

Predict

Installation on Mainframes

Version 8.4.2

October 2019

This document applies to Predict Version 8.4.2 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Document ID: PRD-MF-INSTALL-842-20210412

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Predict Installation on Mainframes

Installation Prerequisites	Provides an overview of the product requirements and the basic installation steps.
First-Time Installation	Describes the steps involved when you install Predict for the first time.
Inplace Conversion from a Previous Version	Describes the steps involved when you migrate from an older Predict version using inplace conversion.
Applying Service Packs or Fixes	Describes the steps involved when you upgrade an existing Predict environment.

1 About this Documentation

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Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the symbol.
[]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

Online Information and Support

Software AG Documentation Website

You can find documentation on the Software AG Documentation website at <https://documentation.softwareag.com>.

Software AG Empower Product Support Website

If you do not yet have an account for Empower, send an email to empower@softwareag.com with your name, company, and company email address and request an account.

Once you have an account, you can open Support Incidents online via the eService section of Empower at <https://empower.softwareag.com/>.

You can find product information on the Software AG Empower Product Support website at <https://empower.softwareag.com>.

To submit feature/enhancement requests, get information about product availability, and download products, go to [Products](#).

To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the [Knowledge Center](#).

If you have any questions, you can find a local or toll-free number for your country in our Global Support Contact Directory at https://empower.softwareag.com/public_directory.aspx and give us a call.

Software AG TECHcommunity

You can find documentation and other technical information on the Software AG TECHcommunity website at <http://techcommunity.softwareag.com>. You can:

- Access product documentation, if you have TECHcommunity credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.
- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

Data Protection

Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Installation Prerequisites

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This document describes step-by-step how to install Predict under the following operating systems:

- BS2000
- z/OS
- z/VSE

The steps to be taken depend on which installation method you choose: first-time installation or in-place conversion.

Notation *vrs* or *vr*:

When used in this document, the notation *vrs* or *vr* represents the relevant product version (see also Version in the *Glossary*).

Product Requirements

The following prerequisites must be met when using Predict on mainframe platforms.

Product Requirements

The products listed below must be installed in order to use Predict.

Product Name (Product ID)	Minimum Requirements
Natural (NAT)	<p>Natural for Mainframes Version 8.2 SP7 or above.</p> <p>The following parameter settings are recommended during the installation of Predict:</p> <ul style="list-style-type: none"> ■ MADIO=0 ■ MAXCL=0 ■ MT=0 ■ RI=OFF. <p>The Natural editor must be installed. The Software AG Editor is required for this version of Predict. You are recommended to set the size of the editor buffer pool to 1024k.</p> <p>If you are using System Maintenance Aid (SMA), the necessary modules are linked when the SMA parameter SAG-EDITOR is set. If you are installing without SMA, see the <i>Natural Installation for Mainframes</i> documentation.</p>
Adabas (ADA)	<p>Adabas Version 8.3 or above.</p> <p>The following Adabas parameter should be set during the installation of Predict:</p> <ul style="list-style-type: none"> ■ NISNHQ = 700 or greater

Product Name (Product ID)	Minimum Requirements
	AOSASM must be linked to the Batch Natural nucleus if AOS is installed. You are recommended to load the Predict system file and the Coordinator FDIC file with index compression.

Other Related Software AG Products

These products are not necessary in order to use Predict, but if they are installed, the following prerequisites must be met.

Product Name (Product ID)	Minimum Requirements
Adabas Online Services (AOS)	Adabas Online Services Version 8.3 or above.
Adabas Native SQL (SQL)	Adabas Native SQL Version 2.4 or above.
Adabas SQL Server (ESQ)	Adabas SQL Server Version 1.4 SP2 or above On mainframes, Interactive Facilities of Adabas SQL Server must be installed within Natural.
Entire System Server (NPR)	Entire System Server Version 3.6 SP2 or above.
Natural Security (NSC)	The Natural Security version that corresponds to your Natural version.
Natural ISPF (ISP)	Natural ISPF Version 8.2 SP7 or above.
Natural for Windows (NAT)	Natural for Windows Version 9.1 SP2 or above.
Predict Application Control (PAC)	Predict Application Control Version 2.6 SP1 with Cumulative Fix 10 and hotfix PA26127, or above.
Con-form (CMF)	Con-form Version 3.4 SP3 or above.
Con-nect (CNT)	Con-nect Version 3.4 SP3 or above. If Con-nect is installed at your site, copy the following modules from SYSCNT2 to SYSDIC to enable the transfer of texts to and from Con-nect: Z-ADD11A, Z-DIS11, Z-ERA11, Z-GET11B, Z-GET11C. See <i>Application Programming Interface</i> in the <i>Con-nect Administration</i> documentation for additional modules that must be copied.
Predict SYSHELP	If SYSHELP is used, you must copy the SYSH* routines from library SYSDICH to a steplib of your application because some routines have changed.
Super Natural (NSN)	Super Natural Version 8.2 SP7 or above.
Natural Business Services (NBS)	Natural Business Services Version 8.2 SP2 or above.
Natural Development Server (NDV)	Natural Development Server Version 8.3 SP4 or above.
Natural SQL Gateway (NSB)	The Natural SQL Gateway version that corresponds to your Natural version on the client.

