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# Mainframe Installation Guide

Version 6.2 SP1, May 2006

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# Before You Install

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## Overview

This document explains how to install the Service Pack 1 (SP1) patch release for Orbix Mainframe 6.2 on z/OS. This patch release affects only the z/OS-based component.

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## SP1 prerequisites

The z/OS-based component of Orbix Mainframe 6.2 must already be installed and configured correctly. See the *Mainframe Installation Guide* for the Orbix Mainframe 6.2 release for more details. Afterwards, the SP1 patch may be installed on top of this release.

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## SP1 installation details

The SP1 patch consists of a SEQ file, `HLQ.ORBIX62.SP1.SEQ`, which is shipped as an `IEBCOPY` backup file that has been compressed using the `TSO XMIT` command.

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# Installing the z/OS-Based Component

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## Overview

This section describes the steps you must follow to install the Orbix Mainframe 6.2 SP1 patch release on z/OS.

**Note:** Follow each of these steps in the order outlined.

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## Step 1—Preallocate a data set

Preallocate a z/OS sequential data set with the following information:

Space Units	Tracks
Primary quantity	895
Secondary quantity	100
Directory blocks	0
Record format	FB
Record length	80
Block size	3120

---

## Step 2—Copy the ORBIX62.SP1.SEQ file

Copy the `HLQ.ORBIX62.SP1.SEQ` file from the IONA FTP site into the z/OS data set that you preallocated in the preceding step. The most convenient way is to use FTP.

The following is an example of the FTP command sequence to transmit the file into the preallocated data set, where the CD drive letter is `d:` and `xxxx.xxxx` represents the name of the data set:

```
d:
ftp os390host
ftp> binary
ftp> put HLQ.ORBIX62.SP1.SEQ 'xxxx.xxxx'
```

**Step 3—Unpack the PDS**

After the SEQ file has been copied to z/OS, use the TSO `RECEIVE` command to unpack the PDS (where `XXXX.XXXX` represents the exact name of the PDS data set that is to be received):

```
RECEIVE INDSN('XXXX.XXXX')
```

Because the preceding command is a TSO command, you must enter it on an ISPF command screen.

You are prompted with restore parameters similar to the following:

```
To receive the Orbix PDS, please specify the following:
DA('HLQ.ORBIX62.SP1.PDS') SPACE(895,100) REL
replacing the HLQ as appropriate.
```

You must choose between one of the following:

- Press Enter to restore `XXXX.XXXX` into the default data set, `HLQ.ORBIX62.SP1.PDS`.
- Restore `XXXX.XXXX` into an alternative data set, by entering the command that appears on your screen and substituting `HLQ.ORBIX62.SP1.PDS` with the data set name you want to use.

The sequential data set, `XXXX.XXXX`, can now be deleted.

**Step 4—Expand the PDS**

The `orbixsp1hlq.PDS($FIRST)` member contains JCL to expand the other PDS members into the Orbix patch installation. The default high-level qualifier for installation data sets is `HLQ.ORBIX62.SP1`. If you want to change the default high-level qualifier to your installation standard, you can use a command as follows in ISPF:

```
C 'HLQ.ORBIX62.SP1' 'orbixsp1hlq' ALL
```

In the preceding example, `orbixsp1hlq` represents the high-level qualifier for your Orbix Mainframe 6.2 SP1 installation, which can be up to 19 characters, including one or more periods.

Now submit `HLQ.ORBIX62.SP1.PDS($FIRST)` to install the Orbix patch.

**Note:** This step might take a few moments to complete.

**Step 5—Check installed data sets** After the \$FIRST job has completed successfully, check that the following data sets were installed:

