

eXtended Productivity Facility

User's Guide
Version 6.1.0

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1. XPF Gateway Dialog

This document will demonstrate how to start and use the XPF maintenance dialog. The user should possess basic knowledge of TSO/ISPF applications.

1.1. Starting the Dialog

The dialog can be started after a successful logon with XPF. Use the program XPFEICTL to start the ISPF dialog.

The program can be called using:

- TSO XPFEICTL
- The ISPF Select function
- An ISPF command table entry with the ISPF Select function
- It is recommend that the ISPF NEWAPPL parameter is always used in order to redisplay the last entered user values
- e.g. "Select PGM(XPFEICTL) NEWAPPL(XPF)"

1.2. Primary Selection Dialog

Screen 1: Primary Selection Dialog

The screenshot displays the 'Gateway Selection' dialog with the following sections:

- Menu:** Option ==>
- Action:** = (<N>ew, rowse, <E>dit, <C>opy, <M>ove, <D>elete, <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og, Display <V>ariables, <G>ate or <X>PF Statistics)
- Target Information:** Gateway: _____, Gatelib: _ or _____, Dataset: _____
- Available Gatelibs:**

Global:	L	SYS4.XPF.GATELIB
System:	S	SYS4.XPFADCD.SYSGATE
Group:	G	&GATENAME..XPF.GATELIB
User:	U	GZU.XPF.GATELIB
- Copy from information:** Gateway: _____, Gatelib: _ or _____, Dataset: _____

Annotations 1-4 point to the Action definition, Target Information, Available Gatelibs, and Copy from information sections respectively.

1. The required action is determined through the entered value. The option value is shown on the right hand side of this section between the "<" and ">" signs of the corresponding action.
2. The "Target Information" specifies the name of the Gateway and the Gatelib which needs to be processed. Specify either a Gatelib Identifier (see section 3) or an

explicit Gatelib dataset. The requested action determines if this value is required.

3. All site defined Gatelibs are displayed in this section. These libraries are specified in the XPF-Parmlib. The Gatelib Identifier is the character which is displayed in the first column. This value can be specified in Target and Source sections.
4. The "Source Information" determines which Gateway and Gatelib are used as the source for the Copy, Move and Rename actions. Specify either a Gatelib Identifier (see section 3) or an explicit Gatelib dataset.

The following table lists all normal action codes. Detailed information for each action follows later.

Action	Description
New	Create a new Gateway in the specified Target Gatelib
Browse	Display the requested Gateway in the specified Target Gatelib
Edit	Edit the requested Gateway in the specified Target Gatelib
Copy	Copy the specified Gateway from the Source to the Target Gatelib. A new Gateway and/or Gatelib name may be specified
Move	Move the specified Gateway from the Source to the Target Gatelib
Delete	Delete the requested Gateway in the specified Target Gatelib
Process	Start or remove a Gateway from the cache
Select	Display all or a list of Gateways matching the pattern located in the specified Gatelib
Rename	Rename the requested Gateway in the specified Target Gatelib. The Source and Target Gatelibs must be the same

Table 1: Selection Dialog - Normal action codes

The following table lists all special action codes. Detailed information for each action follows later.

Action	Description
Reset	Reset the internal XPF statistics for a given Gateway (use with extreme caution)
Log	Write all or a list of Gateways matching the pattern located in the specified Gatelib to Sysout
Display Variables	Display all available XPF and user defined variables
Display Gateway Statistics	Display a list of Gateways located within the XPF cache
Display XPF Statistics	Display XPF runtime information (only required by improvIT Software Innovations support)
Internal	Dump the XPF control blocks. This can potentially take a long time (only required by improvIT Software Innovations Support)

Table 2: Selection Dialog - Special action codes

1.3. Creating New Gateways

```

Menu
-----
Option ==>

                                Gateway Selection

                                Userid - GZU
                                Prefix - **NONE**

Action:          n      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                        <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                        Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:        testappl
GateLib:        u  or
Dataset:        _____

Available Gatelibs
Global:         L      SYS4.XPF.GATELIB
System:         S      SYS4.XPFADCD.SYSGATE
Group:          G      &GATENAME..XPF.GATELIB
User:           U      GZU.XPF.GATELIB

Copy from information
Gateway:        _____
GateLib:        _  or
Dataset:        _____

```

Screen 2: Creating new Gateways

1. The required action character “N” is entered as a new Gateway needs to be defined.
2. The name of the new Gateway is “TESTAPPL” and it should be created in the User Gatelib. An error message is displayed, if the Gateway already exists in the specified Gatelib.

Note: The same information is required by Edit and Browse.

1.3.1. Base Gateway Information

```

Menu
-----
Create Gateway TESTAPPL in Gatelib GZU "RCHANGE " is not active
Option ==> _

Comment: _____ Last changed by: _____
User: _____
on: _____

Application Values
Module Name: _____
Module Type: _ (<P>anel, <C>md, P<g>m, <T>so)
Options: _____

ISPF Values
New ApplId: _____ ('', applid, YES, POOL)
Screen Name: TESTAPPL

Advanced
ISPF Options: _
XPF Options: _

Allocation Information
  Cmd  DDName  Dataset Name
  1  _  CLIST  GZU.ISPF.CLIST
  2  _  EXEC  GZU.ISPF.EXEC
  3  _  PANELS  GZU.ISPF.PANELS
  4  _  MSGS  GZU.ISPF.MSGS
  5  _  SKELS  GZU.ISPF.SKELS
  6  _  TABLES  GZU.ISPF.TABLES
  7  _  LOAD  GZU.ISPF.LOAD
  8  _  TABOUT  GZU.ISPF.TABOUT
  9  _  _____

```

Screen 3: New Gateway Information

1. The “Application Values” section is used to specify the name and type of the program, command, ISPF panel or TSO command processor to be started. Application options may also be specified. The option string can contain text, XPF variables and a user parameter (contained in special variable &OPTION). This value is passed to XPF when the application is started.
2. The “ISPF Values” section determines the basic options used when starting programs, commands and ISPF panels. Only the base options are shown in this dialog. Other ISPF options are maintained using advanced options dialog (see section 3). These entry fields are deactivated if the application type is “T”.
3. Enter any character in the required “Advanced” options field to display the corresponding dialog. This is only performed if all data entered in this dialog is valid.
4. The “Allocation Information” section is used to define all datasets that an application needs to execute. Up to 250 datasets may be entered. All datasets must exist. Member names and XPF variables can be used. The internal TSO & ISPF DDNames use generic values. The following line commands are available: I(nsert), D(elete), R(epeat), E(dit), B(rowse), C(opy) and M(ove). More than one dataset may be allocated to a single allocation by using the DDName “+”. If the first character of the DDName is “*” then the entry is treated as a comment.

Note: Use the Cancel command to exit without saving any changes.

