precisely

Ironstream

Program Directory

Version 2.1.2 - PTF SDF21E3

Ironstream Program Directory

Version 2.1.2 - PTF SDF21E3
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Contents

Chapter 1 Introduction

The *Ironstream Program Directory* contains information concerning the materials and procedures associated with the installation of Ironstream V2.1.2.

Topics:

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What's in this Guide

The *Ironstream Program Directory* contains the following chapters.

Title	Description
Program Materials	Describes the downloadable materials that are available for Ironstream
Program and Service Level Information	Provides an overview of Ironstream and its components.
Obtaining Ironstream Software and Documentation	Explains how to download Ironstream software and documentation on the Precisely Support portal.
Installation Requirements and Considerations	Identifies the system requirements for installing and activating Ironstream.
Installation Instructions	Describes the installation method and the step-by-step procedures to install and to activate the functions of Ironstream.

Audience

The *Ironstream Program Directory* is intended for the system programmer responsible for program installation and maintenance.

Ironstream Description

Ironstream enables you to access real-time, mainframe operational insights through a number of supported data destination platforms, such as Splunk, Elastic Logstash, and Apache Kafka. Ironstream captures many different types of data from your z/OS mainframe and generates JSON formatted data that is forwarded via TCP/IP connections directly into a target destination repository.

What Data Does Ironstream Collect from z/OS?

Ironstream can collect, transform, and securely forward SMF records, IMS logs, JES SYSOUT data, syslogs, log4j messages, flat files, and system state performance metrics into a destination platform. Ironstream can also forward entire USS files and file changes, as well as RMF Monitor III metrics from the RMF distributed data server (DDS). There is also an API for users of COBOL, C, PL/I, REXX, and Assembler applications for forwarding user-defined data to a target destination.

Ironstream Components

Ironstream V2.1.2 consists of a number of data sources, referred to as components:

- Ironstream
- log4j
- Data Collection Extension (DCE)
- Ironstream Desktop (IDT)
- Network Monitoring Components (NMC) Alerts

All of the components are supplied in the downloadable package and are installed at the same time. Individual components are configurable on each deployment system.

Ironstream on the Precisely Support Portal

Ironstream V2.1.2 is provided through the Precisely Support portal at support.precisely.com, which requires valid user credentials. If you are already a Precisely customer, you may have a Precisely Support account, but it may not be authorized to access Ironstream materials. You must request your user-ID and password from your Precisely Account Executive (AE).

Existing Ironstream licensed customers can download and install Ironstream. The "Configuring and Running Ironstream" chapter in the *Ironstream Configuration and User's Guide* has information specific to existing Ironstream customers.

Precisely Knowledge Base

Ironstream V2.1.2 is provided through the Precisely Support portal at support.precisely.com, which requires valid user credentials. If you are already a Precisely customer, you may have a Precisely Support account, but it may not be authorized to access Ironstream materials. You must request your user-ID and password from your Precisely Account Executive (AE).

Search on the Ironstream product by release to find all relevant information about Ironstream. To improve the search process for Ironstream V2.1.2 enhancements, all enhancement-related Knowledge Base articles are indicated with the inclusion of "Enhancement" in the article title. When querying the Knowledge Base, you can also enter "enhancement" in the **Search for** field to list all enhancement-related articles for Ironstream V2.1.2.

Ironstream Starter Edition

The Ironstream Starter Edition is a free version of Ironstream, with limited product support, for forwarding z/OS syslog data and SMF 205 type records to Splunk. Syslog data and SMF record type 205 are the only supported data sources in this version.

If you want to forward other sources of data besides z/OS syslog or SMF record type 205, or require technical support, you will need to license the fully functional and supported version of Ironstream. Email us at info@precisely.com for additional information.

Chapter 2 # Program Materials

This section describes the downloadable materials, such as program files, machine-readable material, and basic program publications that are available for Ironstream V2.1.2.

Topics:
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Overview

To gain access to the Ironstream download site, you need a valid Precisely Support user ID and password for the Precisely Support portal at `support.precisely.com`.

The downloadable materials are shipped in EXE and ZIP file formats.

