Security Considerations for Administrators

This section describes the security aspects of the SYSMAIN utility.

- File Security in Remote Environments

- Natural Security

File Security in Remote Environments

In a remote environment located on a mainframe, a UNIX or an OpenVMS platform, file security (that is, passwords and cipher codes) relates to the security that has been defined for a system file in an Adabas environment. If file security has been defined for a system file, you need to specify a password and a cipher code for the source and/or target system file required before you perform a SYSMAIN function. Otherwise, Adabas will issue an appropriate error message. You do not have to provide security information for the default system files assigned to you at the start of the SYSMAIN utility.

Security information for FSEC and/or FDIC system files can only be specified if Natural Security and/or Predict respectively are installed.

In a remote mainframe environment, the security information of the system files refers to the corresponding profile parameters FNAT, FUSER, FDIC and FSEC described in the *Parameter Reference* documentation.

In a remote UNIX or OpenVMS environment, the security information of the system files refers to the corresponding profile parameters FDIC and FSEC described in the *Parameter Reference* documentation.

The following system files and objects or data contained in the files can be affected by security protection:

- FNAT or FUSER with programming objects and FDIC with DDMs on a mainframe platform;

- FDIC with XRef data (UNIX, OpenVMS and mainframe);

- FSEC with Natural Security profile (UNIX, OpenVMS and mainframe).

▶ **To specify security information for FNAT or FUSER, or FDIC for DDMs on mainframes**

1. In the **Object Maintenance** dialog box of a SYSMAIN utility function, change the entry in the **DBID** or **FNR** box in the **Source** and/or **Target** group boxes.

   The **Password** and **Cipher** boxes appear below **DBID** and **FNR**.

2. Enter the appropriate security information:

   In the **Password** box, enter the 8-character Adabas password for the FNAT or FUSER source and/or target system files.
   In the **Cipher** box, enter the 8-character Adabas cipher code for the FNAT or FUSER source and/or target system files.

▶ **To specify security information for FDIC (XRef data) or FSEC**

1. In the **Object Maintenance** dialog box of a SYSMAIN utility function, choose the **FDIC/FSEC** button in the **Source** and/or **Target** group boxes.

   An **Object Maintenance - Source** or **Object Maintenance - Target** dialog box similar to the example below appears:

2. In the **FDIC** and/or **FSEC** group boxes, enter the appropriate security information for the FDIC system file (if Predict is installed) and/or the FSEC system file (if Natural Security is installed):

DBID	The database ID (DBID) of the source or the target database where the FDIC or FSEC system file is stored. Valid DBIDs are 1 to 65535. The default value is 0 (zero) for the current FDIC or FSEC system file.
FNR	The file number (FNR) of the source or the target database where the FDIC or FSEC system file is stored. Valid FNRs are 1 to 65535. The default value is 0 (zero) for the current FDIC or FSEC system file.
Password	The 8-character Adabas password for the FDIC or FSEC source and/or target system files.
Cipher	The 8-character Adabas cipher code for the FDIC or FSEC source and/or target system files.

The file security specifications in the **Object Maintenance** dialog boxes are retained for the duration of the current SYSMAIN function.

▶ **To specify security information for system files using commands**

1. For FSEC:

   Use the SEC keyword of the *where-clause* described in *Using SYSMAIN with Subprogram*.

Or:
For FDIC and XRef data:

Use the `DIC` keyword of the *where-clause* described in *Using SYSMAIN with Subprogram*.

Or:
For FNAT or FUSER:

Use the `DBID` and `FNR` keywords of the *where-clause* described in *Using SYSMAIN with Subprogram*.

Natural Security

Two aspects must be considered when using the SYSMAIN utility within a Natural Security environment:

- Defining the Natural Security Environment

- Restricting Use of SYSMAIN under Natural Security

Defining the Natural Security Environment

The source and target libraries can be within one Natural Security environment or within two different Natural Security environments. These environments must be defined to the SYSMAIN utility.

The definition of the Natural Security environment(s) to be used can be specified in the **FSEC** group boxes of the **Object Maintenance - Source** and **Object Maintenance - Target** dialog boxes.

By default, SYMAIN uses the current FSEC settings as specified with the `FSEC` profile parameter in the parameter file or at the start of the Natural Studio session. You can override these settings by changing the entries in the **FSEC** group boxes. The new settings remain in effect for the duration of the current SYSMAIN function. When you execute SYSMAIN with a subprogram using commands (see *Using SYSMAIN with Subprogram*), the `SEC` keyword should be used to specify the file security and assignments of the request.

Once the source and target environments have been determined, SYSMAIN verifies both the source libraries and the target libraries with Natural Security. The source and/or target database and file must correspond to the database ID (DBID) and file number (FNR) specified in the library security profile; if these values are not specified, default values are taken from the security profile.

Restricting Use of SYSMAIN under Natural Security

The use of the SYSMAIN utility itself can be restricted, or the use of the source and target libraries to be handled with the SYSMAIN utility can be restricted. The use of SYSMAIN utility functions when invoked with the MAINUSER subprogram can be controlled separately. See *Protecting Utilities* in the *Natural Security* documentation for details.