1.3.2. Advanced ISPF Gateway Options

```

Menu
-----
0  Option ==>

                                Advanced ISPF Gateway Options

  ISPF Values
  Start Command
  Name: _____
  Truncation Length:  _
  Parameters:         _      (<B>asic, <F>ull, <N>one)
  Popup Window:      N      (<Y>es, <N>o)
  Suspend:           N      (<Y>es, <N>o)
  Program Lang:      _____ (APL, CREX, Blank)
  Mode:              D      (<D>efault, <L>ine, <F>SCR)
  Barrier:           D      (<D>efault, <Y>es)
  Nest:              D      (<D>efault, <Y>es)

  XPF Options:

  Allocation Information
  Cmd  DDName  Dataset Name
  1  _  CLIST  GZU.ISPF.CLIST
  2  _  EXEC  GZU.ISPF.EXEC
  3  _  PANELS  GZU.ISPF.PANELS
  4  _  MSGS  GZU.ISPF.MSGS
  5  _  SKELS  GZU.ISPF.SKELS
  6  _  TABLES  GZU.ISPF.TABLES
  7  _  LOAD  GZU.ISPF.LOAD
  8  _  TABOUT  GZU.ISPF.TABOUT
  9  _  _____

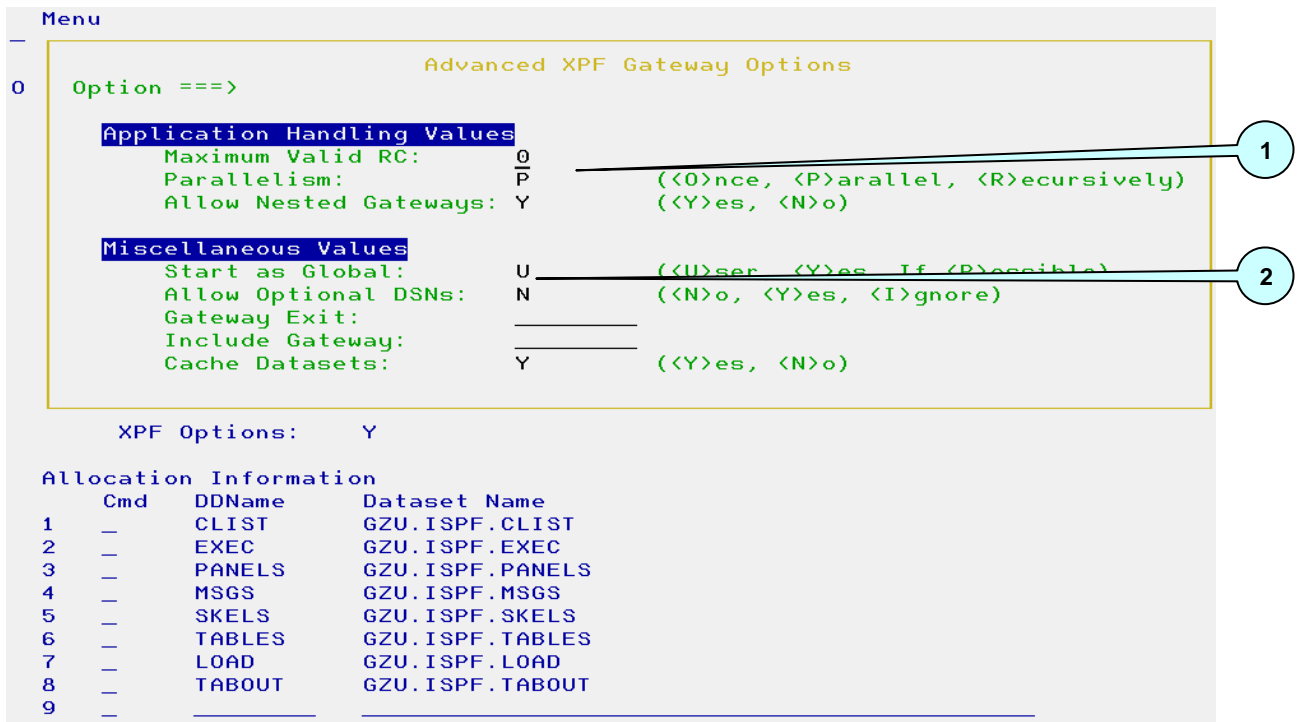
```

Screen 4: Advanced ISPF Gateway Options

The "ISPF Values" section in this dialog controls the advanced ISPF options used when starting programs, commands and panels. The field "Start Command Name" defines the name which can be used to start this application anywhere within ISPF (if the function has been activated in XPF parameters). ISPF needs to be restarted for this value to take effect. The required ISPF system parameters to be passed to the routine can also be specified.

See the IBM ISPF documentation for a full explanation of all other parameters.

1.3.3. Advanced XPF Gateway Options



Screen 5: Advanced XPF Gateway Options

1. Use the "Application Handling Values" to specify how many instances of the application may be active simultaneously and the highest valid return code. A message is displayed if the application return code is higher than the allowed value. Before activating the Recursive option, make sure that the application supports this feature. Nested application calls may also be suppressed.
2. The "Miscellaneous Values" control how the Gateway is loaded, started and handled after the application has completed. Use this section to include datasets from other Gateways. If the included Gateways include other Gateways, then these will all be processed. The found datasets will be merged automatically. An initialisation/termination exit can also be defined to e.g. create temporary datasets. This exit is called when the Gateway is loaded from the repository and removed from the cache. If "Allow Optional Datasets" is enabled and XPF finds an unavailable dataset during the Gateway allocation process, then user may be prompted or the dataset automatically bypassed. "Cache Dataset" should generally not be changed and must not be changed for native TSO applications.

1.4. Editing and Browsing Gateways

```

Menu
-----
Option ==>      Create Gateway TESTAPPL in Gatelib GZU.XPF.GATELIB

Comment:        Test application using XPF                               Last changed by:
                                                         User:
Application Values
Module Name:    TESTAPPL
Module Type:    C                (<P>anel, <C>md, P<g>m, <T>so)
Options:        ID(&U) &OPTION
ISPF Values
New ApplId:     TEST                ('', applid, YES, POOL)
Screen Name:    TESTAPPL
Advanced
ISPF Options:   -
XPF Options:    -
Allocation Information
  Cmd  DDName  Dataset Name
  1    =      CLIST   GZU.ISPF.CLIST
  2    -      +       GZU.ISPF.EXEC
  3    -      PANELS  GZU.ISPF.PANELS
  4    -      MSGS    GZU.ISPF.MSGS
  5    -      _____
  6    -      _____
  7    -      _____
  8    -      _____
  9    -      _____
    
```

Screen 6: Edit and Browse Gateway Information

1. This entry field must contain a comment.
2. In this example a REXX exec called “TESTAPPL” needs to be started. An option string is also specified. The XPF variable &U will be replaced with the current Userid and &OPTION will contain any supplied data from the XPF Gateway startup subparameter OPTION (see chapter “XPF Command Interface”).
3. The ISPF application id “TEST” is to be used when starting the exec. This application id can also contains XPF variables. The total length of the substituted string may not exceed 4 bytes. A screen name is also defined. This is displayed when the ISPF command “swap list” is active.
4. Four datasets are required by the application. Two datasets need to be allocated to the DDName Clist. Additionally ISPF panels and messages are required. The first two datasets use the XPF variable “&U” (Userid) as a high level qualifier.

The following generic DDNames are available: Clist, Exec, Panels, Msgs, Skels, Tables, Tabout, Load, FTOut, IImage & TSOHelp. These are specially processed according to the runtime environment.

Special dataset names are: Sysout, Terminal, Dummy and External. A class may be specified for Sysout (e.g. “SYSOUT T”). External allows XPF to verify the initial allocation without being responsible for the allocation process.

1.4.1. Advanced ISPF Gateway Options

```

Menu
-----
0  Option ==>

                                Advanced ISPF Gateway Options

  ISPF Values
  Start Command
  Name:                        TESTAPPL
  Truncation Length:          5
  Parameters:                  B -      (<B>asic, <F>ull, <N>one)
  Popup Window:                N -      (<Y>es, <N>o)
  Suspend:                      N -      (<Y>es, <N>o)
  Program Lang:                _____ (APL, CREX, Blank)
  Mode:                          D -      (<D>efault, <L>ine, <F>SCR)
  Barrier:                       D -      (<D>efault, <Y>es)
  Nest:                           D -      (<D>efault, <Y>es)

  XPF Options:

  Allocation Information
  Cmd  DDName  Dataset Name
  1  -  CLIST  GZU.ISPF.CLIST
  2  -  +      GZU.ISPF.EXEC
  3  -  PANELS GZU.ISPF.PANELS
  4  -  MSGS   GZU.ISPF.MSGS
  5  -  _____
  6  -  _____
  7  -  _____
  8  -  _____
  9  -  _____
  
```

Screen 7: Advanced ISPF Gateway Options

A “Startup Command Name” TESTAPPL was defined. This is available after the next logon or ISPF restart. The remaining “ISPF Values” were not altered. See the IBM ISPF documentation for a full explanation of these parameters.

