: 1 (ListLib)

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## Operations and Security
## ShareWare Tools - Summary

### ShareWare changes since ITUG 2003

- Available: 9
- Enhanced: 6
- New: 2
- Migrated from FreeWare: 1 (ListLib)

## Operations and Security
## Free- and ShareWare Tools - Future

- Migration to the Itanium hardware platform when necessary
- Migration to PayWare on demanded by US users while keeping the FreeWare
  (you now can pay for the tools!)

More tools!

Operations and Security
Free- and ShareWare Tools

# General

- No warranty is given
- No Decease's, Time Bombs, Trojan Horses or Spoof's build in
- Use it at your own risk

Operations and Security
Free- and ShareWare Tools

# General

- Read the documentation that comes along with each tool
- All tools are the property of GreenHouse



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## Operations and Security
## Free- and ShareWare Tools

- The good news are:

  - **ALL** GreenHouse tools are **SUPPORTED** products – because I use them myself!
  - Yes – the FreeWare is supported as well!

- … and there are no bad news!

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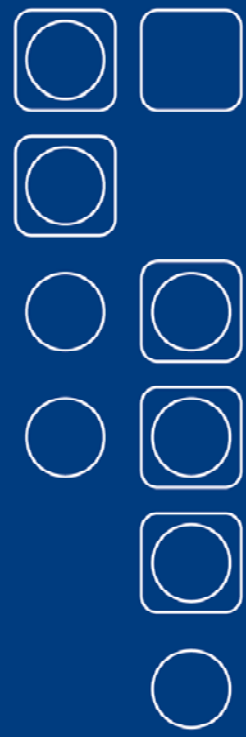
Operations and Security
FreeWare Update

# Updated FreeWare





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Operations and Security
FreeWare Update

# AltFile

- Automatically adjusts alternate key file entries
- Introduction of extended wildcards



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Operations and Security
FreeWare Update

# Extended Wildcards

well known

| | |
|---|---|
| * | = any number (o .. n) of any type of characters |
| ? | = any single character |

New

| | |
|---|---|
| {..A} | = any number of alphabetical characters |
| {..N} | = any number of numeric characters |
| {A} | = any single alphabetic character |
| {N} | = any single numerical character |

For compatibility reasons:

| | |
|---|---|
| {*} or {..*} | = any number of any type of characters |
| {?} | = any single character |

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FreeWare Update

# BindLib

- Binds a library to an executable object file
  Supports code 100 and code 700 type files
- Introduction of extended wildcards

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# CompEdit

- Compresses EDIT type files WITHOUT changing the last modification time stamp
- Enhanced handling for open files
- Introduction of extended wildcards



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FreeWare Update

# DES

- Fast implementation of Data Encryption Standard (TAL/pTAL library)
- Compound procedures (e.g. TripleDES, PWHash) now support 65,535 byte buffers
- Used in PAK/UNPAK
  (see VPROCs next page)

# Operations and Security FreeWare Update

## DES

```
$SYSTEM.TESTPAK1.PAKN
 GMT Binder timestamp:  17SEP2004 14:41:18
    Version procedure:  T1255G06_22SEP2003_PAK_AAA
    Version procedure:  T7172G06_NEWDES304_11FEB2004
    Version procedure:  T7172G06_PWHASH202_11FEB2004
    Version procedure:  T2767G08_30APR2003_01APR2003
    Version procedure:  T8432G09_30APR20031CRTLMAIN
          Native Mode:  runnable file

$SYSTEM.TESTPAK1.UNPAKN
 GMT Binder timestamp:  17SEP2004 14:41:28
    Version procedure:  T1255G06_22SEP2003_UNPAK_AAA
    Version procedure:  T7172G06_NEWDES304_11FEB2004
    Version procedure:  T7172G06_PWHASH202_11FEB2004
    Version procedure:  T2767G08_30APR2003_01APR2003
    Version procedure:  T8432G09_30APR20031CRTLMAIN
          Native Mode:  runnable file
```