Product Name (Product ID)	Minimum Requirements
	CONNX Version 13 or above on the server.
webMethods EntireX	10.1 for z/OS or above 9.6.0 for z/VSE or above 10.3 for BS2000 or above

Although it may be technically possible to run versions of other Software AG products which are older than the ones listed above with a new version of Predict, this is not recommended because, for legal reasons, Software AG cannot continue to support such combinations and cannot make any statements about whether it is technically possible to run a new version of Predict with versions of other Software AG products which are older than the ones listed above.

Other Related Products

Product Name	Minimum Requirements
Natural DB2 Interface	If DB2 is installed, Version 10, Release 1 or above must be installed.
Natural SQL/DS Interface	If SQL/DS is installed, Version 2, Release 2 or above must be installed.
MS Word	Microsoft Word.

Entire Net-Work

- Entire Net-Work for Mainframes Version 6.3 or above
- Entire Net-Work for Open Systems 7.7 or above

These products are required if you are using Predict in a heterogeneous environment.

When the Predict FDIC file is shared between Natural on a mainframe and Natural on a Windows or UNIX platform, Entire Net-Work must be used. For details concerning each platform, see the corresponding *Natural Installation* documentation.

Special Considerations For Predict Application Control



Note: Predict Application Control 2.6 SP1 with Cumulative Fix 6 or above is required when using Predict.

Prerequisites

- The PCF (Predict Control File) must be converted to Predict Version 8.3 format. See the section Conversion in the *Predict Administration documentation*.
- A Coordinator FDIC file must be allocated to the PCF. The Coordinator FDIC of the PCF can be the same as the Coordinator FDIC of the Predict file, but does not have to be.

If the Coordinator FDIC files are identical

If the Coordinator FDIC of the PCF is the same as the Coordinator FDIC of the Predict file, perform the following steps:

1. Start a Natural session with FDIC=(DBnr,Fnr) of PCF.
2. Call the function Defaults > Coordinator Defaults to specify a Coordinator FDIC for the PCF. See the section Defaults in the *Predict Administration Documentation*.

See also the section *Define Coordinator file for PCF* in the *PAC/PAA Release Notes*

If the Coordinator FDIC files are different

If the Coordinator FDIC of the PCF is not the same as the Coordinator FDIC of the Predict file, perform the following steps:

1. Load the Coordinator FDIC contained in data set/file PRD_{vr}s.SYSF using the ADALOD utility (Job I050, Step 0601).
 2. Start a Natural session with FDIC=(DBnr,Fnr) of PCF.
 3. Call the function Defaults > Coordinator Defaults to specify a Coordinator FDIC for the PCF. See the section Defaults in the *Predict Administration Documentation*.
- The following parameter values must be set when migrating Predict objects from the Development FDIC into PAC (job <opsys>_PREDICT-MIGRATE_IN). This is applicable to Predict migrations only.

Step 2: Unload PRD from Development

SSIZE=100

Step 3: Load to Control File

DATSIZE=85

Functional Scope

You can migrate data from Predict 8.4 to PAC 2.6 or above.

Accessing the Dictionary Server with Natural for Windows

With dictionary servers, you can access remote free rules and automatic rules maintained in Predict once you have access to Predict on a mainframe or UNIX host. Predict rules can only be used by accessing Predict on a UNIX or mainframe server.



Note: A dictionary server (also referred to as Predict server) can be any Natural RPC server running in the same environment that Predict is installed in.

Starting the Server

Please read the *Natural Remote Procedure Call (RPC)* documentation before starting the RPC server. The dictionary server name must be known in order to set up the remote dictionary access on the client side.

Accessing the Server

To access the server, you need a Net-Work connection to the server's Net-Work. Please ask your data center for the appropriate settings.

Before starting Natural, define the dictionary server using the Natural for Windows Configuration Utility with the following two steps:

1. Define a logical dictionary server. For this you need to know
 - the server name of the dictionary server (DDM server) that has been defined to the EntireX Broker on the server system.
 - the node name on which this server is running. This is the name of the broker.

Ask your data center for these names. The logical dictionary server is defined in the menu Global CONFIG File > Dictionary Server Assignments.

2. Set the parameter USEDIC (remote dictionary access) to a logical dictionary server name that has been defined in the global CONFIG file.

When running Natural using this parameter module, you must have access to the server. To check whether you are connected to the server, use the command MENU from SYSRPC to ping the server. You therefore need to define the server using the SERVER MAINTENANCE option.

Please ensure that the Server Node Classification has been set to the appropriate values. You can then use the SERVER COMMAND EXECUTION option to ping the server. The server should reply:

I'm still up!

