



**Program Directory for
IBM DB2 Accessories Suite
Data Studio Workbench**

V01.03.00

Program Number 5655-R14

for Use with
z/OS

Service Updated May 2008

Document Date: June 2009

GI10-8773-01

Note!

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 38.

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1.0 Introduction

This Program Directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of the Data Studio Workbench feature of IBM DB2 Accessories Suite.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for Data Studio Workbench.
- 3.0, "Program Support" on page 6 describes the IBM support available for Data Studio Workbench.
- 4.0, "Program and Service Level Information" on page 8 lists the APARs (program level) and PTFs (service level) incorporated into Data Studio Workbench.
- 5.0, "Installation Requirements and Considerations" on page 11 identifies the resources and considerations required for installing and using Data Studio Workbench.
- 6.0, "Installation Instructions" on page 29 provides detailed installation instructions for Data Studio Workbench. It also describes the procedures for activating the functions of Data Studio Workbench, or refers to appropriate publications.

Before installing Data Studio Workbench, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program in softcopy form as well as this Program Directory and then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 6 tells you how to find any updates to the information and procedures in this Program Directory.

Data Studio Workbench is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory is provided in softcopy form on the CBPDO tape which is identical to the hardcopy form provided with your order. All service and HOLDDATA for Data Studio Workbench are included on the CBPDO tape.

Do not use this Program Directory if you are installing Data Studio Workbench with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation provides references to specific sections of the Program Directory as required.

1.1 Data Studio Workbench Description

The database that houses your vital corporate and customer-related data is an integral piece of the IT foundation that allows you to respond to the demands of today's marketplace. To gain the most business value from these critical assets, your database must perform at peak levels.

Highlights of Data Studio Workbench include enhancements to features which allow you to monitor selected health and availability metrics of a data server, Q replication, and event publishing with the Web-based Data Studio Administration Console component of Data Studio.

The Web-based Data Studio Administration Console component provides a rich Web interface.

The functions included are:

- Selected health and availability monitoring*
- Viewing dashboard metrics*
- Investigating alert details*
- Troubleshooting problems using expert recommendations*
- Monitoring Q replication and event publishing
- Generating replication health reports
- Performing basic replication operations

* To enable these functions, a data collector and agent on z/OS, available as part of this Data Studio Workbench feature, must be installed and configured. This data collector and agent only support selected health and availability monitoring in the Data Studio Administration Console. The data collector and agent on z/OS are not required if you want to monitor Q replication and event publishing only.

Note: Please be advised that the Data Studio Administration Console provides these selected capabilities for system health and availability monitoring for DB2 for z/OS. Customers that desire advanced features such as deep dive problem analysis, tracing applications and single SQL executions, historical reporting, pro-actively sending alerts to pagers, cell phones, or e-mail, customizing health and performance indicators, or creating a performance warehouse for trend analysis and capacity planning, may wish to consider selecting the more advanced capabilities in the full featured health, availability, and performance monitoring and management provided by product 5655-Q07, IBM Tivoli OMEGAMON XE for DB2 Performance Expert. See IBM Announcement Letter 206-251 for additional information.

1.2 Data Studio Workbench FMIDs

Data Studio Workbench consists of the following FMIDs (function modification identifiers):

- HKDB41A (License Key)
- HKDB410 (shared common Code)
- HKCI310 (shared common Code)
- HKDS610 (shared common Code)
- HKLV610 (shared common Code)
- HKOB550 (shared common Code)

Note: Please be advised that the License Key delivered with Data Studio Workbench enables a limited set of functionality delivered in these shared common code FMIDs. Please see the **Note** in Section 1.1 for additional information.

2.0 Program Materials

An IBM program is identified by a program number. The program number for IBM DB2 Accessories Suite (Data Studio Workbench) is 5655-R14.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature numbers, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature numbers, and are not required for the product to function.

The program announcement material describes the features supported by IBM DB2 Accessories Suite (Data Studio Workbench feature). 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 magnetic tape or downloadable files. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 29 for more information about how to install the program.

Additionally, this package also includes the following materials which are distributed on DVD media:

- Data Studio Administration Console v1.2 for AIX, LCD4-8322
- Data Studio Administration Console v1.2 for Linux, LCD4-8323
- Data Studio Administration Console v1.2 for Windows, LCD4-8324
- Data Studio for Linux, LCD4-8237
- Data Studio for Windows, LCD4-8236

Information about the physical tape for the Basic Machine-Readable Materials for Data Studio Workbench can be found in the *CBPDO Memo To Users Extension*.

2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for Data Studio Workbench.

2.3 Program Publications

The following sections identify the basic and optional publications for Data Studio Workbench.

2.3.1 Basic Program Publications

The Data Studio Workbench provides a TechNote containing the step-by-step procedures to install and configure the Data Collector and Agent in the Data Studio Workbench feature. The TechNote is available on the Web at:

http://www-01.ibm.com/support/docview.wss?rs=3360&context=SS62YD&dc=DB560&dc=DB520&uid=swg21317086&loc=en_US&cs=UTF-8&lang=en&rss=ct3360db2

Additionally, Data Studio Administration Console installation information can be found in the Data Studio Administration Console Release Notes ([release_readme.htm](#)) which are available on the Data Studio Administration Console DVDs.

Additionally, one basic unlicensed program publication for Data Studio Workbench feature, called *Messages* (GC18-9980), is available from the IBM Publications Center:

<http://www.ibm.com/shop/publications/order>

From this Publications Center Search page, enter GC18-9980-02 in the Publication Number field, and click Go.

2.3.2 Optional Program Publications

No optional publications are provided for Data Studio Workbench.

2.4 Program Source Materials

No program source materials or viewable program listings are provided for Data Studio Workbench.

2.5 Publications Useful During Installation

The publications listed in Figure 1 on page 5 can be useful during the installation of Data Studio Workbench. To order copies, contact your IBM representative or visit the IBM Publications Center at the following Web site:

<http://www.ibm.com/shop/publications/order>

Figure 1. Publications Useful During Installation

Publication Title	Form Number
<i>IBM SMP/E for z/OS User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS Messages, Codes, and Diagnosis</i>	GA22-7770

3.0 Program Support

This section describes the IBM support available for Data Studio Workbench.

3.1 Program Services

Contact your IBM representative for specific information about available program services. You can find information in the *IBM Software Support Handbook* at the following Web site:

<http://techsupport.services.ibm.com/guides/handbook.html>

The handbook provides information about how to contact IBM Software Support, depending on the severity of your problem, and the following information:

- Registration and eligibility
- Telephone numbers and e-mail addresses, depending on the country in which you are located
- What information you need to gather before contacting support

3.2 Preventive Service Planning

Before installing Data Studio Workbench, it is VERY IMPORTANT that you review the current Preventive Service Planning (PSP) information. The PSP buckets maintain current lists (which have been identified since the package was created) of any recommended or required service for this package's installation. This includes software PSP information that contains HIPER, special attention and/or required PTFs against the base release.

If you obtained Data Studio Workbench as part of a CBPDO, there is HOLDDATA included on the PDO.