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FreeWare Update

# DiskACL

- Manages all disk file ACL attributes
- Allows addition of persistent disk file ACL's for non existing disk files
- Code lifting's
- Performance enhancements
- Nowadays superseded by SAFEGUARD

Operations and Security
FreeWare Update

# GetPWSS

- Collects the security settings of PATHWAY applications
- Highlights weak settings
- Persistent security settings corrected
- Performance enhancements



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# License

- Licenses disk files in case they **NEED** to become licensed
- Refuses from licensing NON PRIV/CALLABLE code
- Read errors are now handled correctly

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FreeWare Update

# ListLib

- Listner Library
  Protects the LISTNER from a Denial of Service (DoS) attack through FTP calls
- Moved to ShareWare



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FreeWare Update

# MIG2S

- Converts GUARDIAN RWEP into a SAFEGUARD ACL
- Takes R/W access right into account
- Renamed to MIGFIL2S

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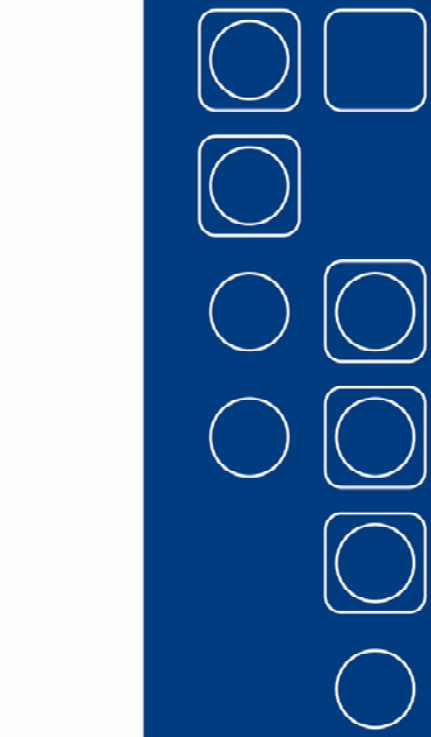
FreeWare Update

# MyInfo

- Enhanced FileInfo
- Use of large file size (64 bit arithmetic)
- Date format changed to: ddmmmyyyy





Operations and Security
FreeWare Update

# MyInfo

- Introduction of qualifiers:
  BROKEN, CRAHSOPEN, EOF
- Introduction of EOF qualifier (=, <, >)
- EOF handling of SQL protection views fixed



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# MyUser

- Displays all GUARDIAN users along with their related Alias users
- A users default ACL is now signaled



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# PurgeDat

- Performs a PURGEDATA on a file and ALL related alternate key files
- All file I/O is now done on locked files



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FreeWare Update

# PWCrypt

- Encodes all non encoded GUARDIAN and Alias user passwords
- Missing LUSERID file now handled correctly

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FreeWare Update

# Remotes

- Displays remote passwords
- Missing LUSERID file now handled correctly



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FreeWare Update

# Secure

- Intelligent FUP SECURE
  e.g. allows wildcards for source and target security setting
- Introduction of extended wildcards
- Introduction of wildcard support for USER and SECURITY filters

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FreeWare Update

# SysInfo

- Displays all relevant system information
- Introduction of time zone



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FreeWare Update

# WhoIs

- Displays active system users
- Named and unnamed processes are now displayed along with their sequence number

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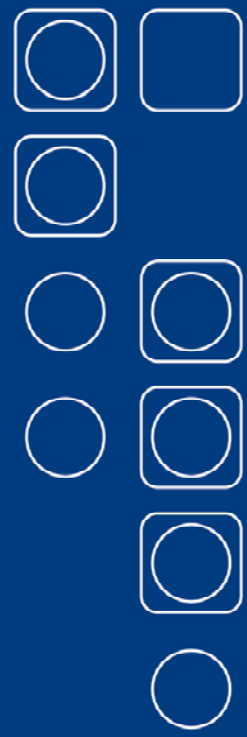
FreeWare New

