

User Definitions

A user definition consists of an authorization table in which you can authorize access to functions for classes of Natural ISPF objects, as well as of default settings on user profiles (PF key assignments, short names for libraries, magic characters, Editor profile, user defaults). All characteristics of the user profile are modifiable by the user. Authorization tables are modifiable only by authorized users.

This section provides information on the following topics:

- Types of User Definition
 - User Group Definitions
 - Maintaining User Definitions
 - Authorization Table
 - Maintaining User Definitions with Function Commands
-

Types of User Definition

Natural ISPF allows for three different types of user definition:

- **Single users:**
You can create a separate definition for a specific user ID;
- **User groups:**
You can create a definition for a group of users. You can choose one of the following methods for associating user IDs with certain groups:
 - Prefix Method
 - Derivation from Natural Security

These are explained in the subsection User Group Definitions.

- **Default definition:**
You can create a definition for the asterisk *. This can be seen as a definition for a null prefix: users are assigned this definition if they log on with a user ID that is not specifically defined and for which there is neither a prefix definition nor a Natural Security group definition.

In the case of the prefix method, a user is assigned the definition which most closely matches that user's ID. The following table illustrates how some example user IDs are assigned definitions:

Definition	Assigned to user ID:
*	U1
S*	S1
SY*	SY1

You can modify the default user definition, and add and modify single user and group (prefix) definitions at any time.

You can enter the user definition facility in any of two ways:

- Select the USER option on the Administrator Menu to display the User Entry Panel. You can specify a function command in the command line and parameters in the input fields (see the following subsection);
- You can access user definitions from any Natural ISPF screen using function command syntax. See the subsection Maintaining User Definitions with Function Commands.

User Group Definitions

You can create a definition for a group of users. By setting APPLYMOD 101 to an appropriate value you can select one of the following methods for associating user IDs with certain groups:

Prefix Method

In this case, a definition for a prefix applies for all user IDs matching that prefix, except for those users for which the corresponding profile item has been defined specifically. For example, the definition for the ID SAG* applies to all user IDs that start with SAG and have no unique definition.

See the corresponding flow diagram for an illustration of the internal handling.

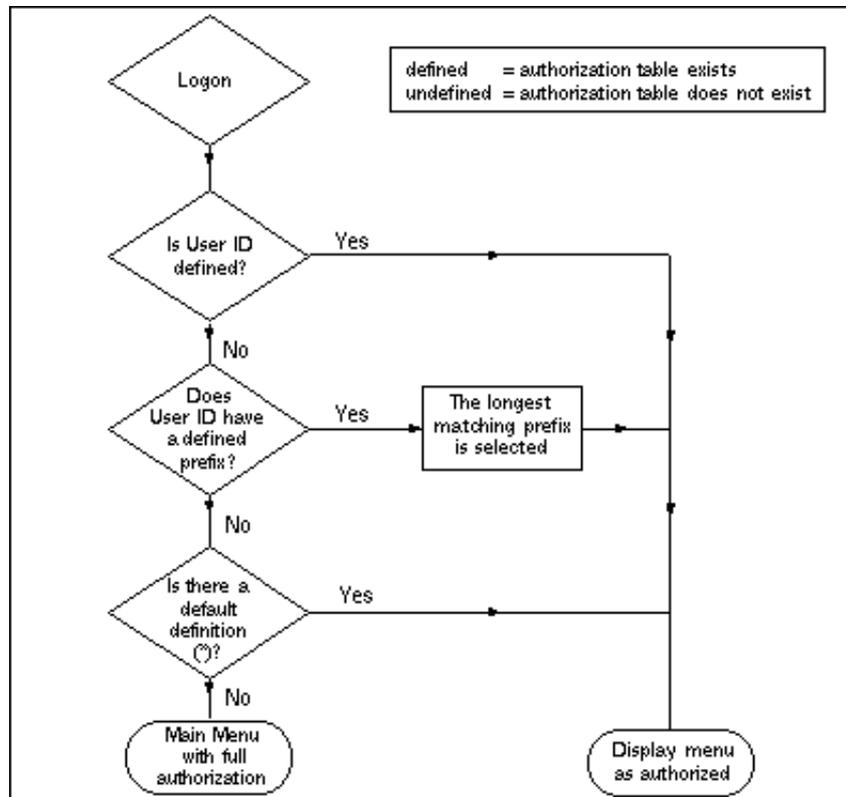
Derivation from Natural Security - NSC

In this case, a definition made for an ID that has been defined as a user group in Natural Security will be used as a default definition that applies for all members of that group, except for those users for which the corresponding profile item has been explicitly defined.