Data Set Name	Member Name	Description
HLQ.ORBIX62.SP1.CONFIG	ORXINTRL	Update to the configuration file.
HLQ.ORBIX62.SP1.DEMOS.CBL.COPYLIB	UBOUNDS	Update to the Nested Sequences demonstration.
HLQ.ORBIX62.SP1.INCLUDE.PLINCL	IMSPCBE	New member to support the Enterprise PL/I compiler for programs in IMS.
HLQ.ORBIX62.SP1.JCLLIB	IORDUMP	New member to run the <code>iordump</code> utility using batch JCL.
HLQ.ORBIX62.SP1.LOADLIB	ORXACTIV ORXBCBL6 ORXBPLI6 ORXCAPC6 ORXCBL6 ORXCICO6 ORXCICSA ORXCPLM6 ORXCPOA7 ORXCSP5 ORXCSTB5 ORXCST5 ORXFILO1 ORXIAPC6 ORXIFR ORXIMSA ORXIMS06 ORXLOCAT ORXMFAS7 ORXMF6M6 ORXMF6S6 ORXNAMIN ORXNODED	ORXFILO1 and ORXRLOG5 are new programs. The rest of the list contains replacements for shipped programs.

Data Set Name	Member Name	Description
	ORXOTSTM ORXPLI6 ORXRLOG5 ORXSOAP5 ORXSRVCE ORXUAPC6 ORXWTOA5 ORXX5095	
HLQ.ORBIX62.SP1.LPALIB	ORXART5	Replacement of existing program.
HLQ.ORBIX62.SP1.MFA.LOADLIB	ORXMCBL6 ORXMPLI6	Replacement of existing programs.

### Step 6—Customize your locale (if necessary)

*This is only relevant if you want to run Orbix Mainframe in a locale other than the default locale, IBM-1047, and your system and compiler are also running in a locale other than IBM-1047.*

Orbix Mainframe 6.2 SP1 include files are coded by default in locale IBM-1047. Follow these steps if you do not want to run Orbix Mainframe in the default IBM-1047 locale, and your system and compiler are also running in a locale other than IBM-1047:

1. In HLQ.ORBIX62.SP1..PDS(\$SECOND), use the following command in ISPF to change the default high-level qualifier, to make it match your installation value (where *orbixsp1hlq* represents the high-level qualifier for your Orbix Mainframe 6.2 SP1 installation, which can be up to 19 characters, including one or more periods):

```
C 'HLQ.ORBIX62' 'orbixsp1hlq' ALL
```

2. In HLQ.ORBIX62.SP1..PDS(\$SECOND), use the following command in ISPF to change the value of the TO variable, to make it match the locale codeset you want to use (where *IBM-xxx* represents your codeset):

```
C 'IBM-500' 'IBM-xxx' ALL
```

The preceding command lets you simultaneously change all occurrences of the default to make it match your codeset.

3. Submit \$SECOND to convert the files to match your installation.

### Step 7—Using the SP1 data sets

Once the SEQ file has been expanded, and the locale has been updated if necessary, you must do either of the following:

- Overlay your existing Orbix Mainframe 6.2 data sets.
- Customize your existing Orbix installation to pick up the Service Pack 1 files.

Both of these methods are valid. You will need to decide which one best meets your requirements.

#### Option 1—Overlaying Your Existing Orbix Mainframe 6.2 Data Sets

The first option is to overlay your Orbix Mainframe 6.2 installation with the new members shipped in Service Pack 1.

**Note:** If you choose to perform this method, you should first perform a complete backup of all existing data sets before you proceed.