# New FreeWare





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# MyPurge

- Purges disk files belonging to a defined user

# Operations and Security
# FreeWare New

Command syntax:

**MYPURGE [/OUT [<file>]/] <template> [[,] [WHERE] OWNER|USER <ID>|<name>]**

Where

| | |
|---|---|
| <file> | is the OUT file name<br>when empty, no output is produced |
| <template> | is a file name template, supporting extended wildcards |
| WHERE | key word |
| OWNER\|USER | key word |
| <ID> | is a user ID, e.g. 100,5 |
| <name> | is a user name, e.g. GHS.CARL, or CarlWeber |

e.g.

MYPURGE $GHS1.*.*,WHERE OWNER GHS.MARTIN
  purges all files of user GHS.MARTIN, residing in $GHS1.*.*

MYPURGE /OUT/ZZBI*
  purges all ZZBI*-files of the MYPURGE user; output is suppressed

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FreeWare New

# FTPOLib

- Library for the FTPSERV program file
- Enables FTPSERV to transfer specified open disk files



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# LaLo

- Displays last 10 logon events at logon time, and on demand
- Configurable

# Operations and Security
# FreeWare New

Command syntax:

```
   [run] MYLALO [num-laston]

 where

   num-laston   is a number between 2 and 10, defining the maximum
                number of last logon events to be displayed.
                Default is: 2
```

e.g.

```
$GHS1 LASTON 11> mylalo
Last unsuccessful logon:    5 Aug 2004, 14:27
Last successful logon:     11 Aug 2004, 09:28
Previous successful logon: 10 Aug 2004, 18:46
$GHS1 LASTON 12>
```

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FreeWare New

# MIGFIL2S

- Migrates GUARDIAN RWEP settings into SAFEGUARD ACLs on file level
- Was: MIG2S

Operations and Security
FreeWare New

# MIGSUB2S

- Migrates GUARDIAN RWEP settings into SAFEGUARD ACLs on subvol level
- Subvol ACL set when 50% of all files have the same OWNER and RWEP
- FileACL set on the rest
- Requires:
  - FileFirst
  - FirstACL
  - CheckVol OFF; SubVol/File ON

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FreeWare New

# MIGUSR2S

- Migrates GUARDIAN RWEP default security into a user Default Protection ACL

Operations and Security
FreeWare New

# MyGive

- FUP GIVE functionality with **VOLUME** template support

```
Command syntax:

   [run] MYGIVE [/OUT [<file>]/] <file-temp>[,] <ID>|<name>
```



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FreeWare New

# NoCTACL

- TACL, lacking the Interface to $CMON
- ... to demonstrate, that $CMON is a totally insufficient security mechanism ...

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FreeWare New

# NoACL

- Displays all disk files lacking an effective SAFEGUARD ACL
- Adjusts the SAFEGUARD-flag in the RWEP security setting



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FreeWare New

# PurgeTMP

- Automatically purges outdated temporary disk files
- Prevents the system from a Denial of Service attack, performed by recursive file creates (temporary files only!)
- Runs as a $ZZKRN controlled process

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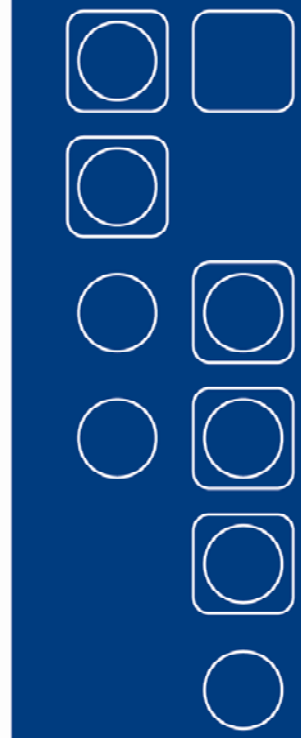
# PWCheck