The process for transferring the downloadable files to your z/OS host is available in two forms:
- Using the supplied EXE file with your appropriate z/OS host TSO credentials and FTP.
- Using your own file transfer method.

See for details about obtaining the machine readable materials and transferring them to your z/OS system.

Basic Machine-Readable Material

Ironstream has an ever-increasing range of data sources, all of which are included in the downloadable package. There are no optional components from a download perspective, although you only customize and deploy the data sources you want Ironstream to forward to a destination. You can configure different combinations of components on different deployment systems.

Basic Program Publications

The following publications for Ironstream V2.1.2 are available on the Precisely Support Portal: support.precisely.com.

- *Ironstream Program Directory* (this manual)
- *Ironstream Configuration and User's Guide* – Provides instructions for configuring and running Ironstream instances. It also describes how to configure the supported data source parameters to optimize data collection and forwarding efficiency for your environment.
- *Ironstream SMF Record Field Reference* – An HTML-based reference that describes all of the SMF record fields supported by Ironstream. This reference is available on the "Ironstream Documentation" page on the Precisely Support Portal.
- *Ironstream New Features and Functions* – A detailed compendium of all Ironstream V2.1.2 enhancements.
- *Syncsort Network Management Component (NMC) Manuals* – Full details of all the configuration options are available in the appropriate Configuration and Reference or Administration manual for the NMC component concerned.

Useful IBM SMP/E Publications During Installation

The IBM publications listed in Table 2-1 may be useful during the installation of Ironstream V2.1.2. According to IBM, you can order copies by contacting your IBM representative or visit the IBM Publications Center at: www.ibm.com/shop/publications/order.

Table 2-1: Useful Publications During Installation

Publication Title	Form Number
IBM SMP/E for z/OS User's Guide	SA23-2277
IBM SMP/E for z/OS Commands	SA23-2275
IBM SMP/E for z/OS Reference	SA23-2276
IBM SMP/E for z/OS Messages, Codes, and Diagnosis	GA32-0883

Preventive Service

The Ironstream package that you download from Precisely Support includes maintenance service and the package name indicates the service level. For example, the current V2.1.2 roll-up "SDF21AA" package includes all fixes from the initial version 2.1 GA, SDF2101, up to and including PTF SDF21A9.

For existing Ironstream customers, this package simplifies the PTF APPLY process since SMP/E jobs need to be customized to include each PTF since SDF21AA. PTFs are viewable and downloadable from the Knowledge Base on Precisely Support.

Ironstream Service Components

Ironstream service is split into five components:

- The core Ironstream component, which has the identifier "SDF". Core Ironstream component fixes are called SDF*vvnn*, where *vv* is the Ironstream version that the fix applies to.
- The Data Collection Extension (DCE) component, which has the identifier "DCE". DCE fixes are called DCE*vvnn*, where *vv* is the version that the fix applies to.
- The Ironstream Desktop (IDT) component, which has the identifier "ZEN". IDT fixes are called ZEN*vvnn*, where *vv* is the version that the fix applies to.
- The Log4j Collector component, which has the identifier "SDJ". Log4j fixes are called SDJ*vvnn*, where *vv* is the version that the fix applies to.

  The SDJ fixes only apply to the log4j appender-specific forwarding component. This component is not necessary when forwarding log4j logs using the Unix System Services (USS) file tailing option.
- The Kafka component, which has the identifier "SDK". Kafka fixes are called SDK*vvnn*, where *vv* is the version that the fix applies to.

Sample SMP/E JCL and control statements are provided in `<hlq>.SDFWORK` in members SDFP*.

Initial Download and Installation

Every Ironstream fix is packaged with its prerequisite fixes as PTFs, which are available to download from the Knowledge Base section of the Precisely Support website . When you download Ironstream for the first time, *Precisely strongly recommends that you apply all outstanding service for all four components immediately following the base product installation.* This is not just to ensure that you have all the available service, it also ensures that you have all the latest functionality because many Ironstream enhancements are delivered as fixes.

Applying Maintenance Fixes

After installing the Ironstream package, each subsequent PTF includes all pre-requisites since package "SDF21AA". You can download the latest ZEN, DCE, IDT, SDF, or SDK co-requisite components separately; they are included in the Ironstream package but they might not be the latest PTF if they were shipped separately from an SDF component fix.