You may copy the files using any method you like. However, before you attempt a copy operation, you will need to either increase the size of HLQ.ORBIX62.LPALIB or delete ORXART5 and compress the library. For your convenience, the following JCL has been included, which will delete the original members, compress the data set and add the new files.

```
//SP1COPY JOB ( ),
//          CLASS=A,
//          MSGCLASS=X,
//          MSGLEVEL=(1,1),
//          REGION=0M,
//          TIME=1440,
//          NOTIFY=&SYSUID
//*
/*****
/**
/** Sample copy job for Orbix Mainframe 6.2 SP1.
/**
/** Before running this JCL, make the following
/** global changes:
/**
/** 1. Change HLQ.ORBIX62.SP1 to your Orbix Mainframe
/**    6.2 SP1 patch dataset high level qualifier.
/**    Substitute your high level qualifier in the
/**    ISPF command below
```

```

/**
/**      C 'HLQ.ORBIX62.SP1' '<your.splpatch.hlq>' ALL
/**
/**      2. Change HLQ.ORBIX62 to your currently installed
/**      Orbix Mainframe 6.2 high level qualifier.
/**      Substitute your high level qualifier in the
/**      ISPF command below
/**
/**      C 'HLQ.ORBIX62' '<your.orbix.hlq>' ALL
/**
/**      NOTE: Do not run this job directly against a
/**      production installation of Orbix Mainframe 6.2.
/**      If the intention is to update a production
/**      installation, make a copy of the installation
/**      and run this job against the copy. When the
/**      patch is successfully installed and tested,
/**      replace your production installation with
/**      the patched installation.
/**
/*******
/**
/*******
/**
/**      STEP01
/**
/**      Delete members from the LOADLIB PDS to make room for the
/**      patched members.
/**
/*******
/**
/**STEP01 EXEC PGM=IDCAMS
/**SYSPRINT DD SYSOUT=*
/**SYSIN DD *
DELETE HLQ.ORBIX62.LOADLIB(ORXACTIV)
DELETE HLQ.ORBIX62.LOADLIB(ORXBCBL6)
DELETE HLQ.ORBIX62.LOADLIB(ORXBPLI6)
DELETE HLQ.ORBIX62.LOADLIB(ORXCAPC6)
DELETE HLQ.ORBIX62.LOADLIB(ORXCBL6)
DELETE HLQ.ORBIX62.LOADLIB(ORXCICO6)
DELETE HLQ.ORBIX62.LOADLIB(ORXCICSA)
DELETE HLQ.ORBIX62.LOADLIB(ORXCPLM6)
DELETE HLQ.ORBIX62.LOADLIB(ORXCPOA7)
DELETE HLQ.ORBIX62.LOADLIB(ORXCSP5)
DELETE HLQ.ORBIX62.LOADLIB(ORXCST5)
DELETE HLQ.ORBIX62.LOADLIB(ORXCSTB5)
DELETE HLQ.ORBIX62.LOADLIB(ORXIAPC6)
DELETE HLQ.ORBIX62.LOADLIB(ORXIFR)