If the CBPDO for Data Studio Workbench is more than two weeks old when you install it, you should contact the IBM Support Center, use S/390 SoftwareXcel to obtain the current "PSP Bucket" or obtain the current PSP from the Web at <https://techsupport.services.ibm.com/server/390.psp390>

For program support, access the Software Support Web site at:

<http://www.ibm.com/software/support/>

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for Data Studio Workbench are included in Figure 2.

<i>Figure 2. PSP Upgrade and Subset ID</i>		
UPGRADE	SUBSET	Description
5655R14	HKDB41A	Data Studio Workbench License Key
5655Q07	HKDB410/0820	OMEGAMON XE for DB2 PE BASE
	HKCI310/0750	Configuration Assistance Tool
	HKDS610/0750	Tivoli Enterprise Monitoring Server on z/OS
	HKLV610/0750	ITMS:Engine
	HKOB550/0750	OMNIMON Base

3.3 Statement of Support Procedures

Report any difficulties you have using this program to IBM Software Support. If an APAR is required, they will provide the address to which any needed documentation can be sent.

Figure 3 identifies the component IDs (COMPID) for Data Studio Workbench.

<i>Figure 3. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HKDB41A	5655OPE00	Data Studio Health Monitor License Key	41A
HKDB410	5655OPE00	OMEGAMON XE for DB2 PE BASE	410
HKCI310	5608A41CC	Configuration Assistance Tool	310
HKDS610	5608A2800	Tivoli Enterprise Monitoring Server on z/OS	610
HKLV610	5608A41CE	ITMS:Engine	610
HKOB550	5608A41OB	OMNIMON Base	550

4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of Data Studio Workbench. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs incorporated into the program.

4.1 Program Level Information

The following APAR fixes against previous releases of components included with Data Studio Workbench have been incorporated into this release. They are listed by FMID.

- FMID HKDB410

PK16411 PK16563 PK16642 PK17027 PK17604 PK17762 PK17771 PK17992
PK18301 PK18446 PK18505 PK18535 PK18603 PK18623 PK18729 PK18752
PK18753 PK19334 PK19340 PK19423 PK19424 PK19425 PK19426 PK19427
PK19428 PK19429 PK19430 PK19431 PK19432 PK19435 PK19436 PK19437
PK19438 PK19440 PK19443 PK19445 PK19446 PK19447 PK19448 PK19449
PK19450 PK19451 PK19452 PK19453 PK19454 PK19455 PK19456 PK19457
PK19458 PK19459 PK19460 PK19462 PK19463 PK19464 PK19465 PK19466
PK19467 PK19468 PK19470 PK19471 PK19472 PK19473 PK19474 PK19475
PK19476 PK19477 PK19479 PK19480 PK19481 PK19482 PK19483 PK19484
PK19499 PK19787 PK19867 PK19867 PK19925 PK19985 PK20201 PK20204
PK20205 PK20339 PK20385 PK20437 PK20548 PK20548 PK20650 PK20708
PK20717 PK20797 PK20819 PK21093 PK21108 PK21110 PK21250 PK21414
PK21528 PK21723 PK21724 PK21727 PK21731 PK21794 PK21806 PK21807
PK21809 PK21811 PK22400 PK22494 PK22696 PK22729 PK22907 PK23043
PK23053 PK23137 PK23156 PK23174 PK23278 PK23439 PK23939 PK23963
PK23980 PK24047 PK24166 PK24233 PK24296 PK24399 PK24474 PK24723
PK25023 PK25038 PK25154 PK25248 PK25395 PK25449 PK25536 PK25895
PK25904 PK25980 PK26527 PK26557 PK26775 PK27072 PK27132 PK27317
PK27323 PK27338 PK27561 PK27581 PK27704 PK27918 PK28104

- FMID HKCI310

OA09405 OA09526 OA09527 OA09528 OA09529 OA09530 OA09531 OA09532

- FMID HKDS610

OA09463 OA09988 OA10129 OA10230 OA10409 OA10521 OA10557 OA10573
OA10900 OA10914 OA11296 OA11840 OA12019 OA12020 OA12021 OA12022
OA12023 OA12024 OA12025 OA12026 OA12580 OA12698 OA12817 OA12883

- FMID HKLV610

OA09477 OA09583 OA09762 OA09797 OA11225 OA11249 OA11649 OA11740
OA11846 OA12017 OA12018

- FMID HKOB550

OA09425 OA09814 OA10043 OA10324 OA10724 OA10902

4.2 Service Level Information

PTFs containing APAR fixes against this release of Data Studio Workbench have been incorporated into this release. They are listed by FMID.

- FMID HKDB410

UK17532 UK17571 UK17832 UK17850 UK18098 UK18101 UK18163 UK18332
UK18622 UK18629 UK18645 UK18666 UK18671 UK18993 UK19044 UK19067
UK19072 UK19073 UK19138 UK19191 UK19272 UK19350 UK19378 UK19409
UK19476 UK19500 UK19512 UK19610 UK19655 UK19741 UK19796 UK19830
UK19914 UK19956 UK19962 UK20002 UK20052 UK20155 UK20275 UK20283
UK20317 UK20326 UK20405 UK20407 UK20412 UK20434 UK20463 UK20469
UK20470 UK20765 UK20830 UK20852 UK20872 UK20938 UK21052 UK21081
UK21274 UK21302 UK21311 UK21375 UK21511 UK21525 UK21550 UK21567
UK21609 UK21644 UK21660 UK21688 UK21692 UK21728 UK21954 UK21957
UK22009 UK22016 UK22078 UK22249 UK22271 UK22344 UK22414 UK22463
UK22478 UK22544 UK22577 UK22595 UK22713 UK22761 UK22818 UK22920
UK23022 UK23047 UK23064 UK23123 UK23202 UK23204 UK23271 UK23274
UK23440 UK23630 UK23673 UK23678 UK23680 UK23682 UK23684 UK23713
UK23901 UK23929 UK23930 UK23984 UK24046 UK24104 UK24147 UK24149
UK24211 UK24285 UK24292 UK24294 UK24338 UK24343 UK24459 UK24466
UK24498 UK24521 UK24581 UK24616 UK24684 UK24688 UK24698 UK24798
UK24801 UK24804 UK24829 UK24874 UK24940 UK24945 UK24961 UK25059
UK25151 UK25208 UK25233 UK25305 UK25440 UK25634 UK25686 UK25832
UK25927 UK25954 UK25963 UK25980 UK26061 UK26130 UK26180 UK26183
UK26200 UK26218 UK26248 UK26294 UK26296 UK26310 UK26352 UK26499
UK26524 UK26537 UK26602 UK26647 UK26687 UK26751 UK26784 UK26816
UK26820 UK26887 UK26909 UK26942 UK26979 UK27008 UK27204 UK27242
UK27296 UK27301 UK27303 UK27304 UK27306 UK27326 UK27337 UK27348
UK27358 UK27362 UK27394 UK27468 UK27514 UK27606 UK27610 UK27637
UK27647 UK27693 UK27757 UK27767 UK27834 UK27846 UK27914 UK27955
UK27964 UK28048 UK28054 UK28060 UK28156 UK28157 UK28159 UK28312
UK28334 UK28431 UK28472 UK28498 UK28551 UK28621 UK28674 UK28704
UK28707 UK28708 UK28728 UK28760 UK28812 UK28882 UK28895 UK28911
UK29065 UK29216 UK29258 UK29318 UK29323 UK29325 UK29347 UK29353
UK29355 UK29398 UK29479 UK29563 UK29605 UK29675 UK29741 UK29798
UK29833 UK29957 UK29959 UK30038 UK30207 UK30241 UK30277 UK30306
UK30343 UK30401 UK30452 UK30525 UK30578 UK30718 UK30734 UK30869
UK30880 UK30887 UK30976 UK31033 UK31040 UK31175 UK31183 UK31206
UK31274 UK31393 UK31434 UK31533 UK31541 UK31543 UK31611 UK31720
UK31791 UK31831 UK31873 UK31875 UK31931 UK31932 UK31933 UK31971
UK31972 UK32029 UK32038 UK32076 UK32121 UK32158 UK32160 UK32219
UK32232 UK32336 UK32345 UK32396 UK32578 UK32590 UK32602 UK32626
UK32628 UK32629 UK32653 UK32654 UK32665 UK32668 UK32678 UK32842
UK32869 UK32873 UK32879 UK32883 UK32972 UK33062 UK33063 UK33232
UK33238 UK33296 UK33410 UK33415 UK33464 UK33468 UK33469 UK33480
UK33516 UK33521 UK33547 UK33580 UK33600 UK33610 UK33623 UK33627
UK33631 UK33660 UK33703 UK33746 UK33751 UK33833 UK33894 UK33902