Using Predict in Heterogeneous Environments

The following applies:

- If you are using Natural on the mainframe, the Predict system file FDIC must be located in the mainframe database.
- If you want to access FDIC only under Natural for Windows or UNIX platforms, FDIC can be located in an Adabas database on any of these platforms.
- If you share the FDIC file between Natural on the mainframe and a Natural for Windows or UNIX installation, your FDIC file must be located on the mainframe and you need to configure the translation definitions in Entire Net-Work. Add the following translation definitions to your Entire Net-Work on the mainframe:

```
Translate Define ADD ID=(<FDIC-DBnr>,<FDIC-Fnr>) Field=L0, FORMAT=(A,33,X,2)
Translate Define ADD ID=(<FDIC-DBnr>,<FDIC-Fnr>) Field=LK, FORMAT=(X,2,A,88)
Translate Define ADD ID=(<FDIC-DBnr>,<FDIC-Fnr>) Field=LJ, FORMAT=(A,16,X,2)
Translate Define ADD ID=(<FDIC-DBnr>,<FDIC-Fnr>) Field=L2, FORMAT=(X,2,A,32)
```

- For the Predict Coordinator FDIC file, the same translation definition as described above must be configured, but using the following syntax. Replace the ID parameter in the four above definitions with:

```
ID=(<Coordinator-DBnr>,<Coordinator-Fnr>)
```

- If you are using the Predict Coordinator, it must be installed on the same platform as the main FDIC.
- Set the Coordinator defaults parameter Clear with System Utility to N.

Installation Jobs/Procedures

The method used for installing Predict depends on your operating system environment.

BS2000, z/OS or z/VSE

For these operating systems, the installation of Software AG products is performed by installation jobs. These jobs are either adapted manually or generated by System Maintenance Aid (SMA), see [Using System Maintenance Aid](#).

For each step of the installation procedure described below, the job number of a job performing the respective task is indicated. This job number refers to an installation job generated by SMA. If you are not using SMA, a sample installation job of the same number is provided in the job library on the Predict installation medium; you must adapt this example job to your requirements.

Using System Maintenance Aid

If you are using Software AG's System Maintenance Aid (SMA) for the installation process, perform the following before generating jobs:

1. Load the SMA table data as described in the SYSTEM MAINTENANCE AID documentation (if you have not already done so).
2. Set PRD_{vrs} in the list of available products for your environment to 'TO BE INSTALLED'.

Then perform one of the following steps depending on the installation method you choose:

- If you are performing a **First-Time Installation**, adapt parameters FDIC Fnr and FDIC-DBID in the parameter group FILNUM to the required values. Then make the appropriate settings in parameter group OPTION as shown in table below.
- If you are performing an **Inplace Conversion** (Predict Version 4.6 is marked as 'INSTALLED' in your SMA environment), you can convert the installed version to Version 8.4 with the following settings in parameter group OPTION:

SMA Switch	For First-Time Installation	For Migrate from Version 4.6
PRD-FIRST-INSTALL	Y	N
PRD-CONVERSION	N	Y



Note: Leaving a field blank is the equivalent of entering N.

See the *System Maintenance Aid documentation* for more information.

Installation Medium

The installation medium contains the data sets (or files for BS2000, z/OS and z/VSE) listed in the table below. The sequence of the data sets/files is shown in the Software AG Product Delivery Report which accompanies the installation medium.

Datasets Required for Predict

The following data sets/files are required to install Predict. The data sets/files delivered (X) depend on the operating system on which you are installing.

Data Set/File Name	BS2000	z/OS	z/VSE	Contents
PRDvrs .JOBS	X	X		Sample installation jobs.
PRDvrs .Tape				Sample installation jobs.
PRDvrs .INPL	X	X	X	Natural modules of Predict in INPL format. This data set/file also contains Predict error messages.
PRDvrs .SYSF	X	X	X	Predict system file in Adabas ADAULD format without database description.
PRDvrs .DATA	X	X	X	Predict description of Predict 8.4 in Migrate 8.4 format.
PRDvrs .DEMO	X	X	X	Predict Demo DB in Migrate 8.4 format. This includes sample files such as EMPLOYEES and VEHICLES and other sample data.
PRDvrs .LIBJ			X	Sample installation jobs.
PRDvrs .DE44	X	X	X	List of modules no longer used by Predict since version 4.4.
PRDvrs .DE45	X	X	X	List of modules no longer used by Predict since version 4.5.
PRDvrs .DE46	X	X	X	List of modules no longer used by Predict since version 4.6.
PRDvrs .DE82	X	X	X	List of modules no longer used by Predict since version 8.2.
PRDvrs .DE83	X	X	X	List of modules no longer used by Predict since version 8.3.
PRDvrs .DE84	X	X	X	List of modules no longer used by Predict since version 8.4.

Copying the Installation Medium Contents to Disk

The steps required to copy the contents of the installation medium to disk depend on your operating system environment.

- [Copying the Installation Medium Contents to a BS2000 Disk](#)
- [Copying the Installation Medium Contents to a z/OS Disk](#)

- [Copying the Installation Medium Contents to a z/VSE Disk](#)

Notation *vrs* or *vr*:

When used in this document, the notation *vrs* or *vr* represents the relevant product version (see also Version in the *Glossary*).

Copying the Installation Medium Contents to a BS2000 Disk

Copy the files (data sets) from the supplied installation medium to your disk before you perform the individual installation procedure for each component to be installed.

The way you copy the files depends on the installation method and the medium used:

- If you use System Maintenance Aid (SMA), refer to the copy job instructions provided in the *System Maintenance Aid* documentation.
- If you are not using SMA and want to copy the files from CD-ROM, refer to the README.TXT file on the CD-ROM.
- If you are not using SMA and want to copy the files from tape, follow the instructions in this section.

This section explains how to copy all files from tape to disk.

