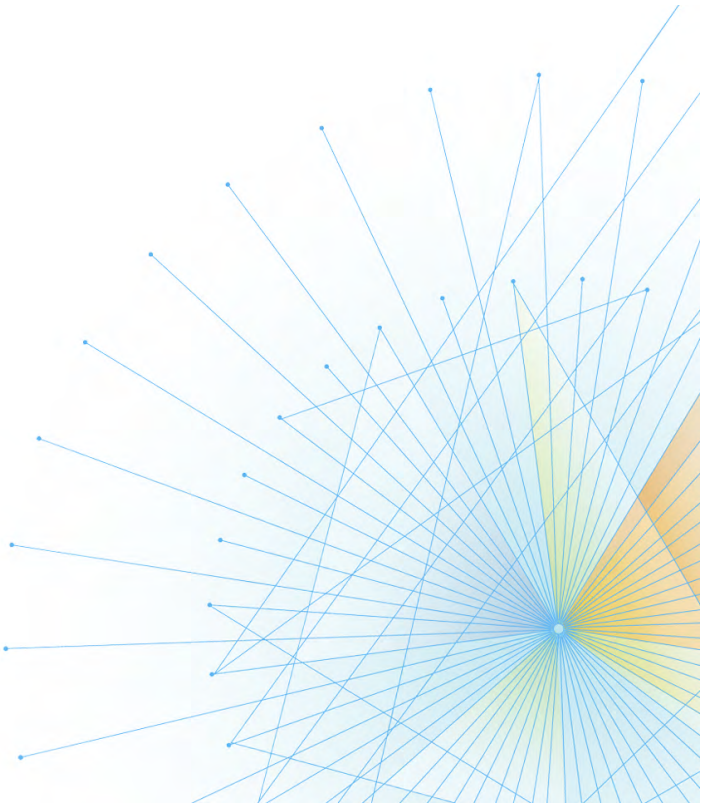
Compuware | The Mainframe Software Partner For The Next 50 Years

Strobe
Installation and Configuration Guide

Release 18.02



Please direct questions about Strobe
or comments on this document to:

Compuware Customer Solutions

https://go.compuware.com/

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Introduction

This manual provides information about how to install, customize, and maintain Strobe.

Overview

This document is intended to guide you through installing/updating, configuring, deploying, and troubleshooting Strobe. Supplemental documentation can be found in the *Strobe Advanced Configuration Guide*.

Icons

The alerts found in this manual include:

Roles: The individuals required to perform a milestone or task.

Tip: A note or tip providing additional information.

Remember: Information important to remember.

Fast Forward: If a particular milestone or task doesn't apply to your site—or your site is not licensed for a particular option—you can skip ahead to the next milestone or task by clicking the hyperlink.

Caution: Failure to follow these instructions can cause serious problems.

Additional Resources

Refer to these other sources of information about Strobe.

Related Publications

An RFN order e-mail also includes a copy of the *Compuware Installer Mainframe Products SMP/E Installation Guide*, which should be used to perform the SMP/E installation of Strobe and Enterprise Common Components (ECC). Preparation for installation and post-installation configuration should be done according to this guide.

In addition to this installation guide, the documents in the following list are available at **https://go.compuware.com**:

- *Compuware Installer Mainframe Products SMP/E Installation Guide*
- *Strobe Advanced Configuration Guide*
- *Strobe Interpretation and Analysis User Guide*
- *Strobe Messages Guide*
- *Strobe Options Guide*
- *Strobe Release Notes*
- *Strobe User Guide*

Online Documentation

The Strobe product installation package does not include the product documentation. Access the Strobe documentation from the Compuware Support Center website at **https://go.compuware.com** in the following electronic formats:

- Release Notes in HTML format
- Product manuals in PDF format
- Adobe PDF index file (PDX file)
- Product manuals in HTML format.

The product documentation is available for viewing or downloading:

- View PDF files with the free Adobe Reader, available at **http://www.adobe.com**.
- View HTML files with any standard web browser.

Strobe Overview

Strobe is a software product that reports on how your application programs use resources in IBM z/OS environments. It determines where and how an online or batch application spends time. Incorporating Strobe measurement into each phase of the application life cycle-design and development; build, test and quality assurance; production; and maintenance-ensures that your applications are designed to run efficiently and responsively and that no performance problems are unintentionally introduced.

Strobe employs a sampling technique that executes within the Strobe Measurement Services Address Space (MSAS) and periodically takes snapshots of an application's execution. Strobe stores this data in a sample dataset, and organizes the information to produce the Strobe Performance Profile, a hierarchical series of reports that show where and how time was spent during the application's execution. The Performance Profile can indicate which few lines of code, among perhaps thousands, are using significant amounts of system resources. With this focus, you can examine your coding techniques and make changes to only those areas of code that have a major effect on performance.

Users drive Strobe requests either through a modern graphical user interface provided by iStrobe, Topaz, or through classic character-based 3270 screens.

Product Architecture

The basic Strobe system is made up of the following functions:

- Session management
- Measurement
- Reporting

Strobe options augment these basic functions by providing support for specific operating environments such as IMS, CICS, or DB2.

Session Management Facility

The session management facility enables you to submit and track measurement requests. The facility includes the Session Requester, the Session Manager, and the Strobe Environment.

The Session Requester operates in the user’s address space, where it receives, edits, and directs measurement requests to the session manager. Measurement requests can originate from Strobe/ISPF, iStrobe, TSO terminals, batch jobs, and system consoles.

The Session Manager receives measurement requests from the session requester. It maintains a Strobe Request Element (SRE) for each measurement request in a local work queue, and records its actions in the Strobe log dataset. If the target application is already executing, the session manager initiates measurement immediately. Otherwise, measurement begins when the application begins executing. The session manager also communicates with the Measurement Services Address Space (MSAS) to process AutoStrobe functions.

The Strobe environment contains the Strobe SVC, attach filter, common control block interfaces, and subsystem interface.

The session management facility utilizes user-provided parameters to control collection of data, such as attribution data for compiler run-time library routines or performance statistics for CICS.