You can quickly find the latest component PTFs in Knowledge Base section of the Precisely Support website (`support.precisely.com`) by using the Keyword search field to enter one of the 3-character component identifiers followed by an asterisk. For example, to find the latest DCE PTFs, enter "DCE*", then sort the results by "Published On (Latest First).

Chapter 3

Program and Service Level Information

This section identifies the program and relevant service levels of Ironstream.

Ironstream Component FMIDs

Table 3-1 shows the FMIDs for each Ironstream component. Note that the Network Monitoring Components are considered a single component from a customization perspective, but it is a set of six discrete components.

Table 3-1: List of Ironstream Components

Component	FMID
Ironstream	LSDF210
Log4J	LSDJ210
Data Collection Extension	LDCE110
Ironstream Desktop	LZEN210
Network Monitoring	
ZEN EE Monitor	LZEM230
ZEN FTP Control	LZFC430
ZEN Data Capture Routine	LDCA130
ZEN IP Monitor	LZIM510
ZEN OSA Monitor	LZOM130
ZEN Unix Server	LZUS110

Collectively, these components correspond to Ironstream V2.1.2 although each component has a discrete version represented by three numerics.

Chapter 4

Obtaining Ironstream Software and Documentation

This section explains how to download Ironstream software and documentation on the Precisely Support Portal.

Topics:

Ironstream Download Page

Go to the Precisely Support Portal: `support.precisely.com`. Then use your Precisely Support user-ID and password and follow the links to the Ironstream product page. When you confirm acceptance of the terms and conditions, the Ironstream product page contains the following the following options:

- Download Ironstream (either as a ZIP file or a self-extracting executable)
- Download Ironstream documentation
- Access the Precisely Knowledge Base
- Obtain an emergency key

Select the option to read and agree to the associated terms and conditions, then choose either the EXE or ZIP file format.

The executable format is a self-extracting ZIP file, which copies the installation files to a local folder and optionally launches the `isetup.exe` file upon completion. The Ironstream Setup - File Upload Utility uses FTP to transfer the files to your z/OS host in a single pass, as described in "Using the File Upload Utility to Transfer the Installation Files".

Using the ZIP format means that you will have to upload each file individually or create your own batch file.

Using the File Upload Utility to Transfer the Installation Files

Follow these steps to run the Ironstream Setup - File Upload Utility.

1. Double-click the `isetup.exe` file. This opens the Components Detected panel, which lists the contents of the package.

2. Click **Next** to display the **Enter z/OS FTP Credentials** panel and complete the following fields:

   ▪ Enter the z/OS Host Name or an IP Address.

   ▪ Enter the FTP User and FTP Password. You can optionally choose to save the password.

   ▪ Enter the z/OS HLQ for Ironstream.

   ▪ Choose the Unit from the drop-down list and enter the Volume label (non SMS):

      · 3390

      · SYSALLDA

      · SYSDA

3. After you complete the z/OS credentials, click **Next**.

4. On the **Upload Ironstream Components** panel, click the **View/Edit JCL** button. This opens a Notepad instance that displays the batch job JCL that is sent to the host.

5. After reviewing the JCL, close the Notepad window and click **Upload**.

All the required files are uploaded by the batch job and consolidated into three z/OS data sets:

- `<hlq>.SDFINST`
- `<hlq>.SDFWORK`
- `<hlq>.SDFCFG`

Once the batch job has completed, you are ready to perform the z/OS install. An 04 return code in the batch job is expected.

Manually Transferring the Files

Precisely recommends that you choose the File Upload Utility to transfer the files, but if your enterprise security procedures prevent you from running the `isetup.exe` file, you can extract the files from the ZIP file and refer to the README file in the download package for instructions to manually transfer the files to your z/OS host.

Chapter 5

Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Ironstream V2.1.2. The following terminology is used:

- *Installation system*: the system used to install the product.
- *Deployment system*: one or more systems on which the product is deployed and executes.

The same system can be used as both the installation and the deployment system.

Precisely recommends that you install Ironstream in its own SMP/E environment. Appropriate sample jobs are provided.