- [Step 1: Copy Library SRVvrs.LIB from Tape to Disk](#)
- [Step 2: Copy the Procedure COPY.PROC from Tape to Disk](#)
- [Step 3: Copy all Product Files from Tape to Disk](#)

Step 1: Copy Library SRVvrs.LIB from Tape to Disk

This step is not necessary if you have already copied the library *SRVvrs.LIB* from another Software AG installation tape. For further information, refer to the element *#READ-ME* in this library. The library *SRVvrs.LIB* is stored on the tape as a sequential file named *SRVvrs.LIBS* containing LMS commands. The current version *vrs* can be obtained from the *Software AG Product Delivery Report*.

- Execute the following commands to convert *SRVvrs.LIBS* into an LMS library:

```
/IMPORT-FILE SUPPORT=*TAPE(FILE-NAME=SRVvrs.LIBS, -  
/ VOLUME=volser, DEV-TYPE=tape-device)  
/ADD-FILE-LINK LINK-NAME=EDTSAM, FILE-NAME=SRVvrs.LIBS, -  
/ SUPPORT=*TAPE(FILE-SEQ=3), ACC-METH=*BY-CAT, -  
/ BUF-LEN=*BY-CAT, REC-FORM=*BY-CAT, REC-SIZE=*BY-CAT  
/START-EDT  
@READ '/'  
@SYSTEM 'REMOVE-FILE-LINK EDTSAM'  
@SYSTEM 'EXPORT-FILE FILE-NAME=SRVvrs.LIBS'  
@WRITE 'SRVvrs.LIBS'  
@HALT
```

```

/ASS-SYSDTA  SRVvrs.LIBS
/MOD-JOB-SW  ON=1
/START-PROG  $LMS
/MOD-JOB-SW  OFF=1
/ASS-SYSDTA  *PRIMARY

```

where:

tape-device is the device type of the tape, for example, TAPE-C4, and
volser is the VOLSER of the tape (see the *Software AG Product Delivery Report*).

Step 2: Copy the Procedure COPY.PROC from Tape to Disk

- Call the procedure P.COPYTAPE in the library SRVvrs.LIB to copy the procedure COPY.PROC to disk:

```

/CALL-PROCEDURE (SRVvrs.LIB,P.COPYTAPE), -
/ (VSNT=volser, DEVT=tape-device)

```

If you use a TAPE-C4 device, you can omit the parameter DEVT.

Step 3: Copy all Product Files from Tape to Disk

- Enter the procedure COPY.PROC to copy all product files to disk:

```

/ENTER-PROCEDURE COPY.PROC, DEVT=tape-device

```

If you use a TAPE-C4 device, you can omit the parameter DEVT.

The result of this procedure is written to the file L.REPORT.SRV.

Copying the Installation Medium Contents to a z/OS Disk

Copy the data sets from the supplied installation medium to your disk before you perform the individual installation procedure for each component to be installed.

The way you copy the data sets depends on the installation method and the medium used:

- If you use System Maintenance Aid (SMA), refer to the copy job instructions provided in the *System Maintenance Aid* documentation.
- If you are not using SMA and want to copy the data sets from CD-ROM, refer to the README.TXT file on the CD-ROM.
- If you are not using SMA and want to copy the data sets from tape, follow the instructions in this section.

This section explains how to copy all data sets from tape to disk.

- [Step 1: Copy Data Set COPY.JOB from Tape to Disk](#)
- [Step 2: Modify hilev.COPY.JOB on Your Disk](#)
- [Step 3: Submit COPY.JOB](#)
- [Copy the Adabas Limited \(WALvrs\) Libraries, If Required](#)

Step 1: Copy Data Set COPY.JOB from Tape to Disk

- Modify the following sample job according to your requirements:

```
//SAGTAPE JOB SAG,CLASS=1,MSGCLASS=X
//* -----
//COPY EXEC PGM=IEBGENER
//SYSUT1 DD DSN=COPY.JOB,
// DISP=(OLD,PASS),
// UNIT=(CASS,,DEFER),
// VOL=(,RETAIN,SER=tape-volser),
// LABEL=(2,SL)
//SYSUT2 DD DSN=hilev.COPY.JOB,
// DISP=(NEW,CATLG,DELETE),
// UNIT=3390,VOL=SER=disk-volser,
// SPACE=(TRK,(1,1),RLSE),
// DCB=*.SYSUT1
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//
```

where:

tape-volser is the VOLSER of the tape, for example: T12345,
hilev is a valid high-level qualifier, and
disk-volser is the VOLSER of the disk.

- Execute the job to copy the data set COPY.JOB to your disk.

Step 2: Modify hilev.COPY.JOB on Your Disk

- Modify *hilev*.COPY.JOB according to your requirements:

Set EXPDT to a valid expiration date, for example, 99365.

Set HILEV to a valid high-level qualifier, for example, USERLIB.

Set LOCATION to a storage location, for example, STORCLAS=ABC or UNIT=3390,VOL=SER=USR123.

Step 3: Submit COPY.JOB

- Execute `hldev.COPY.JOB` to copy single, multiple, or all data sets to your disk.

Copy the Adabas Limited (WALvrs) Libraries, If Required

Entire Net-Work requires some Adabas modules. For systems where Adabas is not installed, these modules are supplied on the installation tape in the Adabas limited libraries (*WALvrs*). See the Software AG Product Delivery Report for specific information regarding these limited libraries.