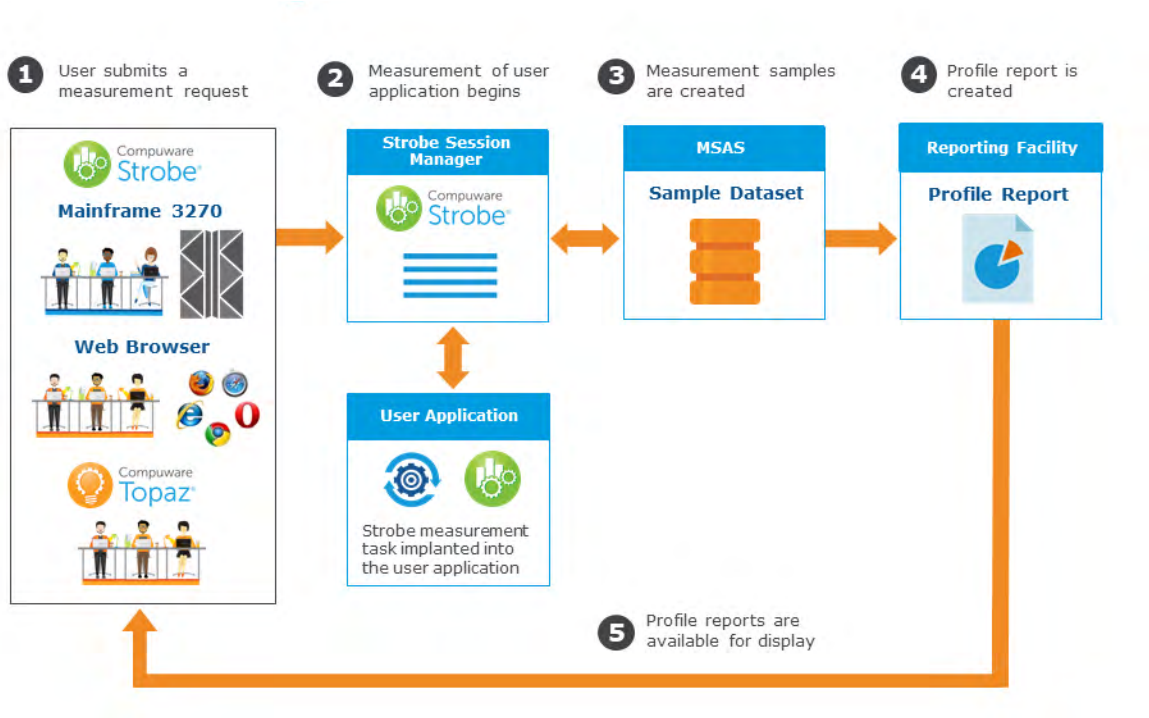
Measurement Facility

Strobe collects performance data by deploying a measurement task within the measured address space. Once activated, the measurement task connects to the measure services address space to dynamically allocate a sample dataset and begins sampling. The session manager sends sampling control commands to the measurement task. The measurement task responds to these commands and records its actions with messages sent through the Strobe SVC.

Reporting Facility

Following a measurement session, Strobe organizes and analyzes the measurement data and produces the Performance Profile or XML to be sent to iStrobe for viewing. The Performance Profile is a set of reports that shows how user programs and system service routines are using system resources.

The following diagram illustrates the Strobe workflow.



The numbered steps in a Strobe workflow include:

1. A mainframe Strobe user, iStrobe user, or Topaz user initiates a request for their user application.
2. Strobe Session Manager receives the Strobe request and implants a Strobe measurement task in the user's running application.
3. The Strobe measurement task passes collected measurement samples to the Measurement Services Address Space (MSAS), which writes them to the Sample Dataset.
4. The Strobe Reporting Facility takes the Sample Dataset as input and builds the iStrobe Profile Report.
5. The Profile Report is available for display.

Planning

This section provides information related to planning to install or update Strobe 18.02.

Steps Involved

1. Order Strobe and its companion products, including the latest maintenance, via Compuware's Product Ordering web page or by contacting Compuware as described in Compuware Customer Solutions on page 43. To understand system requirements and prerequisites, see Prerequisites on page 12.
2. Install Strobe according to the instructions provided in the product order email.
3. Follow the instructions in this guide to configure and deploy Strobe.

Milestones and Roles

Installation, configuration, verification, and deployment are done in six milestones. The rows in Table 1 identify the role or skill set required to perform each milestone. This makes it easier to know which people need to be involved at each milestone along the way and can allow certain tasks to be performed at the same time.

Table 1. People Required for Each Milestone

Milestone	Companion Product Installer	Strobe Installer	z/OS System Programmer	z/OS Security Administrator	DBA
Milestone 1: Ensure Installation and Configuration of Companion Products	ECC ●				
Milestone 2: Install Strobe Using SMP/E		●			
Milestone 3: Configure Strobe — New Installation		●	●	●	DB2 ●
Milestone 4: Configure Strobe — Upgrade		●	●		DB2 ●
Milestone 5: Verify Product Installation		●			
Milestone 6: Deploy Strobe		●			

Checklist of Milestones and Tasks

Consult the Checklist of Milestones and Tasks on page 47 involved in the installation. For convenience, you may want to print this page and check off the milestones and tasks to mark your progress through the installation.

Prerequisites

Strobe Software and Hardware Requirements

Hardware Platforms

- z14
- z13, z13s
- zEC12, zBC12
- z196, z114
- z10-EC/BC
- z9-EC/BC
- z900, z990
- z800, z890

Operating Systems

- IBM z/OS 2.2, 2.3
- IBM ISPF for the supported z/OS releases

Major Subsystems

- IBM Db2 for z/OS 11.1, 12.1
- IBM IMS Transaction and Database Servers 14.1, 15.1
- IBM CICS Transaction Server for z/OS 5.1, 5.2, 5.3, 5.4, 5.5
- IBM MQ for z/OS 8.0, 9.0, 9.0.1, 9.1
- IBM WebSphere Application Server for z/OS 8.5, 8.5.5, 9.0

Languages

- IBM 31-bit and 64-bit SDK for z/OS, Java Technology Edition 7.0, 7.1
- IBM Enterprise COBOL for z/OS 4.2, 5.1, 5.2, 6.1, 6.2
- IBM Enterprise PL/I for z/OS 4.5, 5.1, 5.2
- IBM High Level Assembler for z/OS, z/VM, and z/VSE V1.6
- IBM VS FORTRAN Compiler and Library V2.6
- IBM XL C/C++ for supported z/OS releases

ISV Software

- CA Gen 7.6 SPO, 8.5 Base, 8.5 Inc 1 - 4, 8.6
- CA IDMS 18.5, 19.0
- Innovation Access Method (IAM) 9.2, 9.3
- SAG Adabas 8.3.4 for the supported z/OS releases
- SAG Natural z/OS 8.2.5, 8.2.6 for the supported z/OS releases

iStrobe

iStrobe software and hardware requirements are located in the *Compuware Web Products Installation and Configuration Guide*.