- Displays all system users, lacking a password



# Operations and Security
# FreeWare New

```
Command syntax:

  [run] PWCheck [/OUT <file>/] [-HELP]

where

  <file>   is the OUT file to which PWCHECK has to send to.
           In case this is a non existant disk file, it becomes created
           as an EDIT type file.

  -HELP    causes PWCHECK to display this screen.

e.g.

$SYSTEM SUPER 2> pwcheck
PWCheck (101) - T7172G06 - (28Nov2003) System \BEECH, running NSK G06
Copyright (c) GreenHouse Software & Consulting 2003
GUARDIAN user: EXPIRED.USER has NO password
All Alias users do have a password.
Done
$SYSTEM SUPER 3>
```

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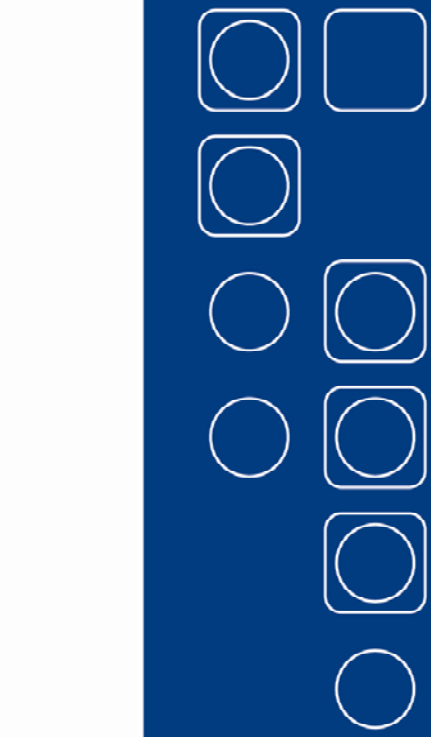
FreeWare New

# ResetSFC

- Resets a users static fail counter in SAFEGUARD
- Requires SUPER.SUPER or a SUPER.SUPER Alias user





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# Operations and Security
# FreeWare New

```
Command syntax is:

 [run] RESETSFC [/OUT <file>/] [-HELP] | [ALIAS|USER <user> [UPDATELASTMOD]]

where

  <file>          is the OUT file to which RESETSFC has to send to.
                  In case this is a non existent disk file, it becomes
                  created as an EDIT type file.
  -HELP           causes RESETSFC to display this screen.
  USER            is a key word and defines <user> being a GUARDIAN user.
                  GUARDIAN user names are NOT case sensitive.
  ALIAS           is a key word and defines <user> being an Alias user.
                  Alias user names ARE case sensitive.
  UPDATELASTMOD   keyword; when present enforces an update of the
                  LAST-MODIFIED time stamp in the users record.
```

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FreeWare New

# TimeZone

- Displays the time zone of a system

```
$SYSTEM SUPER 14> timezone
Time offset to GMT is:  +2:00
Time Zone is:           +1:00
$SYSTEM SUPER 15>
```

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# Wildcard

- Example program to demonstrate the new extended GreenHouse wildcard processor

| | |
|---|---|
| * | = any number of any type of characters |
| ? | = any single character |
| {*} or {..*} | = any number of any type of characters |
| {..A} | = any number of alphabetical characters |
| {..N} | = any number of numeric characters |
| {?} | = any single character |
| {A} | = any single alphabetic character |
| {N} | = any single numerical character |

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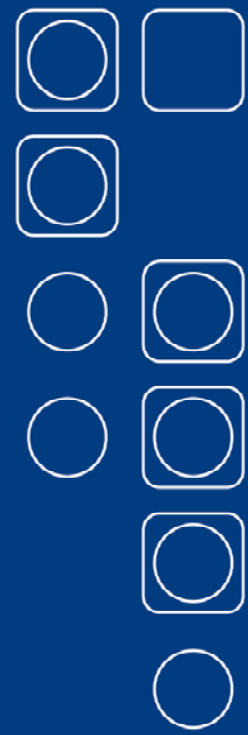
# Operations and Security FreeWare New

```
WILDCARD $ghs{n}.secom.exe?*{..n?a}
WILDCARD $sys???.sys{nn}.{..a}edit
```





