Program Directory for
IBM Z Integration for Observability

6.2.0

Program Number 5698-016

for use with
z/OS

Document Date: November 2024

GI13-5560-02

Note

Before using this information and the product it supports, be sure to read the general information under 7.0, “Notices” on page 50.

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1.0 Introduction

This program directory is intended for system programmers who are responsible for program installation and maintenance. It contains information about the material and procedures associated with the installation of IBM Z Integration for Observability.

The Program Directory contains the following sections:

- 2.0, “Program Materials” on page 7 identifies the basic program materials and documentation for IBM Z Integration for Observability.
- 3.0, “Program Support” on page 10 describes the IBM support available for IBM Z Integration for Observability.
- 4.0, “Program and Service Level Information” on page 12 lists the APARs (program level) and PTFs (service level) that have been incorporated into IBM Z Integration for Observability.
- 5.0, “Installation Requirements and Considerations” on page 15 identifies the resources and considerations that are required for installing and using IBM Z Integration for Observability.
- 6.0, “Installation Instructions” on page 34 provides detailed installation instructions for IBM Z Integration for Observability. It also describes the procedures for activating the functions of IBM Z Integration for Observability, or refers to appropriate publications.

IBM Z Integration for Observability is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The program directory that is provided in softcopy format on the CBPDO is identical to the hardcopy format if one was included with your order. All service and HOLDDATA for IBM Z Integration for Observability are included on the CBPDO.

Before installing IBM Z Integration for Observability, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that are supplied with this program in softcopy format and this program directory; after which, keep the documents for your reference. Section 3.2, “Preventive Service Planning” on page 10 tells you how to find any updates to the information and procedures in this program directory.

Do not use this program directory if you install IBM Z Integration for Observability with a z/OSMF Portable Software Instance (z/OSMF Portable Software Instance (ServerPac)). When you use one of those offerings, use the jobs and documentation supplied with the offering. The offering will point you to specific sections of this program directory as needed.

1.1 IBM Z Integration for Observability Description

IBM Z Integration for Observability 6.2.0 delivers core infrastructure for IBM OMEGAMON clients that are not currently entitled to the IBM Z Monitoring Suite or IBM Z Service Management Suite. Users now can leverage a data ecosystem by integrating multiple data providers with a Kafka infrastructure. Data from both OMEGAMON Data Provider and Common Data Provider can be consumed by IBM Z solutions or streamed to one or more observability or analytics solutions.

IBM Z Integration for Observability enables clients to integrate a discovered topology with IBM Cloud Pak for Watson AIOps to provide a complete view from mobile to mainframe. This hybrid topology enables event correlation for events originating across the entire hybrid application infrastructure, including those originating from OMEGAMON or IBM Z System Automation.

To visualize data from multiple sources, users of OMEGAMON without a suite can leverage IBM Service Management Unite and IBM Z ChatOps. IBM Service Management Unite is a dashboard to bring mainframe management information and tasks from disparate sources into a single environment. IBM Z ChatOps is a collaboration service that connects people, processes, tools, and automation through common collaboration solutions.

Clients who have an active subscription and support license for IBM OMEGAMON Dashboard Edition on z/OS 5.5 have the option to upgrade to IBM Z Integration for Observability. Contact your IBM representative for more information.

This offering includes the following products:

- IBM Tivoli Management Services on z/OS 6.3.3 is offered for those customers who want to run the Tivoli Enterprise Monitoring Server component on a z/OS platform.

  IBM Tivoli Management Services on z/OS includes shared components that run on distributed systems and shared components that run on z/OS.

  The following distributed components are provided on the IBM Tivoli Monitoring Base DVD:

  – Tivoli Enterprise Portal
  – Tivoli Enterprise Portal Server
  – Tivoli Enterprise Monitoring Server

  Before installing the distributed components, read *IBM Tivoli Monitoring Installation and Setup Guide*. This program directory gives installation instructions for the z/OS components. For configuration instructions, see the Configuring topics in the OMEGAMON shared documentation at: **https://www.ibm.com/docs/en/om-shared?topic=63x-configuring**

  IBM Tivoli Management Services on z/OS extends the use of Zowe technology to further modernize the user experience for operations personnel and subject matter experts who use IBM monitoring offerings. IBM Z Service Management Explorer (IZSME), a Zowe-based web user experience, provides access to the critical graphical and tabular monitoring information that has traditionally been available through the Tivoli Enterprise Portal user interface.

IZSME installs in minutes as a server in a Zowe environment and is instantly available to TEP users via a web browser interface. No changes to Configuration Manager parameters are necessary, and no migration of existing workspaces, navigators, or situations is required, as IZSME automatically inherits them. Any new changes made with the administration features of TEP are immediately available to IZSME users.

Users familiar with TEP will instantly be able to navigate and use IZSME, with its familiar format, navigation, and operation. IZSME improves and modernizes the look and feel of artifacts like graphs, tables, and navigators while protecting the historical investment in training and customization. IZSME does not require users to install any software or to have Java installed on their workstations, reducing the effort required to distribute and maintain access to critical monitoring data.

In addition to modernizing the look and feel of monitoring data and reducing the need for user Java usage, IZSME improves the ability to view and manipulate the data displayed, as compared to what is available in TEP. In TEP, users can sort and filter only rows of data that are currently displayed on the screen; IZSME sorting and filtering operates on all of the data returned from queries, making it quicker and easier to get to the data that is actually needed, with fewer custom reports needed.

The IBM Z Service Management Explorer (IZSME)

- Provides a familiar user experience that is similar to TEP in navigation, layout, operation, and actions
- Requires no Java user workstations to view and navigate workspaces, or execute previously defined Take-Actions
- Typically installs in minutes as a Zowe plug-in with simple configuration requiring no changes to Configuration Manager
- Requires no changes to Tivoli Enterprise Portal Server (TEPS) or Tivoli Enterprise Monitoring Server (TEMS) server infrastructure
- Automatically uses any TEP workspaces, navigators, situations, and Take Actions without migration or new customization, including distributed platform agents
  - All existing and future customizations are automatically inherited.
  - TEP Java Extensions are not supported at this time.
- Is fully compatible with and coexists with existing TEP clients and TEPS and TEMS servers
- Leverages the Zowe environment, including Zowe Desktop and Web UI
- Is invoked from Zowe Desktop or Web UI
- Does not support administrative functions such as creating or editing workspaces, custom navigators or situations, or user administration

- IBM Z OMEGAMON Integration Monitor 5.6.0 displays performance information from a variety of sources, including multiple OMEGAMON monitors and other IBM monitoring software, in a single location. It delivers near real-time and historical information and operating system and key subsystem performance. You can use a single-screen view of all situation alerts to rapidly identify the root-cause of complex issues involving multiple subsystems.

This delivery provides capability that is designed to make it easy to extract critical z/OS metrics available from IBM Z OMEGAMON AI for z/OS and visualize them by using open source platforms (such as Prometheus, Grafana, Kafka, ElasticSearch, and Kibana). Sample visualizations created for use with Kibana are provided. These modern visualizations are designed to be easily customized to meet specific analysis needs, including longer term trending, and Artificial Intelligence (AI) and Machine Learning (ML) techniques can be used to analyze this operational data to expose anomalies or determine new insights.

- IBM Discovery Library Adapter for z/OS 3.2.0 discovers z/OS resources and generates output XML files. The files, often referred to as Books, conform to the Discovery Library IdML XML schema and Common Data Model (CDM).
- Features and functions:
  - Support Z Resource Discovery Data Service - a modern API to retrieve zDLA data

  The Discovery Library Adapter for z/OS is implemented as a combination of z/OS load modules and REXX routines that can be executed as a batch job or started task on the z/OS system to perform the discovery. The modules will typically use system service macros, various memory control blocks, APIs including Db2 IFI, DSNREXX SQL, and product utilities including netstat and MQ command interface (API) to identify those resources and relationships that are active at the time discovery is executed.
- Discovery coverage includes:
  - z/OS information, for example, PARMLIB active member contents, LNKLST, IODF data set and so on
  - zSeries machine information, for example, Serial Number, Processing Capacity and LPAR
  - SYSPLEX group information
  - IMS information, for example, transactions, programs and data bases
  - CICS information, for example, transactions, programs, files and System Initialiization on Table (SIT) details
  - DB/2 for z/OS information, for example, database, tables spaces
  - MQSeries for z/OS information, for example, ports and connections
  - WebSphere Application Server for z/OS information, for example, Cell, Node, configuration files
  - Address Space information, for example, Allocations
  - DASD volumes information

  Configuration Manager provides configuration enhancements by providing users the option to utilize the functionality of the z/OS Discovery Library Adapter (DLA) to automatically discover properties about online subsystems and include these details within the runtime environment (RTE) configuration files. This reduces the time and effort in creating accurate configuration files.

  Note: For more information, refer to the usage of the Configuration Manager topic in this URL: **https://www.ibm.com/docs/en/SSAUBV/zcommonconfig/parmgen_dla.html**

- IBM Z Integration for Observability IZSAM ID, HZIO620 FMID, is a function that allows IBM Z Software Asset Management to differentiate between individual products and suites that are composed of a number of these same products.
- Apache Kafka for IBM Z 1.1.0 provides z/OS support for Apache Kafka as a general-purpose event streaming platform which can be used for high-performance data pipelines, streaming analytics, data integration and mission-critical applications.

  Eliminating the need to download, transfer and update the official image from the Apache website, Apache Kafka for IBM Z simplifies the installation and configuration of Apache Kafka experience entirely on z/OS. The Apache Kafka for IBM Z version delivered in the product is also well tested by IBM on the z/OS operating system.
- IBM Z Common Data Provider 5.1.1 provides the infrastructure for accessing IT operational data from z/OS systems and streaming them to analytics or other applications. It supports the collection of a large breadth of both structured and unstructured data, including System Management Facilities (SMF) data, IBM Information Management System (IMS) logs, Resource Management Facility (RMF) III reports, SYSLOG, OPERLOG and other z/OS logs. It collects only once, even if the data is being streamed to multiple systems which expect different data formats. It supports a number of data destinations both on and off platform, including Logstash (Elasticsearch), Splunk, Humio, and Kafka.