Milestone 1: Ensure Installation and Configuration of Companion Products

Enterprise Common Components (ECC) is required as a Strobe companion product. This milestone describes the required tasks for ECC installation.

The Enterprise Common Components installer is required for this milestone.

Tasks

Complete the following tasks to install and configure the Strobe companion products.

Task 1.1 Install/Upgrade Enterprise Common Components

Enterprise Common Components (ECC) version 17.02 or more current, **with all current maintenance applied**, must be installed and configured to support Strobe 18.02. Refer to the ECC installation guide for instructions on configuring ECC for use with Strobe.

Task 1.2 Apply ECC Maintenance

Apply the latest maintenance to ECC 17.02.

Task 1.3 Update CMSC PARMLIB Member DDSN*nnnn*

Verify that CMSC Simple Deploy PARMLIB member(s) DDSN*nnnn* have been updated with the DDNAMEs and DATASET names for your installed instance of the Strobe run-time libraries. You will need this name for configuring Strobe unless you use the default DDSN*nnnn* as specified in your site's CMSC start-up. The ECC *hlq*.SLCXCNTL library default member is DDSN00.

Task 1.4 Import Strobe License

When you received your Strobe product, you also received a license key for it. Import your Strobe license into the Compuware License Management System.

Milestone 2: Install Strobe Using SMP/E

SMP/E Installation and Configuration Preparation

Strobe is installed using SMP/E. This milestone guides you through the SMP/E installation as well as some preparatory tasks you can perform to make configuration of Strobe easier.

The Strobe installer is required for this milestone.

Strobe Component Prefix and FMIDs

Compuware has registered the STR element prefix with IBM for Strobe and its components. The Strobe FMID is MSTR*nnn*, where *nnn* identifies the version and release.

Libraries Created During SMP/E Installation

Table 2 lists the libraries created during the Strobe installation using SMP/E.

Table 2. Libraries Created During Installation with SMP/E

DDName	Library Type and Content	Dataset Name as Distributed
SAMPLIB	Strobe Sample Library	CPWR.MSTR180.SSTRSAMP
	SMP/E Global Datasets:	
SMPCSI	Compuware Global CSI	CPWR.GLOBAL.CSI
SMPLOG	SMP/E Primary Log File - Global Zone	CPWR.GLOBAL.SMPLOG
SMPLOGA	SMP/E Alternate Log File - Global Zone	CPWR.GLOBAL.SMPLOGA
SMPPTS	SMP/E System File	CPWR.GLOBAL.SMPPTS
	SMP/E Distribution Datasets:	
ASTRAUTH	Strobe Distribution Authorized Load Library	CPWR.MSTR180.ASTRAUTH
ASTRCLST	Strobe Distribution Sample/CLIST Library	CPWR.MSTR180.ASTRCLST
ASTRLOAD	Strobe Distribution Unauthorized Load Library	CPWR.MSTR180.ASTRLOAD
ASTRMENU	Strobe Distribution ISPF Menu Library	CPWR.MSTR180.ASTRMENU
ASTRMSGS	Strobe Distribution Messages Library	CPWR.MSTR180.ASTRMSGS
ASTRPARM	Strobe Distribution Parameter Library	CPWR.MSTR180.ASTRPARM
ASTRPENU	Strobe Distribution ISPF Panel Library	CPWR.MSTR180.ASTRPENU
ASTRPROC	Strobe Distribution PROC Library	CPWR.MSTR180.ASTRPROC
ASTRSAMP	Strobe Distribution Sample Library	CPWR.MSTR180.ASTRSAMP
ASTRSKEL	Strobe Distribution ISPF Skeleton Library	CPWR.MSTR180.ASTRSKEL
STR180D	Strobe Distribution Zone	CPWR.MSTR180.DZ.CSI
	SMP/E Target Datasets:	

Table 2. Libraries Created During Installation with SMP/E

DDName	Library Type and Content	Dataset Name as Distributed
SMPLTS	SMP/E System File	CPWR.MSTR180.SMPLTS
SMPMTS	SMP/E System File	CPWR.MSTR180.SMPMTS
SMPSCDS	SMP/E System File	CPWR.MSTR180.SMSCDS
SMPSTS	SMP/E System File	CPWR.MSTR180.SMPSTS
STR180T	Strobe Target Zone	CPWR.MSTR180.TZ.CSI
SSTRAUTH	Strobe Target Authorized Load Library — PDSE	CPWR.MSTR180.SSTRAUTH
SSTRCLST	Strobe Target Sample/CLIST Library	CPWR.MSTR180.SSTRCLST
SSTRLOAD	Strobe Target Unauthorized Load Library — PDSE	CPWR.MSTR180.SSTRLOAD
SSTRMENU	Strobe Target ISPF Message Library	CPWR.MSTR180.SSTRMENU
SSTRMSGS	Strobe Target Messages Library	CPWR.MSTR180.SSTRMSGS
SSTRPARM	Strobe Target Parameter Library	CPWR.MSTR180.SSTRPARM
SSTRPENU	Strobe Target ISPF Panel Library	CPWR.MSTR180.SSTRPENU
SSTRPROC	Strobe Target PROC Library	CPWR.MSTR180.SSTRPROC
SSTRSAMP	Strobe Target Sample Library	CPWR.MSTR180.SSTRSAMP
SSTRSKEL	Strobe Target ISPF Skeleton Library	CPWR.MSTR180.SSTRSKEL

Tasks

Complete the following task to SMP/E-install Strobe.

Task 2.1 Follow the Compuware Installer Guide

Follow the instructions in the *Compuware Installer Mainframe Products SMP/E Installation Guide* to install Strobe.