If a user is a member of several groups, Natural ISPF will first search privileged groups in the specified order and then non-privileged groups in alphabetical order.

See the corresponding flow diagram for an illustration of the internal handling.

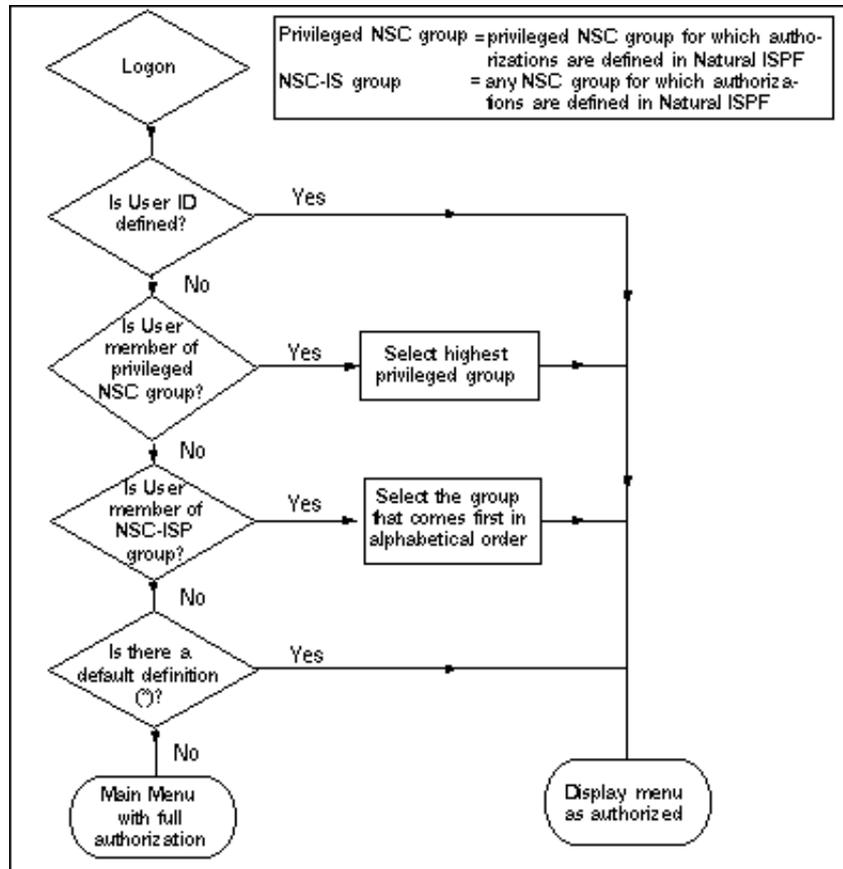
The following flow diagram illustrates the internal handling for the **prefix method** when a user logs on:



Note:

Without a default definition (*), an undefined user ID to which no prefix definition applies is granted full authorization for the system. When installing Natural ISPF and setting up the system, you must therefore define at least a default definition (*) to control access to the system (see the subsection Maintaining User Definitions).

The following flow diagram illustrates the internal handling for the **Natural Security (NSC) method** when a user logs on:



Note:

If a user is a member of more than 20 groups, only the first 20 will be evaluated in the above context.