1.4.2. Advanced ISPF Gateway Options

```

Menu
-----
0  Option ==>

                                Advanced XPF Gateway Options

Application Handling Values
Maximum Valid RC:                4
Parallelism:                     0  ((<0>nce, <P>arallel, <R>ecursively)
Allow Nested Gateways:           Y  ((<Y>es, <N>o)

Miscellaneous Values
Start as Global:                 U  ((<U>ser, <Y>es, If <P>ossible)
Allow Optional DSNs:             N  ((<N>o, <Y>es, <I>gnore)
Gateway Exit:                    _____
Include Gateway:                 _____
Cache Datasets:                  Y   ((<Y>es, <N>o)

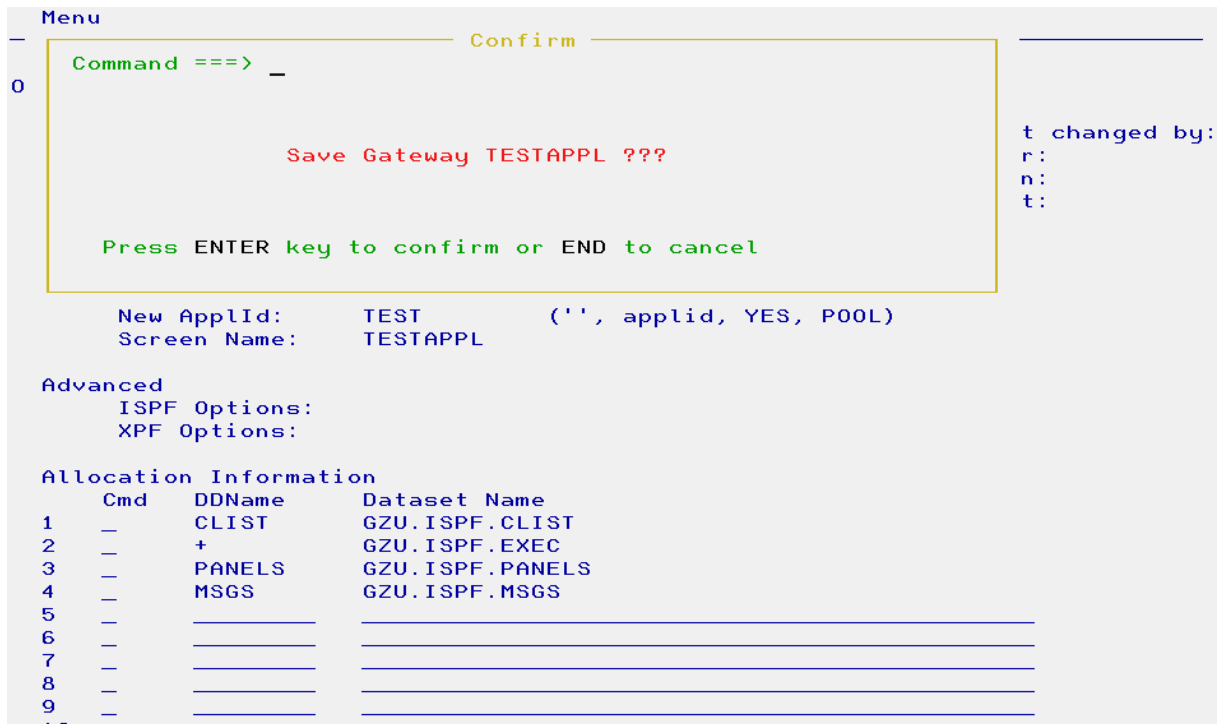
XPF Options:                      Y

Allocation Information
  Cmd  DDName      Dataset Name
  1    _         CLIST      GZU.ISPF.CLIST
  2    _         +          GZU.ISPF.EXEC
  3    _         PANELS     GZU.ISPF.PANELS
  4    _         MSGS       GZU.ISPF.MSGS
  5    _         _____
  6    _         _____
  7    _         _____
  8    _         _____
  9    _         _____
    
```

Screen 8: Advanced XPF Gateway Options

1. The value for “Maximum Valid RC” was changed from 0 to 4. XPF will therefore only display a termination message if the application completes with a return code greater 4. “Parallelism” is set to “Once”. As a result the application may only be active in one ISPF split screen at any one time.
2. The default “Miscellaneous Values” were not changed. For the implications of activating the “Start as Global” parameter, see the chapter “XPF Gateway Isolation”.

1.4.3. Edit Confirmation



Screen 9: Edit Confirmation

The user must confirm that the edited Gateway is to be saved in the Gatelib prior to exiting the maintenance dialog.

1.5. Copy, Rename and Move

```

Menu
-----
Option ==>

Gateway Selection      "RCHANGE " is not active

Userid - GZU
Prefix - **NONE**

Action:                C      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                             <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                             Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
-----
Gateway:  TESTNEW
Gatelib:  U  or
Dataset:  _____

Available Gatelibs
-----
Global:   L      SYS4.XPF.GATELIB
System:   S      SYS4.XPFADCD.SYSGATE
Group:    G      &GATENAME..XPF.GATELIB
User:     U      GZU.XPF.GATELIB

Copy from information
-----
Gateway:  TESTAPPL
Gatelib:  U  or
Dataset:  _____

```

Screen 10: Copy, Rename and Move

1. Enter "C" to copy a Gateway from one Gatelib to another or within the same Gatelib using a different target name. Action "R" allows a Gateway to be renamed within the same Gatelib. Use "M" to move Gateways between Gatelibs.
2. Use the section "Target Information" to specify the new Gateway and/or Gatelib name.
3. The "Source Information" contains the name of the Gateway and/or Gatelib which is the source for the copy, rename or move operation.
4. After supplying all the required information and verification was successful, the user is prompted to confirm the required action.

Note: Do not copy, rename or move Gateways using normal TSO/ISPF facilities, otherwise the Gateway may become unusable (e.g. when the name is changed). When the XPF dialog is used, a logical copy is performed! Otherwise the batch interface must be used.

1.6. Delete Gateway

```

Menu
-----
Option ==>

Gateway Selection          Enter required field
Userid - GZU
Prefix - **NONE**

Action:      D      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                   <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                   Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:      TESTNEW
GateLib:      U or
Dataset:      _____

Available Gatelibs
Global:      L      SYS4.XPF.GATELIB
System:      S      SYS4.XPFADCD.SYSGATE
Group:       G      &GATENAME.XPF.GATELIB
User:        U      GZU.XPF.GATELIB

Copy from information
Gateway:      _____
GateLib:      _ or
Dataset:      _____

```

Screen 11: Delete Gateway

1. Enter "D" to delete a Gateway.
2. Use the section "Target Information" to specify the name of the Gateway to delete. The GateLib must also be supplied.
3. After supplying all the required information and verification was successful, the user is prompted to confirm the required action.

Note: As a safety measure, it is not possible to delete the Gateway with which the current logon was performed

1.7. Process Gateway

```

Menu
-----
Option ==>

Gateway Selection          Enter required field
-----

Action:                    P      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                                <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                                Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
-----
Gateway: TESTNEW
GateLib:  or
Dataset:  _____

Available Gatelibs
-----
Global:  L      SYS4.XPF.GATELIB
System:  S      SYS4.XPFADCD.SYSGATE
Group:   G      &GATENAME..XPF.GATELIB
User:    U      GZU.XPF.GATELIB

Copy from information
-----
Gateway:  _____
GateLib:  - or
Dataset:  _____

```

Screen 12: Process Gateway

1. Enter "P" to process a Gateway. The Gateway can then be started or explicitly removed from the XPF cache. This is required if changes have been made in the repository and the Gateway was already loaded in the XPF cache. This can also be performed by using the XPF Command Interface.
2. Use the section "Target Information" to specify the name of the Gateway to process. The Gatelib is optional. If not specified, then the normal XPF search sequence applies. Otherwise the Gateway is explicitly loaded from the supplied Gatelib. If the Gateway is already in the XPF cache, then the Gatelib value is ignored.