Milestone 3: Configure Strobe — New Installation

This milestone guides you through configuration of a Strobe 18.02 new installation.

If you are performing an upgrade instead, skip ahead to Milestone 4: Configure Strobe — Upgrade.

The following roles are required for this milestone:

- Strobe installer
- z/OS security administrator
- z/OS system programmer
- DB2 database administrator

Tasks

Task 3.1 Allocate the Required Datasets

The Strobe installer is required for this task.

1. Execute CLIST STRINCUS found in the *hlq*.SSTRSAMP dataset to access the Strobe JCL Customization Facility as shown in Figure 1.
2. Press Enter to continue.

Figure 1. Strobe JCL Customization Facility (Screen 1)

```
                                STROBE
                    Strobe JCL Customization Facility
Command ==>

  Welcome to the customization facility for Strobe.This
  facility will gather information specific to your site and generate
  the customization JCL for Strobe.
  Each time the facility is executed the installation JCL will be
  regenerated with the new information provided.

           Press Enter to continue, PF1 for help, or END to exit.
```

3. Complete the fields in Figure 2 on page 18 to create the $07ALSTR job.

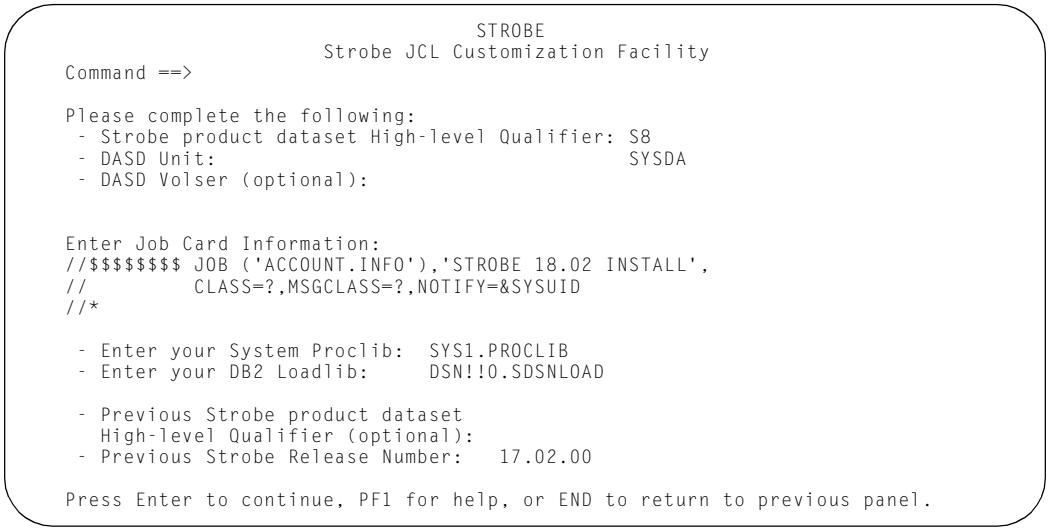
   This job allocates the required Strobe datasets and Strobe startup procedures.

4. If your site is licensed for the Strobe for DB2/DDF option, replace DSN!!0.SDSNLOAD with the name of your site's most current DB2 version SDSNLOAD library.

   Because you are performing a first-time installation, ignore the next three fields regarding a previous release because they apply only to upgrading a Strobe release.

5. Press Enter to continue.

Figure 2. Strobe JCL Customization Facility (Screen 2)



6. Edit and execute member $07ALSTR found in the *hlq*.SSTRSAMP dataset.

   $07ALSTR contains a job that creates the queue, log, system, group, and history datasets. This job also creates startup procedures STRBSM, STRBSSR, STRSSA, STRMSAS, and STRBMNAS.

7. Review the VOLSER and VOL=SER= values and, if required, supply a site-specific value.

Although Compuware does *not* recommend it, if your site standards require modifications to the Strobe started task names, the following changes must be made:

1. Update the procedures (created by the $07ALSTR job) in the system procedure library to the new names.
2. Ensure the Security steps in Task 3.2 Review External Security Considerations on page 18 reflect the new names.
3. Update the Strobe parameters MSASPROCNAME, SSAPROCNAME, and MNASPROCNAME in Strobe parameter member STRB00 to reflect the correct procedure names.

Task 3.2 Review External Security Considerations

The z/OS security administrator is required for this task.

Task 3.2.1 Strobe Started Tasks

Your site's z/OS security administrator should review and implement the following security requirements:

1. The **STRBSM** started task requires a user ID defined to your security product and ALTER access to the Strobe Log dataset. The Session Manager must be able to read and write to the Strobe Queue, System Message and Request Group datasets. For the Strobe Log dataset, the session manager must have WRITE access and be able to create a dataset (when Log datasets defined as GDGs). To use the automatic Performance Profile option, the session manager must have the authority to:

   – Submit jobs on behalf of any Strobe user.
   – Read sample datasets created by any Strobe user.
   – Create a print file on behalf of any Strobe user.

   For z/OS systems, the Session Manager address space must also have UPDATE access to the BPX.SERVER profile in the FACILITY class so that Strobe can display the USS processes on the Active Process Section List panel. The Session Manager Address Space must have a UID of zero (UID(0)) specified in the rules of the security package (RACF, CA Top Secret, CA ACF2) you are using. This rule gives Strobe the authority to collect process information for all processes. For more information, refer to the IBM manual *z/OS UNIX System Services Planning*.

   To enable the Strobe Session Manager (running as a superuser) to successfully call the z/OS UNIX System Service BPX1SEU, define user BPXROOT to RACF, ACF2, or CA Top Secret. This action prevents Strobe from issuing message STR6429W.

   Always define the Strobe Session Manager to CA ACF2 as a Multiple-User Single Address Space System (MUSASS).

2. The **STRMSAS** started task requires a user ID/ACF2 logon ID defined to your security product; and if using RACF, it must have a RACF ID in the RACF started task group. Create an associated owner ID with an OMVS segment to allow use of TCP/IP for communications for the MSAS. Sample datasets are dynamically allocated and cataloged from this address space. Define any prefix used for the sample datasets to be allocated, read, written, and cataloged from the MSAS.