```

## Installing the z/OS-Based Component

```
DELETE HLQ.ORBIX62.LOADLIB(ORXIMSA)
DELETE HLQ.ORBIX62.LOADLIB(ORXIMS06)
DELETE HLQ.ORBIX62.LOADLIB(ORXMFAS7)
DELETE HLQ.ORBIX62.LOADLIB(ORXMF6M6)
DELETE HLQ.ORBIX62.LOADLIB(ORXMFUS6)
DELETE HLQ.ORBIX62.LOADLIB(ORXNAMIN)
DELETE HLQ.ORBIX62.LOADLIB(ORXNODED)
DELETE HLQ.ORBIX62.LOADLIB(ORXOTSTM)
DELETE HLQ.ORBIX62.LOADLIB(ORXPLI6)
DELETE HLQ.ORBIX62.LOADLIB(ORXSOAP5)
DELETE HLQ.ORBIX62.LOADLIB(ORXSRVCE)
DELETE HLQ.ORBIX62.LOADLIB(ORXUAPC6)
DELETE HLQ.ORBIX62.LOADLIB(ORXWTOA5)
DELETE HLQ.ORBIX62.LOADLIB(ORXX5095)
DELETE HLQ.ORBIX62.LPALIB(ORXART5)
DELETE HLQ.ORBIX62.MFA.LOADLIB(ORXMCBL6)
DELETE HLQ.ORBIX62.MFA.LOADLIB(ORXMPLI6)
/*
/**
/**
/**
/** STEP02
/**
/** Compress the installation PDSes before copying.
/**
/**
/**
/**STEP02 EXEC PGM=IEBCOPY
/**SYSPRINT DD SYSOUT=*
/**PDS1 DD DSN=HLQ.ORBIX62.CONFIG,DISP=SHR
/**PDS2 DD DSN=HLQ.ORBIX62.DEMOS.CBL.COPYLIB,DISP=SHR
/**PDS3 DD DSN=HLQ.ORBIX62.INCLUDE.PLINCL,DISP=SHR
/**PDS4 DD DSN=HLQ.ORBIX62.JCLLIB,DISP=SHR
/**PDS5 DD DSN=HLQ.ORBIX62.LOADLIB,DISP=SHR
/**PDS6 DD DSN=HLQ.ORBIX62.LPALIB,DISP=SHR
/**PDS7 DD DSN=HLQ.ORBIX62.MFA.LOADLIB,DISP=SHR
/**SYSIN DD *
COPY OUTDD=PDS1,INDD=PDS1
COPY OUTDD=PDS2,INDD=PDS2
COPY OUTDD=PDS3,INDD=PDS3
COPY OUTDD=PDS4,INDD=PDS4
COPY OUTDD=PDS5,INDD=PDS5
COPY OUTDD=PDS6,INDD=PDS6
COPY OUTDD=PDS7,INDD=PDS7
/*
/**
/**
/**
```

```

/**
/**  STEP03
/**
/**  Copy the patch files to the installation base.
/**
/*******
/**
/**STEP03  EXEC PGM=IEBCOPY
/**SYSPRINT DD SYSOUT=*
/**PDS1    DD DSN=HLQ.ORBIX62.CONFIG,DISP=SHR
/**PPDS1   DD DSN=HLQ.ORBIX62.SP1.CONFIG,DISP=SHR
/**PDS2    DD DSN=HLQ.ORBIX62.DEMOS.CBL.COPYLIB,DISP=SHR
/**PPDS2   DD DSN=HLQ.ORBIX62.SP1.DEMOS.CBL.COPYLIB,DISP=SHR
/**PDS3    DD DSN=HLQ.ORBIX62.INCLUDE.PLINCL,DISP=SHR
/**PPDS3   DD DSN=HLQ.ORBIX62.SP1.INCLUDE.PLINCL,DISP=SHR
/**PDS4    DD DSN=HLQ.ORBIX62.JCLLIB,DISP=SHR
/**PPDS4   DD DSN=HLQ.ORBIX62.SP1.JCLLIB,DISP=SHR
/**PDS5    DD DSN=HLQ.ORBIX62.LOADLIB,DISP=SHR
/**PPDS5   DD DSN=HLQ.ORBIX62.SP1.LOADLIB,DISP=SHR
/**PDS6    DD DSN=HLQ.ORBIX62.LPALIB,DISP=SHR
/**PPDS6   DD DSN=HLQ.ORBIX62.SP1.LPALIB,DISP=SHR
/**PDS7    DD DSN=HLQ.ORBIX62.MFA.LOADLIB,DISP=SHR
/**PPDS7   DD DSN=HLQ.ORBIX62.SP1.MFA.LOADLIB,DISP=SHR
/**SYSIN   DD *
COPY INDD=( (PPDS1,R) ),OUTDD=PDS1
COPY INDD=( (PPDS2,R) ),OUTDD=PDS2
COPY INDD=( (PPDS3,R) ),OUTDD=PDS3
COPY INDD=( (PPDS4,R) ),OUTDD=PDS4
COPY INDD=( (PPDS5,R) ),OUTDD=PDS5
COPY INDD=( (PPDS6,R) ),OUTDD=PDS6
COPY INDD=( (PPDS7,R) ),OUTDD=PDS7
/**
/**
/*******
/**
/**  STEP04
/**
/**  Recreate the alias names in the RUN PDS.
/**
/*******
/**
/**STEP04  EXEC PGM=HEWL,PARM='AC=1,AMODE=31,RMODE=ANY,RENT,REUS'
/**SYSLMOD DD DISP=SHR,DSN=HLQ.ORBIX62.LOADLIB
/**SYSUT1  DD UNIT=VIO,SPACE=(32000,(30,30))
/**SYSPRINT DD SYSOUT=*
/**SYSLIN  DD *
INCLUDE SYSLMOD(ORXSRVCE)

```

```

ALIAS  ORXACTIV
ALIAS  ORXCICSA
ALIAS  ORXIFR
ALIAS  ORXIMSA
ALIAS  ORXLOCAT
ALIAS  ORXNAMIN
ALIAS  ORXNODED
ALIAS  ORXOTSTM
ENTRY  CEESTART
NAME   ORXSRVCE (R)
/*
//

```

### Option 2—Customizing your existing Orbix installation to pick up the Service Pack 1 files

The second option is to update the PROCS and configuration files shipped with Orbix Mainframe 6.2 to reference the new files. This involves the following steps:

1. Update the STEPLIB in HLQ.ORBIX62.PROCLIB(ORXADMIN):

```

//STEPLIB DD DISP=SHR,DSN=&ORBIX..ADMIN.LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..SP1.LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..SP1.LPALIB
//          DD DISP=SHR,DSN=&ORBIX..LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..LPALIB
//          DD DISP=SHR,DSN=&LIBPRFX..SCEERUN
//          DD DISP=SHR,DSN=&CLBPRFX..SCLBDLL

```

2. Update the STEPLIB in HLQ.ORBIX62.PROCLIB(ORXG) and HLQ.ORBIX62.PROCLIB(ORXGCBL):

```

//STEPLIB DD DISP=SHR,DSN=&ORBIX..SP1.LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..SP1.LPALIB
//          DD DISP=SHR,DSN=&LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..LPALIB
//          DD DISP=SHR,DSN=GSK.SGSKLOAD
//          DD DISP=SHR,DSN=&LIBPRFX..SCEERUN
//          DD DISP=SHR,DSN=&CLBPRFX..SCLBDLL

```

**Note:** Remove the comment character (that is, \*) from the GSK.SGSKLOAD line if you are using SSL.

- Update the STEPLIB in HLQ.ORBIX62.PROCLIB(ORXIDL):

```
//STEPLIB DD DISP=SHR,DSN=&ORBIX..SP1.LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..SP1.LPALIB
//          DD DISP=SHR,DSN=&ORBIX..LOADLIB
//          DD DISP=SHR,DSN=&ORBIX..LPALIB
//          DD DISP=SHR,DSN=&LIBPRFX..SCEERUN
//          DD DISP=SHR,DSN=&CLBPRFX..SCLBDLL
```

- Update the PLI.SYSLIB DD of step SRVICMP and step SRVMCMP in HLQ.ORBIX62.PROCLIB(ORXPLCSC) and HLQ.ORBIX62.PROCLIB(ORXPLISC):

```
//PLI.SYSLIB DD DSN=&ORBIX..SP1.INCLUDE.PLINCL,DISP=SHR
//          DD DSN=&ORBIX..INCLUDE.PLINCL,DISP=SHR
```

- Update the PLI.SYSLIB DD of step CLNTCMP in HLQ.ORBIX62.PROCLIB(ORXPLICC):

```
//PLI.SYSLIB DD DSN=&ORBIX..SP1.INCLUDE.PLINCL,DISP=SHR
//          DD DSN=&ORBIX..INCLUDE.PLINCL,DISP=SHR
```

- If you will be deploying new domains, update the MAKECON steps in HLQ.ORBIX62.JCLLIB(DEPLOY1) and HLQ.ORBIX62.JCLLIB(DEPLOYT):

```
include "//HLQ.ORBIX62.SP1.CONFIG(ORXINTRL)";
```

- If you are using the ORXINTRL file, ensure that your deployed domains include the proper file:

```
include "//HLQ.ORBIX62.SP1.CONFIG(ORXINTRL)";
```

- If you are not using the ORXINTRL file, because you have migrated the domain from a previous release, ensure that you add the following configuration settings to your existing domains:

```
plugins:fileloc_resolver:shlib_name = "ORXFILO";
plugins:request_logger:shlib_name   = "ORXRLOG";
plugins:request_logger:shlib_name   = "ORXRLOG";
url_resolvers:itfileloc:plugin      = "fileloc_resolver";
plugins:fileloc_resolver:shlib_version = "1";
plugins:request_logger:shlib_version = "5";
```

## Installing the z/OS-Based Component

9. Update your CICS and/or IMS regions so that the `HLQ.ORBIX62.SP1.MFA.LOADLIB` is found before the `HLQ.ORBIX62.MFA.LOADLIB`.

---

# Migration Issues

There are only two items to consider during migration after you have installed Service Pack 1:

- If you are using the Enterprise PL/I compiler and wish to use the keyword `assignable`, rerun the IDL compile step and pass in the new `-E` flag. This causes the new include file shipped in this patch to be picked up. After recompiling the IDL file, also recompile your program.
- You will need to restart any Adapters you have running and restart your IMS and CICS regions to pick up the new `MFA.LOADLIB`.

For Further Assistance

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## For Further Assistance

For further assistance, please contact [support@iona.com](mailto:support@iona.com).