UK33948 UK33989 UK34045 UK34151 UK34153 UK34173 UK34201 UK34202
UK34255 UK34275 UK34309 UK34332 UK34366 UK34370 UK34373 UK34390
UK34408 UK34409 UK34433 UK34538 UK34576 UK34582 UK34625 UK34626
UK34627 UK34639 UK34729 UK34731 UK34762 UK34909 UK34931 UK35005
UK35017 UK35080 UK35126 UK35165 UK35201 UK35254 UK35310 UK35314
UK35337 UK35343 UK35409 UK35471 UK35578 UK35623 UK35644 UK35813
UK35857 UK35877 UK35999 UK36097 UK36213 UK36239 UK36334

- **FMID HKCI310**

UA19519 UA21225 UA22755 UA23836 UA26622 UA26910 UA28345 UA29835
UA30255 UA30256 UA32351 UA33367 UA33511 UA34143 UA34861 UA36078

- **FMID HKDS610**

UA23376 UA24370 UA25116 UA25436 UA25473 UA25481 UA25513 UA25521
UA25955 UA26554 UA26609 UA26752 UA26856 UA26892 UA27354 UA27660
UA27693 UA28536 UA28634 UA28936 UA29164 UA29436 UA29802 UA29846
UA30018 UA30097 UA30187 UA30336 UA30680 UA31054 UA31093 UA31094
UA31245 UA31246 UA31985 UA32009 UA32035 UA32275 UA33186 UA33235
UA34011 UA34012 UA35207 UA35953 UA36080 UA36770 UA37709 UA37711

- **FMID HKLV610**

UA25117 UA25408 UA25954 UA27418 UA27661 UA28538 UA30019 UA30337
UA30681 UA30918 UA31095 UA31247 UA31780 UA33185 UA33550 UA34013
UA35208 UA35954 UA36920 UA37710

- **FMID HKOB550**

UA19890 UA20653 UA21011 UA21133 UA21221 UA21255 UA21331 UA21930
UA22116 UA22895 UA23796 UA25258 UA25961 UA26108 UA26171 UA26374
UA26684 UA27258 UA27534 UA27603 UA27609 UA29523 UA29824 UA30349
UA30858 UA31034 UA31660 UA31661 UA32249 UA32843 UA33294 UA33587
UA33856 UA34338 UA35166 UA35498 UA36042 UA36367 UA36579 UA36783
UA37572 UA38093

5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating Data Studio Workbench. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is intended to run.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running 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.

Some cases where two systems must be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to 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 Data Studio Workbench.

5.1.1 Machine Requirements

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

The Web-based Data Studio Administration Console server requires:

- A minimum of 1 GB RAM, 2 GB is recommended
- 900 MB of disk space in the installation directory
- A minimum of 512 MB of disk space in the temporary directory. Two GB is recommended

5.1.2 Programming Requirements

Figure 4 (Page 1 of 2). Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
Any <i>one</i> of the following:	

Figure 4 (Page 2 of 2). Driving System Software Requirements

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V1.7 or later
5655-G44	IBM SMP/E for z/OS V3.3 or later

5.2 Target System Requirements

This section describes the environment of the target system required to install and use Data Studio Workbench.

Data Studio Workbench 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: An installation requisite is defined as a product that is required and *must* be present or one that is not required but *should* be present on the system for the successful installation of this product.

A mandatory installation requisite identifies products that are required, without exception, or this product *will not install* on your system. This includes products specified as PREs or REQs.

Figure 5. Mandatory Installation Requisites

Program Number	Product Name and Minimum VRM/Service Level
5694-A01	z/OS V1.7 or later

A conditional installation requisite identifies products that are *not* required for successful install but may resolve such things as certain warning messages at installation time. They include products that are specified as IF REQs.

Data Studio Workbench has no conditional installation requisites.

5.2.2.2 Operational Requisites: An operational requisite is defined as a product that is required and *must* be present or a product that is not required but *should* be present on the system for this product to operate all or some of its functions.

A mandatory operational requisite identifies products that are required, without exception, or this product *will not operate* its basic function unless the requisite is met. This includes products specified as PREs or REQs.

<i>Figure 6. Mandatory Operational Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
Any <i>one</i> of the following:	
5694-A01	z/OS V1.7 with APARs OA11901 OA13628
5694-A01	z/OS V1.8 or later
Any <i>one</i> of the following:	
5625-DB2	DB2 for z/OS Version 8
5697-N29	DB2 for z/OS Version 8 VUE
5635-DB2	DB2 9 for z/OS
5697-P12	DB2 9 for z/OS VUE
Any <i>one</i> of the following:	
	Microsoft Windows Server 2003 Standard Edition with R2 SP2, or later, (32 bit/IA32)
	Microsoft Windows Server 2003 Enterprise Edition with R2 SP2, or later, (32 bit/IA32)
	Windows XP Professional Edition SP2 (32 bit/IA32)
	Red Hat Enterprise Linux 4 (32 bit/IA32)
	Red Hat Enterprise Linux 4 (64 bit/EM64T, AMD64)
	Red Hat Enterprise Linux 5 (32 bit/IA32)
	Red Hat Enterprise Linux 5 (64 bit/EM64T, AMD64)
	SUSE Linux Enterprise Server 9 with SP3 (32 bit/IA32)
	SUSE Linux Enterprise Server 9 with SP3 (64 bit/EM64T, AMD64)
	SUSE Linux Enterprise Server 10 at pdksh-5.2.14, or later, (32 bit/IA32).
	SUSE Linux Enterprise Server 10 (64 bit/EM64T, AMD64)
	IBM AIX Version 5.3 (64 bit/PPC64)

The console:

- Supports health monitoring for DB2 for z/OS Version 8 (5625-DB2)
- Supports monitoring of Q replication 8.2, and later, which runs DB2 for z/OS Version 8, (5625-DB2) or later

- Requires one of the following browsers:

Internet Explorer 6.0, or later

Mozilla Firefox 2.0, or later

Internet Explorer 7.0, or Mozilla Firefox 2.0 is recommended

The data collector and agent components running on z/OS require one of:

DB2 for z/OS Version 8 (5625-DB2)

DB2 9 for z/OS (5635-DB2)

Data Studio Administration Console server running on Linux 64-bit platforms cannot operate against DB2 for z/OS installations. Refer to the IBM Data Studio Web site for the most current information on platform support.