Topics:

z/OS System Requirements

Ironstream runs on any IBM supported version of z/OS and all currently supported hardware configurations.

Gathering SMF Data

Ironstream provides two ways to gather SMF data:

SMF Real-time Interface (INMEM)

Ironstream can be configured to select SMF records via the SMF real-time interface, which provides applications with a high-speed data feed with low system overhead, both in terms of CPU time and elapsed time.

Note: Ironstream supports all IBM implementations of INMEM for capturing SMF records, which include CF log streams and DASD-only. Ironstream recommends using INMEM if your system is configured to access SMF log streams, but it is not required.

When enabled, INMEM resource names defined to SMF log streams are acquired dynamically. Ironstream will retrieve the names from SMF, ensure security access, ensure no duplicate SMF types are captured, connect to the INMEM resource, and retrieve records. For more information, refer to the "SMF Subparameters" information in the "Manually Setting Ironstream Parameters" chapter of the *Ironstream Configuration and User's Guide*.

Define z/OS SMF Record Exits

Ironstream uses the standard z/OS SMF record exits IEFU83, IEFU84, and IEFU85 for real-time capture. Ironstream is unable to intercept and capture SMF records unless these exits are defined in all SYS and SUBSYS EXIT parameter lists in the SMFPRM*nn* member of SYS1.PARMLIB or one of its related data sets.

There are different ways to configure your SMFPRM*nn* member. The following is an example of the relevant part of an SMFPRM*nn* member.

```
SYS(TYPE(2:4,7:9,11,
        14:18,30,40,41,42,50,57,61:83,89,90,92,99,100:102,
        109,110,113,115,116,117,118,119,120(9),128,132,205,207:210,
        220,230,240,241),
    EXITS(IEFU83,IEFU84,IEFU85,IEFACTRT,IEFUTL,
    IEFUSI,IEFUJI,IEFU29),INTERVAL(000500),DETAIL)
SUBSYS(STC,EXITS(IEFU29,IEFU83,IEFU84,IEFU85,IEFUJP,IEFUSO))
```

Your installation may have fewer or more record types defined. Ironstream cannot collect records that are not included in the TYPE parameter. Also, Ironstream will not collect records that are defined in the SMFPRM*nn* member, but which are not specified in an Ironstream SELECT statement in the configuration file.

You can use the MVS `D SMF,O` command to view the currently active exits. If you don't see IEFU83/4/5, Ironstream will not collect the records that you select.

The following commands are also useful:

```
D PROG,EXIT,EXITNAME=SYS.IEFU8n,DIAG
D PROG,EXIT,ALL
```

Once you make changes to your SMF member, use the command `SET SMF=xx` to dynamically bring the new changes.

Everything discussed here is covered in the z/OS *MVS Initialization and Tuning Reference (V2R2)* manual, or the appropriate manual for your release of the operating system.

Additional Information

The SYS parameter can be looked at as setting the defaults for the system, while the SUBSYS parameter sets the parameters for the specified subsystem. In this case, the SYS parameter is turning on most of the SMF record types, most of the exits (which are not active unless specifically turned on), and sets the reporting interval.

What is important to note is that if you specify a SUBSYS parameter, it overrides all the named parameters that it includes. For instance, the `SUBSYS(STC,EXITS(...` entry in the example above, tells the system that for started tasks it should only call the IEFU29, IEFU83, IEFU84, IEFU85, IEFUJP, and IEFUSO exits, and not the IEFACTRT, IEFUTL, or the IEFUSI exits that were also specified in the SYS parameters. Because the SUBSYS parameter did not specify a TYPE parameter, all the SMF record types specified in the SYS parameter will be reported.

The SMF-defined subsystems are JES2, JES3, STC, ASCH, and TSO. Other valid subsystems include IBM-supplied (such as, OMVS), vendor-supplied, and user-defined subsystems. If they are specified as a SUBSYS and if an EXIT parameter is specified, then IEFU83, IEFU84, and IEFU85 must be specified in the EXIT list for Ironstream to collect all the specified SMF record types.

PC Requirements

Precisely recommends that you invoke the downloaded `isetup.exe` file to transfer the installation materials to the installation system using the File Upload Utility. However, this requires a networked PC capable of using FTP to perform the transfer.