Software AG recommends that you concatenate the Adabas limited (WAL) libraries with the Entire Net-Work (WDX) load library first in the sequence.

Copying the Installation Medium Contents to a z/VSE Disk

Copy the data sets from the supplied installation medium to your disk before you perform the individual installation procedure for each component to be installed.

The way you copy the data sets depends on the installation method and the medium used:

- If you use System Maintenance Aid (SMA), refer to the copy job instructions provided in the *System Maintenance Aid* documentation.
- If you are not using SMA and want to copy the data sets from CD-ROM, refer to the README.TXT file on the CD-ROM.
- If you are not using SMA and want to copy the data sets from tape, follow the instructions in this section.

This section explains how to copy the data sets `.LIBJ`, `.LIBR` and `.LICS` (if supplied) from tape to disk. All other data sets can be installed directly from the tape.

- [Step 1: Copy Data Set COPYTAPE.JOB to Disk](#)
- [Step 2: Modify COPYTAPE.JOB on Your Disk](#)
- [Step 3: Submit COPYTAPE.JOB](#)

Step 1: Copy Data Set COPYTAPE.JOB to Disk

- Modify the following sample job according to your requirements:

```
* $$ JOB JNM=LIBRCAT,CLASS=0,                                     +
* $$ DISP=D,LDEST=(*,UID),SYSID=1
* $$ LST CLASS=A,DISP=D
// JOB LIBRCAT
* *****
*       STORE COPYTAPE.JOB IN LIBRARY
* *****
// ASSGN SYS004,nnn
// MTC REW,SYS004
```

```
// MTC FSF,SYS004,4
ASSGN SYSIPT,SYS004
// TLBL IJSYSIN,'COPYTAPE.JOB'
// EXEC LIBR,PARM='MSHP; ACC S=lib.sublib'
/*
// MTC REW,SYS004
ASSGN SYSIPT,FEC
/*
/&
* $$ EOJ
```

where:

nnn is the tape address, and

lib.sublib is the library and sublibrary in which the data set COPYTAPE.JOB is to be stored.

- Execute the job to copy the data set COPYTAPE.JOB to disk.

COPYTAPE.JOB contains the JCL required to copy the data sets .LIBJ, .LIBR and .LICS from tape to disk.

Step 2: Modify COPYTAPE.JOB on Your Disk

- Modify COPYTAPE.JOB according to your requirements and set the disk space parameters as appropriate.

Step 3: Submit COPYTAPE.JOB

- Execute COPYTAPE.JOB to copy the data sets .LIBJ, .LIBR and .LICS to your disk.

Which Installation Method?

The installation method you choose depends on whether Predict is already installed at your site. There are two methods available: [First-Time Installation](#) and [Inplace Conversion](#).

3 First-Time Installation

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Installing under BS2000, z/OS or z/VSE with SMA

1. Set the SMA switches as shown in the table below.

SMA Switch	
SMA Switch PRD-FIRST-INSTALL	Y
PRD-CONVERSION	N



Note: Leaving a field blank is the equivalent of entering N.

2. Copy the installation medium contents to disk. The steps required depend on your operating system environment and are described in the section *Copying the Installation Medium Contents to Disk* for
 - **BS2000**
 - **z/OS**
 - **z/VSE**
3. Perform the following installation steps.

Installation Steps for All Operating Systems

Perform the following steps in the order given:

- Step 1 - Load Predict System File
- Step 2 - Load Coordinator FDIC
- Step 3 - Delete Modules No Longer Used
- Step 4 - Relink your Natural Nucleus
- Step 5 - Load Predict System Programs
- Step 6 - Define the Predict Libraries to Natural Security manually
- Step 7 - Copy DDMs from Natural system file FNAT to the Predict system file FDIC
- Step 8 - Define Coordinator FDIC in new SYSDIC
- Step 9 - Adapt the Text Modules in Library SYSEXT
- Step 10 - Load the Predict Description of the Predict System File

- [Step 11 - Load the Predict Example Data](#)

Step 1 - Load Predict System File

(Job I050, Step 0600)

Load the Predict 8.4 system file contained in data set/file PRD_{vrs}.SYSF using the Adabas utility ADALOD.

Step 2 - Load Coordinator FDIC

(Job I050, Step 0601)

Load the Coordinator FDIC contained in data set/file PRD_{vrs}.SYSF using the Adabas utility ADALOD.

Step 3 - Delete Modules No Longer Used

(Job I051, Steps 0613 - 0616)

Predict modules from earlier versions which were copied to libraries different from the original libraries after installation must be deleted from these libraries using the Natural utility INPL with the data sets PRD_{vrs}.DE44, PRD_{vrs}.DE45, PRD_{vrs}.DE46, PRD_{vrs}.DE82, PRD_{vrs}.DE83 and PRD_{vrs}.DE84 as input.

Step 4 - Relink your Natural Nucleus

(Job I060 for Batch Mode or Job I080 for Online Operation)

Predict requires the following Natural parameter settings:



Note: The size parameters are recommendations only. It may be necessary to adapt these values to your particular environment.