  IBM Z Common Data Provider includes a web-based configuration tool which enables the easy creation of data streams of various content for disparate subscribers. It is provided as an application for IBM WebSphere Application Server for z/OS Liberty or as a plug-in for IBM z/OS Management Facility (z/OSMF). An optional FMID in this product delivers a z/OS Liberty profile which will be maintained at the appropriate service level for this product. Alternatively, you can choose to use the z/OS Liberty profile embedded in z/OS V2R3 and higher.

  Some targets such as Splunk and Elastic Stack require application files to be installed on the target system (subscriber). These files should be shipped by the product including IBM Z Common Data Provider in its package as either physical media (CD or DVD) or .iso images which can be electronically ordered from the location where you ordered the including product.

  In this release the System Data Engine component of IBM Z Common Data Provider is able to offload more work to zIIPs and significantly reduce the additional overhead incurred.
- IBM Z Resource Discovery Data Service (ZRD-DS) 1.3.1.2, is an embedded component in several IBM products. It is used to discover the infrastructure componentry of a system, understand the relationships and interdependences between the components, and connect these artifacts to a topological UI via a graph API. It can help you perform root-cause analysis faster by understanding how artifacts impact one another based on the discovered relationships.

1.2 IBM Z Integration for Observability FMIDs

IBM Z Integration for Observability consists of the following FMIDs:

HKDS630
HKCI310
HKLV630
HIUW631
HRKD560
HKOA110
HIZD320
HKFK110
HHBO510
HHBO51L
HZIO620

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM Z Integration for Observability is 5698-016.

Basic Machine-Readable Materials are materials that are supplied under the base license and are required for the use of the product.

The program announcement material describes the features supported by IBM Z Integration for Observability. Ask your IBM representative for this information if you have not already received a copy.

2.1 Basic Machine-Readable Material

The distribution medium for this program is physical media or downloadable files. This program is in SMP/E RELFILE format and is installed by using SMP/E. See 6.0, “Installation Instructions” on page 34 for more information about how to install the program.

You can find information about the physical media for the basic machine-readable materials for IBM Z Integration for Observability in the *CBPDO Memo To Users Extension*.

2.2 Program Publications

The following sections identify the basic publications for IBM Z Integration for Observability which can be found at **IBM Products documentation https://www.ibm.com/docs/en/products** and by direct links below.

Figure 1 identifies the basic unlicensed publications for IBM Z Integration for Observability.

The unlicensed documentation for IBM Z Integration for Observability can be found on the IBM Documentation website at **https://www.ibm.com/docs/en/om-integ-obs**.

Figure 1. Basic Material: Unlicensed Publications
Publication Title
What's New
Overview
Getting started
Planning
Installing
Upgrading
Configuring
Scenarios and how-tos
Reference
Component Products
IBM Z Service Management Explorer User Guide
IBM Discovery Library Adapter for z/OS User's Guide and Reference
IBM Z OMEGAMON Data Provider User's Guide

Prior to installing IBM Z Integration for Observability, IBM recommends you review the OMEGAMON shared documentation **First time deployment guide (FTU installation and tasks)**, the Planning, Configuring, and Configuration Manager topics for general planning and configuration flow. This documentation focuses on the things you will need to know for a successful installation and configuration of the product components included in ths package.

The OMEGAMON shared documentation can be found at the IBM Documentation URL listed below:

https://www.ibm.com/docs/en/om-shared

2.3 Program Source Materials

No program source materials or viewable program listings are provided for IBM Z Integration for Observability.

2.4 Publications Useful During Installation

You might want to use the publications listed in Figure 2 during the installation of IBM Z Integration for Observability which can be found at **IBM Products documentation** https://www.ibm.com/docs/en/products .

Figure 2. Publications Useful During Installation

Publication
IBM SMP/E for z/OS User's Guide
IBM SMP/E for z/OS Reference
IBM SMP/E for z/OS Commands
IBM SMP/E for z/OS Messages, Codes, and Diagnosis

3.0 Program Support

This section describes the IBM support available for IBM Z Integration for Observability.

3.1 Program Services

Contact your IBM representative for specific information about available program services.

3.2 Preventive Service Planning

Before you install IBM Z Integration for Observability, make sure that you review the PSP bucket information for IBM Z products document **https://www.ibm.com/support/pages/node/7127792**. It contains the latest information concerning the installation of IBM products, including the latest service recommendations and cross-product dependencies. This information was previously available in traditional PSP buckets, which are no longer published for IBM Z products.

For support, access the Software Support Website at **https://www.ibm.com/mysupport/**

3.3 Statement of Support Procedures

Report any problems which you feel might be an error in the product materials to your IBM Support Center. You may be asked to gather and submit additional diagnostics to assist the IBM Support Center in their analysis.

Figure 3 identifies the component IDs (COMPID) for IBM Z Integration for Observability.

Figure 3. Component IDs

FMID	COMPID	Component Name	Release
HKDS630	5608A2800	Tivoli Enterprise Monitoring Server on z/OS	630
HKCI310	5608A41CC	Configuration Assistance Tool	310
HKLV630	5608A41CE	TMS:Engine	630
HIUW631	5698A7900	Z Service Management Explorer	631
HRKD560	5698B6604	OMEGAMON Integration Monitor DE	560
HKOA110	5698B6605	OMEGAMON Data Provider	110
HIZD320	5698A4700	z/OS DLA	320
HKFK110	5698LDA00	Apache Kafka for IBM Z	110
HHBO510	5698ABJ00	IBM Z Common Data Provider - Base	510
HHBO51L	5698ABJ03	IBM Z Common Data Provider - Liberty	51L
HZIO620	569801600	IBM Z Integration for Observability IZSAM ID	620

4.0 Program and Service Level Information

This section identifies the program and relevant service levels of IBM Z Integration for Observability. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated into the program.

4.1 Program Level Information

The following APAR fixes against the previous release of components included with IBM Z Integration for Observability have been incorporated into this release. They are listed by FMID.

- FMID HKDS630

  OA37631 OA38366 OA38500 OA38773 OA38895 OA38896 OA38913 OA38919
  OA38922 OA38926 OA38938 OA38946 OA38947 OA38953 OA38962 OA38963
  OA38972 OA38974 OA38988 OA38989 OA38990 OA38991 OA38992 OA38993
  OA38995 OA38996 OA38997 OA39001 OA39002 OA39011 OA39012 OA39013
  OA39017 OA39020 OA39447 OA39630 OA39969 OA40162 OA40409 OA40411
  OA40412 OA40422 OA40424 OA40426 OA40427 OA40431 OA40432 OA40435
  OA40436 OA40437 OA40438 OA40439 OA40440 OA40443 OA40445 OA40446
  OA40450 OA40452 OA40453 OA40459

  OA42114 OA42119 OA42123 OA42147 OA42148 OA42152 OA42155 OA42423
  OA43232 OA43243 OA43251 OA43260 OA43263 OA43264 OA43265 OA43266
  OA43270 OA43271 OA43273 OA43274 OA43275 OA43276 OA43277 OA43278
  OA43279 OA43284 OA43285 OA43286 OA43287 OA43289 OA44022 OA44155
  OA44915 OA44966 OA44999 OA45080 OA45161 OA45254 OA45619 OA45644
  OA45646 OA45650 OA45651 OA45653 OA45672 OA45674 OA45675 OA45676
  OA45678 OA45680 OA45754 OA45812 OA45834 OA45836 OA45856 OA46555
  OA46557 OA46569 OA46571 OA46572 OA46579 OA46581 OA46583 OA46585
  OA46586 OA46587 OA46681 OA46695 OA46708 OA46709 OA46976 OA46983
  OA47082 OA47252 OA48065 OA48068 OA48077 OA48081 OA48082 OA48083
  OA48096 OA48097 OA48100 OA48102 OA48275 OA48482 OA49237 OA49238
  OA49254 OA49255 OA49269 OA49280 OA49282 OA49283 OA49284 OA49285
  OA49286 OA49288 OA49760 OA49763 OA49780 OA49879 OA51151 OA51152
  OA51183 OA51184 OA51195 OA51238 OA51627 OA51991 OA52181 OA52183
  OA52186 OA52202 OA52713 OA53435 OA54969 OA54971 OA55236 OA55408
  OA55673 OA56372 OA56379 OA56397 OA56398 OA56399 OA56400 OA56403
  OA56407 OA56408 OA56595 OA56596 OA56597 OA56598 OA56862 OA56991
  OA57107 OA58117 OA58325 OA58326 OA58812 OA58900 OA59319 OA59320
  OA59376 OA59685 OA59686 OA60245 OA60259 OA60364 OA60516 OA60651
  OA60653 OA60834 OA60952 OA61140 OA61411 OA61893 OA62146 OA62365
  OA62458 OA62760 OA62900 OA63184

- FMID HKCI310

  OA09405 OA09526 OA09527 OA09528 OA09529 OA09530 OA09531 OA09532

  OA11476 OA12143 OA13234 OA13523 OA14355 OA14857 OA15487 OA16208
  OA16882 OA16900 OA17915 OA18174 OA18712 OA19099 OA19387 OA19573
  OA19840 OA19894 OA20404 OA20419 OA20490 OA20529 OA21440 OA21580
  OA21585 OA23865 OA24039 OA25134 OA25649 OA26188 OA26981 OA27782
  OA28829 OA29001 OA29410 OA30376 OA30575 OA30882 OA32122 OA32126
  OA34091 OA34442 OA35009 OA35415 OA37159 OA37250 OA38375 OA38937
  OA39386 OA39626 OA39890 OA40035 OA40072 OA40196 OA40649 OA41710
  OA42733 OA43392 OA43859 OA44054 OA44620 OA45024 OA46184 OA46749
  OA46817 OA47937 OA48678 OA49893 OA50912 OA51503 OA51755 OA52888
  OA53974 OA54852 OA54854 OA54925 OA56017 OA56325 OA58363 OA58439
  OA58518 OA58817 OA58861 OA59012 OA59214 OA59433 OA59463 OA59623
  OA59848 OA59910 OA60002 OA60006 OA60163 OA60190 OA60209 OA60210
  OA60244 OA60460 OA60518 OA60562 OA60708 OA60759 OA60827 OA61187
  OA61383 OA61403 OA61515 OA61601 OA61776 OA61810 OA61872 OA61959
  OA61993 OA62001 OA62125 OA62185 OA62230 OA62294 OA62358 OA62486
  OA62526 OA62643 OA62792 OA62832 OA62833 OA63060 OA63103