   Upon measurement initiation, the MSAS started task creates a dataset and requires authority of ACC(ALL) if using CA Top Secret or ALTER access under RACF. The dataset name is composed of two Strobe parameter values found in the *hlq*.SSTRPARM library, plus the job name of the job being measured.

   ```
   DSNAME=TSOESA /* SAMPLE DATASET NAME PREFIX */

   DSNSUFX=ACME1 /* SAMPLE DATASET NAME SUFFIX */
   ```

   Use DSNAME= to specify the first node of the dataset name and DSNSUFX= to specify the last node of the dataset name. If the measured job name is ABC1234Z, then ABC1234Z is used as the second level node for the dataset name.

3. The **STRSSA** started task requires a user ID/ACF2 logon ID defined to your security product; and if using RACF, it must have a RACF ID in the RACF started task group (required for Strobe for DB2/DDF licensed users).

4. The **STRBMNAS** started task requires a user ID/ACF2 logon ID defined to your security product; and if using RACF, it must have a RACF ID in the RACF started task group. Create an associated owner ID with an OMVS segment to allow use of TCP/IP for communications for the MNAS.

Task 3.2.2 User IDs

1. Any user ID that plans to generate Strobe Performance Profiles requires ALLOCATE, READ, WRITE, and CATALOG access to the sample dataset naming conventions, similar to the STRMSAS started task.

2. Strobe users require READ access to the Strobe Log dataset and the Strobe unauthorized load library (*hlq*.SSTRLOAD). They must also be able to read and write to the Strobe History and AutoStrobe datasets.

3. To further control user access to Strobe, refer to the section entitled “Configuring Access Filter Security” in the *Strobe Advanced Configuration Guide*. This security interface allows you to control security considerations such as the following:

   – Who can use Strobe to measure jobs

– Systems on which those measurement requests can run
– Whether users can measure any job or just their own
– Who is authorized to start Strobe as a batch job
– Who has privileges to administer Strobe.

Task 3.3 Integrate Strobe with MVS

The followings roles are required for this task:

- Strobe installer
- z/OS system programmer.

Task 3.3.1 Copy Runtime Libraries

Compuware recommends that copies of selected SMP/E target libraries be made that will comprise the runtime environment. The SMP/E target libraries listed in Table 3 are recommended to have corresponding runtime copies.

Table 3. SMP/E Target Libraries That Typically Have Corresponding Runtime Copies

Library	Description
SSTRAUTH	Strobe Authorized Load Library
SSTRCLST	Strobe CLIST/EXEC Library
SSTRLOAD	Strobe Unauthorized Load Library
SSTRMENU	Strobe ISPF Message Library
SSTRMSGS	Strobe Messages Library
SSTRPARM	Strobe Parameter Library
SSTRPENU	Strobe ISPF Panel Library
SSTRPROC	Strobe PROC Library
SSTRSAMP	Strobe Sample Library
SSTRSKEL	Strobe ISPF Skeleton Library

Task 3.3.2 Authorize and Add the Strobe SSTRAUTH Library to the System LINKLIST Concatenation

To establish the Strobe environment, some Strobe modules must execute in an authorized state. Compuware has provided a load library, *hlq*.SSTRAUTH, that contains those modules. APF-authorize only the *hlq*.SSTRAUTH library. To perform this task, complete the following steps:

1. Ensure that the members in the Strobe 18.02 *hlq*.SSTRAUTH library are in an APF-authorized library that is contained in the LINKLIST.
2. Use the MVS MODIFY system command to refresh the system linklist:

```
MODIFY LLA,REFRESH
```

Task 3.4 Implement the Strobe PARMLIB Under CMSC

The Strobe installer is required for this task.

Strobe parameters are managed by the Compuware Mainframe Services Controller (CMSC). The CMSC component is SMP/E-installed with Enterprise Common Components (ECC) as described in Milestone 1: Ensure Installation and Configuration of Companion Products. This address space is a centralized facility that provides Compuware Common parameter library services. This facility functions in a similar manner to the IBM z/OS PARMLIB. Strobe requires CMSC to be installed for all Common PARMLIB processing.

Task 3.4.1 Create PARMLIB Member STRB00

In order to use the CMSC component, copy the Strobe parameter dataset member STRB00 from the *hlq*.SSTRPARM library to a dataset in the //CWPARM DD concatenation in the CMSC JCL, or ask your CMSC administrator to do so.

Task 3.4.2 Review Strobe Parameters

1. While most parameters have a default setting, some parameters in the *hlq*.SSTRPARM dataset are site-specific and should be reviewed at installation time:
   - Set SSA=NO if your site is *not* licensed for the Strobe for DB2/DDF options.
   - Set UI_STRBLOAD to the name of your *hlq*.SSTRLOAD dataset.
   - Set UI_STRBETXT to the name of your *hlq*.SSTRMSGS dataset.
   - Set UI_STRHIST to the name of the history dataset that was allocated by the HISTDS step of the $07ALSTR job.
   - Set UI_STRHISTA to the name of the history alternate index dataset that was allocated by the HISTDS step of the $07ALSTR T(est) job.
   - Set UI_STRHLOG to the name of the history log dataset that was allocated by the HISTLOG step of the $07ALSTR job.
   - Set the STRAUTO parameter to the name of your AutoStrobe dataset allocated by the AUTODS step of the $07ALSTR job.
   - The last line in the new parameter member is **$$$ V2 END $$$ -- DO NOT MODIFY OR REMOVE**. This line marks the end of new format and must *not* be modified or removed.
2. If you changed your Strobe started task names in Task 3.2.1 Strobe Started Tasks on page 18, ensure that MSASPROCNAME, SSAPROCNAME, and MNASPROCNAME parameters reflect the correct names.
3. An additional sample Strobe parameter member, STRBALL, has been provided in the Strobe *hlq*.SSTRPARM library. This member contains an example of all Strobe parameters. Refer to the *Strobe Advanced Configuration Guide* for a complete description of installation parameters that control Strobe functions.

The STRB00 parameter member contains only the most commonly changed parameters. If you changed the MNASPROCNAME started task name, you must add the parameter to your STRB00 member. An example of this parameter is in the sample parameter member STRBALL.

Task 3.4.3 Update CMSC with STRB00

Use the z/OS MODIFY (F) command to update the CMSC with the PARMLIB members you created.