1.7.1. Gateway Processing Options

```

Menu
-----
Menu
-----
Option ==>
-----
Function:      _START      ((S)tart, <Rem>ove, <Ref>resh)
-----
Start Information
Option:
Global:      NO          ((Y)es, <N>o)
ISPF Test:  NO          ((Y)es, <N>o)
-----
Available Gatelibs
Global:      L          SYS4.XPF.GATELIB
System:     S          SYS4.XPFADCD.SYSGATE
Group:      G          &GATENAME..XPF.GATELIB
User:       U          GZU.XPF.GATELIB

Copy from information
Gateway:     _____
GateLib:    _ or _____
Dataset:    _____
    
```

1

2

Screen 13: Process Gateway

1. Specify whether the Gateway is to be started, removed from the cache or refreshed prior to restarting. If the Gateway is to be removed or refreshed, then the application cannot be active in any session.
2. Use "Start Information" to pass parameters to the application. These will only be passed to the application if the Gateway definition uses the &OPTION variable in the "Options" field. The "Global" option may also be selected (see Chapter "XPF Gateway Isolation"). If "ISPF Test" is activated, then IBM ISPF Dialog Test is used to start the application.

1.7.2. Gateway Processing Results

```

Menu
-----
Option ==>

                                     Gateway Selection

                                     Userid - GZU
                                     Prefix - **NONE**

Action:          P      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                       <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                       Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:        TESTNEW
GateLib:        _ or
Dataset:        _____

Available Gatelibs
Global:         L      SYS4.XPF.GATELIB
System:         S      SYS4.XPFADCD.SYSGATE
Group:          G      &GATENAME..XPF.GATELIB
User:           U      GZU.XPF.GATELIB

Copy from information
Gateway:        _____
GateLib:        _ or
Dataset:        _____

*** XPF0089E - Application TESTNEW completed with RC: 20 (XPFEGACT) ***

```

Screen 14: Process Gateway

A completion message is displayed after the application has terminated. *It contains the return code from the application.*

The described processing can also be performed by using the XPF Command Interface.

1.8. Select Gateway

```

Menu
-----
Option ==>

                                Gateway Selection      "RCHANGE " is not active
                                Userid - GZU
                                Prefix - **NONE**

Action:          S      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                        <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                        Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:        X*
GateLib:        L or
Dataset:        _____

Available Gatelibs
Global:         L      SYS4.XPF.GATELIB
System:         S      SYS4.XPFADCD.SYSGATE
Group:          G      &GATENAME.XPF.GATELIB
User:           U      GZU.XPF.GATELIB

Copy from information
Gateway:        _____
GateLib:        _ or
Dataset:        _____
    
```

```

Menu
-----
Option ==> _

                                Gateway Selection
                                Userid - GZU
                                Prefix - **NONE**

Gateways available in Gatelib: SYS4.XPF.GATELIB

- XIP          - XITISPF      - XPFGATE      - XPFISPF      - XPFTST
- XRS454       - XRS460        - XRS462       - XRS480       - XRS490D
- XRS490I     - XRS490P       - XSMMAINT     - XSM230I      - XSM240I
- XSM242I     - XSM260I

Gateway:        _____
GateLib:        _ or
Dataset:        _____
    
```

Screen 15: Select Gateway

1. Enter "S" to list all Gateways in a specified Gatelib.
2. Use the section "Target Information" to specify the name of the Gatelib to process. If a Gateway name is entered, then this value will be used as a generic prefix and only matching Gateway names are displayed.
3. After confirmation, the Gateways in the Gatelib are displayed. Gateways can be directly edited (using "E"), browsed (using "B"), deleted (using "D") or processed (using "P"). Any other value in front of the Gateway entry will result in the name and the action character being copied to the XPF Primary dialog.

1.9. Reset Gateway

```

Menu
-----
Option ==>
                                     Gateway Selection
Userid - GZU
Prefix - **NONE**

Action:      T  (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
-----
Gateway:    TESTAPPL
GateLib:    U or
Dataset:    _____

Available Gatelibs
-----
Global:    L      SYS4.XPF.GATELIB
System:    S      SYS4.XPFADCD.SYSGATE
Group:     G      &GATENAME..XPF.GATELIB
User:      U      GZU.XPF.GATELIB

Copy from information
-----
Gateway:    _____
GateLib:    - or
Dataset:    _____

Menu
-----
Command ==>  _
Confirm
-----
Reset Session Statistics for Gateway TESTAPPL ???
This action is EXTREMELY risky and must only be carried
out if recovery has failed. Press PF1 before continuing.

Press ENTER key to confirm or END to cancel

Gateway:    TESTAPPL
GateLib:    U or
Dataset:    _____

d - GZU
x - **NONE**
ve, <D>elete,
), <L>og,
Statistics)
    
```

Screen 16: Reset Gateway

1. Enter "T" to reset the internal session statistics for a Gateway. This will only change values in the runtime environment and not in the repository.
2. Use the section "Target Information" to specify the name of the Gateway to process. If a GateLib is entered, then this is ignored.
3. After supplying all the required information and verification was successful, the user is prompted to confirm the required action.

Note: The Reset function should not normally be used. Only use it if XPF was unable to recover the ISPF session after an application abend. In all other cases, it can destabilise the TSO/ISPF environment. The safest method to continue after automatic XPF recovery has failed is to perform a new TSO logon !



1.10. Log Gateways

```

Menu
-----
Option ==>

                                Gateway Selection

                                Userid - GZU
                                Prefix - **NONE**

Action:      L      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                   <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                   Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:    X*
GateLib:    L or
Dataset:    _____

Available Gatelibs
Global:     L      SYS4.XPF.GATELIB
System:     S      SYS4.XPFADCD.SYSGATE
Group:      G      &GATENAME..XPF.GATELIB
User:       U      GZU.XPF.GATELIB

Copy from information
Gateway:    _____
GateLib:    _ or

*** XPF0142D - 17 Gateway description(s) written to Sysout DDNAME XPFDLIST
(XPFEGSHW) ***
    
```

Screen 17: Log Gateways

1. Enter "L" to list all Gateways in a specified Gatelib.
2. Use the section "Target Information" to specify the name of the Gatelib to process. If a Gateway name is entered, then this value will be used as a generic prefix and only matching Gateway names are displayed.
3. After processing a status message is displayed. Gateways matching the entered name and the corresponding description text are written to the XPF list file (DDName XPFDLIST).



1.11. Display System Variables

```

Menu
-----
Option ==>                               Gateway Selection

Userid - GZU
Prefix - **NONE**

Action:      V      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                   <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                   Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:      _____
GateLib:      - or _____
Dataset:      _____
    
```

1

```

Menu
-----
Option ==> _      Display Available User Variables

Userid - GZU
Prefix - **NONE**

Num. Variable name
Variable value
1  SYSCONE
  1A
2  SYSNAME
  ADCD
3  SYSID
  ADCD
4  USERID
  GZU
5  DRACFGRP
  IMPROVIT
6  GATENAME
  &GATENAME
    
```

2

Screen 18: Display System Variables

1. Enter “V” to display all available XPF variables. These are all defined in the XPF parmlib.
2. The variable names and their corresponding values are displayed. The variable “Gatename” contains the value “&GATENAME” as this can only be resolved when a Gateway is processed.