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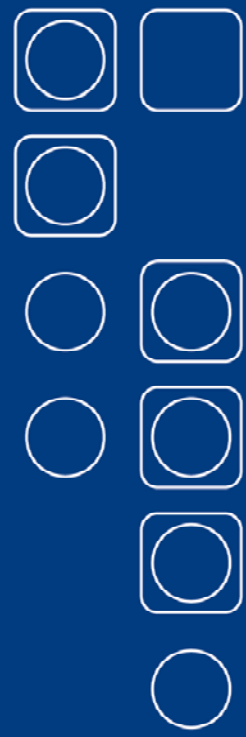
ShareWare Update

# Updated ShareWare





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Operations and Security
ShareWare Update

# LogonLog

- Displays authentication events in real time
- Requires SAFEGUARD
- The missing LicenseToken message now is suppressed for the first 62 days

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Operations and Security
ShareWare Update

# MergeUID

- Export and import of user ID's with ALL user attributes (incl. Password!)
- EXPORT now allows an already existing OUT file
- Introduction of LISTUSER command in IMPORT
- The missing LicenseToken message now is suppressed for the first 62 days

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ShareWare Update

# MyLogin

- Automatically logs a 6530 type window on to the system
- Special support for Win6530 emulator from comForte
- The missing LicenseToken message now is suppressed for the first 62 days

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ShareWare Update

# SetPW

- Sets/changes a system users password
- The new password now can be supplied in a ‘blind hand shake’
- The missing LicenseToken message now is suppressed for the first 62 days



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Operations and Security
ShareWare Update

# WhatsUp

- Evaluates and lists SAFEGUARD events in real time
- Gives a clue about: What's going on here ...
- The missing LicenseToken message now is suppressed for the first 62 days

# Wipe

- Erases the
  - data of a disk file, the
  - free space between files and the
  - free space beyond a files EOF
- The missing LicenseToken message now is suppressed for the first 62 days

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ShareWare New

# New ShareWare



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ShareWare New

# ListLib

- Listner Library
- Protects the Listner against a DoS attack through the FTP port
- Migrated from FreeWare to ShareWare



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ShareWare New

# NetDup

- Allows the duplication of files using EXPAND WITHOUT the need to have remote passwords

# Operations and Security
# ShareWare New

```
Command syntax:

 [run] NETDUP [/OUT <file>/] <from> [,] <to> [,<option>]

where:
  from          defines the files to be transferred;
                wildcards are allowed.
  to            defines the new location of the transferred files;
                wildcards are allowed.
  option        is one or more of:
                GIVETO   <newowner>
                SECURETO <rwep>
                PURGE

A typical command looks like this:

 $GHS1 SETPW 23> netdup \sequoia.$ghs1.secom.secom,*
```

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ShareWare New

# SECOML

- Allows an ID change without the need to know the target IDs password
- Executes any resource with any available user ID (GUARDIAN, Alias)
- Easy to manage
- Lite version of the SECOM product

(Secure Command Manager) ⇒

# Operations and Security
# ShareWare New

```
Command syntax:
  SECOML  -H[ELP]   [COMMAND]
          [EXECUTE] <command> [;<command> ..]
           LICENSE  <command> [;<command> ..]
           LIST    [<command> [;<command> ..]]
where

  -H[ELP]   displays this screen
            when the COMMAND keyword is present, all possible
            SECOML command key words are displayed.
  EXECUTE   enforces SECOML to execute <command>.
            The EXECUTE keyword is optional.
  LICENSE   licenses a SECOML command file.
            Only SUPER.SUPER, the group manager of the command ID,
            or the command ID can license a SECOML command file.
  LIST      lists all SECOML commands the current SECOML user is
            allowed to execute.
            A supplied fully qualified <command> causes SECOML to
            display the entire command contents.
```