Refreshing a Single Parameter Member

```
F cmscname,PARMLIB REFRESH member_name
```

Whenever you modify an existing CMSC PARMLIB member or add a new member, you must execute the CMSC REFRESH command to update the contents of the CMSC cache.

Task 3.5 Configure the Strobe for DB2 Options

This task guides you through configuring the support for DB2 in Strobe. Proceed to Milestone 5: Verify Product Installation if you are not licensed for DB2.

The DB2 database administrator is required for this task.

Task 3.5.1 Bind Strobe DB2 Packages and Plan and Grant Required Privileges

Review the following restrictions:

- A DB2 database administrator with SYSADM authorization should execute the following steps for each DB2 subsystem where Strobe measurements will occur.
- Do *not* change Strobe Package, Collection, Plan Names, or Bind parameters.
- Enabling New Function subsystems is *not* supported.
- If your site uses your Security Package to provide DB2 authorization, the equivalent GRANT authorization found in SBDB2INS needs to be made.
- If the Security Administrator changed the name of STRSSA in Task 3.2.1 Strobe Started Tasks on page 18, update the name in the SBDB2INS JCL before submitting the job.
- STRSSA should be assigned the same, or higher, dispatching priority as the DB2 MSTR address space. Running it at a lower priority could result in measurements with missed DB2 data.
- Compuware recommends granting PUBLIC execution authorization to its PLAN, STRANANA. If restrictions prohibit granting it to PUBLIC, a list of authorization IDs that will be executing Strobe SQL Analysis is required. This list must include all Strobe SQL Agent authorization IDs because they also access the plan.
- Strobe SQL Agent authorization IDs, typically STRSSA, must be granted TRACE and MONITOR2 authorization.
- If you are running Db2 Version 12, add option 'APPLCOMPAT(V12R1)' to each 'BIND PACKAGE' command in the SBDB2INS JCL member.

Bind the Strobe DB2 Packages and Plan and Grant Authorization by completing the following steps:

1. Edit the SBDB2INS JCL member found in *hlq*.SSTRSAMP and make the changes as directed in the JCL.
2. Submit the JCL.
3. Repeat the steps for each DB2 subsystem where Strobe measurements will occur.

Task 3.5.2 Create DB2 Explain Tables

Before you can create a Performance Profile for iStrobe that contains Strobe SQL Analysis reports, a PLAN_TABLE, DSN_FUNCTION_TABLE, DSN_PREDICAT_TABLE, and DSN_STAT_FEEDBACK (optional DSN_QUERYINFO_TABLE if used at your site) must exist for the resolved or secondary authorization ID of the user/job running the reports.

Sample DDL to create the Explain tables is in the IBM DB2 SDSNSAMP library in member DSNTESC. The DDL for the DSN_STAT_FEEDBACK table, used for additional reporting, exists only in DB2 Version 11 and more current. The table qualifier must match the authorization ID of the user executing reports.

If user DB2USER1 wants to generate a Strobe profile that contains SQL Analysis, DB2USER1 needs *one* of the following:

- A set of explain tables created with the qualifier DB2USER1.
- A secondary user ID set up for DB2USER1— for example, STROBE and a set of explain tables created with the qualifier STROBE.
- A set of explain tables created with a generic qualifier — for example, STROBE and aliases created against them for DB2USER1.

```
CREATE ALIAS DB2USER1.PLAN_TABLE FOR STROBE.PLAN_TABLE;
```

Task 3.5.3 Validate Unicode Conversion Tables

For support of DB2, Strobe requires z/OS Unicode Services and the appropriate Unicode conversion tables. If these Unicode conversion tables are not installed on your z/OS system, your Strobe for DB2 and SQL Analysis reports might be unreadable.

Verify that you have installed the following Unicode conversion tables on your system, by issuing the MVS Display command **D UNI,ALL**:

- 01200-01208-E or -ER
- 01208-01200-E or -ER
- 01200-*nnnnn*-E or -ER, where *nnnnn* is the value of the SCCSID keyword in the DSNHDECP module of your DB2 subsystem

For general information about setting up a conversion environment and installing Unicode conversion tables, refer to the IBM z/OS Library. In particular, see *z/OS Support for Unicode ™* (SA 22-7649), which specifies using the tables above as the base for conversion services.

Milestone 4: Configure Strobe — Upgrade

This milestone guides you through configuration of an upgrade to Strobe 18.02 from Strobe 5.2 or more current.

If you are performing a new installation instead, skip ahead to Milestone 5: Verify Product Installation.

The following roles are required for this milestone:

- Strobe installer
- z/OS system programmer
- DB2 database administrator

Tasks

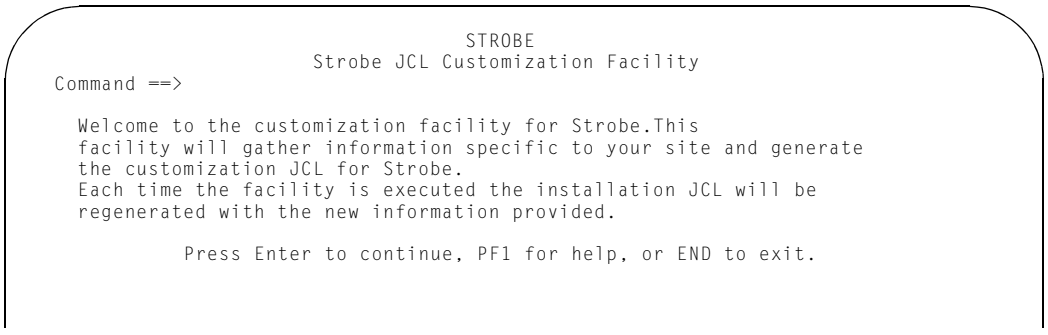
Complete the following tasks to upgrade to Strobe 18.02.

Task 4.1 Allocate the Required Datasets and Provide Migration Information

The Strobe installer is required for this task.

1. Execute CLIST STRINCUS found in the *hlq*.SSTRSAMP dataset to access the Strobe JCL Customization Facility as shown in Figure 3.
2. Press Enter to continue.