This product was originally developed and tested with z/OS 1.4 systems and later. However, z/OS 1.4 and 1.5 End of Support (EOS) occurred 31 March 2007, and z/OS 1.6 EOS occurred 30 September 2007; which could raise support issues if this product encounters a problem running on those levels.

A conditional operational requisite identifies products that are *not required* for the basic function but are needed at run time for this product to utilize specific functions. They can include products specified as IF REQs.

Figure 7 (Page 1 of 2). Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5625-DB2	DB2 for z/OS Version 8, plus APAR PK47649	Add metrics to IFCID 1,2
5625-DB2	DB2 for z/OS Version 8, or later, plus APAR PK47893	Administration Scheduler tasks, such as Stored Procedures ADMIN_INFO_SSID COMMAND_DB2
5625-DB2	DB2 for z/OS Version 8, or later, plus APAR PK64298	Enhance Stored Procedure to select content of XML output document
5625-DB2	DB2 for z/OS Version 8, plus APAR PK46562	Stored Procedures for DB2 for z/OS administrative enablement to SYSPROC: GET_CONFIG GET_MESSAGE GET_SYSTEM_INFO
5625-DB2	DB2 for z/OS Version 8, or later, plus APARs PK62116, PK66373	RMF API Exploitation Part 1 and 2

Figure 7 (Page 2 of 2). Conditional Operational Requisites

Program Number	Product Name and Minimum VRM/Service Level	Function
5625-DB2	DB2 for z/OS Version 8, or later, plus APARs PK45599 (and PK60366 for DB2 for z/OS Version 8 only)	Use of DB2-supplied Stored Procedures for job management, data set management, parallel utility execution, system information retrieval, and command execution.
5625-DB2	DB2 for z/OS Version 8, or later, plus APAR PK47126	Utilize facility to access DB2 messages
5635-DB2	DB2 9 for z/OS, plus APAR PK56356	Add metrics to IFCID 1,2
5635-DB2	DB2 9 for z/OS, plus APAR PK63288	DB2 scheduler for administrative tasks
5635-DB2	DB2 9 for z/OS, plus APAR PK57235	Stored Procedures for DB2 for z/OS administrative enablement to SYSPROC: GET_CONFIG GET_MESSAGE GET_SYSTEM_INFO
5697-A01	z/OS V1.7.0, or later, Recover Manager Facility component, plus APAR OA24404	RMF API Exploitation
5655-Q07	IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V4.1.0, or later, plus APARs PK59975 or PK60435	Add metrics to IFCID 1,2
5655-Q07	IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V4.1.0, plus APAR PK65753	distributed commit rate
5655-Q07	IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V4.1.0, plus APAR PK64381	Exploit DB2 Instrumentation
5655-Q07	IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V4.1.0, plus APAR PK65121	Provide Stored Procedure for Agent configuration
5655-Q07	IBM Tivoli OMEGAMON XE for DB2 Performance Expert on z/OS V4.1.0, plus APAR PK57640	Support of DB2 Instrumentation Enhancements: IFCID 1, IFCID 197, enablement of IFCID 225 inTEP
<i>One or more of the following:</i>		
5697-E93	CICS Transaction Server for z/OS V2.2 or later	
5655-M15	CICS Transaction Server for z/OS V3.1 or later	
5655-C56	IBM IMS V8.1 or later	
5655-J38	IBM IMS V9.1 or later	

5.2.2.3 Toleration/Coexistence Requisites: A toleration/coexistence requisite is defined as a product that must be present on a shared system. 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 at different time intervals.

Data Studio Workbench has no toleration/coexistence requisites.

5.2.2.4 Incompatibility (Negative) Requisites: A negative requisite identifies products that must *not* be installed on the same system as this product.

<i>Figure 8. Negative Requisites</i>	
Program Number	Product Name and Minimum VRM/Service Level
5655-E54	DB2 Buffer Pool Analyzer V1.1 or later
5655-E61	DB2 Performance Monitor V7.1 or later
5655-I21	DB2 Performance Expert V1.1 or later

5.2.3 DASD Storage Requirements

Data Studio Workbench libraries can reside on all supported DASD types.

Figure 9 lists the total space required for each type of library.

<i>Figure 9. Total DASD Space Required by Data Studio Workbench</i>	
Library Type	Total Space Required in 3390 Tracks
Target	8740 tracks
Distribution	8740 tracks

Notes:

1. If you are installing into an existing environment that has the data sets in Figure 12 on page 19 and Figure 13 on page 20 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. Use system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, a block size of 32760 is recommended, which is the most efficient from a performance and DASD utilization perspective.
3. The following abbreviations are used for the data set type:

- U** Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or program directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to 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 others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set 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 one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not 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 on the names and sizes of the required data sets, please refer to 6.1.7, "Allocate SMP/E Target and Distribution Libraries" on page 32.

4. All target and distribution libraries listed have the following attributes:
 - The default name of the data set may not be changed.
 - The default block size of the data set may be changed.
 - The data set may not be merged with another data set that has equivalent characteristics.
5. 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.
 - The values in the "Member Type" column are not necessarily the actual SMP/E element types identified in the SMPMCS.
6. All target libraries listed that contain load modules have the following attributes:
 - The data set may not be in the LPA.
 - The data set may be in the LNKST except for TKANMODS.
 - Some data sets require to be APF-authorized. Please refer to Sections 4.5, "Configuring the Agent for Data Studio Workbench feature", and 4.6, "Configuring the Data Collector for Data Studio Workbench feature", of the TechNote found at the following Web site, for further information.

http://www-01.ibm.com/support/docview.wss?rs=3360&context=SS62YD&dc=DB560&dc=DB520&uid=swg21317086&loc=en_US&cs=UTF-8&lang=en&rss=ct3360db2

If you are installing into an existing environment, ensure the values used for the SMP/E work datasets reflect the minimum values shown in Figure 10 on page 18. 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 10. Storage Requirements for SMP/E Work Data Sets

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D S	L E N G T H	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
SMPWRK6	S	PDS	FB	80	300	1500	660
SYSUT1	U	SEQ	--	--	75	75	0
SYSUT2	U	SEQ	--	--	75	75	0
SYSUT3	U	SEQ	--	--	75	75	0
SYSUT4	U	SEQ	--	--	75	75	0

If you are installing into an existing environment, ensure the current SMP/E support dataset allocations reflect the minimum values shown in Figure 11. Check the space and directory block allocation and reallocate the data sets, if necessary.