- FMID HKLV630

  OA37475 OA38066 OA38898 OA38899 OA38909 OA38950 OA38973 OA38994
  OA39016 OA39019 OA39557 OA40434 OA40441 OA40442 OA40444

  OA42112 OA42121 OA42136 OA42137 OA42139 OA42141 OA43246 OA43247
  OA43252 OA43258 OA44192 OA44344 OA44517 OA45647 OA45649 OA45681
  OA45719 OA46343 OA46553 OA46573 OA46577 OA46580 OA46689 OA47320
  OA47891 OA47950 OA48069 OA48075 OA48103 OA48104 OA48851 OA49131
  OA49242 OA49243 OA49273 OA49586 OA49717 OA50042 OA50525 OA50935
  OA51153 OA51155 OA51630 OA52184 OA52203 OA52242 OA54026 OA54506
  OA54564 OA54672 OA54794 OA54964 OA54979 OA55564 OA55598 OA55674
  OA55918 OA55920 OA56223 OA56351 OA56352 OA56381 OA56404 OA56795
  OA56797 OA56834 OA56904 OA56915 OA56990 OA57039 OA57043 OA57069
  OA57649 OA57874 OA58163 OA58164 OA58502 OA58631 OA59036 OA59289
  OA59389 OA59708 OA59709 OA59929 OA60178 OA60324 OA60427 OA60445
  OA60765 OA60806 OA61138 OA61892 OA62349 OA62724

- FMID HIUW631

  OA59394 OA59586 OA59691 OA60211 OA60520 OA60796 OA61152 OA61707
  OA62197 OA62198 OA63186

- FMID HIZD320

  OA36070 OA34388 OA40005 OA40585 OA40760 OA41322 OA41662 OA41604
  OA43245 OA42836 OA45275 OA46337 OA46190 OA50377 OA48608 OA48092
  OA46882 OA48660 OA46912 OA47137 OA47264 OA47357 OA47810 OA47844
  OA48106 OA49943 OA48978 OA49050 OA49290 OA50051 OA50811 OA51462
  OA52819 OA53263 OA52105 OA55003 OA56499 OA58571 OA60640 OA60786
  OA61082 OA61550 OA61913 OA62043 OA61655 OA63544

4.2 Service Level Information

PTFs containing APAR fixes against this release of IBM Z Integration for Observability have been incorporated into this product package. For a list of included PTFs, examine the ++VER statement in the product's SMPMCS.

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating IBM Z Integration for Observability. The following terminology is used:

- *Driving system*: the system on which SMP/E is executed to install the program.

  The program might have specific operating system or product level requirements for using processes, such as binder or assembly utilities during the installation.

- *Target system*: the system on which the program is configured and run.

  The program might have specific product level requirements, such as needing access to the library of another product for link-edits. These requirements, either mandatory or optional, might directly affect the element during the installation or in its basic or enhanced operation.

In many cases, you can use a system as both a driving system and a target system. However, you can make a separate IPL-able clone of the running system to use as a target system. The clone must include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Use separate driving and target systems in the following situations:

- When you install a new level of a product that is already installed, the new level of the product will replace the old one. By installing the new level onto a separate target system, you can test the new level and keep the old one in production at the same time.
- When you install a product that shares libraries or load modules with other products, the installation can disrupt the other products. By installing the product onto a separate target system, you can assess these impacts without disrupting your production system.

5.1 Driving System Requirements

This section describes the environment of the driving system required to install IBM Z Integration for Observability.

5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

5.1.2 Programming Requirements

Figure 4. Driving System Software Requirements

Program Number	Product Name	Minimum VRM	Minimum Service Level will satisfy these APARs	Included in the shipped product?
5650-ZOS	z/OS	2.5 or higher	N/A	No

Notes:

1. SMP/E is a requirement for installation and is an element of z/OS.
2. Installation might require migration to new z/OS releases to be service supported. See **https://www.ibm.com/support/lifecycle/**.

The Z Service Management Explorer, the OMEGAMON Data Connect component of OMEGAMON Data Provider, Apache Kafka for IBM Z, and IBM Z Common Data Provider Base and Liberty components are installed into a file system.

Before installing these components, you must ensure that the target system file system data sets are available for processing on the driving system. OMVS must be active on the driving system and the target system file data sets must be mounted on the driving system.

zFS must be active on the driving system. Information on activating and using zFS can be found in z/OS Distributed File Service zSeries File System Administration, SC24-5989.

5.2 Target System Requirements

This section describes the environment of the target system required to install and use IBM Z Integration for Observability.

IBM Z Integration for Observability installs in the z/OS (Z038) SREL.

5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

5.2.2 Programming Requirements

5.2.2.1 Installation Requisites

Installation requisites identify products that are required and *must* be present on the system or products that are not required but *should* be present on the system for the successful installation of this product.

Mandatory installation requisites identify products that are required on the system for the successful installation of this product. These products are specified as PREs or REQs.

IBM Z Integration for Observability has no mandatory installation requisites.

Conditional installation requisites identify products that are *not* required for successful installation of this product but can resolve such things as certain warning messages at installation time. These products are specified as IF REQs.

IBM Z Integration for Observability has no conditional installation requisites.

5.2.2.2 Operational Requisites

Operational requisites are products that are required and *must* be present on the system or products that are not required but *should* be present on the system for this product to operate all or part of its functions.

Mandatory operational requisites identify products that are required for this product to operate its basic functions.

Figure 5. Target System Mandatory Operational Requisites

Program Number	**Product Name and Minimum VRM/Service Level**
5650-ZOS	z/OS 2.5 or higher
5698-ZWG	IBM Z Distribution for Zowe 2.2 or higher
See Note	bash shell 4.3 or higher
Any **one** of the following:	
5655-DGH	IBM 64-bit SDK for z/OS, Java 2 Technology Edition, 8.0
5695-014	IBM Library for REXX on z/Series 1.4 or higher
5695-014	IBM Library for REXX on zSeries Alternate Library 1.4 or higher
For **traditional** ZCDP configuration:	
5650-ZOS	IBM z/OS Management Facility V2.3
Or the following:	
For an **alternate** way of configuring CDP, use the supplied WebSphere Liberty Profile (or your own at 19.0.0.6 or later)	

Notes:

1. Apache Kafka for IBM Z requires the bash shell be available for operation. The bash shell is offered free of charge by Rocket Software, Inc. and is available on their website, **https://www.rocketsoftware.com/zos-open-source** for customers with a service contract and from the anaconda.org website for anyone.
2. The IBM Library for REXX on z/Series 1.4 is shipped with the product and may be used in lieu of ordering the mandatory operational requisites above.
3. Installation might require migration to new releases to obtain support. See **https://www.ibm.com/support/lifecycle/**

Conditional operational requisites identify products that are *not* required for this product to operate its basic functions but are required at run time for this product to operate specific functions. These products are specified as IF REQs.

The self-describing agent (SDA) support provided in this release requires JRE for this optional capability.

Figure 6. Target System Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5639-OLE	Db2 Analytics Accelerator Loader for z/OS 2.1.0 or higher	Load data into IBM Db2 Analytics Accelerator
5698-LDA	Apache Kafka for IBM Z 1.1.0	Intermediate data repository or target subscriber on z/OS

Note: Installation might require migration to new releases to obtain support.

5.2.2.3 Toleration/Coexistence Requisites

Toleration/coexistence requisites identify products that must be present on sharing systems. These systems can be other systems in a multisystem environment (not necessarily sysplex), a shared DASD environment (such as test and production), or systems that reuse the same DASD environment at different time intervals.

IBM Z Integration for Observability has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites

Negative requisites identify products that must *not* be installed on the same system as this product.

IBM Z Integration for Observability has no negative requisites.

5.2.3 DASD Storage Requirements

IBM Z Integration for Observability libraries can reside on all supported DASD types.

Figure 7 lists the total space that is required for each type of library.

Figure 7. Total DASD Space Required by IBM Z Integration for Observability

Library Type	Total Space Required in 3390 Trks
Target	21840
Distribution	49699
File System(s)	30480

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 10 on page 21 and Figure 12 on page 23 already allocated, ensure sufficient disk space and directory blocks are available to support the requirement listed. This might require you to reallocate some data sets to avoid x37 abends.
2. For non-RECFM U data sets, IBM recommends using system-determined block sizes for efficient DASD utilization. For RECFM U data sets, IBM recommends using a block size of 32760, which is most efficient from the performance and DASD utilization perspective.
3. Abbreviations used for data set types are shown as follows.

   U Unique data set, allocated by this product and used by only this product. This table provides all the required information to determine the correct storage for this data set. You do not need to refer to other tables or program directories for the data set size.

   S Shared data set, allocated by this product and used by this product and other products. To determine the correct storage needed for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

   E Existing shared data set, used by this product and other products. This data set is *not* allocated by this product. To determine the correct storage for this data set, add the storage size given in this table to those given in other tables (perhaps in other program directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.

   If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old release and reclaim the space that was used by the old release and any service that had been installed. You can determine whether these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

For more information about the names and sizes of the required data sets, see 6.1.8, “Allocate SMP/E Target and Distribution Libraries” on page 41.

4. Abbreviations used for the file system path type are as follows.

   N New path, created by this product.
   X Path created by this product, but might already exist from a previous release.
   P Previously existing path, created by another product.

5. All target and distribution libraries listed have the following attributes:

   - The default name of the data set can not be changed.
   - The default block size of the data set can be changed.
   - The data set can not be merged with another data set that has equivalent characteristics.
   - The data set can be either a PDS or a PDSE, with some exceptions. If the value in the "ORG" column specifies "PDS", the data set must be a PDS. If the value in "DIR Blks" column specifies "N/A", the data set must be a PDSE.