1.12. Display Cached Gateways

Menu

Option ==>

Userid - GZU
Prefix - **NONE**

Action: G (<N>ew, rowse, <E>dit, <C>opy, <M>ove, <D>elete, <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og, Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information

Gateway: _____
GateLib: _ or _____
Dataset: _____

Menu

Option ==> _

Userid - GZU
Prefix - **NONE**

R	Num	Gateway	Used-Cnt	Load-Env	DD-Prf	DD-Cnt	Load-Date	Load-Time	Loaded-From
			Act-Date	Act-Time	Act-Cnt	Act-Sessions	Numbers	(Recursion)	
-	1	XPFISPF	1	0	00001	9	20120618	09:27:14	SYS4.XPF.GATELIB
			20120618	09:27:14	1	0(1)			
-	2	XPFGATE	1	1	00002	0	20120618	09:30:13	SYS4.XPF.GATELIB
			20120618	09:30:13	1	1(1)			
-	3	TESTAPPL	1	1	00003	3	20120618	09:33:03	GZU.XPF.GATELIB
			20120618	09:33:05	0	0			

Screen 19: Display Cached Gateways

1. Enter “G” to display all Gateways currently loaded in the cache
2. Various Gateway runtime statistics are displayed. Most of the values are not for end user use. Values which are useful for the end user are:
 - o When was the Gateway loaded
 - o From which Gatelib was the Gateway loaded
 - o In which sessions is the application active (with recursion count), Session “0” is native TSO

A displayed Gateway may be removed from the cache by entering an “R” in front of the entry. This can only be performed if the application is no longer active (i.e. value “Act-Cnt” = 0).

1.13. Display Runtime Data

1

```

Menu
-----
Option ==>

                                Gateway Selection

                                Userid - GZU
                                Prefix - **NONE**

Action:          X      (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                        <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                        Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:      _____
GateLib:     -   or
Dataset:     _____
    
```

2

```

Menu
-----
Option ==> _

                                Display Site and Runtime Data

                                Userid - GZU
                                Prefix - **NONE**

Num.  Name      Value
  1   RUNTIME   I
  2   PDELIM
  3   EXECNAME.0 XPFEGACT
  4   TRACE_TYP 0
  5   LOAD_CNT  3
  6   APPL_1ST_START 1
    
```

Screen 20: Display Runtime Data

1. Enter "X" to display all XPF internal runtime data values.
2. The displayed variables and their values are not designed for end user use. They are only required by improvIT Software Innovations in case of an internal XPF error.

1.14. Online Help

```

Menu
-----
Edit Gateway TESTAPPL in Gatelib GZU.XPF.GATELIB
Option ==>

Comment:          Test application using XPF                      Last changed by:
                                                           User: GZU
Application Values
Module Name:      TESTAPPL                                       on: 15/06/2012
Module Type:      C          (<P>anel, <C>md, P<g>m, <T>so)      at: 10:57:20
Options:          ID(&U) &OPTION

ISPF Values
New ApplId:       TEST          ('', applid, YES, P00L)
Screen Name:      TESTAPPL

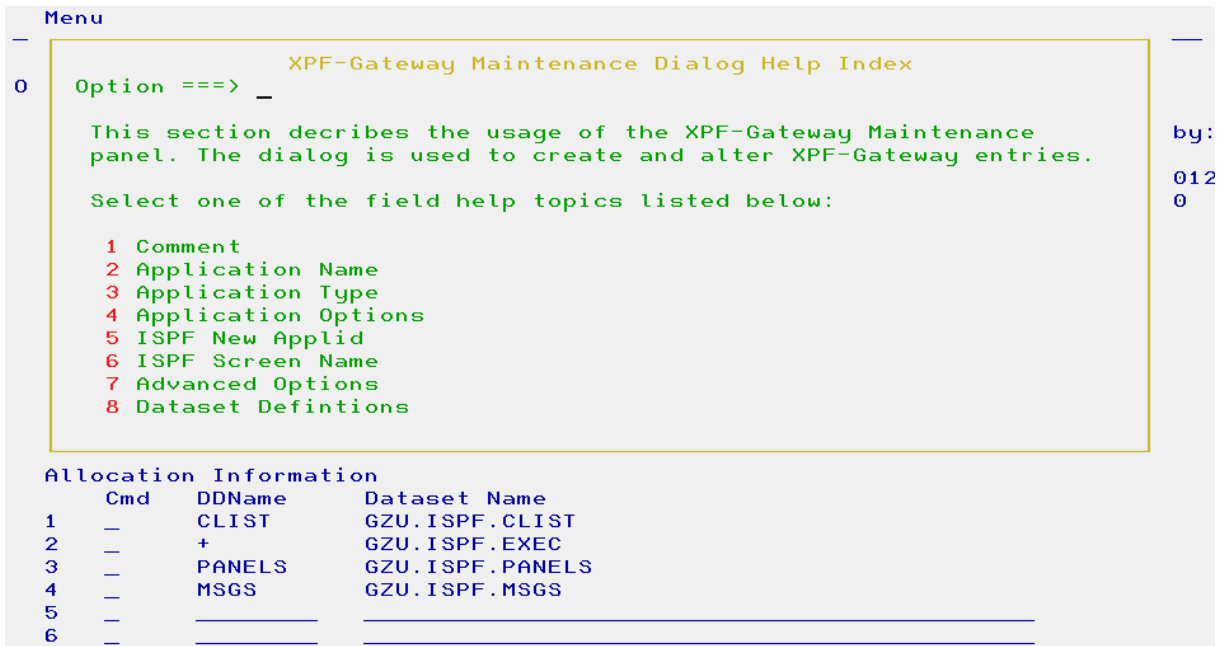
Advanced
ISPF Options:
XPF Options:

Allocation Informa
  Cmd  DDName
 1  _   CLIST
 2  _   +
 3  _   PANELS
 4  _   MSGS          GZU.ISPF.MSGS
 5  _   _____
 6  _   _____

Gateway Entries
Option ==> _
ISPF Screen Name Specify text name to be used
                  as a logical ISPF screen name
PF7/Previous      PF8/Next      I/Index
    
```

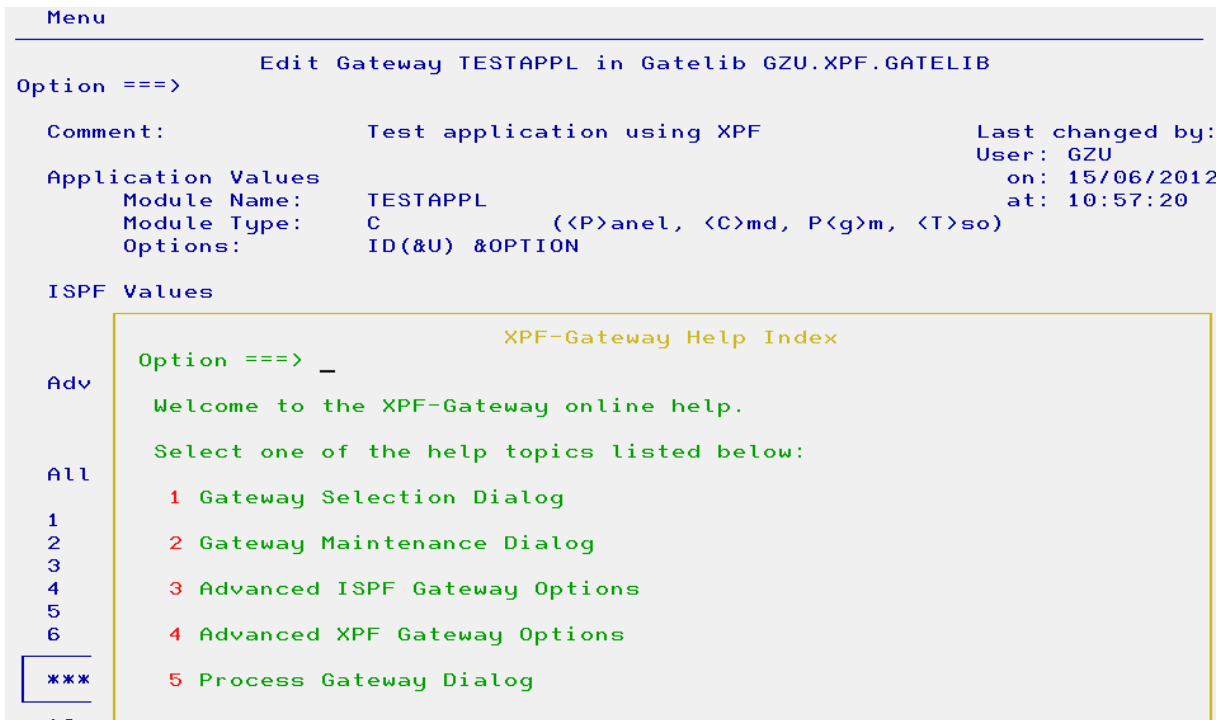
Screen 21: Online Help

Context sensitive online help is always available within the XPF dialogs. It can be accessed by placing the cursor on any entry field and pressing PF1 (help). Afterwards online help is available for all other dialog entry fields by scrolling using PF7 (up) or PF8 (down). Use PF3 (end) to return to the main dialog.