Figure 11. Storage Requirements for SMP/E Data Sets

Library DDNAME	T Y P E	O R G A N I Z A T I O N	R E C O R D S	L E N G T H	Prim No. of 3390 Trks	Sec No. of 3390 Trks	No. of DIR Blks
SMPLTS	E	PDSE	U	0	15	150	220
SMPMTS	E	PDS	FB	80	15	150	220
SMPPTS	E	PDSE	FB	80	300	1500	660
SMPSCDS	E	PDS	FB	80	15	150	220
SMPSTS	E	PDS	FB	80	15	150	220

Figure 12 on page 19 and Figure 13 on page 20 describe the target and distribution libraries required to install Data Studio Workbench in a standalone environment. The storage requirements of Data Studio Workbench must be added to the storage required by other programs having data in the same library or

path when installing into an existing environment. Additional tables for each FMID are provided to help determine the specific space required for a FMID if some common components are already installed. See 5.2.4, “DASD Storage Requirements by FMID” on page 21 for more information.

Figure 12 (Page 1 of 2). Storage Requirements for Data Studio Workbench Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCLI	CLIST	Any	S	PDS	FB	80	3	44
TKANCMD	Data	Any	S	PDS	FB	80	10	40
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANDATV	Data	Any	S	PDS	VB	6160	400	80
TKANHENU	Help	Any	S	PDS	FB	80	130	180
TKANISP	CLIST	Any	S	PDS	FB	80	3	50
TKANMAC	Macro	Any	S	PDS	FB	80	14	44
TKANMOD	LMOD	Any	S	PDS	U	0	1100	600
TKANMODL	LMOD	Any	S	PDS	U	0	1700	280
TKANMODS	LMOD	Any	S	PDS	U	0	250	88
TKANPAR	Data	Any	S	PDS	FB	80	10	44
TKANPENU	Panel	Any	S	PDS	FB	80	1050	500
TKANPKGI	Data	Any	S	PDS	FB	80	150	50
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
TKANSAMV	Sample	Any	S	PDS	VB	255	13	44
TKCIINST	CLIST	Any	S	PDS	FB	80	130	140
TKNSLOCL	Data	Any	S	PDS	VB	6160	100	100
TKOBHELP	Help	Any	S	PDS	FB	80	30	180
TKO2DATA	Data	Any	S	PDS	VB	9072	4	44
TKO2DBRM	Data	Any	S	PDS	FB	80	100	50
TKO2EXEC	EXEC	Any	S	PDS	FB	80	60	50
TKO2HELP	Help	Any	S	PDS	FB	80	23	132
TKO2MENU	MSG	Any	S	PDS	FB	80	19	44
TKO2PENU	Panel	Any	S	PDS	FB	80	300	800
TKO2PROC	Panel	Any	S	PDS	FB	80	182	968
TKO2SAMP	Sample	Any	S	PDS	FB	80	180	90

Figure 12 (Page 2 of 2). Storage Requirements for Data Studio Workbench Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKO2SLIB	Sample	Any	S	PDS	FB	80	7	50
TKO2TENU	Table	Any	S	PDS	FB	80	16	44
TKO2WS01	Data	Any	S	PDS	VB	256	25500	40

Figure 13 (Page 1 of 2). Storage Requirements for Data Studio Workbench Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
DKANCLI	S	PDS	FB	80	3	44
DKANCMD	S	PDS	FB	80	10	40
DKANCUS	S	PDS	FB	80	1300	1150
DKANDATV	S	PDS	VB	6160	400	80
DKANHENU	S	PDS	FB	80	130	180
DKANISP	S	PDS	FB	80	3	50
DKANMAC	S	PDS	FB	80	14	44
DKANMOD	S	PDS	U	0	1100	600
DKANMODL	S	PDS	U	0	1700	280
DKANMODS	S	PDS	U	0	250	44
DKANPAR	S	PDS	FB	80	10	44
DKANPENU	S	PDS	FB	80	1050	500
DKANPKGI	S	PDS	FB	80	150	50
DKANSAM	S	PDS	FB	80	56	44
DKANSAMV	S	PDS	VB	255	13	44
DKCIINST	S	PDS	FB	80	130	140
DKNSLOCL	S	PDS	VB	6160	100	100
DKOBHELP	S	PDS	FB	80	30	180
DKO2DATA	S	PDS	VB	9072	4	44
DKO2DBRM	S	PDS	FB	80	100	50
DKO2EXEC	S	PDS	FB	80	60	50

Figure 13 (Page 2 of 2). Storage Requirements for Data Studio Workbench Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
DKO2HELP	S	PDS	FB	80	23	132
DKO2MENU	S	PDS	FB	80	19	44
DKO2PENU	S	PDS	FB	80	300	800
DKO2PROC	S	PDS	FB	80	182	968
DKO2SAMP	S	PDS	FB	80	180	90
DKO2SLIB	S	PDS	FB	80	7	50
DKO2TENU	S	PDS	FB	80	16	44
DKO2WS01	S	PDS	VB	256	25500	40

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 14. Storage Requirements for HKDB41A Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANMOD	LMOD	Any	S	PDS	U	0	1100	600
TKANPKGI	Data	Any	S	PDS	FB	80	150	50
DKANCUS			S	PDS	FB	80	1300	1150
DKANMOD			S	PDS	U	0	1100	600
DKANPKGI			S	PDS	FB	80	150	50

Figure 15 (Page 1 of 2). Storage Requirements for HKDB410 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCLI	CLIST	Any	S	PDS	FB	80	3	44
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANDATV	Data	Any	S	PDS	VB	6160	400	80
TKANHENU	Help	Any	S	PDS	FB	80	130	180
TKANMOD	LMOD	Any	S	PDS	U	0	1100	600
TKANMODL	LMOD	Any	S	PDS	U	0	1700	280
TKANPAR	Data	Any	S	PDS	FB	80	10	44
TKANPENU	Panel	Any	S	PDS	FB	80	1050	500
TKANPKGI	Data	Any	S	PDS	FB	80	150	50
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
TKANSAMV	Sample	Any	S	PDS	VB	255	13	44
TKO2DATA	Data	Any	S	PDS	VB	9072	4	44
TKO2DBRM	Data	Any	S	PDS	FB	80	100	50
TKO2EXEC	EXEC	Any	S	PDS	FB	80	60	50
TKO2HELP	Help	Any	S	PDS	FB	80	23	132
TKO2MENU	MSG	Any	S	PDS	FB	80	19	44
TKO2PENU	Panel	Any	S	PDS	FB	80	300	800
TKO2PROC	Panel	Any	S	PDS	FB	80	182	968
TKO2SAMP	Sample	Any	S	PDS	FB	80	180	90
TKO2SLIB	Sample	Any	S	PDS	FB	80	7	50
TKO2TENU	Table	Any	S	PDS	FB	80	16	44
TKO2WS01	Data	Any	S	PDS	VB	256	25500	40
DKANCLI			S	PDS	FB	80	3	44
DKANCUS			S	PDS	FB	80	1300	1150
DKANDATV			S	PDS	VB	400	80	1
DKANHENU			S	PDS	FB	80	130	180
DKANMOD			S	PDS	U	0	1100	600
DKANMODL			S	PDS	U	0	1700	280
DKANPAR			S	PDS	FB	80	10	44