Figure 3. Strobe JCL Customization Facility (Screen 1)



3. Complete the fields in Figure 4 on page 26 to create the $07ALSTR job.

   This job allocates the required Strobe datasets and Strobe startup procedures.

4. If your site is licensed for the Strobe for DB2/DDF option, replace DSN!!0.SDSNLOAD with the name of your site's most current DB2 version SDSNLOAD library.
5. Enter the high-level qualifier of the Strobe release that you are migrating from.
6. Enter the release number of the Strobe release that you are migrating from. Valid values are 17.02.00, 16.03.00, 05.02.00, and 05.01.00.
7. Press Enter to continue. This information is used to create the migration JCL that will be used in Task 4.2 Migrate Strobe Requests .

Figure 4. Strobe JCL Customization Facility (Screen 2)

```
                                STROBE
                    Strobe JCL Customization Facility
Command ==>

Please complete the following:
 - Strobe product dataset High-level Qualifier: S8
 - DASD Unit:                                   SYSDA
 - DASD Volser (optional):


Enter Job Card Information:
//$$$$$$$$ JOB ('ACCOUNT.INFO'),'STROBE 18.02 INSTALL',
//         CLASS=?,MSGCLASS=?,NOTIFY=&SYSUID
//*

 - Enter your System Proclib:  SYS1.PROCLIB
 - Enter your DB2 Loadlib:     DSN!!0.SDSNLOAD

 - Previous Strobe product dataset
   High-level Qualifier (optional):
 - Previous Strobe Release Number:   17.02.00

Press Enter to continue, PF1 for help, or END to return to previous panel.
```

Task 4.2 Migrate Strobe Requests

The Strobe installer is required for this task.

A new Strobe release may change the internal data structures of:

- Measurement requests
- AutoStrobe group requests
- AutoStrobe monitoring requests.

These data structures reside on the Strobe queue, group, and AutoStrobe datasets. When they change for a new release, Strobe must create new queue, group, and AutoStrobe datasets. If you want to retain any of these existing requests for use with a new release of Strobe, follow the procedures in this section. If you do not, you will need to manually resubmit the requests using the new Strobe release.

Task 4.2.1 Stop Strobe Session Manager

If the Strobe session manager is running, use the following MVS console commands to stop it:

- **STOP STRBSM** (production)
- **STOP STRBMNAS** <== If Global Monitoring is active

Task 4.2.2 Verify and Execute the $09MGSTR job

.

Running the $07ALSTR job is not necessary when migrating to a new Strobe release. $09MGSTR will handle allocating the new Strobe datasets to which you want to migrate.

The $09MGSTR job is built using the input parameters you provided in Task 4.1 Allocate the Required Datasets and Provide Migration Information on page 25. If previous Strobe datasets are not found, you will be notified in the status panel above and the migration steps for that dataset will not be included in $09MGSTR.

The migration of the queue dataset is intended for all Strobe installations, including those with AutoStrobe. The migration of the group dataset and the AutoStrobe dataset is intended for AutoStrobe users only.

The following are brief descriptions of each of the migration steps that can be included in the $09MGSTR job. Please verify $09MGSTR has the correct steps and site-specific parameters depending on the datasets you intend to migrate to your new Strobe installation.

- If you want to migrate the queue dataset, these steps are included in $09MGSTR:
  - **QUEUEXST:** Checks to see if the new queue dataset exists. This is the dataset you are migrating to. If it does *not* exist, this step will allocate it.
  - **QUEUEWRK:** Allocates temporary work datasets used by the Strobe migration utility.
  - **QUEUEMIG:** Reformats the contents of the previous queue dataset and puts it on the new queue dataset. Doing so enables the new Strobe release to process the following types of requests from the previous release:
    - Queued and completed measurement requests
    - AutoStrobe monitoring requests
- If you want to migrate the group dataset, these steps are included in $09MGSTR:
  - **GROUPXST:** Checks to see if the new group dataset exists. This is the dataset you are migrating to. If it does *not* exist, this step will allocate it.
  - **GROUPWRK:** Allocates temporary work datasets used by the Strobe migration utility.
  - **GROUPMIG:** Reformats the contents of the previous AutoStrobe dataset and puts it on the new group dataset. This enables the new Strobe release to process the following types of requests from the previous release:
    - Queued and completed measurement requests
    - AutoStrobe monitoring requests
- If you want to migrate the AutoStrobe dataset, these steps are included in $09MGSTR:
  - **AUTOXST:** Checks to see if the new AutoStrobe dataset exists. This is the dataset you are migrating to. If it does *not* exist, this step will allocate it.
  - **AUTOCREA:** Attempts to copy the contents of the previous AutoStrobe dataset to the new queue dataset.
  - **AUTOMIG:** Synchronizes the new AutoStrobe dataset to the new queue dataset

Review the header comments in $09MGSTR that describe the steps included in the job. Submit $09MGSTR after you have verified these steps and that the parameters you have supplied are correct.

Task 4.3 Integrate Strobe with MVS

The z/OS system programmer is required for this task.

Task 4.3.1 Copy Runtime Libraries

Compuware recommends that copies of selected SMP/E target libraries be made that will comprise the runtime environment. The SMP/E target libraries listed in Table 4 are recommended to have corresponding runtime copies.

Table 4. SMP/E Target Libraries That Typically Have Corresponding Runtime Copies

Library	Description
SSTRAUTH	Strobe Authorized Load Library
SSTRCLST	Strobe CLIST/EXEC Library
SSTRLOAD	Strobe Unauthorized Load Library
SSTRMENU	Strobe ISPF Message Library
SSTRMSGS	Strobe Messages Library
SSTRPARM	Strobe Parameter Library
SSTRPENU	Strobe ISPF Panel Library
SSTRPROC	Strobe PROC Library
SSTRSAMP	Strobe Sample Library
SSTRSKEL	Strobe ISPF Skeleton Library

Task 4.3.2 Authorize and Add the Strobe SSTRAUTH Library to the System LINKLIST Concatenation

To establish the Strobe environment, some Strobe modules must execute in an authorized state. Compuware has provided a load library, *hlq*.SSTRAUTH, that contains those modules. APF-authorize only the *hlq*.SSTRAUTH library. To perform this task, complete the following steps:

1. Bring down your current version of Strobe.
2. Ensure that the members in the Strobe 18.02 *hlq*.SSTRAUTH library are in an APF-authorized library that is contained in the LINKLIST. Either replace the modules from the earlier release or specify a new library before the earlier release library in the linklist concatenation.
3. Use the MVS MODIFY system command to refresh the system linklist:

```
MODIFY LLA,REFRESH
```

When you install a new release of Strobe, any CICS region that has a measurement request active in its address space must be recycled before the new release can occupy that address space. Even if the Strobe upgrade is complete and LLA is refreshed, if the region is not recycled, any measurement request will fail.