- DATSIZE must be at least 250.
- SSIZE=64
- RI=OFF
- If you are using work files, you are recommended to specify WORK=(...,OPEN=ACC) instead of using the Natural default
- If Predict XRef data is to be used: set the XREF parameter to ON or FORCE.
- If you want to use the feature *Search usage in Web Services*, Natural must be started with the following parameter settings:

```
XML=(ON,RDOC=ON,PARSE=ON) CP=IBM01140 CFICU=ON
```

Adapt your Natural parameter module with the new parameters and assemble it.

Link the new Natural parameter module and the following modules to the environment-independent part of the Natural nucleus:

Natural

Operating System	Module	Load Library
BS2000	PRDXREF	NAT _{vrs} .MOD
z/OS	PRDXREF	NAT _{vrs} .LOAD
z/VSE	PRDXREF	NAT _{vrs} .LIBR

For details, see the *Natural Installation for Mainframes documentation* and the *Natural Operations for Mainframes documentation*.

Step 5 - Load Predict System Programs

(Job I061, Step 0600)

The Predict system programs are contained in the data set/file PRD_{vrs}.INPL and are loaded to your Natural system file (FNAT) using the Natural utility INPL. This data set/file also contains the Predict error messages.

Step 6 - Define the Predict Libraries to Natural Security manually

If Natural Security is installed, define the following libraries to Natural Security:

SYSDIC, SYSDICBE, SYSDICCO, SYSDICH, SYSDICMA

This step must be performed manually.



Note: If you specify a startup transaction on the Natural Security **Modify Library** screen, then specify **N** for **Batch execution**.

Step 7 - Copy DDMs from Natural system file FNAT to the Predict system file FDIC

(Job I200, Step 0600)

If you were previously using Natural without Predict, the DDMs were stored on the Natural system file. With Predict, the DDMs are stored on the Predict system file.

Step 8 - Define Coordinator FDIC in new SYSDIC

(Job I200, Step 0601)

To set up your environment so you can use the Coordinator, start a Predict 8.4 online session (using the newly installed FDIC file) or perform the following batch mode commands:

```
LOGON SYSDIC
MENU
ASSIGN
COORDINATOR DBNR=n FNR=n UTILITY-CLEAR=Y
FIN
```

Where *n* represents the DBNR and FNR of the Coordinator FDIC you specified in [Step 2](#).

Step 9 - Adapt the Text Modules in Library SYSEXT

(Job I200, Step 0608)

This step is optional.

Start a Predict 8.4 online session or perform the following batch mode commands:

```
LOGON SYSDIC
MENU
NEWEXGEN
FIN
```



Note: If you execute this function in batch, please ensure that you have set Batch execution to N (No) on the Natural Security Modify Library screen of library SYSEXT.

Step 10 - Load the Predict Description of the Predict System File

(Job I500, Step 0605)

This step is optional. Please note that, due to the number of checks performed by the Coordinator when loading this data set/file, this step may take a long time.

The installation data set/file PRD*vr*s.DATA contains a description of the Predict 8.4 system file in Migrate 8.4 format. Load the description into the Predict system file with the Predict Coordinator.



Note: No support is guaranteed if you manipulate the Predict system file with your own programs.

The following syntax is used:

```
LOGON SYSDICBE
MENU
```

```
LOAD OBJECTTYPE ALL,REPLACE=Y,ADA=N  
FIN
```

If a previous import operation with the Coordinator terminated abnormally for any reason, the Coordinator FDIC is locked and a corresponding message is given. Enter the following commands to clear the Coordinator FDIC:

```
LOGON SYSDIC  
MENU  
SPECIAL REFRESH  
FIN
```

Step 11 - Load the Predict Example Data

(Job I500, Step 0606)

This step is optional. Please note that, due to the number of checks performed by the Coordinator when loading this data set/file, this step may take a long time.

The installation data set/file PRD_{vrs}.DEMO contains the example data in Migrate 8.4 format. Load the description into the Predict system file with the Predict Coordinator. The following syntax is used:

```
LOGON SYSDICBE  
MENU  
LOAD OBJECTTYPE ALL,REPLACE=Y,ADA=N  
FIN
```

If a previous import operation with the Coordinator terminated abnormally for any reason, the Coordinator FDIC is locked and a corresponding message is returned. Enter the following commands to clear the Coordinator FDIC:

```
LOGON SYSDIC  
MENU  
SPECIAL REFRESH  
FIN
```

4 Inplace Conversion from a Previous Version

- Installing under BS2000, z/OS or z/VSE with SMA 26
- Considerations Prior to Upgrading to Version 8.4 26
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-  **Caution:** The inplace conversion will result in considerable modifications to the internal structure of your dictionary data. Software AG recommends that, before you execute the following installation steps you back up your Predict system file using the backup procedures usually performed in your environment.

Please read the following operating system specific information before you start installing Predict.

Installing under BS2000, z/OS or z/VSE with SMA

1. Set the SMA switches as shown in the table below.

SMA Switch	For Migrate from Version 4.6 and beyond
PRD-FIRST-INSTALL	N
PRD-CONVERSION	Y



Note: Leaving a field blank is the equivalent of entering N.

2. Copy the installation medium contents to disk. The steps required depend on your operating system environment and are described in the section *Copying the Installation Medium Contents to Disk* for
 - **BS2000**
 - **z/OS**
 - **z/VSE**
3. For the conversion from Version 4.6, perform the following Installation Steps and continue.