Figure 15 (Page 2 of 2). Storage Requirements for HKDB410 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
DKANPENU			S	PDS	FB	80	1050	500
DKANPKG1			S	PDS	FB	80	150	50
DKANSAM			S	PDS	FB	80	56	44
DKANSAMV			S	PDS	VB	255	13	44
DKO2DATA			S	PDS	VB	9072	4	44
DKO2DBRM			S	PDS	FB	80	100	50
DKO2EXEC			S	PDS	FB	80	60	50
DKO2HELP			S	PDS	FB	80	23	132
DKO2MENU			S	PDS	FB	80	19	44
DKO2PENU			S	PDS	FB	80	300	800
DKO2PROC			S	PDS	FB	80	182	968
DKO2SAMP			S	PDS	FB	80	180	90
DKO2SLIB			S	PDS	FB	80	7	50
DKO2TENU			S	PDS	FB	80	16	44
DKO2WS01			S	PDS	VB	256	25500	40

Figure 16 (Page 1 of 2). Storage Requirements for HKCI310 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCMD	Data	Any	S	PDS	FB	80	10	40
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANPAR	Data	Any	S	PDS	FB	80	10	44
TKANPKG1	Data	Any	S	PDS	FB	80	150	50
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
TKCIINST	Sample	Any	S	PDS	FB	80	130	140
DKANCMD			S	PDS	FB	80	10	40
DKANCUS			S	PDS	FB	80	1300	1150
DKANPAR			S	PDS	FB	80	10	44

Figure 16 (Page 2 of 2). Storage Requirements for HKCI310 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
DKANPKG1			S	PDS	FB	80	150	50
DKANSAM			S	PDS	FB	80	56	44
DKCIINST			S	PDS	FB	80	130	140

Figure 17. Storage Requirements for HKDS610 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANDATV	Data	Any	S	PDS	VB	6160	400	80
TKANMAC	Macro	Any	S	PDS	FB	80	14	44
TKANMOD	LMOD	Any	S	PDS	U	0	1100	600
TKANMODL	LMOD	Any	S	PDS	U	0	1700	280
TKANMODS	LMOD	Any	S	PDS	U	0	250	88
TKANPAR	Data	Any	S	PDS	FB	80	10	44
TKANPKG1	Data	Any	S	PDS	FB	80	150	50
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
TKNSLOCL	Data	Any	S	PDS	VB	6160	100	100
DKANCUS			S	PDS	FB	80	1300	1150
DKANDATV			S	PDS	VB	6160	400	80
DKANMAC			S	PDS	FB	80	14	44
DKANMOD			S	PDS	U	0	1100	600
DKANMODL			S	PDS	U	0	1700	280
DKANMODS			S	PDS	U	0	250	44
DKANPAR			S	PDS	FB	80	10	44
DKANPKG1			S	PDS	FB	80	150	50
DKANSAM			S	PDS	FB	80	56	44
DKNSLOCL			S	PDS	VB	6160	100	100

Figure 18. Storage Requirements for HKLV610 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCMD	Data	Any	S	PDS	FB	80	10	40
TKANHENU	Help	Any	S	PDS	FB	80	130	180
TKANMAC	Macro	Any	S	PDS	FB	80	14	44
TKANMODL	LMOD	Any	S	PDS	U	0	1700	280
TKANMODS	LMOD	Any	S	PDS	U	0	250	88
TKANPAR	Data	Any	S	PDS	FB	80	10	44
TKANPENU	Panel	Any	S	PDS	FB	80	1050	500
TKANPKGI	Data	Any	S	PDS	FB	80	150	50
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
DKANCMD			S	PDS	FB	80	10	44
DKANHENU			S	PDS	FB	80	130	180
DKANMAC			S	PDS	FB	80	14	44
DKANMODL			S	PDS	U	0	1700	280
DKANMODS			S	PDS	U	0	250	44
DKANPAR			S	PDS	FB	80	10	44
DKANPENU			S	PDS	FB	80	1050	500
DKANPKGI			S	PDS	FB	80	150	50
DKANSAM			S	PDS	FB	80	56	44

Figure 19 (Page 1 of 2). Storage Requirements for HKOB550 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANCUS	CLIST	Any	S	PDS	FB	80	1300	1150
TKANISP	CLIST	Any	S	PDS	FB	80	3	50
TKANMAC	Macro	Any	S	PDS	FB	80	14	44
TKANMOD	LMOD	Any	S	PDS	U	0	1100	600
TKANMODS	LMOD	Any	S	PDS	U	0	250	88
TKANPKGI	Data	Any	S	PDS	FB	80	150	50

Figure 19 (Page 2 of 2). Storage Requirements for HKOB550 Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
TKANSAM	Sample	Any	S	PDS	FB	80	56	44
TKOBHELP	HELP	Any	S	PDS	FB	80	30	180
DKANCUS			S	PDS	FB	80	1300	1150
DKANISP			S	PDS	FB	80	3	50
DKANMAC			S	PDS	FB	80	14	44
DKANMOD			S	PDS	U	0	1100	600
DKANMODS			S	PDS	U	0	1700	280
DKANPKGI			S	PDS	FB	80	150	50
DKANSAM			S	PDS	FB	80	56	44
DKOBHELP			S	PDS	FB	80	30	80

5.3 FMIDs Deleted

Installing Data Studio Workbench may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not want to delete these FMIDs at this time, you must install Data Studio Workbench into separate SMP/E target and distribution zones.

Note: These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to delete FMIDs from the Global Zone.

5.4 Special Considerations

To effectively manage a suite of products with common components, you can install products into a shared consolidated software inventory (CSI). Space requirements are reduced by installing products into a shared CSI 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 a shared CSI so product configuration sets up the runtime environment correctly.

Data Studio Workbench includes several components that are referred to as common components because they are also included with other products. If you install into an existing environment, you might need to remove some of the FMID references for these components from the SMP/E installation jobs to avoid errors because they are already installed.

These common components are:

- HKDB410
- HKCI310
- HKDS610
- HKLV610
- HKOB550

Full Omegamon XE for DB2 PE and Data Studio Health Monitor can be installed in different CSI target zones. Separate run-time environments of full Omegamon XE for DB2 PE and Data Studio Health Monitor can be configured that coexist in a given LPAR.

You may upgrade from HKDB41A to HKDB41X or HKDB41Y in the same CSI target zone.

You may **not** downgrade from HKDB41X or HKDB41Y to HKDB41A. Therefore, HKDB41A is coded such that it cannot be installed in a CSI target zone if HKDB41X or HKDB41Y (full-use license key) is already installed in that CSI target zone.

FMID HKDB41A must **not** be removed from the SELECT-list as this could result in incompatibilities such as overwriting an existing V310 installation, and upgrades from HKDB41A to HKDB41X will be possible and not vice versa.

Consider the following issues, if you use a shared CSI.

- 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.