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# Operations and Security
# ShareWare New

```
$GHS1 SECOML 12> secoml -help command
SECOML (212) - T7172G06 - (22Jun2004)   System \BEECH, running NSK G06
Copyright (c) GreenHouse Software & Consulting 2004
Possible SECOML command attributes:
COMMENT:     [comment]                    optional, multiple
ID:          <GURDIAN-ID>                 mandatory
RESOURCE:    <object-file-name>           mandatory
PARAM:       <start-up parameter(s)>      optional
NOWAIT:      ON|OFF                       optional
DEFAULT:     <default location>           optional
IN:          <IN-file>                    optional
OUT:         <OUT-file>                   optional
TIMEFRAME:   <timeframe>                  optional, multiple
USER:        <user>                       optional, multiple
USERPARAM:   ADD|IGNORE|REPLACE|REQUIRE   optional
EMS:         OFF|INFORM|CRITICAL          optional
SECOML propagates process state bits.
$GHS1 SECOML 13>
```

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# Operations and Security
# ShareWare New

```
$GHS1 SECOML 8> secoml list
       Command File                          Comment
--------------------------  ------------------------------------------------
CHECKACR                    Checks an the functionality of an Atalla Ch..
COMMAND1                    Test of SECOM-L command
COMMAND2                    Test of SECOM-L command
COMMAND3                    Test of SECOM-L command
FUPTEST                     SUPER.SUPER FUP
INTEST                      Test of IN file
PURGE                       FUP PURGE <file>
REFRESH                     REFRESH directs SCF to refresh all disk volumes
RESTART                     Restarts any server of any PATHWAY system
SUPERFUP                    Starts an interactive SUPER.SUPER FUP
SUPERT                      Starts an interactive SUPER.SUPER TACL
VPROC                       Displays the VPROC of any given object file
$GHS1 SECOML 9>
```

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# Operations and Security
# ShareWare New

```
COMMENT:   Starts an interactive SUPER.SUPER FUP
COMMENT:   Requires Option 63 = empty PARAM
COMMENT:   Used     Option 59 = to allow USERs (optional)
COMMENT:   Used     Option 56 = to generate an EMS message (optional)
COMMENT:   Adjust the USER entry according to your needs:
COMMENT:   - change the entry and/or
COMMENT:   - add new entries

COMMENT:   When the LicenseToken is expired, this command will no longer
COMMENT:   function.

USER:      ghs.carl
ID:        super.super
RESOURCE:  $system.system.fup
EMS:       INFORM
LICENSEE:  SUPER.SUPER
LICDAT:    22Jun2004, 17:13:46
LICTOK:    4FFC128F9DBD2346965DAA083928CC8D
```

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# Operations and Security
# ShareWare New

```
$GHS1 SECOML 13> secoml fuptest
File Utility Program - T6553G07 - (21NOV2001)    System  \BEECH
Copyright Tandem Computers Incorporated 1981, 1983, 1985-2001
-
```

- The FUP prompt you see is a the one from a SUPER.SUPER running FUP
- Generated EMS message:

```
04-08-11 11:18:27 \BEECH.$Z03M      GHS.19.200          007172 SECOML start
                                    of: $GHS1.SECOML.SUPERFUP/$SYSTEM.SYS01.FUP
                                    as SUPER.SUPER by SA.CARL
```

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## Operations and Security
## Free- and ShareWare Tools

Where can you get all these

<u>supported</u>

tools?

www.greenHouse.de



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## Operations and Security
## Free- and ShareWare Tools

- Please inform me about
  - bugs, errors and glitches: I'll fix them
  - meaningful enhancements: I'll add them

- You can reach me at:

GreenHouseSoftware@T-Online.de

Carl.Weber@GreenHouse.de

Info@GreenHouse.de

Operations and Security
Free- and ShareWare Tools

Questions?

Suggestions?

Ideas?

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Operations and Security
Free- and ShareWare Tools

In case you like to talk to me:
I‘m around during ITUG and can give live demos of ALL tools!



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Thank you for your time and attention!

Have a good day, and
enjoy the conference!



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