Screen 22: Online Help

A dialog help index is displayed if the cursor is not located on an entry field when help was requested.



Screen 23: Online Help

Entering "i" in a help dialog causes the overall XPF help index to be displayed.

1.15. Internal Memory Dump

```

Menu
-----
Option ==>          Gateway Selection          Enter required field

                                Userid - GZU
                                Prefix - **NONE**

Action:              I          (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                                <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                                Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:            _____
GateLib:            - or
Dataset:            _____

Available Gatelibs
Global:            L          SYS4.XPF.GATELIB
System:            S          SYS4.XPFADCD.SYSGATE
Group:             G          &GATENAME..XPF.GATELIB
User:              U          GZU.XPF.GATELIB

Copy from information
Gateway:            _____
GateLib:            - or
Dataset:            _____
    
```

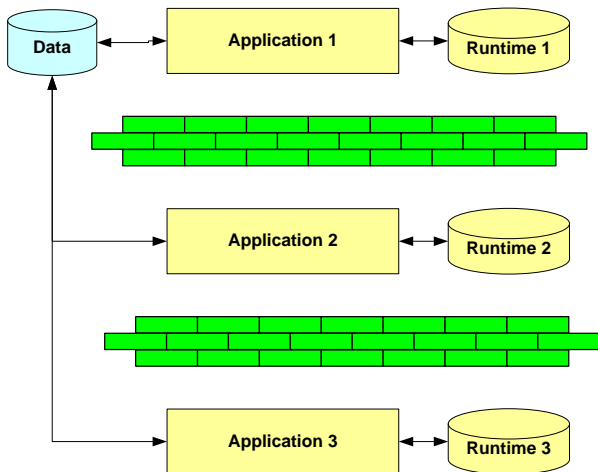
Screen 24: Internal Memory Dump

One additional hidden option is available from the XPF primary dialog. The action “i” results in an internal XPF memory dump being written to the Sysout log file (DDName XPFDMMSG). This operation can take a long time and should only be performed if requested by improvIT Software Innovations in case of an internal XPF error.

2. XPF Gateway Isolation

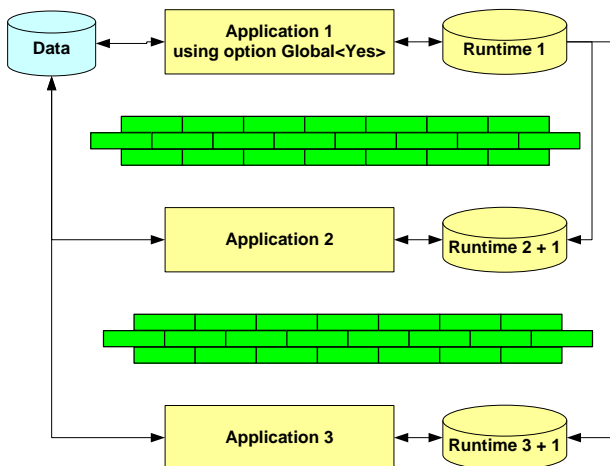
This chapter will demonstrate how XPF isolates individual applications when active and how this behavior can be changed. This feature allows the easy integration of private user work environments.

The following diagram illustrates the default way that application datasets are isolated from one another. This isolation only applies to system datasets (e.g. Clist, Panels, Skeletons and others). Application DDNames are generally available and cannot be isolated. XPF however ensures that application DDNames are uniquely owned by a single application within the TSO/ISPF environment.



Graphic 1: Gateway Isolation

The following diagram shows the effects of the Global option. Application 1 is started with the Global parameter and all system datasets (e.g. Clist) are seen by all applications started in this split screen while application 1 is active. Application 3 however does still not see any system datasets used by application 2. Application DDNames are still generally available.



Graphic 2: Gateway Isolation with Global option

Note: The Global option may only be active once per ISPF split screen at any one time and can not be used for native TSO applications !

3. XPF Command Interface

This chapter covers the usage of the XPF command interface which is used to control Gateway processing.

The description is divided into two areas:

- Using Gateways
- Maintaining Gateways

Note: Do not copy, rename or move Gateways using normal TSO/ISPF facilities, otherwise the Gateway may become unusable (e.g. when the name is changed). When the XPF dialog is used, a logical copy is performed! Otherwise the batch interface must be used.

3.1. Command Interface - Using Gateways

Gateway functions can be performed using the program "XPFEIGTW". Parameters are delimited by using the "<" and ">" characters. No spaces are permitted between the option keyword and the delimiter character.

Valid Parameters are:

Parameter	Value	Default	Required
Gate	Gateway name (a generic Name may be specified when using the Remove function)	-	Yes
Func	Start, Remove or Refresh	Start	No
Option	User Option Parameter	-	No
FromLevel	User, Group, System or Global	-	No
FromName	Explicit Gatelib	-	No
Global	Yes or No (only valid when in ISPF)	No	No
ISPFTEST	Keyword used to start application using IBM ISPF Dialog Test	-	No

Table 3: Using Gateways - Valid Parameters

Examples:

- "XPFEIGTW GATE<test> OPTION<xxx>"
 - Start Gateway "TEST" and pass the string "xxx" to the application
- "XPFEIGTW GATE<test> FUNC<REMOVE>"
 - Remove the Gateway "TEST" from the cache. This will only be carried out if the application is no longer active

A generic Gateway name may be specified when function "Remove" is used.

The Refresh function will remove the Gateway from the cache (if loaded) and then reload the application definition from a Gatelib.

The command interface can be called from:

- The command line
"TSO XPFEIGTW GATE<TEST>"
- The ISPF Select function
"SELECT CMD(XPFEIGTW GATE<TEST> OPTION<TEST>)"
- A REXX exec
"RC = XPFEIGTW('GATE<TEST> GLOBAL<YES>')"
- A Clist
"XPFEIGTW &STR(GATE<TE*> FUNC<R>)"

3.2. Command Interface - Maintaining Gateways

Gateways can be moved, copied, renamed or deleted using the program "XPFESTRT". It must be called from within batch TSO (see sample GATEMAIN).