6. All target libraries listed have the following attributes:

   - These data sets can be SMS-managed, but they are not required to be SMS-managed.
   - These data sets are not required to reside on the IPL volume.
   - The values in the "Member Type" column are not necessarily the actual SMP/E element types that are identified in the SMPMCS.

7. All target libraries that are listed and contain load modules have the following attributes:

   - These data sets can not be in the LPA, with some exceptions. If the data set should be placed in the LPA, see the Special Considerations section below.
   - These data sets can be in the LNKLST except for TKANMODR and TKANMODS.
   - These data sets are not required to be APF-authorized, with some exceptions. If the data set must be APF-authorized, see the Special Considerations section below.

If you are installing into an existing environment, ensure the values used for the SMP/E work data sets reflect the minimum values shown in Figure 8. Check the corresponding DDDEF entries in all zones because use of values lower than these can result in failures in the installation process. Refer to the SMP/E manuals for instructions on updating DDDEF entries.

Figure 8 (Page 1 of 2). Storage Requirements for SMP/E Work Data Sets

Library DDNAME	TYPE	ORG	RECFM	LRECL	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPWRK1	S	PDS	FB	80	150	150	220
SMPWRK2	S	PDS	FB	80	150	150	220
SMPWRK3	S	PDS	FB	80	300	600	1320
SMPWRK4	S	PDS	FB	80	150	150	220

Figure 8 (Page 2 of 2). Storage Requirements for SMP/E Work Data Sets

Library DDNAME	TYPE	ORG	RECFM	LRECL	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPWRK6	S	PDS	FB	80	300	1500	660
SYSUT1	S	SEQ	--	--	75	75	0
SYSUT2	S	SEQ	--	--	75	75	0
SYSUT3	S	SEQ	--	--	75	75	0
SYSUT4	S	SEQ	--	--	75	75	0

If you are installing into an existing environment, ensure the current SMP/E support data set allocations reflect the minimum values shown in Figure 9. Check the space and directory block allocation and reallocate the data sets, if necessary.

Figure 9. Storage Requirements for SMP/E Data Sets

Library DDNAME	TYPE	ORG	RECFM	LRECL	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPLTS	S	PDSE	U	0	15	150	N/A
SMPMTS	S	PDS	FB	80	15	150	220
SMPPTS	S	PDSE	FB	80	300	1500	N/A
SMPSCDS	S	PDS	FB	80	15	150	220
SMPSTS	S	PDS	FB	80	15	150	220

Figure 10 and Figure 12 on page 23 describe the target and distribution libraries and file system paths that will be allocated by this product's install jobs or that will be required for installation. The space requirements reflect what is specified in the allocation job or the space that this product will require in existing libraries. Additional tables are provided to show the specific space required for libraries that are used by each FMID. See 5.2.4, “DASD Storage Requirements by FMID” on page 26 for more information.

The storage requirements of IBM Z Integration for Observability must be added to the storage required by other programs having data in the same library or path.

Figure 10 (Page 1 of 2). Storage Requirements for IBM Z Integration for Observability Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SIUWINST	SAMP	Any	U	PDS	FB	80	2	44
SIUWPAX	SAMP	Any	U	PDS	VB	256	12375	44
SIUWSAMP	SAMP	Any	U	PDS	FB	80	2	44
SIZDEXEC	CLIST	Any	U	PDS	FB	80	30	132
SIZDINST	JCL	Any	U	PDS	FB	80	30	132
SIZDLOAD	Samples	Any	U	PDS	U	0	105	132
SIZDMESG	CLIST	Any	U	PDS	FB	80	30	132
SIZDSAMP	Samples	Any	U	PDS	FB	80	45	132
SHBOCLST	Data	ANY	U	PDS	FB	80	2	2
SHBODEFS	Data	ANY	U	PDS	VB	255	300	30
SHBOINST	SAMP	ANY	U	PDS	FB	80	5	5
SHBOLLST	MOD	ANY	U	PDS	U	0	5	3
SHBOLOAD	MOD	ANY	U	PDSE	U	0	70	N/A
SHBOLPA	MOD	ANY	U	PDS	U	0	5	2
SHBOSAMP	SAMP	ANY	U	PDS	FB	80	10	5
SHBOWLPI	SAMP	ANY	U	PDS	FB	80	3	5
SKFKINST	Samples	ANY	U	PDS	FB	80	3	5
SKFKSAMP	Samples	ANY	U	PDS	FB	80	15	5
SHIOLOAD	LMOD	Any	U	PDS	U	0	2	44
SHIOPKGI	Data	Any	U	PDS	FB	80	2	44
TKANCMD	Parm	Any	S	PDS	FB	80	19	88
TKANCUS	CLIST	Any	S	PDS	FB	80	1440	1320
TKANDATV	Data	Any	S	PDS	VB	6160	1016	132
TKANHENU	Help	Any	S	PDS	FB	80	24	88
TKANMAC	Macro	Any	S	PDS	FB	80	4	44
TKANMOD	LMOD	Any	S	PDS	U	0	200	88
TKANMODL	LMOD	Any	S	PDS	U	0	2070	176
TKANMODP	LMOD	Any	S	PDSE	U	0	350	N/A
TKANMODS	LMOD	Any	S	PDS	U	0	6	44

Figure 10 (Page 2 of 2). Storage Requirements for IBM Z Integration for Observability Target Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANPAR	Parm	Any	S	PDS	FB	80	80	88
TKANPENU	Panel	Any	S	PDS	FB	80	84	88
TKANPKGI	Data	Any	S	PDS	FB	80	56	88
TKANSAM	Sample	Any	S	PDS	FB	80	590	88
TKANSQL	SQL	Any	S	PDS	FB	80	3	44
TKCIINST	CLIST	Any	S	PDS	FB	80	104	132
TKNSLOCL	Data	Any	S	PDS	VB	6160	71	88

Figure 11. IBM Z Integration for Observability File System Paths

DDNAME	TYPE	Path Name
SIUWBIN	N	/usr/lpp/IBM/iuw/bin/IBM
SHBOFS00	N	/usr/lpp/IBM/zcdp/v5r1m0/IBM/
SHBOFSWL	N	/usr/lpp/IBM/zcdp_liberty/v5r1m0/IBM/
SKFKZFS	P	/usr/lpp/IBM/kafka/v1r1m0/IBM
TKAYHFS	N	/usr/lpp/omdp/bin/IBM

Figure 12 (Page 1 of 3). Storage Requirements for IBM Z Integration for Observability Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AIUWBIN	U	PDS	VB	256	2	44
AIUWINST	U	PDS	FB	80	2	44
AIUWPAX	U	PDS	VB	256	12375	44
AIUWSAMP	U	PDS	FB	80	2	44
AIZDEXEC	U	PDS	FB	80	30	132
AIZDINST	U	PDS	FB	80	30	132
AIZDLOAD	U	PDS	U	0	105	132

Figure 12 (Page 2 of 3). Storage Requirements for IBM Z Integration for Observability Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AIZDMESG	U	PDS	FB	80	30	132
AIZDSAMP	U	PDS	FB	80	30	132
AHBOCLST	U	PDS	FB	80	2	2
AHBODEFS	U	PDS	VB	255	300	25
AHBOINST	U	PDS	FB	80	5	2
AHBOLOAD	U	PDSE	U	0	75	N/A
AHBOPGM	U	PDS	U	0	5	5
AHBOPGM2	U	PDSE	U	0	75	N/A
AHBOSAMP	U	PDS	FB	80	10	2
AHBOZFS	U	PDS	VB	27920	8500	5
AHBOWLPH	U	PDS	VB	27920	18000	5
AHBOWLPI	U	PDS	FB	80	3	2
AKFKINST	U	PDS	FB	80	3	2
AKFKSAMP	U	PDS	FB	80	15	5
AKFKZFS	U	PDS	VB	27920	18000	1
AHIOLOAD	U	PDS	U	0	2	44
AHIOPKGI	U	PDS	FB	80	2	44
DKANCMD	S	PDS	FB	80	19	88
DKANCUS	S	PDS	FB	80	1430	1320
DKANDATV	S	PDS	VB	6160	1016	132
DKANHENU	S	PDS	FB	80	24	88
DKANMAC	S	PDS	FB	80	4	44
DKANMOD	S	PDS	U	0	200	88
DKANMODL	S	PDS	U	0	2070	176
DKANMODP	S	PDSE	U	0	350	N/A
DKANMODS	S	PDS	U	0	6	44
DKANPAR	S	PDS	FB	80	80	88
DKANPENU	S	PDS	FB	80	84	88
DKANPKGI	S	PDS	FB	80	48	88

Figure 12 (Page 3 of 3). Storage Requirements for IBM Z Integration for Observability Distribution Libraries

Library DDNAME	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
DKANSAM	S	PDS	FB	80	590	88
DKANSQL	S	PDS	FB	80	3	14
DKAYHFS	U	PDSE	VB	32740	2295	N/A
DKCIINST	S	PDS	FB	80	119	132
DKNSLOCL	S	PDS	VB	6160	71	88

5.2.4 DASD Storage Requirements by FMID

The tables in this section can help determine the specific space required for components not already installed in an existing environment. There is a table for each FMID included with the product.