If you cannot use FTP, the transfer can be done manually using IND$FILE. The README file that is included in the downloaded package explains the manual file transfer process.

Installation System Programming Requirements

A supported version of SMP/E is required on the installation system. Some Ironstream components use ZFS files. These are created during SMP/E processing. A sample job to create the ZFS root directory is provided.

Deployment System Programming Requirements

The following are optionally required depending on your required data sources:

- IBM Cross-System Coupling Facility (XCF) is required by some Ironstream run-time components. A single XCF group is required, although multiple groups can be used depending on the data sources and volumes.
- IDT requires unique domain and HTTP server ports.
- If you plan to use the RMF III data source, you must configure access to the RMF Distributed Data Server (DDS).
- IDT and a number of NMC components require a VTAM application major node, and in some cases a VTAM ACB is required. Some components make use of data spaces.
- IDT uses the ZFS created during the SMP/E process.

These instructions assume that you have an existing process for copying the appropriate installation system target data sets to each deployment system. You must ensure that you have a reliable method for copying the ZFS files as well.

DASD Storage Requirements

Ironstream libraries can reside on all supported DASD types. Table 5-1 lists the total amount space initially allocated for each type of library.

Table 5-1: Total DASD Space Requirements

Library Type	Total Amount of Space Allocated
Target	389 cylinders
Distribution	189 cylinders
SMP/E system data sets	249 cylinders

Notes:

- The installation jobs follow the IBM recommendation of using system-determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.
- Some NMC SMP/E managed data sets may be empty after the SMP/E process is complete. This is because Ironstream does not exploit all their available features in Ironstream V2.1.2.

- All target and distribution libraries listed have the following attributes:
  - The default name of the data set may be changed.
  - The default block size of the data set may be changed.
  - The data set may be merged with another data set that has equivalent characteristics.
  - The data set may be either a PDS or a PDSE.
- All target libraries listed have the following attributes:
  - The data set may be SMS-managed.
  - It is not required for the data set to be SMS-managed.
  - It is not required for the data set to reside on the IPL volume.
- SSDFAUTH must be APF-authorized. Do *not* add SSDFAUTH to the LPA or the LINKLIST. Always use JOBLIB or STEPLIB in all started tasks or batch jobs that access SSDFAUTH.

The following tables describe the distribution and target libraries, and ZFS paths required to install Ironstream V2.1.2. The storage requirements of Ironstream must be added to the storage required by other programs having data in the same library or path.

Table 5-2 shows the distribution data set attributes and sizes. Note that the libraries are assumed to be PDS/E.

Table 5-2: Distribution Data Set Attributes

Library DDNAME	Library Type	Target Volume	Type	RECFM	LRECL	No. of 3390 CYLS
ASDFHFS	ASCII	ANY	PDSE	V	4092	200
ASDFIMP	EXEC	ANY	PDSE	FB	80	2
ASDFJAR	ASCII	ANY	PDSE	VB	27000	2
ASDFMAC	MACLIB	ANY	PDSE	FB	80	5
ASDFMOD	LMOD	ANY	PDSE	U	0	150
ASDFSAMP	SAMP	ANY	PDSE	FB	80	10
ASDFZIMA	HELP	ANY	PDSE	FB	80	10
ASDFZIMH	HELP	ANY	PDSE	FB	80	10

Table 5-3 shows the target data set attributes and sizes. Note that the libraries are assumed to be PDS/E.

Table 5-3: Target Data Set Attributes

Library DDNAME	Library type	Target Volume	Type	RECFM	LRECL	No. of 3390 CYLS
SSDFAUTH	LMOD	ANY	PDSE	U	0	150
SSDFIMP	EXEC	ANY	PDSE	FB	80	2
SSDFMAC	MACLIB	ANY	PDSE	FB	80	5
SSDFSAMP	SAMP	ANY	PDSE	FB	80	10
SSDFSD	EXEC	ANY	PDSE	FB	80	2
SSDFZIMA	SAMP	ANY	PDSE	FB	80	10
SSDFZIMH	SAMP	ANY	PDSE	FB	80	10

Existing Ironstream SMP/E Installations

Ironstream V2.1.2 is a completely new installation. Prior Ironstream SMP/E environments should be preserved until they are no longer required.