Parameter syntax:

- "function,gateway,gatelib,target"

Valid Parameters are:

Parameter	Value
Function	"XPFGCOPY" - Copy a Gateway "XPFGMOVE" - Move a Gateway "XPFGREN" - Rename a Gateway "XPFGDEL" - Delete a Gateway
Gateway	Name of Gateway to process
Gatelib	Name or level of the Gatelib in which the Gateway can be found
Target	New Name or Gatelib (depending on function). Not required by XPFGDEL

Table 4: Maintaining Gateways - Valid Parameters

Parameter examples:

- "XPFGDEL,TESTGATE,U"
 - Delete Gateway TESTGATE from the User Gatelib
- "XPFGREN,TESTGATE,SYS.XPF.GATELIB,TEST4711"
 - Rename Gateway TESTGATE in Gatelib SYS.XPF.GATELIB to TEST4711
- "XPFGCOPY,TESTGATE,U,L"
 - Copy Gateway TESTGATE from the User to the Global Gatelib
- "XPFGMOVE,TESTGATE,SYS.XPF.GATELIB,S"

- Move Gateway TESTGATE from SYS.XPF.GATELIB to the System Gatelib

3.3. XPF Batch JCL

The following JCL is the sample job GATEMAIN:

```

/*****
/**
/** JOB NAME      : GATEMAIN
/**
/** Notice       : This program may not be copied, reproduced or
/**                distributed in any form (electronic or otherwise)
/**                without written permission from the author.
/**
/** Description  : This job demonstrates how to use the Gateway
/**                maintenance function in batch.
/**
/**                Gateways may be deleted, copied, moved or renamed.
/**
/**                The normal XPF runtime environment must be
/**                available when performing maintenance functions.
/**
/** Syntax       : Delete - XPFGDEL,gateway,gatelib
/**                Rename - XPFGREN,gateway,gatelib,new-gateway
/**                Copy   - XPFGCOPY,gateway,gatelib,new-gatelib
/**                Move   - XPFGMOVE,gateway,gatelib,new-gatelib
/**
/**                Gatelib and New-Gatelib may be either the fully
/**                qualified dataset name or the gatelib level
/**                (eg. "G" for global).
/**
/*****

//XPFMAINT EXEC PGM=IKJEFT01,DYNAMNBR=500,
//                PARM='XPFESTRT function/parameters'
/** STEPLIB (if XPF is not in LPA or LLA)
/**STEPLIB DD DSN=?????.XPF???.SXPFOLOD,DISP=SHR
/** Boot exit dataset
//SYSEXEC DD DSN=?????.XPF???.SXPFSAAMP,DISP=SHR
/** Boot parmlib dataset
//XPFDBOOT DD DSN=?????.XPF???.SXPFSAAMP(BOOTINI),DISP=SHR
/**XPFDTRCE DD DUMMY
//SYSTSIN DD *
/*
//SYSTSPRT DD SYSOUT=*

```

Screen 25: Command Interface - Maintaining Gateways - Sample job GATEMAIN

3.4. Command Interface – Log and Trace

Two other programs are available for customer use:

1. XPFEILOG - Call this program to temporarily override the automatic logoff setting as defined in the XPF parmlib. As a result, when ISPF or another application is terminated, the user will e.g. be returned to the TSO prompt. Calling this program again will toggle the value.
2. XPFETRRC - This program dynamically activates/deactivates the internal XPF trace. The trace information is only required by improvIT Software Innovations in case of an internal XPF error. Trace data is written to the Sysout log file "XPFDTRCM". It should not generally be activated as it is detrimental to performance.

3.5. Command Interface – Accessing Variables

During logon processing, XPF creates certain user variables. It is also possible to create further variables in BOOTINI processing. The created values can be then used in Gateway definitions. It is also possible to obtain these values in user REXX execs. XPF system variables cannot be accessed.

To access values just call the function “XPFEIVAR” with the name of the required variable:

```
/* REXX */
Parse value XPFEIVAR("JOBID") with IRC JOB
Say "RC      :" IRC
Say "JobID:" JOB
Return 0
```

Screen 26: Command Interface – Accessing Variables

After processing IRC will contain the return code (0 = OK, 8 = Not Found, 12 = Variable not in user pool, > 12 = Severe Error) and JOB the current jobid. See sample GETUVARS for further information.

4. Miscellaneous

This chapter covers various other subjects.

4.1. Recommendations

The following recommendations apply to applications running in the TSO/ISPF environment with XPF:

- Define every Gateway as a stand-alone object
- Allocate all system datasets using XPF
 - i.e. no LIBDEFS & ALTLIBS in application procedures
- Allocate all permanent application datasets using XPF
- Do not re-allocate datasets allocated during the logon
- Only make modifications in user datasets & concatenate these if required
- Use NEWAPPL parameter to isolate ISPF variables used by applications
- Keep definitions as variable as possible
- If all TSO/ISPF applications are managed using XPF then
 - Application stability will improve
 - General performance should be better
 - Application maintenance will be easier
 - Powerful application management features are available

The following screen shot shows the implementation of some of the previously explained recommendations.

```

Menu
-----
Edit Gateway TESTAPPL in Gatelib GZU. "RCHANGE " is not active
Option ==> _

Comment:          Test application using XPF                      Last changed by:
                                                           User: GZU
Application Values
Module Name:      TESTAPPL                                       on: 15/06/2012
Module Type:      C          (<P>anel, <C>md, P<g>m, <T>so)       at: 10:57:20
Options:          ID(&U) &OPTION

ISPF Values
New ApplId:       TEST          ('', applid, YES, POOL)
Screen Name:      TESTAPPL

Advanced
ISPF Options:     _
XPF Options:      _

Allocation Information
  Cmd  DDName  Dataset Name
  ---  ---    ---
  1    _      CLIST   GZU.ISPF.CLIST
  2    _      +       GZU.ISPF.EXEC
  3    _      PANELS  GZU.ISPF.PANELS
  4    _      MSGS    GZU.ISPF.MSGS
    
```

Screen 27: Gateway Recommendations

4.2. Gateway Override Exit

The XPF samplib contains a member "GATEEXIT". This sample shows how a Gateway initialisation / termination exit needs to be constructed. The following attributes apply:

- Name is defined in the advanced Gateway options
- Is only called when the Gateway is loaded from the repository and when it is removed from the cache
- Is passed the following parameters
 - Function (Init or Term)
 - Userid
 - System Id
 - Name of current Gateway
 - Jobstep Name
 - Job Procedure Name
 - Jobld
 - TCPIP System Name
- Must be coded in REXX or adhere to the REXX function linkage conventions when coded in another language

4.3. User Gateway Sample

The XPF samplib also contains a member "USERGATE". This sample shows how a private Gateway for a user could automatically be started after a TSO logon. The Gateway used during the logon needs to be amended to automatically call this REXX exec.

4.4. Batch Gateway Sample

XPF can also be used for TSO/ISPF batch applications. A sample job “XPFBATCH” is located in the XPF samplib. An optional Gateway name and start option may be specified. These values must be comma delimited. If the parameters are omitted, then the normal start Gateway will be used.

If Gateway name “**NONE**” is specified, then the XPF environment will be initialised, but a Gateway will not be directly started. This feature is generally only useful for online applications such as SAS/PC, which automatically connect to TSO using native Telnet and need to enter TSO commands directly prior to starting the application Gateway.

```

/*****
/**
/** Job Name      : BATCH
/**
/** Date         : November 2000
/**
/** Written by   : Jon Renton, (c) improvIT Software Innovations GmbH
/**
/** Notice      : This program may not be copied, reproduced or
/**              distributed in any form (electronic or otherwise)
/**              without written permission from the author.
/**
/** Description  : This job demonstrates how to start TSO in batch
/**              using an XPF Gateway.
/**
/**              A gateway name and options may be passed as
/**              parameters. These will override the values in the
/**              XPFDBOOT but not if the boot gateway exit changes
/**              these later.
/**
/**              The DDName XPFDIRCE may be allocated. This is only
/**              required by Systematics support.
/**
/**              Note: The XCS-Libraries must be available when
/**              using this logon procedure
/**
*****/
/XPFBATCH EXEC PGM=IKJEFT1A,PARM='XPFESTRT <GW Name><,GW Options>'
/** STEPLIB (if XPF is not in LPA or LLA)
/** STEPLIB DD DSN=?????.XPF?????.SXPFOLOD,DISP=SHR
/** Boot exit dataset
/** SYSEXEC DD DSN=?????.XPF?????.SXPFSAMP,DISP=SHR
/** Boot parmlib dataset
/** XPFDBOOT DD DSN=?????.XPF?????.SXPFSAMP(BOOTINI),DISP=SHR
/** Required by TSO
/** SYSTSIN DD DUMMY
/** SYSTSPRT DD SYSOUT=*

```

Screen 28: Batch Gateway Sample

4.5. Known Restrictions

Certain products running under TSO/ISPF change the runtime environment dramatically. As a result certain incompatibilities exist that impose some restrictions when using XPF. The issues are listed below:

- IPCS from IBM - When using the standalone XPF runtime modules, the XPF maintenance dialog can not be started when called from within IPCS
- DumpMaster from Macro4 - The XPF maintenance dialog and other Gateways can not be called from within a DumpMaster session

5. XPF ISPF Edit Macros

XPF contains numerous IBM ISPF Program Macros (compiled Edit Macros). These need to be activated during the XPF installation process. The shown alias names can differ. After installation, they can be used by all users. Enter "macro-name ?" for detailed help information.