Figure 13. Storage Requirements for HKDS630 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	S	PDS	FB	80	132	88
TKANDATV	Data	Any	S	PDS	VB	6160	884	17
TKANMAC	Macro	Any	S	PDS	FB	80	1	2
TKANMOD	LMOD	Any	S	PDS	U	0	192	2
TKANMODL	LMOD	Any	S	PDS	U	0	1869	14
TKANMODP	LMOD	Any	S	PDSE	U	0	2	N/A
TKANMODS	LMOD	Any	S	PDS	U	0	3	5
TKANPAR	Parm	Any	S	PDS	FB	80	1	2
TKANPKGI	Data	Any	S	PDS	FB	80	9	2
TKANSAM	Sample	Any	S	PDS	FB	80	7	4
TKANSQL	SQL	Any	S	PDS	FB	80	2	2
TKNSLOCL	Data	Any	S	PDS	VB	6160	62	38
DKANCUS			S	PDS	FB	80	132	88
DKANDATV			S	PDS	VB	6160	884	17
DKANMAC			S	PDS	FB	80	1	2
DKANMOD			S	PDS	U	0	192	2
DKANMODL			S	PDS	U	0	1868	14
DKANMODP			S	PDS	U	0	2	1
DKANMODS			S	PDS	U	0	3	5
DKANPAR			S	PDS	FB	80	1	2
DKANPKGI			S	PDS	FB	80	9	2
DKANSAM			S	PDS	FB	80	7	4
DKANSQL			S	PDS	FB	80	3	2
DKNSLOCL			S	PDS	VB	6160	62	38

Figure 14. Storage Requirements for HKCI310 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCMD	Parm	Any	S	PDS	FB	80	16	8
TKANCUS	CLIST	Any	S	PDS	FB	80	1126	784
TKANMOD	LMOD	Any	S	PDS	U	0	9	4
TKANPAR	Parm	Any	S	PDS	FB	80	69	10
TKANPKGI	Data	Any	S	PDS	FB	80	31	2
TKANSAM	Sample	Any	S	PDS	FB	80	564	33
TKCIINST	Sample	Any	S	PDS	FB	80	104	94
DKANCMD			S	PDS	FB	80	16	8
DKANCUS			S	PDS	FB	80	1126	784
DKANMOD			S	PDS	U	0	8	7
DKANPAR			S	PDS	FB	80	69	10
DKANPKGI			S	PDS	FB	80	31	2
DKANSAM			S	PDS	FB	80	564	33
DKCIINST			S	PDS	FB	80	104	94

Figure 15 (Page 1 of 2). Storage Requirements for HKLV630 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCMD	Parm	Any	S	PDS	FB	80	1	2
TKANHENU	Help	Any	S	PDS	FB	80	22	28
TKANMAC	Macro	Any	S	PDS	FB	80	3	2
TKANMODL	LMOD	Any	S	PDS	U	0	204	153
TKANMODS	LMOD	Any	S	PDS	U	0	3	4
TKANPAR	Parm	Any	S	PDS	FB	80	1	3
TKANPENU	Panel	Any	S	PDS	FB	80	84	53
TKANPKGI	Data	Any	S	PDS	FB	80	15	2
TKANSAM	Sample	Any	S	PDS	FB	80	19	6
DKANCMD			S	PDS	FB	80	1	2

Figure 15 (Page 2 of 2). Storage Requirements for HKLV630 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
DKANHENU			S	PDS	FB	80	22	28
DKANMAC			S	PDS	FB	80	3	2
DKANMODL			S	PDS	U	0	204	131
DKANMODS			S	PDS	U	0	3	4
DKANPAR			S	PDS	FB	80	1	3
DKANPENU			S	PDS	FB	80	84	53
DKANPKGI			S	PDS	FB	80	15	2
DKANSAM			S	PDS	FB	80	19	6

Figure 16. Storage Requirements for HIUW631 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SIUWINST	SAMP	Any	U	PDS	FB	80	2	44
SIUWPAX	SAMP	Any	U	PDS	VB	256	12375	44
SIUWSAMP	SAMP	Any	U	PDS	FB	80	2	44

Figure 17. Storage Requirements for HRKD560 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	E	PDS	FB	80	1	2
TKANMOD	LMOD	Any	E	PDS	U	0	1	2
TKANPKGI	Data	Any	E	PDS	FB	80	1	2
DKANCUS			E	PDS	FB	80	1	2
DKANMOD			E	PDS	U	0	1	2
DKANPKGI			E	PDS	FB	80	1	2

Figure 18. Storage Requirements for HKOA110 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
TKANSAM	Sample	Any	E	PDS	FB	80	3	2
TKANMODP	LMOD	Any	E	PDSE	U	0	350	N/A
DKANMODP			E	PDSE	U	0	350	N/A
DKANSAM			E	PDS	FB	80	3	2
DKAYHFS			U	PDSE	VB	32740	2260	N/A

Figure 19. Storage Requirements for HIZD320 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SIZDINST	JCL	Any	U	PDS	FB	80	3	3
SIZDSAMP	Samples	Any	U	PDS	FB	80	5	4
SIZDEXEC	CLIST	Any	U	PDS	FB	80	10	5
SIZDLOAD	Samples	Any	U	PDS	U	0	90	15
SIZDMESG	CLIST	Any	U	PDS	FB	80	3	3
AIZDINST			U	PDS	FB	80	3	3
AIZDSAMP			U	PDS	FB	80	25	4
AIZDEXEC			U	PDS	FB	80	10	5
AIZDLOAD			U	PDS	U	0	90	15
AIZDMESG			U	PDS	FB	80	3	3

Figure 20 (Page 1 of 2). Storage Requirements for HKFK110 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SKFKINST	Samples	Any	U	PDS	FB	80	3	5
SKFKSAMP	Samples	Any	U	PDS	FB	80	15	5
AKFKINST			U	PDS	FB	80	3	2

Figure 20 (Page 2 of 2). Storage Requirements for HKFK110 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AKFKSAMP			U	PDS	FB	80	15	5
AKFKZFS			U	PDS	VB	27920	18000	1

Figure 21. Storage Requirements for HHBO510 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SHBOCLST	Data	Any	U	PDS	FB	80	2	2
SHBODEFS	Data	Any	U	PDS	VB	255	300	30
SHBOINST	SAMP	Any	U	PDS	FB	80	5	5
SHBOLLST	MOD	Any	U	PDS	U	0	5	3
SHBOLOAD	MOD	Any	U	PDSE	U	0	70	N/A
SHBOLPA	MOD	Any	U	PDS	U	0	5	2
SHBOSAMP	SAMP	Any	U	PDS	FB	80	10	5
AHBOCLST			U	PDS	FB	80	2	2
AHBODEFS			U	PDS	VB	255	300	30
AHBOINST			U	PDS	FB	80	5	2
AHBOLOAD			U	PDSE	U	0	75	N/A
AHBOPGM			U	PDS	U	0	5	5
AHBOPGM2			U	PDSE	U	0	75	N/A
AHBOSAMP			U	PDS	FB	80	10	2
AHBOZFS			U	PDS	VB	27920	8500	5

Figure 22 (Page 1 of 2). Storage Requirements for HHBO51L Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SHBOWLPI	SAMP	Any	U	PDS	FB	80	3	5

Figure 22 (Page 2 of 2). Storage Requirements for HHBO51L Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
AHBOWLPH			U	PDS	VB	27920	18000	2
AHBOWLPI			U	PDS	FB	80	3	2

Figure 23. Storage Requirements for HZIO620 Libraries

Library DDNAME	Member Type	Target Volume	TYPE	ORG	RECFM	LRECL	No. of 3390 Trks	No. of DIR Blks
SHIOLOAD	LMOD	Any	U	PDS	U	0	2	44
SHIOPKGI	Data	Any	U	PDS	FB	80	2	44
AHIOLOAD			U	PDS	U	0	2	44
AHIOPKGI			U	PDS	FB	80	2	44

5.3 FMIDs Deleted

Installing IBM Z Integration for Observability might result in the deletion of other FMIDs. To see which FMIDs will be deleted, examine the ++VER statement in the SMPMCS of the product.

If you do not want to delete these FMIDs at this time, install IBM Z Integration for Observability into separate SMP/E target and distribution zones.

Note: These FMIDs are not automatically deleted from the Global Zone. If you want to delete these FMIDs from the Global Zone, use the SMP/E REJECT NOFMID DELETEFMID command. See the SMP/E Commands documentation for details.

5.4 Special Considerations

To effectively manage a suite of products with common components, you can install products into shared zones of a consolidated software inventory (CSI). Space requirements are reduced by installing products into shared CSI zones avoiding the duplication when different target zones, distribution zones, and data sets are used. Sharing a common set of zones also allows SMP/E to automatically manage IFREQ situations that exist across product components.

If you intend to share a Tivoli Enterprise Monitoring Server on z/OS with other products, use shared CSI zones so product configuration sets up the runtime environment correctly.

Discovery Library Adapter additional z/OS data sources:

- CICSPlex System Manager - Version 5.4

Prior to installing IBM Z Integration for Observability, IBM recommends you review the OMEGAMON shared documentation **First time deployment guide (FTU installation and tasks)**, the Planning, Configuring, and Configuration Manager topics for general planning and configuration flow. This documentation focuses on the things you will need to know for a successful installation and configuration of this product.

The OMEGAMON shared documentation can be found at the IBM Documentation URL listed below:

https://www.ibm.com/docs/en/om-shared

If you are installing into an existing CSI zone that contains the listed FMIDs, ensure the maintenance has been installed previously or it must be installed with this product package.

```
HKCI310 - UJ96215
HKDS630 - UJ07787
HKLV630 - UJ07235
```

New DDDEFs and allocations were introduced via the service process and must be present in the CSI before the APPLY job is executed.

- PTF UJ93059 (HIZD320 FMID), requires SMP/E SMPTLOAD DDDEF, ensure that SMPTLOAD is defined in the CSI.

The following sample job can be used to define the SMPTLOAD DDDEF, change all occurrences of the following lowercase variables to values suitable for your installation before submitting.

```
  #globalcsi - The dsname of your global CSI.
  #tzone - The name of the SMP/E target zone.
  #dzone - The name of the SMP/E distribution zone.
//SMPTLOAD JOB 'ACCOUNT INFORMATION','SMPTLOAD',
//       CLASS=A,MSGCLASS=X,MSGLEVEL=(1,1),NOTIFY=&SYSUID
//*************************************************************
//*            D e f i n e   D D D E F   E n t r i e s  *
//*************************************************************
//SMPTLOAD EXEC PGM=GIMSMP,REGION=4096K
//SMPCSI   DD DISP=OLD,DSN=#globalcsi
//SMPCNTL  DD *
    SET   BDY(GLOBAL) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
       UNIT(SYSALLDA) .
       ENDUCL .

    SET   BDY(#tzone) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
       UNIT(SYSALLDA) .
       ENDUCL .

    SET   BDY(#dzone) .
    UCLIN .
    ADD DDDEF(SMPTLOAD) CYL SPACE(2,1) DIR(10)
       UNIT(SYSALLDA) .
       ENDUCL .
/*
```

Consider the following items when using shared CSI zones.