If Data Studio Workbench is used with the IBM Tivoli OMEGAVIEW or IBM Tivoli OMEGAMON DE on z/OS product, they should both be installed in the same CSI target and distribution zones. This ensures the maintenance level of the Engine and Management Server components, which are used by both products, is at the same level. If they are installed in different CSI zones, you should check to ensure the maintenance levels of the Engine and Management Server components in both zones are the same or at a compatible level. This is also true for your runtime library environments (RTE).

The PSP bucket will have the most current information and must be reviewed before installation. The OMEGAVIEW or OMEGAMON DE configuration document must also be reviewed for other operational considerations.

The Data Studio Workbench provides a TechNote containing the step-by-step procedures to install and configure the Data Collector and Agent in the Data Studio Workbench feature. The TechNote is available on the Web at:

http://www-01.ibm.com/support/docview.wss?rs=3360&context=SS62YD&dc=DB560&dc=DB520&uid=swg21317086&loc=en_US&cs=UTF-8&lang=en&rss=ct3360db2

Additionally, Data Studio Administration Console installation information can be found in the Data Studio Administration Console Release Notes (release_readme.htm) which are available on the Data Studio Administration Console DVDs.

6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of Data Studio Workbench.

Note the following information:

- If you want to install Data Studio Workbench 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. Additionally, to assist you in doing this, IBM has provided samples at the following Web site to help you create an SMP/E environment. A copy of these have been included with the other sample jobs.
<http://www.ibm.com/support/docview.wss?rs=660&context=SSZJDU&uid=swg21066230>
- Sample jobs have been provided to help perform some or all of the installation tasks. The SMP/E jobs assume that all DDDEF entries required for SMP/E execution have been defined in the appropriate zones.
- The SMP/E dialogs can be used instead of the sample jobs to accomplish the SMP/E installation steps.

6.1 Installing Data Studio Workbench

6.1.1 SMP/E Considerations for Installing Data Studio Workbench

This release of Data Studio Workbench is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs can be used to accomplish the SMP/E installation steps.

6.1.2 SMP/E Options Subentry Values

The suggested values for some SMP/E CSI subentries are shown in Figure 20. If you are installing into an existing environment, check these values because use of values lower than these can result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

SUB-ENTRY	Value	Comment
DSSPACE	300,900,1200	Use 1200 directory blocks
PEMAX	SMP/E Default	Use the SMP/E default for PEMAX.

6.1.3 SMP/E CALLLIBS Processing

Data Studio Workbench uses the CALLLIBS function provided in SMP/E to resolve external references during installation. When Data Studio Workbench is installed, ensure that DDDEFs exist for the following libraries:

- CSSLIB

Note: The DDDEFs above are used only to resolve the link-edit for Data Studio Workbench using CALLLIBS. These data sets are not updated during the installation of Data Studio Workbench.

6.1.4 Sample Jobs

The sample jobs provided expect a CSI to exist already. If one does not exist, see the information at the beginning of the installation section for creating one. The sample installation jobs in Figure 21 are provided as part of the product to help you install Data Studio Workbench.

Figure 21. Sample Installation Jobs

Job Name	Job Type	Description	RELFILE
KDBJASMA	Optional	Sample job to create new SMP/E support files	IBM.HKDB41A.F4
KDBJASMI	Optional	Sample job to create and prime a new SMP/E CSI	IBM.HKDB41A.F4
KDBJAALO	ALLOCATE	Sample job to allocate target and distribution libraries	IBM.HKDB41A.F4
KDBJADDF	DDDEF	Sample job to define SMP/E DDDEFs	IBM.HKDB41A.F4
KDBJAREC	RECEIVE	Sample RECEIVE job	IBM.HKDB41A.F4
KDBJAAPP	APPLY	Sample APPLY job	IBM.HKDB41A.F4
KDBJAACC	ACCEPT	Sample ACCEPT job	IBM.HKDB41A.F4

You can access the sample installation jobs by performing an SMP/E RECEIVE (refer to 6.1.9, “Perform SMP/E RECEIVE” on page 32), then copy the jobs from the relfiles to a work data set for editing and submission. See Figure 21 to find the appropriate relfile data set.

You may also choose to copy the jobs from the tape or product files by creating and submitting the job below. Use either the //TAPEIN or the //FILEIN DD statement, depending on your distribution medium, and comment out or delete the other statement. Add a job card and change the lowercase parameters to uppercase values to meet your site's requirements before submitting.

```
//STEP1 EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//TAPEIN DD DSN=IBM.HKDB41A.F4,UNIT=tunit,
// VOL=SER=volser,LABEL=(x,SL),
// DISP=(OLD,KEEP)
//FILEIN DD DSN=IBM.HKDB41A.F4,UNIT=SYSALLDA,DISP=SHR,
// VOL=SER=filevol
```

```

//OUT      DD DSNAME=jcl-library-name,
//          DISP=(NEW,CATLG,DELETE),
//          VOL=SER=dasdvol,UNIT=SYSALLDA,
//          SPACE=(TRK,(10,5,5))
//SYSUT3   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSIN    DD *
          COPY INDD=xxxxIN,OUTDD=OUT
          SELECT MEMBER=(KDBJAACC,KDBJAALO,KDBJAAPP,KDBJADDF,KDBJAREC)
          SELECT MEMBER=(KDBJASMA,KDBJASMI,KDB41AD,KDB41AJ,KDB41AM)
/*

```

In the sample above, update the statements as noted below:

If using TAPEIN:

tunit is the unit value matching the product tape.

volser is the volume serial matching the product tape.

x is the tape file number where the data set name is on the tape.

Refer to the documentation provided by CBPDO to see where IBM.KKDB41A.F4 is on the tape.

If using FILEIN

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 will be stored.

dasdvol is the volume serial of the DASD device where the output data set will reside.

SYSIN

Change **xxxxIN** to either TAPEIN or FILEIN depending on your input DD statement.

6.1.5 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 Data Studio Workbench installation, edit and submit sample job KDBJASMA. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.6 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 Data Studio Workbench installation, edit and submit sample job KDBJASMI. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.7 Allocate SMP/E Target and Distribution Libraries

If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Edit and submit sample job KDBJAALO to allocate the SMP/E target and distribution libraries for Data Studio Workbench. Consult the instructions in the sample job for more information.

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

6.1.8 Create DDDEF Entries

If you are installing into an existing environment, you might have to remove lines for data sets that already exist.

Edit and submit sample job KDBJADDF to create DDDEF entries for the SMP/E target and distribution libraries for Data Studio Workbench. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.9 Perform SMP/E RECEIVE

Having obtained Data Studio Workbench as part of a CBPDO, you can use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the Data Studio Workbench FMIDs as well as any service and HOLDDATA included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

You can also choose to edit and submit sample job KDBJAREC to perform the SMP/E RECEIVE for Data Studio Workbench. Consult the instructions in the sample job for more information.

Expected Return Codes and Messages: 0

6.1.10 Perform SMP/E APPLY

Edit and submit sample job KDBJAAPP to perform an SMP/E APPLY CHECK for Data Studio Workbench. Add a BYPASS(HOLDSYSTEM) operand to the SMP/E control statements in the APPLY job and uncomment the CHECK operand to see which PTFs will be processed because the ++HOLD is bypassed. 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 following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis

identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Enhanced HOLDDATA introduced ERROR HOLDS against FMIDs for HIPER APARs. Prior to installing, ensure you have the latest Enhanced HOLDDATA (available at <http://service.software.ibm.com/holdata/390holddata.html>). The FMIDs can be installed regardless of the status of unresolved HIPERs, however, the software must not be deployed until the unresolved HIPERs have been analyzed to determine applicability.