Macro Name	Default Alias	Description
XPFMBACK	#BU	Create a backup copy of the current editor data
XPFMCCOL	#CC	Copy data from one column(s) to another
XPFMCNTR	#CE	Centre text within records
XPFMCSTR	#CS	Count matching strings
XPFMCUTD	#CU	Copy data into the clipboard
XPFMDCOL	#DC	Delete data in a given column(s)
XPFMDSTR	#DS	Delete records containing a given string
XPFMEDSN	#ED	Edit the dataset/member at the current cursor position
XPFMEIDX	#EI	Edit the member name at the start of the record
XPFMEEXEC	#EX	Execute a Clist or REXX exec directly or display the current panel
XPFMFDUP	#FD	Find duplicate records in sorted data
XPFMHELP	#HE	Display help information
XPFMIMED	#IM	Execute TSO commands directly and show results
XPFMJCRD	#JC	Create a JCL jobcard
XPFMMCPY	#MC	Copy one or more members into the current edit session
XPFMMLST	#ML	Insert a list of dataset members
XPFMNMBR	#NM	Add a counter at a given position into the records
XPFMONLY	#ON	Display only records containing a given string
XPFMPAST	#PA	Paste data from the clipboard
XPFMPREF	#PF	Add a prefix to records
XPFMSUBM	#SU	Submit JCL based on steps or selected records
XPFMSUFF	#SF	Add a suffix to records
XPFMXCOL	#XC	Swap data in a given column with that of another

Table 5: XPF ISPF Edit Macros and Alias Names

6. TSO Dynamic STEPLIB support

XCS version 2.8.0 (or higher) includes the "TSO Dynamic STEPLIB" feature.

This feature allows you to test/execute a new version of a load module in the TSO STEPLIB concatenation without doing a TSO LOGOFF/LOGON.

The sample gateway XPFSTP (adapt it to your dataset naming conventions) demonstrates this feature:

Invoke the gate XPFSTP (the display must be configured as a 43x80 model):

```

Menu
-----
Option ==>

                                Gateway Selection

                                Userid - GZU
                                Prefix - **NONE**

Action:          P           (<N>ew, <B>rowse, <E>dit, <C>opy, <M>ove, <D>elete,
                                <P>rocess, <S>elect, <R>ename, Rese<t>, <L>og,
                                Display <V>ariables, <G>ate or <X>PF Statistics)

Target Information
Gateway:        XPFSTP
GateLib:        L or
Dataset:        _____

Available GateLibs
Global:         L           SYS4.XPF.GATELIB
System:
Group:          G           &GATENAME..XPF.GATELIB
User:           U           GZU.XPF.GATELIB

Copy from information
Gateway:        _____
GateLib:        - or
Dataset:        _____

```

Screen 29: Invoke gateway XPFSTP

Start the gate XPFSTP:

```

Menu
-----
Option ==>

                                Process Gateway XPFSTP

                                Userid - GZU
                                Prefix - **NONE**

Function:        START      (<S>tart, <Rem>ove, <Ref>resh)

Start Information
Option:
Global:         NO         (<Y>es, <N>o)
ISPF Test:     NO         (<Y>es, <N>o)

Available GateLibs
Global:         L           SYS4.XPF.GATELIB
System:
Group:          G           &GATENAME..XPF.GATELIB
User:           U           GZU.XPF.GATELIB

Copy from information
Gateway:        _____
GateLib:        - or
Dataset:        _____

```

Screen 30: Start gateway XPFSTP

The following panel will be displayed:

```
Menu
-----
Option ==>                XPF Dynamic Steplib Function

                                Userid - GZU
                                Prefix - **NONE**

This application lists or dynamically changes the current
STEPLIB allocation of your TSO session.

Please fill out the following fields:
Function      LIST          (ADDF,ADDL,ALLOC,FREE,LIST,REMOVE)
Datasetname   -

Then press ENTER
```

Screen 31: Invoke LIST function

Press "Enter":

```
XPFE000I: XPF Dynamic Steplib Function V6R1M0
XPFE000I: (C)opyright improvIT software innovations GmbH,
XPFE000I:      Germany

XPFE010I: No STEPLIB found
*** -
```

Screen 32: Result of LIST function

Allocate a new STEPLIB with the specified dataset:

```
Menu
-----
Option ==>                XPF Dynamic Steplib Function

                                Userid - GZU
                                Prefix - **NONE**

This application lists or dynamically changes the current
STEPLIB allocation of your TSO session.

Please fill out the following fields:
Function      ALLOC        (ADDF,ADDL,ALLOC,FREE,LIST,REMOVE)
Datasetname   GZU.ISPF.LOADLIB_____

Then press ENTER
```

Screen 33: Allocate a new STEPLIB

The new STEPLIB is allocated to the DDNAME #TEP0001:

```

XPFE000I: XPF Dynamic Steplib Function V6R1M0
XPFE000I: (C)opyright improvIT software innovations GmbH,
XPFE000I:      Germany

XPFE012I: STEPLIB found: DDNAME=#TEP0001
XPFE012I: STEPLIB-DSN.1=GZU.ISPF.LOADLIB
***      -

```

Screen 34: Result of ALLOC function

Expand the new STEPLIB:

```

Menu
-----
Option ==>>          XPF Dynamic Steplib Function

Userid - GZU
Prefix - **NONE**

This application lists or dynamically changes the current
STEPLIB allocation of your TSO session.

Please fill out the following fields:

Function      ADDL      (ADDF, ADDL, ALLOC, FREE, LIST, REMOVE)
Datasetname   GZU.ISPF.LOADLIB1_

Then press  ENTER

```

Screen 35: Invoke the ADDL function

The STEPLIB was expanded:

```

XPFE000I: XPF Dynamic Steplib Function V6R1M0
XPFE000I: (C)opyright improvIT software innovations GmbH,
XPFE000I:      Germany

XPFE012I: STEPLIB found: DDNAME=#TEP0002
XPFE012I: STEPLIB-DSN.1=GZU.ISPF.LOADLIB
XPFE012I: STEPLIB-DSN.2=GZU.ISPF.LOADLIB1
***      -

```

Screen 36: Result of ADDL function

The TSO HELP function (F1) gives you more details regarding this feature:

```
Menu
-----
Option ==>                XPF Dynamic Steplib Function

                                Userid - GZU
                                Prefix - **NONE**

This application lists or dynamically changes the current
STEPLIB allocation of your TSO session.

Please fill out the following fields:
Function      ADDL      (ADDF,ADDL,ALLOC,FREE,LIST,REMOVE)
Datasetnam

Then press

Option ==> _
Function      Specify the required function:
ADDF/ADDL:    Adds the specified dataset as
              first/last dataset
              in the STEPLIB concatenation
ALLOC:        Allocates a new STEPLIB with the
              specified dataset
LIST:         Lists the current STEPLIB
FREE:         De-allocates the current STEPLIB
REMOVE:       Removes the specified dataset from
              the STEPLIB concatenation

PF7/Previous      PF8/Next      I/Index
```

Screen 37: Help function for Dynamic STEPLIB

7. Contact

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