



# **Bsafe/Security for VSE CICS/TS**

Complete Security for the CICS/TS environment

*Mainframe Compliance with PCI-DSS, SOX, HIPAA and others*

- Easy authority management for CICS resources at all levels
- Data protection and masking (file, record and field level)
- Monitoring and auditing of user activity and security events
- Policy management of users and passwords
- Monitoring of security officer activity
- Menu generator
- Application-independent

**Bsafe/Security for CICS** is the answer to auditors' requirements of internal controls for the protection and auditing of your data. It addresses the difficult demands of industry and legal regulatory compliance like PCI, SOX and HIPAA through data protection, privacy and an easy-to-understand audit log.



## Controlled User Authority to CICS Resources at All Levels

**Bsafe/Security for CICS** is a granular system of managing user authority to CICS resources at the level of **terminal, transaction, file, record** and **field**. The system is user-oriented. Each user or profile is granted authorization to the resources they require.

```

Session B - [24 x 80]
File Edit View Communication Actions Window Help
DATE: 03/03/08 ** S A F E / 1 VER 2.7.0 ** BSAFE INFO SYSTEMS
TIME: 18:06:03 FILE AUTHORIZATION CICS / CP12

PROFILE: DF1 USERID: NEIL TRANSID: TRN1 AUTHORIZATION DEFAULT: Y

LIST OF FILES | FILE PREFIX | FILE GROUP
-----
FILE | AUTH | FILE | AUTH | FILE | AUTH | SYS | SUB/S | AUTH
NAME | TYPE | NAME | TYPE | PREFIX | TYPE | CODE | NO. | TYPE
1. ARFIL1 | N | 9. ARFIL9 | I | 1. GLX | N | 1. GR01 | 01 | I
2. ARFIL2 | N | 10. AFFIL10 | 0 | 2. | | 2. | | 
3. ARFIL3 | A | 11. GLFIL2 | L | 3. | | 3. | | 
4. AARIL4 | 0 | 12. | | 4. | | 4. | | 
5. ARFIL5 | I | 13. | | 5. | | 5. | | 
6. ARFIL6 | 0 | 14. | | 6. | | 6. | | 
7. ARFIL7 | N | 15. | | 7. | | 7. | | 
8. ARFIL8 | L | 16. | | 8. | | 8. | | 

TYPES: I=INPUT; O=OUTPUT; A=I/O; N=UNAUTHORIZED; L=RECORD AUTH.; P=PREVIOUS

OPERATION: SCROLL FORWARD
RESPONSE : 0008.....SUCCESSFUL REQUEST
F1 = F2 = UPDATE F3 = EXIT F4 = F5 = F6 =
F7 = BACKWARD F8 = FORWARD F9 = RETRIEVE F10= ADD F11= DELETE F12=

MA b E=> S> 04/012
Connected to remote server/host 9.9.9.151 using lu/pool SC0TCP12 and port 23 Brother HL-5250DN series on IP_9.9.9.180
  
```

Authorizations can be multi-level, involving different combinations of resources i.e. user permitted to specified files for certain transactions. All authorizations defined by **Bsafe/Security for CICS** are independent of application, operating at the system level and applying to all current and future applications.

Authorization definitions are facilitated by group authorities for users and resources, reducing the time required for implementation and maintenance. The handling of authorities is further aided by the way you specify authorized



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resources for a user. You can choose the specific resources (transaction, file etc.) to which the user is authorized, or decide that the user is authorized to all resources of a certain type, except those specified.

### Data Protection and Masking (File, Record and Field Level)

**Bsafe/Security for CICS** allows you to control data in VSAM files at the file, record and field level. You can define user authorization to specific files (**none, read** or **write**). Furthermore you can define which records each user may access according to its field values. Finally, you can mask selected fields from view according to field-value criteria.

```
Session B - [24 x 80]
File Edit View Communication Actions Window Help
DATE: 03/03/08 ** S A F E / 1 VER 2.7.0 ** BSAFE INFO SYSTEMS
TIME: 18:08:39 FIELD MASK DEFINITION CICS / CP12

FILE ID: GLFIL2 ELEMENT/SEGMENT: MASK CODE: 1
DB TYPE (V=VSAM, T=SUPRA, S=SAPIENS, A=ADABAS, I=IMS, D=DB2/SQL): V
DETAILS:
FIELD/COLUMN LNG MASK VALUE TYPE
00017 003 *** C
00020 004 **** C
00030 030 L
00080 014 NOT AUTHORIZED C
00101 050 _ D

TYPE: H=HI-VALUE; L=LOW-VALUE; N=NUMERIC; P=PACKED; X=HEX; C=CHARACTER; D=PAD-CHAR

OPERATION: SCROLL BACKWARD
RESPONSE : 0008.....SUCCESSFUL REQUEST
F1 = F2 = UPDATE F3 = EXIT F4 = F5 = F6 =
F7 = BACKWARD F8 = FORWARD F9 = RETRIEVE F10= ADD F11= DELETE F12=

MA b E=> S> 04/011
Connected to remote server/host 9.9.9.151 using lu/pool SCOTCP12 and port 23 Brother HL-5250DN series on IP_9.9.9.180
```