There are two methods to complete an FMID installation where ++HOLDS for HIPERs exist for the FMIDs being installed:

1. To ensure that all recommended and critical service is installed with the FMIDs, add the SOURCEIDs of PRP, HIPER, and RSU* to the APPLY command. There may be PE or HIPER APARs that do not have resolving PTFs available yet. You need to analyze the symptom flags to determine if you want to BYPASS the specific ERROR HOLDS and continue the FMID installation.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(PRP,HIPER,RSU*,...)
GROUPEXTEND .
```

This method requires more initial research, but will provide resolution for all HIPERs that have fixes available and are not in a PE chain. There may still be unresolved PEs or HIPERs that require the use of BYPASS.

2. To install an FMID as it was installed prior to Enhanced HOLDDATA, you can add a BYPASS(HOLDCLASS(HIPER)) operand to the APPLY command. This allows the FMID to be installed even though there are HIPER ERROR HOLDS against it. Note that not all ERROR HOLDS were bypassed, only the HIPER ERROR HOLDS. After the FMIDs are installed, you must run the SMP/E REPORT ERRSYSMODS command to identify any missing HIPER maintenance.

```
APPLY S(fmid,fmid,...)
FORFMID(fmid,fmid,...)
SOURCEID(RSU*)
GROUPEXTEND
BYPASS(HOLDCLASS(HIPER))
other parameters documented in the program directory...
```

This method is the quicker of the two, but requires subsequent review of the REPORT ERRSYSMODS to investigate any HIPERs.

If you bypass any HOLDS during the installation of the FMIDs because fixing PTFs were not yet available, you can use the APAR Status Tracking (AST) function of ServiceLink or the APAR Tracking function of ResourceLink to be notified when the fixing PTF is available.

After you have taken any actions 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 apply all requisite SYSMODs. The requisite SYSMODs might be applicable to other functions.

Expected Return Codes and Messages from APPLY CHECK: 4

You will receive the following message for PTFs that contain ++HOLD statements when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
          WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
          BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statements and a PTF contains 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.

```
GIM23903W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
          WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
          LMOD ccccccc IN THE ddddddd LIBRARY. THE
          RETURN CODE WAS ee. DATE yy.ddd - TIME
          hh:mm:ss - SEQUENCE NUMBER nnnnnn.
```

```
GIM23913W LINK-EDIT PROCESSING FOR SYSMOD aaaaaaa
          WAS SUCCESSFUL FOR MODULE bbbbbbbb IN
          LMOD ccccccc IN THE ddddddd 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 22 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 22. SMP/E Elements Not Selected

KCICBRWS	KCICSVU1	KCICSVU2	KCICTALR	KCICVER	KCNCCUST
KCNIOXR	KCNSSAM2	KDE1LNKP	KDHDFCRE	KDHDFDLS	KDHDFGET
KDHDFGHD	KDHDFGHI	KDHDFOPE	KDHDFPUT	KDHDFRSP	KDHDFHTTP
KDH1LNKP	KDS	KDSBASE	KDSFILT	KDSINDFE	KDSINSQL
KDSMAIN	KDSNCSDL	KDSNCSRQ	KDSNCSR	KDSOPCTD	KDSPRB
KDSRPCRQ	KDSSPCMD	KDSSTSLE	KEBSTAE4	KEBZSB10	KFAAUTOX
KFACOM	KFAOMTEC	KFAPRB	KFAXCF	KGL01P1	KLB
KLBSTART	KLXI	KLXI@CLO	KLXI@DRO	KLXI@IPM	KLXI@OPE
KLXI@RST	KLXI@TRA	KLXI@USE	KLXIACCE	KLXIBIND	KLXICLOS
KLXICONN	KLXIFRAI	KLXIGHNA	KLXIGPNA	KLXIGSNA	KLXIGSOP
KLXIGTAI	KLXIGTNI	KLXIHPAE	KLXIHPUE	KLXIIOCT	KLXILIST
KLXINTCP	KLXIRECV	KLXISEND	KLXISHUT	KLXISLCT	KLXISLIH
KLXISOCK	KLXISSOP	KLXN	KLXNEXED	KLXNGLBD	KLXNLLBD
KLXNOPLB	KLXPCREA	KLXPENLA	KLXPERRN	KLXPEXLA	KLXPINIT
KLXPPOST	KLXPPRAD	KLXPTEST	KLXPTHAD	KLXPWAIT	KLXT
KLXTCANC	KLXTCLPO	KLXTCLPU	KLXTCOBR	KLXTCODE	KLXTCOIN
KLXTCOSI	KLXTCOTW	KLXTCOWA	KLXTEXIT	KLXTHRCR	KLXTHRDE
KLXTHRJO	KLXTKEYC	KLXTKEYG	KLXTKEYS	KLXTKILL	KLXTMXDE
KLXTMXIN	KLXTMXLO	KLXTMXTR	KLXTMXUN	KLXTSELF	KLXTSETI
KLXTSETT	KLXTTEST	KLXTYIEL	KOBCIDSM	KOBCISRM	KOBICM2M
KOBINTXT	KOBINT1M	KOBPEEKT	KOBSEPAM	KOBSHART	KOBSUBXM
KRA	KRAETRP	KRANDREG	KRAOPIRM	KSMOMS	

6.1.11 Perform SMP/E ACCEPT

Edit and submit sample job KDBJAACC to perform an SMP/E ACCEPT CHECK for Data Studio Workbench. Add a BYPASS(HOLDSYSTEM) operand to the SMP/E control statements in the ACCEPT job and uncomment the CHECK operand to see which PTFs will be processed because the ++HOLD is bypassed. 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 following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, set the ACCJCLIN indicator in the distribution zone. This causes entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD

containing inline JCLIN is accepted. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

After you have taken any actions 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 accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

Expected Return Codes and Messages from ACCEPT CHECK: 4

You will receive the following message for PTFs that contain ++HOLD statements when the BYPASS operand is used.

```
GIM42001W THE FOLLOWING CONDITIONS FOR SYSMOD sysmod
          WERE NOT SATISFIED, BUT WERE IGNORED BECAUSE THE
          BYPASS OPERAND WAS SPECIFIED. PROCESSING CONTINUES.
```

If the BYPASS operand is not included in the control statements and a PTF contains 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 containing replacement modules are being accepted, SMP/E ACCEPT processing linkedit/binds the modules into the distribution libraries. During this processing, the Linkage Editor or Binder can issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

Expected Return Codes and Messages from ACCEPT: 4

You might receive the following messages during processing depending on your environment.

```
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 22 on page 34 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 Data Studio Workbench

The Data Studio Workbench TechNote contains the step-by-step procedures to install and configure the Data Collector and Agent in the Data Studio Workbench feature. The TechNote is available on the Web at:
<http://www.ibm.com/support/docview.wss?uid=swg21306463>

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Printed in U.S.A.

G110-8773-01