- You must specify the same high-level qualifier for the target and distribution libraries as the other products in the same zones for the configuration tool to work correctly.
- If you install a product into an existing CSI that contains a previous version of the same product, SMP/E deletes the previous version during the installation process. To maintain multiple product versions concurrently, they must be installed into separate CSI zones.
- If you install into an existing environment, you might need to remove data set references from the installation jobs to avoid errors because the data sets already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of IBM Z Integration for Observability.

Please note the following points:

- If you want to install IBM Z Integration for Observability into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- You can use the sample jobs that are provided to perform part or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries that are required for SMP/E execution have been defined in appropriate zones.

6.1 Installing IBM Z Integration for Observability

6.1.1 SMP/E Considerations for Installing IBM Z Integration for Observability

Use the SMP/E RECEIVE, APPLY, and ACCEPT commands to install this release of IBM Z Integration for Observability.

6.1.2 SMP/E Options Subentry Values

The recommended values for certain SMP/E CSI subentries are shown in Figure 24. Using values lower than the recommended values can result in failures in the installation. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. See the SMP/E manuals for instructions on updating the global zone.

Figure 24. SMP/E Options Subentry Values

Subentry	Value	Comment
DSSPACE	300,1200,1200	Use 1200 directory blocks
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

IBM Z Integration for Observability does not use the CALLLIBS function.

6.1.4 Installation Job Generator Utility

A utility is available to generate the necessary installation jobs for this product and others that might be included in the product package deliverable. Be aware that not all products are supported and maintenance might be required to get the latest updates for the Job Generator product selection table. It is recommended you use this job generation utility to create a set of jobs to install the product package when installing into an existing environment rather than using the sample jobs provided for each product.

The job generation utility is delivered in the z/OS Installation and Configuration Tool component of the Tivoli Management Services on z/OS product, which is a requisite of this product. This utility is enhanced through the maintenance stream so there could be an issue if it is invoked from an environment without the latest maintenance. Ensure the latest maintenance is installed for the components of this product to get the latest updates for the Job Generator product selection table.

If you are installing for the first time into a new environment and don't have an existing environment available to invoke this utility, you must use the sample jobs for the Tivoli Management Services on z/OS product and install it first. This will install the FMID containing the job generation utility and the latest maintenance. Then you can invoke the utility from the target library TKANCUS to install other products in the package.

The job generation utility can be invoked from the SMP/E target library with the low-level qualifier of TKANCUS, launch the utility by using ISPF option 6 and entering the following command.

```
ex '&gbl_target_hilev.TKANCUS'
```

Select "SMP/E-install z/OS products with Install Job Generator (JOBGEN)" from the z/OS Installation and Configuration Tool main menu.

You can use the online help available as a tutorial to become familiar with the utility and its processes.

6.1.4.1 Introduction to the Job Generator

The job generation utility creates a set of jobs to define a SMP/E environment (CSI and supporting data sets), allocate product libraries (target and distribution zone data sets and DDDEFS), and install the products (RECEIVE APPLY ACCEPT). You can use these jobs to create a new environment or to install the products into an existing CSI.

Processing Steps

- The jobs are generated from a series of ISPF interactive panels and ISPF file tailoring.
- The initial step is selection of the product mix. The set of products will determine any additions to the basic set of values needed to create the JCL.

Process Log

- One of the members of the generated job library is KCIJGLOG, which is the process log.

- This member shows the generating parameters and internal lists that were used to create the batch jobs.
- It also indicates which jobs were actually produced and need to be run. Note that the RECEIVE, APPLY, and ACCEPT jobs are always generated even if the selected products are already in the target CSI. In that case, the jobs install additional maintenance when available.

6.1.4.2 Product Selection

You can select one or more products from a table that will determine the set of FMIDs to install. You must select at least one product and you should always select the appropriate version of the IBM Tivoli Management Services on z/OS product (5698-A79) that is an installation requisite for this product offering. This will install the necessary FMIDs and maintenance for a new environment but also ensure any requisite maintenance will be processed when installing into an existing environment.

The selection table contains information about all of the supported products and might contain entries for products that you do not have or do not wish to install. Select only those products that are available in the package delivered and that you want to install.

6.1.4.3 Installing into an existing CSI

When the high-level qualifiers point to an existing environment, the job generation utility eliminates the jobs that allocate and initialize the CSI.

The job generation utility suppresses the creation of libraries that already exist in the target environment. Instead, the generator creates a job to determine whether sufficient space is available for any additional data to be installed into the libraries.

The member KCIJGANL is generated to report on the available space for each of the existing libraries that will have new data. However, KCIJGANL cannot check for the maintenance stream requirements.

The space analyzer function is very helpful in identifying data set space issues that might cause X37 abends during APPLY and ACCEPT processing.

6.1.4.4 Job Generator - Update Command

The job generation utility was enhanced to allow dynamic additions to the product table. The UPDATE routine is used to obtain additional data for products that are available but not yet included in the installation job generator table, KCIDJG00.

You must have the product RELFILEs available on DASD in order to run this routine and all components of the product must be available. After a successful run, the output of this routine will replace the KCIDJG00 member of the work data set. If you make multiple changes to the data member be sure to save the original member as a backup.

Note: Not all products qualify for inclusion in the job generator process. Refer to the online help for more information about this facility.

6.1.5 Sample Jobs

If you choose not to use the installation job generator utility documented in the previous section, you can use the sample jobs that were originally created for the products included in IBM Z Integration for Observability. This will require you to research and tailor each of the jobs accordingly. The RELFILEs and member names for these sample jobs are provided in the following tables.

Figure 25. Sample Installation Jobs for IBM Tivoli Management Services on z/OS

Job Name	Job Type	Description	SMPTLIB Data Set
KDSJ1SMA	Optional	Sample job to create new SMP/E support files	IBM.HKDS630.F13
KDSJ2SMI	Optional	Sample job to create and prime a new SMP/E CSI	IBM.HKDS630.F13
KDSJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKDS630.F13
KDSJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKDS630.F13
KDSJ5REC	RECEIVE	Sample RECEIVE job	IBM.HKDS630.F13
KDSJ6APP	APPLY	Sample APPLY job	IBM.HKDS630.F13
KDSJ7ACC	ACCEPT	Sample ACCEPT job	IBM.HKDS630.F13

Figure 26. Sample Installation Jobs for IBM Z Service Management Explorer

Job Name	Job Type	Description	SMPTLIB Data Set
IUWJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HIUW631.F2
IUWJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HIUW631.F2
IUWJ5REC	RECEIVE	Sample RECEIVE job	IBM.HIUW631.F2
IUWJ6BDI	MKDIR	Sample job to invoke the supplied IUWMKDIR EXEC to allocate file system paths	IBM.HIUW631.F2
IUWJ7APP	APPLY	Sample APPLY job	IBM.HIUW631.F2
IUWJ8ACC	ACCEPT	Sample ACCEPT job	IBM.HIUW631.F2

Figure 27 (Page 1 of 2). Sample Installation Jobs for IBM Z OMEGAMON Integration Monitor

Job Name	Job Type	Description	RELFILE
KAYJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKOA110.F2
KAYJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKOA110.F2
KAYJ5REC	RECEIVE	Sample RECEIVE job	IBM.HKOA110.F2
KAYJ6BDI	MKDIR	Sample job to invoke the supplied KAYMKDIR EXEC to allocate file system paths	IBM.HKOA110.F2

Figure 27 (Page 2 of 2). Sample Installation Jobs for IBM Z OMEGAMON Integration Monitor

Job Name	Job Type	Description	RELFILE
KAYJ7APP	APPLY	Sample APPLY job	IBM.HKOA110.F2
KAYJ8ACC	ACCEPT	Sample ACCEPT job	IBM.HKOA110.F2

Figure 28. Sample Installation Jobs for IBM Discovery Library Adapter for z/OS

Job Name	Job Type	Description	RELFILE
IZDJALLO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HIZD320.F1
IZDJDDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HIZD320.F1
IZDJRECD	RECEIVE	Sample RECEIVE job	IBM.HIZD320.F1
IZDJAPP	APPLY	Sample APPLY job	IBM.HIZD320.F1
IZDJACC	ACCEPT	Sample ACCEPT job	IBM.HIZD320.F1

Figure 29. Sample Installation Jobs for Apache Kafka for IBM Z

Job Name	Job Type	Description	RELFILE
KFK1ALLO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKFK110.F1
KFK3RMKD	MKDIR	Sample job to invoke the supplied KFKMKDIR EXEC to allocate file system paths	IBM.HKFK110.F1
KFK4DDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKFK110.F1
KFK5RECV	RECEIVE	Sample RECEIVE job	IBM.HKFK110.F1
KFK6APLY	APPLY	Sample APPLY job	IBM.HKFK110.F1
KFK7ACCP	ACCEPT	Sample ACCEPT job	IBM.HKFK110.F1

Figure 30. Sample Installation Jobs for IBM Z Common Data Provider - Base

Job Name	Job Type	Description	RELFILE
HBO1ALLO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HHBO510.F2
HBO3RMKD	MKDIR	Sample job to invoke the supplied KFKMKDIR EXEC to allocate file system paths	IBM.HHBO510.F2
HBO4DDDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HHBO510.F2
HBO5RECV	RECEIVE	Sample RECEIVE job	IBM.HHBO510.F2
HBO6APLY	APPLY	Sample APPLY job	IBM.HHBO510.F2
HBO7ACCP	ACCEPT	Sample ACCEPT job	IBM.HHBO510.F2

Figure 31. Sample Installation Jobs for IBM Z Common Data Provider - Liberty

Job Name	Job Type	Description	RELFILE
HBOL1ALL	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HHBO51L.F1
HBOL3MKD	MKDIR	Sample job to invoke the supplied KFKMKDIR EXEC to allocate file system paths	IBM.HHBO51L.F1
HBOL4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HHBO51L.F1
HBOL5REC	RECEIVE	Sample RECEIVE job	IBM.HHBO51L.F1
HBOL6APL	APPLY	Sample APPLY job	IBM.HHBO51L.F1
HBOL7ACC	ACCEPT	Sample ACCEPT job	IBM.HHBO51L.F1

SMP/E Considerations for Installing Liberty for ZCDP

A copy of the WebSphere Liberty Profile, entitled to be used with ZCDP and associated products dependent upon ZCDP.