Maintaining User Definitions

If you select the USER option from the Administrator Menu, the User Entry Panel appears:

```

----- USER - ENTRY PANEL -----
COMMAND ==>>

User          ==>> *
Profile type  ==>>          ( A,K,L,C,E,D,B,Y,N,O)

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help Split End  Suspe Rfind Rchan Up      Down Swap Left  Right Curso
    
```

Meaning of the input fields:

Field	Meaning
User	User ID of user definition to be maintained. You can also enter the wildcard * to list all user definitions, or ABC* to list all definitions beginning with ABC.
Profile type	Enter characteristic of definition to be maintained. Possible options: A Authorization table B BS2000/OSD defaults C Magic characters D User defaults E Editor profile K PF key assignments L Library short names N Natural defaults O Editor color definition Y Layout of object lists (COPY or DELETE only) * Full profile (COPY or DELETE only)

Note:

The Profile type field is not used as selection criterion for the LIST command. It is used to select sections of the user profile for EDIT, DELETE or COPY operations. The whole profile can be selected for COPY and DELETE operations by entering the wildcard * in this field.

The user authorization table (characteristic A) can only be modified by users authorized to access configuration functions. All other characteristics are modifiable by the user and are described in detail in the section Profile Maintenance in the Natural ISPF User's Documentation. You can access them here to maintain the default settings.

Once you have entered the specified user definition, you can scroll the profile sections using the UP and DOWN commands (usually assigned to PF7 and PF8 respectively).

Authorization Table

To access the user authorization table for a user profile, specify the profile name (user ID, group ID, prefix followed by the wildcard *, or wildcard * only) in the User field and A in the Profile type field. The authorization table for the specified definition appears, for example:

```

----- EDIT USER BRY , Byrone, Rinaldi -----
COMMAND ==>

      Authorization Class          Level      Main Menu      ==>
      Natural programming          ==> 9
      PDS Maintenance              ==> 9
      Data Sets Maintenance        ==> 9      + --- COMMANDS LEVEL REMINDER ---- +
      SYSOUTS                      ==> 9      ! Lvl   Command Abbreviation   !
      System info                  ==> 9      ! --- ----- !
      Active jobs                  ==> 9      ! 1 - L,B,ZP,XT,I,ET,DI,DF,RU,XE !
      Operator commands            ==> 9      !   EX,OT,FR,DW,CR,BPSTAT       !
      NSPF Administrator           ==> 9      ! 2 - E,R,SB,PL,PR,CP,A,CT,U,FL !
      PANVALET                     ==> 9      !   ST,CC,RL,HL,DS,UP          !
      LIBRARIAN                   ==> 9      ! 3 - D,PG,CH,NSPR,GENN         !
      USER defined                 ==> 9      ! 4 - CM,OPER                   !
                                   !                               !
                                   !                               !
                                   !                               !
                                   +-----+

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Split End  Suspe Rfind Rchan Up    Down Swap Left Right Curso

```

The above authorization table could be in place for user definitions in an OS/390 environment that includes PANVALET.

Explanation of the authorization table

- **Header:**
The header line contains the function (EDIT USER) and the user ID invoked;
- **Main Menu:**
The field labelled Main Menu contains the name of the menu displayed when the user logs on to Natural ISPF. The default menu is the Main Menu, MAIN (see the section Menu Maintenance);
- **Authorization class:**
The column headed Authorization Class contains a list of items that correspond to Natural ISPF objects and certain administration functions. The classes displayed correspond to the subsystem(s) installed at your site. For a list of possible classes, see Authorization Classes at the end of this documentation.

The extent to which the user is authorized for each class of objects is determined by the authorization level;

- **Authorization level:**
The column headed Level contains the numerical identifier of the level to which the user is authorized for the corresponding class of objects. An authorization level is a command or group of commands defined in the window headed Commands Level Reminder. Typing a level number against a class of objects authorizes the user to issue these commands for the class of objects. The lowest possible level is blank or 0 (zero) and means that the corresponding object option does not appear on the user's Main Menu. The highest possible level is 9 and includes all commands on Levels 1-9;
- **Command Level Reminder:**
This window tells you which commands belong to which level. The abbreviations correspond to the valid abbreviations of the respective commands as follows:

Level 1 Abbreviation	Function
L	LIST
B	BROWSE
ZP	ZAPS
XT	EXTERNS
I	INFORMATION
ET	EXTENTS
DI	DIFFERENCE
DF	DEFINITION
RU	RUN
XE	EXECUTE
EX	EXPORT
OT	OUTPUT
FR	FORMAT
DW	DOWNLOAD
CR	COMPARE
BPSTAT	BPSTAT
DEFB	DEFBS2PROF (BS2000/OSD general defaults)
DEFS	DEFSUBPROF (BS2000/OSD submit defaults)

Level 2 Abbreviation	Function
E	EDIT
R	RENAME
SB	SUBMIT
PL	PLAY
PR	PRINT
CP	COPY
A	ALLOCATE
CT	CATALOG
U	UNCATALOG
FL	FOLLOW
ST	STATUS
CC	Condition codes
RL	RELEASE
HL	HOLD
DS	DESCRIPTION
UP	UPLOAD

Level 3 Abbreviation	Function
D	DELETE
PG	PURGE
CH	CHANGE
NSPR	Natural ISPF parameters
GENN	Generate command processor

Level 4 Abbreviation	Function
CM	COMPRESS
OPER	Issue operator commands

You can update an authorization by modifying the Main Menu name and/or modifying the authorization level for one or more classes.

For example, if you type **0** in the authorization level field for the Natural class, the user cannot access Natural objects; this option will not appear on his Main Menu when he logs on, and he cannot use direct commands for Natural objects.

If you type **1** in the authorization level field for the SYSOUT class, the user can perform browse functions on job SYSOUTs, but he cannot perform any other operations. Whether the JOBS option appears on that user's Main Menu depends on the system authorization level for the option (see the section Menu Maintenance).

If an option does not appear on the user's Main Menu but the user is authorized for some functions on the object type, he or she can use appropriate direct commands.

To save user authorizations, issue the END command (usually assigned to PF3) after having modified any value on the screen.

Below is an example of a default authorization table (*):

```

----- EDIT USER * -----
COMMAND ==>

      Authorization Class      Level      Main Menu      ==> NULL
Natural programming          ==>
PDS Maintenance              ==>
Data Sets Maintenance        ==>      + --- COMMANDS LEVEL REMINDER ---- +
SYSOUTS                      ==>      ! Lvl      Command Abbreviation      !
System info                  ==>      ! --- ----- !
Active jobs                  ==>      ! 1 - L,B,ZP,XT,I,ET,DI,DF,RU,XE      !
Operator commands           ==>      !      EX,OT,FR,DW,CR,BPSTAT          !
NSPF Administrator          ==>      ! 2 - E,R,SB,PL,PR,CP,A,CT,U,FL      !
PANVALET                    ==>      !      ST,CC,RL,HL,DS,UP              !
LIBRARIAN                   ==>      ! 3 - D,PG,CH,NSPR,GENN              !
USER defined                 ==>      ! 4 - CM,OPER                        !
                              !                                     !
                              !                                     !
                              !                                     !
                              +-----+

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help Split End  Suspe Rfind Rchan Up    Down Swap Left Right Curso
    
```

Explanation

Since all authorization levels are blank (zeroes), undefined users who do not belong to a prefix group cannot execute any secured function, and they will be presented with menu NULL when they log on to Natural ISPF (see the section Menu Maintenance for an example of menu NULL).

Notes:

1. Functions on the user's profile, the user workpool and recovery files are not secured.
2. If you leave the above screen by issuing an END command or by pressing PF3 without having modified any of the values on the screen, the authorization table of the individual user specified will not be updated. From this scenario, you cannot even be sure if the authorization table displayed has been defined for the user explicitly or if it has been inherited from a prefix definition or from a (Natural Security-based) user group definition.
To be certain that a user has an individual authorization table, look at the list of Natural ISPF users: all users with an individual authorization table will be listed with Auth next to user ID and last access date.

Maintaining User Definitions with Function Commands

Natural ISPF users are separate objects within Natural ISPF with object type USR. This means that you (and other authorized users) can maintain user definitions with function command syntax entered from any system screen.