Considerations Prior to Upgrading to Version 8.4

The following must be considered prior to an upgrade:

- [Superfluous Fields](#)
- [User Exit Routines](#)
- [Other Programs Delivered in Source Form](#)
- [User Programs which access the Predict System File](#)

- [Help Texts](#)

Superfluous Fields

A Predict system file converted with Inplace conversion will still contain a number of Adabas fields no longer used in Predict 8.4. These can be ignored.

User Exit Routines

Predict provides a number of user exits which can be used to customize many Predict functions to meet special needs. Sample user exit routines illustrating the use of user exits and explaining the parameters are delivered with Predict.

All user exit routines from previous Predict versions with the prefix U- together with their parameter data areas will be replaced by new sample routines during the installation.

Other Programs Delivered in Source Form

In addition to user exits, a number of other Predict programs are delivered in source form. During installation, these source programs replace those delivered with the previous Predict version.

The following source programs in the library SYSDIC are replaced:

EXIT	MAIN__	MAINM1	MAINM2	MAINM3	PUNCH01
------	--------	--------	--------	--------	---------



Note: The program MAIN__ is the equivalent of the former program MAIN. You are recommended to remove existing old sources of MAIN.

The following type-dependent user exits are also replaced:

ACM**EX	CAT**EX	PUR**EX
---------	---------	---------



Note: The asterisks above represent an object type code, for example FI or SY.

If you adapted any of these programs to meet special needs at your site, save them to a different library before starting the installation.

User Programs which access the Predict System File

All fields in the Predict system file (FDIC) that have been modified since the last version are assigned the keyword SAG-PRD-V84-MOD.

All new fields in Predict 8.4 are assigned the keyword SAG-PRD-V83.

All fields that are no longer used in Predict 8.4 are assigned the keyword SAG-PRD-V84-DEL.

If you have written your own programs which access these fields in the Predict system file, check that these programs are still compatible with these modified fields.

To access Predict data, use API USR3005N.

Help Texts

Predict supplies a large number of online help texts as Natural text members with the prefix H- in the library SYSDIC. These texts can be customized and extended with the special function Maintain Predict Help Texts.

All help texts with the prefix H- are replaced during installation. To prevent user-modified help texts being replaced with new texts supplied by Software AG, rename the prefix H- of modified help texts to T-.

If a help text with the prefix T- exists, this is always used by the Predict help system instead of the standard help text with the prefix H-.

Inplace Conversion from Version 4.6, Version 8.2 or Version 8.3

The inplace conversion will result in considerable modifications to the internal structure of your dictionary data. Software AG recommends that, before you execute the following installation steps you back up your Predict system file using the backup procedures usually performed in your environment.

Before starting installation with this method, carefully read the section Conversion in the *Predict Administration documentation*.



Note: There are no physical changes in the Predict system file from Version 4.6, Version 8.2 or Version 8.3 to Version 8.4.

Installation Steps

Perform the following steps after copying the installation medium contents to disk.

- [Step 1 - Delete Modules No Longer Used](#)
- [Step 2 - Relink your Natural Nucleus](#)
- [Step 3 - Load Predict System Programs](#)
- [Step 4 - Convert the Data on the Predict System File to 8.4 Format](#)
- [Step 5 - Adapt the Text Modules in Library SYSEXT](#)
- [Step 6 - Load the Predict Description of the Predict System File](#)
- [Step 7 - Load the Predict Example Data](#)

Step 1 - Delete Modules No Longer Used

(Job I051, Steps 0613 - 0616)

Predict modules from earlier versions which were copied to libraries different from the original libraries after installation must be deleted from these libraries using the Natural utility INPL with the data sets PRD_{vrs}.DE44, PRD_{vrs}.DE45, PRD_{vrs}.DE46, PRD_{vrs}.DE82, PRD_{vrs}.DE83 and PRD_{vrs}.DE84 as input.

Step 2 - Relink your Natural Nucleus

(Job I060 for Batch Mode, Job I080 for Online Operation)

Predict requires the following Natural parameter settings:



Note: The size parameters are only recommendations. It may be necessary to adapt these values to your particular environment.

- DATSIZE must be at least 200.
- SSIZE=64
- RI=OFF
- If you are using work files, you are recommended to specify WORK=(...,OPEN=ACC) instead of using the Natural default.
- If Predict XRef data is to be used: set the XREF parameter to ON or FORCE.
- If you want to use the feature *Search usage in Web Services*, Natural must be started with the following parameter settings:

```
XML=(ON,RDOC=ON,PARSE=ON) CP=IBM01140 CFICU=ON
```

Adapt your Natural parameter module with the new parameters and assemble it.

Link the new Natural parameter module and the following modules to the environment-independent part of the Natural nucleus:

Natural

Operating System	Module	Load Library
BS2000	PRDXREF	NAT _{vrs} .MOD
z/OS	PRDXREF	NAT _{vrs} .LOAD
z/VSE	PRDXREF	NAT _{vrs} .LIBR

For details see the corresponding *Natural Installation for Mainframes* documentation and the *Natural Operations for Mainframes* documentation.