The TSO userid used to perform this install needs to either have **UID 0** or have **READ** authority to the **SUPERUSER.FILESYS.PFSCTL** profile in the **UNIXPRIV** class.

You need to install Liberty for ZCDP if:

1. You are installing on a z/OS 2.2 system which does not have an entitled Liberty and you do not plan to use the z/OSMF plug-in option for the ZCDP Configuration Application.
2. You are installing IBM Z Operations Analytics 4.1.0 to use ZCDP.
3. You need a separate copy of Liberty from the one shipped with z/OS 2.3 in order to insure that you always have the specific service level needed for either ZCDP or the dependent products.

Figure 32. Sample Installation Jobs for IBM Z Integration for Observability IZSAM ID

Job Name	Job Type	Description	RELFILE
HIOJ3ALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HZIO620.F1
HIOJ4DDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HZIO620.F1
HIOJ5REC	RECEIVE	Sample RECEIVE job	IBM.HZIO620.F1
HIOJ6APP	APPLY	Sample APPLY job	IBM.HZIO620.F1
HIOJ7ACC	ACCEPT	Sample ACCEPT job	IBM.HZIO620.F1

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.10, “Perform SMP/E RECEIVE” on page 41) then copy the jobs from the SMPTLIB data sets to a work data for editing and submission.

You can also copy the sample installation jobs from the product files by submitting the following job. Before you submit the job, add a job card and change the lowercase parameters to uppercase values to meet the requirements of your site.

```
//STEP1    EXEC PGM=IEBCOPY,REGION=4M
//SYSPRINT DD SYSOUT=*
//IN   DD DSN=IBM.fmid.relfile,UNIT=SYSALLDA,DISP=SHR,
//         VOL=SER=filevol
//OUT      DD DSNAME=jcl-library-name,
//         DISP=(NEW,CATLG,DELETE),
//         VOL=SER=dasdvol,UNIT=SYSALLDA,
//         SPACE=(TRK,(10,2,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
    COPY INDD=IN,OUTDD=OUT
    SELECT MEMBER=(member-names)
/*
```

See the following information to update the statements in the previous sample:

IN:
: **filevol** is the volume serial of the DASD device where the downloaded files reside.

OUT:
: **jcl-library-name** is the name of the output data set where the sample jobs are stored.
dasdvol is the volume serial of the DASD device where the output data set resides.

6.1.6 Create New SMP/E Support Files - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate new SMP/E support data sets for IBM Z Integration for Observability installation, edit and submit the generated allocation job KCIJGSMA or edit and submit sample job KDSJ1SMA. Consult the instructions in the job for more information.

Expected Return Codes and Messages: 0

6.1.7 Create New SMP/E CSI - Optional

If you do not want to install into an existing environment, you can create a new environment. To allocate a new SMP/E CSI and prime it for IBM Z Integration for Observability installation, edit and submit the generated allocation job KCIJGSMI or edit and submit sample job KDSJ2SMI. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.8 Allocate SMP/E Target and Distribution Libraries

Edit and submit the generated job KCIJGALO to allocate the SMP/E target and distribution libraries for IBM Z Integration for Observability.

If you are not using the generated allocation job, select the sample allocation job for each of the products included. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information. Consider the following issues before submitting the job.

- If you are installing into an existing environment, you might have to remove lines for data sets that already exist.
- If you are installing into an existing environment that has the data sets already allocated, ensure sufficient space and directory blocks are available to support the requirement listed in the DASD tables. This might require you to reallocate some data sets to avoid x37 abends.

Expected Return Codes and Messages: 0

6.1.9 Create DDDEF Entries

Edit and submit the generated job KCIJGDDF to create DDDEF entries for the SMP/E target and distribution libraries for IBM Z Integration for Observability.

If you are not using the generated job, select the sample DDDEF job for each of the products included. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information. If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Expected Return Codes and Messages: 0

6.1.10 Perform SMP/E RECEIVE

If you have obtained IBM Z Integration for Observability as part of a CBPDO, use the RCVPDO job in the CBPDO RIMLIB data set to receive the IBM Z Integration for Observability FMIDs, service, and HOLDDATA that are included on the CBPDO package. For more information, see the documentation that is included in the CBPDO.

You can also choose to edit and submit the generated job KCIJGREC to perform the SMP/E RECEIVE for IBM Z Integration for Observability. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.11 Allocate, create and mount ZFS Files (Optional)

This job allocates, creates a mountpoint, and mounts zFS data sets.

You can choose to create a new file system for this product installation by copying, editing, and submitting the JCL below. Add a job card and change all occurrences of the following lowercase variables to values suitable for your installation before submitting.

```
 #zfsdsn - The dsname of your zFS directory.
 #volser - The volume serial number for the DASD that will contain
           the new file system.
 #zfsdir - The zFS directory where this product will be installed.
        The recommended mountpoint is /-PathPrefix-/usr/lpp/kan.
           The zFS directory tree is case sensitive. Ensure #zfsdir
           is an absolute path name and begins with a slash (/).
//*************************************************************
//* ALLOCZ This step allocates your zFS data set.             *
//*************************************************************
//ALLOCZ   EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
   DEFINE CLUSTER(NAME(#zfsdsn) -
   LINEAR CYLINDERS(15 5) SHAREOPTIONS(3) VOLUMES(#volser))
/*
//*************************************************************
//* FORMAT This step formats your newly created zFS data set.  *
//*   When executing the IOEAGFMT program you must have        *
//*   superuser authority (UID 0) or READ authority to the     *
//*   SUPERUSER.FILESYS.PFSCTL profile in the UNIXPRIV class.  *
//*************************************************************
//FORMAT EXEC PGM=IOEAGFMT,REGION=0M,
//       PARM=('-aggregate #zfsdsn -compat')
//STEPLIB  DD DSN=IOE.SIOELMOD,DISP=SHR
//SYSPRINT DD SYSOUT=*
//*************************************************************
//* MAKEDIR This step creates the directory path for your      *
//* Mount Point                                               *
//*************************************************************
//MAKEDIR  EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD *
  PROFILE WTPMSG MSGID
  MKDIR '#zfsdir' MODE(7,5,5)
  PROFILE
/*
//*************************************************************
//*  MOUNT This step MOUNTS your newly created zFS File System *
//*  using the AGGRGROW parameter.                            *
```

```
//*************************************************************
//MOUNT    EXEC PGM=IKJEFT01
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSTSIN  DD *
  MOUNT FILESYSTEM('#zfsdsn') +
     TYPE(ZFS) MODE(RDWR) PARM('AGGRGROW') +
     MOUNTPOINT('#zfsdir')
/*
```

Expected Return Codes and Messages: 0

6.1.12 Allocate File System Paths

If you are installing the Z Service Management Explorer, OMEGAMON Integration Monitor, Apache Kafka for IBM Z, and IBM Z Common Data Provider Base and Liberty components, edit and submit the generated job KCIJGBDI to define the file system paths.

If you are not using the generated job, select the sample jobs IUWJ6BDI, KAYJ6BDI, KFK3RMKD, HBO3RMKD, and HBOL3MKD. Edit and submit them after making appropriate changes for your environment. Consult the instructions in the sample job for more information. Consider the following items before submitting the job.

Important Notes:

1. The RELFILEs containing the IUWMKDIR, KAYMKDIR, KFK3RMKD, HBO3RMKD, and HBOL3MKD execs must be available prior to running these jobs. The Relfiles needed are HIUW631.F2, HKOA110.F2, HKFK110.F1, HHBO510.F2, HHBO51L.F1 and should be available after running the RECEIVE job.
2. This job must be run before the APPLY job.
3. This job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.
4. The user ID must have read access to the BPX.FILEATTR.APF and BPX.FILEATTR.PROGCTL resource profiles in the RACF FACILITY class.
5. If you plan to create a new file system for this product, ensure it is created before submitting this job to define file system paths.
6. The file system must be in read/write mode before this job is run.
7. If you create a new file system for IBM Z Integration for Observability, consider updating the BPXPRMxx PARMLIB member to mount the new file system at IPL time. This action can be helpful if an IPL occurs before the installation is completed.

Expected Return Codes and Messages: 0

6.1.13 Perform SMP/E APPLY

Ensure that you have the latest HOLDDATA, then edit and submit the generated job KCIJGAPP to perform an SMP/E APPLY CHECK for IBM Z Integration for Observability.

If you are not using the generated job, select the sample APPLY job for each of the products included. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information.

Important Notes:

1. If the Z Service Management Explorer, OMEGAMON Data Provider, Apache Kafka for IBM Z, and IBM Z Common Data Provider Base and Liberty components are being installed, the APPLY job must be run by a user ID that has superuser authority (UID=0) or read access to resource BPX.SUPERUSER under the FACILITY profile and superuser authority must be activated.
2. The user ID must also have read access to the BPX.FILEATTR.APF and BPX.FILEATTR.PROGCTL resource profiles in the RACF FACILITY class. This is required for the script to execute successfully and maintain the APF-authorized attributes for all executables and DLLs during unpax.
3. The file system must be in read/write mode before this job is run.

The latest HOLDDATA is available through several different portals, including https://public.dhe.ibm.com/s390/assigns/ or https://www.ibm.com/support/pages/enhanced-holddata-zos for usage instructions. The latest HOLDDATA may identify HIPER and FIXCAT APARs for the FMIDs you will be installing. An APPLY CHECK will help you determine if any HIPER or FIXCAT APARs are applicable to the FMIDs you are installing. If there are any applicable HIPER or FIXCAT APARs, the APPLY CHECK will also identify fixing PTFs that will resolve the APARs, if a fixing PTF is available.