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### Monitoring and Auditing of User Activity and Security Events

Bsafe/Security for CICS incorporates an audit log of security events. The security officer can view the log in real-time, filtered by various parameters including user, event type, date and time.

```
Session B - [24 x 80]
File Edit View Communication Actions Window Help
DATE: 03/03/08 ** S A F E / 1 VER 2.7.0 ** BSAFE INFO SYSTEMS
TIME: 18:13:27 LOGGED EVENTS CICS / CP12

EVENT DATE TIME PRFILE USER-ID TERMIID DETAILS
01 SUCCESSFUL LOGON 12/12/06 10:05:21 AR1 SAFEUSER CP14
02 SUCCESSFUL LOGOFF 12/12/06 10:22:34 AR1 SAFEUSER CP14
03 SUCCESSFUL LOGON 12/12/06 10:32:58 AR1 YOSI CP14
04 APPLN ACTIVATION 12/12/06 10:33:03 AR1 YOSI CP14 AMVJ
05 APPLN ACTIVATION 12/12/06 10:33:23 AR1 YOSI CP14 TF79
06 TRANSACT. VIOLATION 12/12/06 10:33:27 AR1 YOSI CP14 CEDA
07 APPLN ACTIVATION 12/12/06 10:33:30 AR1 YOSI CP14 TF79
08 TRANSACT. VIOLATION 12/12/06 10:33:32 AR1 YOSI CP14 CEDA
09 APPLN ACTIVATION 12/12/06 10:33:35 AR1 YOSI CP14 TF79
10 TRANSACT. VIOLATION 12/12/06 10:33:37 AR1 YOSI CP14 CEBR
11 SUCCESSFUL LOGOFF 12/12/06 10:35:43 AR1 YOSI CP14
12 SUCCESSFUL LOGON 12/12/06 10:36:03 AR1 ALEX CP14

DATE REQUESTED: _ TIME REQUESTED:
OPERATION: GENERAL INFORMATION
RESPONSE : 0008.....SUCCESSFUL REQUEST
F1 = F2 = F3 = EXIT F4 = PROMPT F5 = SKIP BCW F6 = SKIP FW
F7 = BACKWARD F8 = FORWARD F9 = ADD INFO F10= F11= F12=

MA b E=> S> 19/021
Connected to remote server/host 9.9.9.151 using lu/pool SCOTCP12 and port 23 Brother HL-5250DN series on IP_9.9.9.180
```

The audit log can be viewed on-line and reports can be printed with or without filtering of the events. In addition, the printed reports can be sorted by a variety of criteria.

### User Activity Tracking

For selected users, monitor usage of specific transactions and access to defined field values. This is done while the user works normally, without being aware of any tracking.



## **Alerting**

The product features a real-time IDS (intrusion detection system) in which alerts can be issued following specific events. For example, users attempting to log on from unauthorized terminals.

## **Monitoring of Security Officer Activity**

All authorizations and definitions made by the security officers can be logged in a dedicated log file, including details of the authorizations defined and the identification of the administrator who made the definitions.

## **Policy Management of Users and Passwords**

### **Password Encryption**

Every password stored in the system is encrypted and cannot be viewed even by the security officer. The encryption algorithm is irreversible and encrypted passwords cannot be decrypted.

### **Passwords Set and Known Only by the User**

With the creation of a new user, an initial password is issued by the security officer. On the first logon, the user is forced to set a new password which is known only to that user. Forgotten passwords cannot be restored and a new initial password must be issued.

### **Forced Periodic Password Changes**

The security officer can define for each user the period of time the current password may be used, after which the system will force the user to change the password. The user cannot choose a new password identical or similar to recently-used passwords.

### **Automatic User Locking Following Repeated Wrong Passwords**

**Bsafe/Security for CICS** allows the security officer to set the number of times a user can attempt to log on with an incorrect password before being locked by the system. Once locked, the user cannot log on from any terminal until unlocked by the security officer.



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### Other Policy Management Features

The security officer can determine the permitted character structure of the password and other password management features. In addition, he can define the period a user will be authorized to log on to the computer. This is ideal for temporary user IDs which sometimes get forgotten. It also provides a means of restricting the times of day during which each user can log on. Restrictions can be set at the user level.

### Menu Generator

**Bsafe/Security for CICS** incorporates a menu generator to create menus for end users. Your users will be able to run clearly-named tasks rather than having to remember transactions and parameters.

```
Session B - [24 x 80]
File Edit View Communication Actions Window Help
DATE: 03/03/2008 ** S A F E / 1 VER 2.7.0 ** BSAFE INFO SYSTEMS
TIME: 18:16:42 MAIN MENU SAFEUSER /CICS /CP12

01 SYSTEM ADMINISTRATOR MENU          09 CREDIT CARD DETAILS
02 GROUP DEFINITION MENU              10 DB2 FILE DEFINITION
03 SECURITY AUTHORIZ. MENU
04 MENU GENERATOR MENU
05 SECURITY AUDITOR MENU
06 SAFE UTILITIES MENU                14 EXIT MENU (RETURN=PF3)
08 EXIT TO CICS                      15 EXIT MENU (RETURN=CLEAR)
                                      16 LOGOFF FROM CICS

SELECT OPTION  =====>
APPLICATION PARAMETER: _____
RESPONSE : 0008.....SUCCESSFUL REQUEST

PF3 = EXIT
MA b E=> S> 18/033
[Connected to remote server/host: 9.9.9.151 using lu/pool: SCOTCP12 and port: 23] [Brother HL-5250DN series on IP_9.9.9.180]
```

This improves user-friendliness, reduces the chances of executing transactions wrongly and prevents users from attempting to run transactions not meant for them.