Special Considerations

Ironstream V2.1.2 has no special considerations for the target system.

Chapter 6   # Installation Instructions

This section describes the installation method and the step-by-step procedures to install and to activate the functions of Ironstream V2.1.2. Please note the following:

- Precisely recommends installing Ironstream into its own SMP/E environment. Executing all of the installation jobs described in this chapter will accomplish this.
- The SMP/E dialogs can be used instead of the sample jobs to accomplish the SMP/E installation steps.

Topics:

Installing Ironstream V2.1.2

Ironstream is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. Alternatively, the SMP/E ISPF dialogs can be used to accomplish the SMP/E installation steps.

Table 6-1 summarizes the main sample batch jobs provided in `<hlq>.SDFWORK`:

Table 6-1: Sample SMP/E jobs

Member	Description	Required (R) or Optional (O)
SDFALOCZ	*Optional* - JCL to define DZONE TZONE as separate data sets	O
SDFALOC1	Create the SMP/E system data sets	R
SDFALOC2	Create target and distribution data sets	R
SDFDDDEF	Add the target and distribution DDDEFs	R
SDFMKDIR	Create the ZFS directories	R
SDFRECV	Receive the SDFINST members into the global zone	R
SDFAPPL	Apply the SMP/E objects	R
SDFACCP	Accept the SMP/E objects	R
SDFDELT	*Optional* - Delete all the data sets created in the previous jobs	O
SDFJSUB1	*Optional* - Job submission	O
SDFRXUSS	REXX used for issuing USS `mkdir` commands	R

Each job is described in detail below. However, note the following:

- Every job requires manual tailoring prior to submission.
- The SMP/E jobs use REP(lace) and not ADD to re-enable re-running.
- Members SDFALOC1 and SDFALOC include commented JCL to create certain data sets as PDS, as opposed to PDSE. Note that ASDFMOD and SSDFAUTH must be created as PDSEs.
- The two members prefixed with SDFH* are sample ZFS export and import jobs. Use these to export the SMP/E ZFS to each deployment system: SDFHFSE performs the export and SDFHFSI performs the import. Note that both of these members contain a second job to clean up the temporary export file.
- The six members prefixed with SDFP* are sample jobs that perform various routine SMP/E functions. These are not used for installing Ironstream and are provided to assist you with ongoing SMP/E activities post-installation.
- The #README member has a brief description of all members.

SDFALOCZ: Optionally create separate TZONE/DZONE data sets

Edit and submit member SDFALOCZ if you want to create separate target and distribution VSAM data sets. There are two variables.

Expected Return Codes and Messages: 0

SDFALOC1: Create SMP/E data sets

Edit and submit member SDFALOC1 to create the SMP/E data sets. There are two variables to be tailored. The 3rd job step SMPEUCLN issues message GIM27701W because the SMP definitions use REP and the objects initially do not exist. The JCL includes comments explaining additional changes if you ran SDFALOCZ.

Expected Return Codes and Messages: 4 in step SMPEUCLN

SDFALOC2: Create target/distribution data sets

Edit and submit member SDFALOC2 to create the target/distribution data sets. There are two variables to be tailored.

Expected Return Codes and Messages: 0

SDFDDDEF: Add target/distribution DDDEFs

Edit and submit member SDFDDDEF to add the target/distribution data set definitions to SMP/E. There are three variables.

Expected Return Codes and Messages: 4

SDFMKDIR: Create ZFS directories

Edit and submit member SDFDMKDIR to create the ZFS directories. This member uses the REXX utility SDFRXUSS, which is supplied in `<hlq>.SDFWORK`. There are two variables. Note that RC=0 may not indicate that the job has ended correctly and you should review any messages in DD USSERR.

Note that the ZFS root directory must exist prior to running SDFMKDIR. For example, if you specify `/u/PLX1/ironstream` as the root directory, then `u/PLX1` must already exist.

Expected Return Codes and Messages: 0

SDFRECV: Perform SMP/E receive

Edit and submit member SDFRECV to receive the SMP/E objects from `<hlq>.SDFINST` into the global zone. There are two variables.