The available function commands are:

Command	Object Parameter Syntax
LIST	user-id
EDIT	user-id TYPE=t
DELETE	user-id TYPE=t
COPY	user-id TYPE=t,target-user-id,REP

where:

Parameter	Function
user-id	Can be a specific user ID, a prefix notation or the default definition (*).
t	Identifies the user characteristic to be maintained. Possible options: A User authorization table B BS2000/OSD defaults C User magic characters D User defaults E User Editor profile K User PF-key assignments L User short names for libraries N Natural defaults O Editor color definition Y Layout of object lists (DELETE and COPY only) * Whole profile (DELETE and COPY only)
target-user-id	New user definition to be created or replaced.
REP	Specify to replace target definition, if it already exists.

Note:

If you issue any of the commands without parameters, Natural ISPF prompts you for valid values.

If you issue any of the above commands from outside the user maintenance facility, you must specify the object-type parameter USR after the command keyword.

Example: EDIT

The command:

```
EDIT USR SAG* TYPE=K
```

displays the PF key table assigned to all users with prefix SAG. You can modify this table. The update is performed every time you press the ENTER key, provided the screen contains valid update data. You can leave the screen with the command END (usually assigned to PF3).

Example: DELETE

The command:

```
DELETE USR *
```

deletes the default definition (*). Note that without a default definition, any undefined user for whom there is no prefix definition receives full authorization at logon.

Example: COPY

The command:

```
COPY USR MBE TYPE=Y
```

can be used to copy the layout definition of object lists from one user to another. The following window opens:

```
+-----+
!                                     !
! Copy User MBE           Section: LAYOUT      !
! to User                                     !
! Replace NO                                     !
! Enter to perform , PF3 to exit              !
+-----+
```

Enter the user ID of the recipient user in the to User input field to copy the layout definitions from user MBE. All list layouts defined by user MBE are copied. For details on list layout, see the section LAYOUT Command for Lists in the section Useful Features of the Natural ISPF User’s Documentation.

Example: LIST

The command:

```
LIST USR *
```

lists all Natural ISPF users, for example:

```

LIST-USR:* ----- Row 0 of 15 - Columns 010 076
COMMAND====>                                SCROLL====> CSR
  USER          DATE      DEFINED CHARACTERISTICS
** ***** top of list *****
  *      *Edited          Auth,Edit,Default,Char,
  BRY          94/12/13  Auth,Edit,Key,Natural,
  GW           94/12/08
  HHH          Edit,
  JWO          94/12/13  Auth,Edit,Default,Char,Key,Color,Natural,Lib,
  JWOAB        Default,
  MAK          94/11/12  Default,Key,
  MSE          94/12/09
  MZC          94/12/13  Auth,Edit,Default,Char,Key,Layout,Natural,Lib,
  MZCC         94/10/27  Auth,Edit,Default,Char,Key,Lib,
  SML          94/12/09
  UHE          94/10/11  Auth,
  WHE          94/10/17
  WKK          94/12/01
  WOS          94/11/23
** ***** bottom of list *****

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Help Split End Suspe Rfind Rchan Up      Down Swap Left Right Curso
    
```

The list contains all users who have logged on Natural ISPF, as well as all defined user definitions (authorization tables and profile sections).

Meaning of the column headings:

Column	Meaning
USER	User ID, user prefix or *. Each user appears in the list after first logon.
DATE	Date the user logged on to Natural ISPF last.
DEFINED CHARACTERISTICS	Characteristics which are specifically defined. Possible values: Auth User authorization table BS2 User BS2000/OSD defaults (general and submit) Char User magic characters Color User color definitions Default User system defaults Edit User Editor profile Key User PF-key table Layout User layout for lists Lib User library short names Natural User Natural defaults For any characteristic not in the list, the user is assigned the values defined for the appropriate prefix definition or, if no prefix matches the user ID, the values defined for the default definition (*).

A user characteristic attains **defined** status when you create or modify it for the user ID, or when a user modifies any characteristic in his or her user profile while working with Natural ISPF.

You can select any user or definition from the list with the **E** (EDIT), **CP** (COPY) or **D** (DELETE) line command entered in the input field preceding the user ID. The EDIT option allows you to modify the user’s command authorization table as described above, and any profile setting as described in the section Profile Maintenance in the

Natural ISPF User's Documentation.