The security officer can update the user menus on-line, quickly and simply, even while the users continue to work.

Restriction by menu is an additional layer of protection, on top of user authorizations to resources.

## **Ease of Use**

With **Bsafe/Security for CICS** you implement CICS authority through clear menus and easy-to-understand, structured screens. Definitions made can be reviewed and changed quickly and simply with no need to remember the format of commands. Changes and additions are made on a full screen while the current authorizations for the user are displayed. Following the changes made, the full updated state of authorizations remains displayed on the screen for confirmation of the updated values.

Alongside the product's powerful online update is a mass update facility to make large numbers of authorization definitions in batch.

A full set of reports can be produced including details of all authorizations and policies defined in the system and statistical reports like inactive users.

## **Bsafe/Security Server for CICS (Optional)**

The Bsafe/Security Server provides the organization's applications with a means of receiving security information from Bsafe/Security for CICS.



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### Decentralization of Administration

**Bsafe/Security for CICS** allows you to distribute administration functions by defining different functions and control for different administrators. For example, you can create a restricted security administrator who can add new users and assign them to existing profiles but cannot add or change authorizations to access resources. Another example is a security help-desk function which could be given authorization only to handle users which have been locked but cannot perform any other security functions.

```
Session B - [24 x 80]
File Edit View Communication Actions Window Help
DATE: 03/03/08 ** S A F E / 1 VER 2.7.0 ** BSAFE INFO SYSTEMS
TIME: 18:23:21 SEC.OFFICER LIMITATIONS CICS / CP12

USER-ID: SYSUSER
TABLE NAME | READ | ADD | UPD | DEL | TABLE NAME | READ | ADD | UPD | DEL |
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
USER DEFINITION | + | + | + | - | MENU DEFINITION | - | - | - | - |
APPLICATION DEFN. | - | - | - | - | FILE AUTHORIZATION | - | - | - | - |
SAFE/1 TABLES | - | - | - | - | INSTALL. PARAMETERS | - | - | - | - |
TERMINAL AUTHORIZAT. | - | - | - | - | PARAMETER DEFINITION | - | - | - | - |
BATCH GROUP DEFN. | - | - | - | - | BATCH AUTHORIZATION | - | - | - | - |
FILE GROUP DEFN. | - | - | - | - | TERMINAL GROUP DEFN. | - | - | - | - |
LOGO DESIGN | - | - | - | - | RECORD AUTHORIZATION | - | - | - | - |
FIELD MASK DEFN. | - | - | - | - | SEC.OFF.LIMITATIONS | - | - | - | - |
TRANSACTION AUTH. | + | - | + | - | TRANS. GROUP DEFN. | - | - | - | - |
PROGRAM AUTHORIZAT. | + | - | - | - | PROGRAM GROUP DEFN. | - | - | - | - |

OPERATION: ADD RECORD
RESPONSE : 0008.....SUCCESSFUL REQUEST
F1 = F2 = UPDATE F3 = EXIT F4 = F5 = F6 =
F7 = BACKWARD F8 = FORWARD F9 = RETRIEVE F10= ADD F11= DELETE F12=

MA b E=> S> 04/015
Connected to remote server/host: 9.9.9.151 using lu/pool SC0T/CP12 and port 23 Brother HL-5250DN series on IP_9.9.9.180
```

### On-line Help

The product features detailed help screens to assist the administrator in making the required definitions.





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```
Session B - [24 x 80]
File Edit View Communication Actions Window Help
03/03/08 *** UniSafe V1.1.1 *** BSAFE INFO SYSTEMS
18:25:47 Help Facility SAFEUSER/CICS /CP12

Book....: UniSafe Authorization Maintenance
Division: Authorization Definition Screen
Chapter : Authorization Receiver ID

Identification of the subject which receives the authorization. The meaning
of the identification depends on the contents of the other fields in the
"Authorization Receiver" group of fields.

Examples of possible combinations:

When
  Single/Group      = SINGLE
  Resource Type/USER = USER
Then
  Authorization Receiver ID includes the Userid.

F1 = Help   F2 =      F3 = Exit   F4 =      F5 = Prev   F6 = Next
F7 = Backward F8 = Forward F9 =      F10=      F11=      F12=

MA b E=> S> 04/012
Connected to remote server/host: 9.9.9.151 using lu/pool SC01CP12 and port 23 Brother HL-5250DN series on IP_9.9.9.180
```

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# Maximum Security, **Simply!**

## Bsafe/Security for CICS