Step 3 - Load Predict System Programs

(Job I061, Step 0600)

The Predict system programs are contained in the data set/file PRD_{vrs}.INPL. Load these programs into your Natural system file using the Natural utility INPL. This data set/file also contains the Predict error messages.

Step 4 - Convert the Data on the Predict System File to 8.4 Format

(Job I200, Step 0606)

This job converts Predict 4.6, 8.2 or 8.3 data to Version 8.4 format. If the data on your Predict system file is already in Version 8.4 format, a corresponding message is returned.



Note: We recommend you save your Predict system file in Version 4.6, 8.2 or 8.3 format before proceeding with the steps below.

```
LOGON SYSDICCO
MENU
CONVERT VERSION84
FIN
```

Now the data is in Version 8.4 format.

Step 5 - Adapt the Text Modules in Library SYSEXT

(Job I200, Step 0608)

This step is optional.

Start a Predict 8.4 online session or perform the following batch mode commands:

```
LOGON SYSDIC
MENU
NEWEXGEN
FIN
```



Note: If you execute this function in batch, please ensure that you have set Batch execution to N (No) on the Natural Security Modify Library screen of library SYSEXT.

Step 6 - Load the Predict Description of the Predict System File

(Job I500, Step 0605)

This step is optional. Please note that, due to the number of checks performed by the Coordinator when loading this data set/file, this step may take a long time.

The installation data set/file PRD*vrs*.DATA contains a description of the Predict 8.4 system file in Migrate 8.4 format. Load the description into the Predict system file with the Predict Coordinator.

The following syntax is used:

```
LOGON SYSDICBE
MENU
LOAD OBJECTTYPE ALL,REPLACE=Y,ADA=N
FIN
```

If a previous import operation with the Coordinator terminated abnormally for any reason, the Coordinator FDIC is locked and a corresponding message is returned. Enter the following commands to clear the Coordinator FDIC:

```
LOGON SYSDIC
MENU
SPECIAL REFRESH
FIN
```

Step 7 - Load the Predict Example Data

(Job I500, Step 0606)

This step is optional. Please note that, due to the number of checks performed by the Coordinator when loading this data set/file, this step may take a long time.

The installation data set/file PRD_{vrs}.DEMO contains the example data in Migrate 8.3 format. Load the description into the Predict system file with the Predict Coordinator. The following syntax is used:

```
LOGON SYSDICBE
MENU
LOAD OBJECTTYPE ALL,REPLACE=Y,ADA=N
FIN
```

If a previous import operation with the Coordinator terminated abnormally for any reason, the Coordinator FDIC is locked and a corresponding message is returned. Enter the following commands to clear the Coordinator FDIC:

```
LOGON SYSDIC
MENU
SPECIAL REFRESH
FIN
```

Upgrading from Predict Version 4.5 or below



Caution: For users of Predict Version 4.5 or below:

If you are using Predict Version 4.5 or below and want to migrate to a newer version, it is necessary to perform the following actions in the order given below.

1. Perform a Predict Unload operation using Predict Version 4.5 or below.

The following data need to be unloaded:

- If user-defined object-types (UDEs) exist, then their metadata must be unloaded using `UNLOAD METADATA <UDE-name> <parameters>`. Specify the unload parameters that meet your requirements.
- All documented objects using `UNLOAD OBJECTTYPE ALL CODE=Y,INTERNAL-ID=Y <parameters>`. Specify the unload parameters that meet your requirements.
- If XRef data are to be transferred to the new FDIC, then they must be unloaded using `UNLOAD OBJECTTYPE XR <parameters>`. Specify the unload parameters that meet your requirements.
- If user-defined Retrieval Models exist, then these must be unloaded using `UNLOAD RETRIEVALMODEL <object type> <parameters>`. Specify the unload parameters that meet your requirements.

2. Install Predict Version 8.4.
3. Perform a Predict Load operation using Predict Version 8.4.

5 Applying Service Packs or Fixes

- Steps to be performed 36

When migrating from Predict Version 8.4 SP1 to Predict Version 8.4 SP n (where $n > 1$), please observe the information below. If you have already installed Predict Version 8.4 SP1 in your environment, no conversion of your FDIC file is necessary.

Perform the following steps after copying the installation medium contents to disk as described in the Predict Installation Documentation.



Note: If you are working with System Maintenance Aid (SMA), set the following parameters in parameter group OPTION to N before starting the installation:

- PRD-CONVERSION
- PRD-FIRST-INSTALL

Steps to be performed

■ Step 1

Save the user exit routines, other programs delivered in source form, and help texts if you modified them.

■ Step 2

Delete modules no longer used.

See [Step 1](#) (Job I051, Steps 0613 - 0616) in the section *Inplace Conversion*.

■ Step 3

Load Predict System Programs.

See [Step 3](#) (Job I061, Step 0600) in the section *Inplace Conversion*.

■ Step 4

Restore the objects you saved in Step 1 of this description.

■ Step 5

Update the Predict Metadata.

Start a Predict 8.4 online session or perform the following batch mode commands:

```
LOGON SYSDIC
MENU
NEWGEN1
FIN
```

■ Step 6

Adapt Text Modules in Library SYSEXT.

Start a Predict 8.4 online session or perform the following batch mode commands:

```
LOGON SYSDIC  
MENU  
NEWEXGEN  
FIN
```