Expected Return Codes and Messages: 0

SDFAPPL: Perform SMP/E apply

Edit and submit member SDFAPPL to execute SMP/E apply processing. There is one variable. The first step performs APPLY CHECK for all FMIDS, followed conditionally by three APPLY steps for specific FMIDs. All steps should complete with RC=0.

Expected Return Codes and Messages: 0

SDFACCP: Perform SMP/E accept

Edit and submit member SDFACCP to execute SMP/E accept processing. There is one variable. The first step performs ACCEPT CHECK processing, followed conditionally by an ACCEPT step, both of which should complete with RC=4.

Expected Return Codes and Messages: 4

SDFDELT: Optionally delete all data sets

Edit and submit member SDFDELT to delete all the data sets that you have created. There are two variables. Note the EXEC PGM=IDCAMS statement is commented out, in case the job is submitted accidentally.

Expected Return Codes and Messages: 0 (If SDFALOCZ has not been run, RC=08 is returned)

Member #README summarizes the members and provides the order in which they should run.

Activating Ironstream V2.1.2

Ironstream must be configured before activation on each deployment system. The following SMP/E distribution data sets must be available on each deployment system:

- `<hlq>.SSDFAUTH`
- `<hlq>.SSDFMAC`
- `<hlq>.SSDFSAMP`
- `<hlq>.SSDFZIMA`
- `<hlq>.SSDFZIMH`

Notes:

- `<hlq>.SSDFAUTH` must be a PDSE and must be authorised on every z/OS system where Ironstream is deployed.
- The entire Ironstream ZFS file system must be available on each deployment system.

There is an ISPF-based configuration component that runs on a deployment system. This is contained in the `<hlq>.SDFCFG` file, which is part of the package downloaded from the Precisely Support portal. Refer to the "Configuring and Running Ironstream" chapter in the *Ironstream Configuration and User's Guide* for detailed configuration instructions.

Implications of Adding SSDFAUTH to the LINKLIST

The Ironstream SSDFAUTH library must only be accessed by STEPLIB or JOBLIB. If your installation standards dictate that system load libraries must be included in LINKLIST or LPA, there are Ironstream FTP exit programs that may inadvertently be invoked by your existing system FTP and TCPIP tasks. This will result in SAF failures in these address spaces and may cause other issues if you are already using your own versions of these exits.

For more information and to understand your options, review the following:

- FTP needs to be set up as a protected program in RACF, as described in the *ZEN FTP CONTROL Configuration and Reference* manual bundled with Ironstream documentation. Specifically, refer to the section "A Note on First-Time Login Problems" in "Chapter 3, Getting Started".
- Also, refer to the "Protecting Programs" chapter in IBM's *z/OS Security Server RACF Security Administrator's Guide SA23-2289*.

Ongoing SMP/E Maintenance

You should devise a process for keeping your Ironstream service level current. This is not just to prevent problems but also to access new functionality that is delivered as fixes. Refer to "Preventive Service" on page 2-3 for a description of the types and names of Ironstream fixes.

Authorized users can download Ironstream fixes from the Knowledge Base, which is accessible from the Precisely Support portal: `support.precisely.com`.

You must have a user ID and password to access the Precisely Support portal. If you don't have valid Ironstream credentials, you must contact your Precisely Account Executive (AE).

Every Ironstream fix has an associated KB article (KBA) describing the symptoms of the issue resolved by the fix, plus a link to download it. The fixes are binary files created by the z/OS JES XMIT command. Sample SMP/E JCL and control statements are provided in `<hlq>.SDFWORK` in members SDFP*. There are no special considerations for applying Ironstream fixes, but you must have a process to handle fixes that update files in ZFS.

The KBA includes fixes for other Precisely products and there is a search facility allowing you to view fixes for a specific product version/release.

We like hearing from you!

At Precisely, we are always looking for ways to improve our software, our documentation, and the support we provide to our customers. Therefore, we welcome any comments from you regarding any of these aspects, or any other related matter.

You can find a "Get in touch" form by visiting our website, `precisely.com`. The website includes information for contacting any of our offices globally. The full range of Precisely products and services is available by logging on to the Precisely website.