You should install the FMIDs regardless of the status of unresolved HIPER or FIXCAT APARs. However, do not deploy the software until the unresolved HIPER and FIXCAT APARs have been analyzed to determine their applicability. That is, before deploying the software either ensure fixing PTFs are applied to resolve all HIPER or FIXCAT APARs, or ensure the problems reported by all HIPER or FIXCAT APARs are not applicable to your environment.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the APPLY CHECK. The SMP/E root cause analysis identifies the cause only of *errors* and not of *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings, instead of errors).

Here are sample APPLY commands:

1. To ensure that all recommended and critical service is installed with the FMIDs, receive the latest HOLDDATA and use the APPLY CHECK command as follows

```
APPLY S(fmid,fmid,...) CHECK
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
FIXCAT(IBM.ProductInstall-RequiredService)
GROUPEXTEND .
```

Some HIPER APARs might not have fixing PTFs available yet. You should analyze the symptom flags for the unresolved HIPER APARs to determine if the reported problem is applicable to your environment and if you should bypass the specific ERROR HOLDs in order to continue the installation of the FMIDs.

This method requires more initial research, but can provide resolution for all HIPERs that have fixing PTFs available and are not in a PE chain. Unresolved PEs or HIPERs might still exist and require the use of BYPASS.

2. To install the FMIDs without regard for unresolved HIPER APARs, you can add the BYPASS(HOLDCLASS(HIPER)) operand to the APPLY CHECK command. This will allow you to install FMIDs even though one or more unresolved HIPER APARs exist. After the FMIDs are installed, use the SMP/E REPORT ERRSYSMODS command to identify unresolved HIPER APARs and any fixing PTFs.

   ```
   APPLY S(fmid,fmid,...) CHECK
   FORFMID(fmid,fmid,...)
   SOURCEID(RSU*)
   FIXCAT(IBM.ProductInstall-RequiredService)
   GROUPEXTEND
   BYPASS(HOLDCLASS(HIPER)) .
    ..any other parameters documented in the program directory
   ```

   This method is quicker, but requires subsequent review of the Exception SYSMOD report produced by the REPORT ERRSYSMODS command to investigate any unresolved HIPERs. If you have received the latest HOLDDATA, you can also choose to use the REPORT MISSINGFIX command and specify Fix Category IBM.PRODUCTINSTALL-REQUIREDSERVICE to investigate missing recommended service.

   If you bypass HOLDs during the installation of the FMIDs because fixing PTFs are not yet available, you can be notified when the fixing PTFs are available by using the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink.

Expected Return Codes and Messages from APPLY CHECK: 0

After you take actions that are indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

Note: The GROUPEXTEND operand indicates that SMP/E applies all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
       HOLD REASON IDS WERE NOT RESOLVED.
```

Expected Return Codes and Messages from APPLY: 4

You can receive many of the following messages depending on your environment. These messages can be ignored, because they will not affect product execution.

```
GIM23913W  LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
           WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
           LMOD cccccccc IN THE dddddddd LIBRARY.  THE
           RETURN CODE WAS ee.  DATE yy.ddd -- TIME
           hh:mm:ss -- SEQUENCE NUMBER nnnnnn --
           SYSPRINT FILE ffffffff.
IEW2454W  SYMBOL symbol UNRESOLVED. NO AUTOCALL (NCAL) SPECIFIED.

IEW2480W  EXTERNAL SYMBOL symbol OF TYPE ESD-type WAS
          ALREADY DEFINED AS A SYMBOL OF TYPE ESD-type
          IN SECTION section-name.

IEW2482W  THE ORIGINAL DEFINITION WAS IN A MODULE
          IDENTIFIED BY ddname.  THE DUPLICATE DEFINITION
          IS IN section IN A MODULE IDENTIFIED BY ddname.
```

Figure 33 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

Figure 33 (Page 1 of 2). SMP/E Elements Not Selected

KAYBNETL	KAYBRP00	KAYB0001	KAYOPEN	KAY11PAX	KAY11SH
KAY11ZIP	KCI$SYN2	KCICRPLC	KCIDJG00	KCIDPGNX	KCIDPGNZ
KCIDPNEW	KCIJPVER	KCIJSALO	KCIJSLOD	KCIJSUSU	KCIPQPGW
KCIPRMLB	KCIRPLBV	KCIRXDLA	KC5JSLOD	KC5PRMLB	KDSJSLOD
KDSPRMLB	KD2AHELP	KD2PRMLF	KD2PRMLP	KD5JSALO	KD5JSLOD
KD5JSUPV	KD5PRMLB	KFJMAINT	KFJSALO	KFJSCLIB	KFJSCPMV
KFJSCPR	KFJSC2WC	KFJSEMBC	KFJSEMBG	KFJSIDEF	KFJSMGSV
KFJSMIGD	KFJSMIGG	KFJSPDMG	KFJSPPMV	KFJSPRF	KFJSROPT
KFJSSECC	KFJSSYS	KFJSUPV	KFJSUSSV	KFJSVER2	KFJUDEPL
KFJWCONF	KFJWDEL	KFJWDEPL	KFJWNEW	KFJWPACK	KFJWVAL
KFUIAGTC	KFUIMLVL	KFUIROWP	KFUOALOC	KFUOCALL	KFUOCOPY

Figure 33 (Page 2 of 2). SMP/E Elements Not Selected					
KFUODEMD	KFUODEML	KFUODISC	KFUODYNA	KFUOFLOW	KFUOIJCL
KFUOLDSI	KFUOLIDS	KFUOMEGA	KFUOMSGO	KFUOREXH	KFUOREXI
KFUOREXL	KFUOREXS	KFUOREXX	KFUOSYDS	KFUOSYVA	KFUOTIOT
KFUOTRAP	KFUOTSEV	KFUOVARS	KFURPRE1	KFURSH	KGLBASE
KGLCRYWR	KGWPRMLB	KI2AHELP	KI5AHELP	KI5JSLOD	KI5PRMLB
KM5JSLOD	KM5PRMLB	KN3PRMLB	KOBJSLOD	KOLOPS	KQIJSLOD
KQIJSUSU	KQIJSUS6	KQIPRMLB	KQIUIUSS	KQMM	KRALIB
KRANDREG	KRGPRMLB	KRHPRMLB	KRJPRMLB	KRKPRMLB	KRNPRMLB
KRTAHELP	KRTBHELP	KRTDDICT	KRTDDICX	KRTREXIT	KRVPRMLB
KSMOMS	KS3PRMLB	KYNJSALO	KYNJSUSU	KYNPRMLB	

After installing new function, you should perform two operations:

1. Create a backup of the updated data sets, including any SMP/E data sets affected, in case something happens to the data sets during the next phase.
2. Do some testing before putting the new function into production.

After you are satisfied that an applied SYSMOD has performed reliably in your target system, you can install it in your distribution libraries using the ACCEPT process.

Another good practice is to accept most SYSMODs, particularly FMIDs, before performing another APPLY process. This provides you the ability to use the RESTORE process of SMP/E and to support the scenario where SMP/E needs to create a new load module from the distribution libraries during the APPLY process.

6.1.14 Perform SMP/E ACCEPT

Edit and submit the generated job KCIJGACC to perform an SMP/E ACCEPT CHECK for IBM Z Integration for Observability.

If you are not using the generated job, select the sample ACCEPT job for each of the products included. Edit and submit it after making appropriate changes for your environment. Consult the instructions in the sample job for more information.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the PRE, ID, REQ, and IFREQ on the ACCEPT CHECK. The SMP/E root cause analysis identifies the cause of *errors* but not *warnings* (SMP/E treats bypassed PRE, ID, REQ, and IFREQ conditions as warnings rather than errors).

Before you use SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. In this way, you can save the entries that are produced from JCLIN in the distribution zone whenever a SYSMOD that contains inline JCLIN is accepted. For more information about

the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E Commands documentation for details.

Expected Return Codes and Messages from ACCEPT CHECK: 0

After you take actions that are indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

Note: The GROUPEXTEND operand indicates that SMP/E accepts all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

If the BYPASS operand is not included in the control statement when processing a PTF with a ++HOLD statement, the job will get a return code of 12 and the following message.

```
GIM30206E command PROCESSING FAILED FOR SYSMOD sysmod.
          HOLD REASON IDS WERE NOT RESOLVED.
```

If PTFs that contain replacement modules are accepted, SMP/E ACCEPT processing will link-edit or bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder might issue messages that indicate unresolved external references, which will result in a return code of 4 during the ACCEPT phase. You can ignore these messages, because the distribution libraries are not executable and the unresolved external references do not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: 4

You can receive many of the following messages depending on your environment. These messages can be ignored, because they will not affect product execution.

```
GIM24701W SMP/E COULD NOT OBTAIN LINK-EDIT PARAMETERS FOR LOAD
       MODULE loadmod FOR SYSMOD sysmod. DEFAULTS WERE USED.
```

Figure 33 on page 46 contains a list of elements that might be marked as not selected during the APPLY and ACCEPT processes. This might occur because a VERSION parameter was supplied in an FMID indicating that it contained a higher level version of the same element provided by another FMID being processed at the same time. The higher version element is selected for processing and the lower version is not selected for processing. It might also occur because maintenance is being installed at the same time as the FMIDs.

6.2 Activating IBM Z Integration for Observability

Prior to activating the products included in IBM Z Integration for Observability, IBM recommends you review the Quick Start Guide, **First time deployment guide (FTU installation and configuration tasks)** as well as Planning and Configuring topics if you have not already done so. This documentation focuses on the things you will need to know for a successful deployment of the products included in this package.

Activating the products included in IBM Z Integration for Observability requires you to use the OMEGAMON shared publications and the configuration guides for each product listed in Figure 1 on page 8.

Links to this documentation can be found online at:

https://www.ibm.com/docs/en/om-integ-obs

6.2.1 File System Execution

If you mount the file system in which you have installed Z Service Management Explorer, OMEGAMON Data Provider, Apache Kafka for IBM Z, and IBM Z Common Data Provider Base and Liberty components in read-only mode during execution, then you do not have to take further actions.

7.0 Notices

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APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always refer to the instructions in the **Service Recommendation Summary and Service Recommendations** and **Cross Product Dependencies** sections of the **PSP bucket information for IBM Z products** at https://www.ibm.com/support/pages/node/7127792, to ensure you have all required service.

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