Task 4.4 Implement the Strobe PARMLIB Under CMSC

The Strobe installer is required for this task.

Strobe parameters are managed by the Compuware Mainframe Services Controller (CMSC). The CMSC component is SMP/E-installed with Enterprise Common Components (ECC) as described in Milestone 1: Ensure Installation and Configuration of Companion Products. This address space is a centralized facility that provides Compuware Common parameter library services. This facility functions in a similar manner to the IBM z/OS PARMLIB. Strobe requires CMSC to be installed for all Common PARMLIB processing.

Task 4.4.1 Strobe Parameter Migration

Previous Strobe release parameter members must go through a migration process. To prepare for this migration, depending upon the currently installed Strobe release from which you are migrating, the following actions should be taken:

- If you are migrating from Strobe Release 16.03 or less current, rename your existing STROBE parameter member to STRB00 and copy it to a dataset in the //CWPARM DD concatenation in the CMSC JCL, or ask your CMSC administrator to do so.
- The last line in the new parameter member is **$$$ V2 END $$$ -- DO NOT MODIFY OR REMOVE**. This line marks the end of new format and must *not* be modified or removed.
- For installations currently using CMSC, no action is required at this time.

Some Strobe parameters are being deprecated and may be permanently removed from the product at some point in the future. Refer to the Strobe 18.02 release notes for the complete list of deprecated parameters at **https://go.compuware.com**.

Task 4.4.2 Strobe Parameters To Review

1. While most parameters have a default setting, the following parameters in the *hlq*.SSTRPARM library are site-specific and should be reviewed at installation time:
   - Set UI_STRBLOAD to the name of your *hlq*.SSTRLOAD dataset.
   - Set UI_STRBETXT to the name of your *hlq*.SSTRMSGS dataset.
   - Set UI_STRHIST to the name of the history dataset that was allocated by the HISTDS step of the $07ALSTR job.
   - Set UI_STRHISTA to the name of the history alternate index dataset that was allocated by the HISTDS step of the $07ALSTR job.
   - Set UI_STRHLOG to the name of the history log dataset that was allocated by the HISTLOG step of the $07ALSTR job.
   - Set the STRAUTO parameter to the name of your AutoStrobe dataset allocated by the AUTODS step of the $07ALSTR job.
2. An additional sample Strobe parameter member, STRBALL, has been provided in the *hlq*.SSTRPARM library. This member contains an example of all Strobe parameters. Refer to the *Strobe Advanced Configuration Guide* for a complete description of installation parameters that control Strobe functions.

Task 4.4.3 Update CMSC with STRB00

Use the z/OS MODIFY (F) command to update the CMSC with the PARMLIB members you created.

Refreshing a Single Parameter Member

```
F cmscname,PARMLIB REFRESH member_name
```

Whenever you modify an existing CMSC PARMLIB member or add a new member, you must execute the CMSC REFRESH command to update the contents of the CMSC cache.

Task 4.5 Configure the Strobe for DB2 Options

This task guides you through configuring the support for DB2 in Strobe. Proceed to Milestone 5: Verify Product Installation if you are not licensed for DB2.

The DB2 database administrator is required for this task.

Task 4.5.1 Bind Strobe DB2 Packages

Review the following restrictions:

- A DB2 database administrator with SYSADM authorization should execute the following steps for each DB2 subsystem where Strobe measurements will occur.
- Do not change Strobe Package or Collection Names.
- Enabling New Function subsystems is not supported.

Bind the Strobe DB2 Packages by completing the following steps:

1. Edit the SBDB2UPG JCL member found in *hlq*.SSTRSAMP and make the changes as directed in the JCL.
2. Submit the JCL.
3. Repeat the steps for each DB2 subsystem where Strobe measurements will occur.

Milestone 5: Verify Product Installation

This milestone provides instructions for verifying the Strobe installation.

The Strobe installer is required for this milestone.

Tasks

Complete the following tasks to verify the Strobe installation.

Task 5.1 Start and Configure Strobe for Testing

Complete the following tasks to start and configure Strobe for testing.

Task 5.1.1 Start the Strobe Address Space

Start Strobe from the operator's console by entering:

```
START STRBSM
```

Task 5.1.2 Verify the Strobe CLIST

hlq.SSTRCLST dataset member STROBE includes a TSO CLIST for executing Strobe/ISPF. The CLIST uses the ISPF/PDF LIBDEF service to allocate and concatenate application-level libraries.

The CLIST invokes the ISPF LIBDEF service to define panel, message, and skeleton libraries, executes the Strobe program STRBISPF, and invokes the LIBDEF service again to free the libraries when you exit.

By default, the CLIST uses the Simple Deploy method to allocate Compuware dataset names as specified with the SBNODE(PARMLIB) and the Enterprise Common Components (ECC) CMSC PARMLIB member DDSN*nnnn*. If you do not specify a DDSNSFX, the default DDSN00 member will be used. When using a different DDSN suffix, just update the DDSNSFX( ). For example, DDSNSFX(CPWR) points to DDSNCPWR.

The Simple Deploy method requires ECC Release 17.02, ***with all current maintenance applied***. The comments in the member also provide instructions if you choose *not* to use the Simple Deploy method.

If you choose to use the simple Deploy method:

1. Ensure SBNODE(PARMLIB) is coded.
2. Verify that CMSC Simple Deploy PARMLIB member(s) DDSN*nnnn* have been updated with the DDNAMEs and dataset names for your installed instance of the Strobe run-time libraries.

Use this CLIST in *either* of the following ways:

- Execute the CLIST from the command line of any ISPF/PDF panel:

  ```
  TSO EXEC 'hlq.SSTRCLST(STROBE)'
  ```

- If desired, copy member STROBE to a library in your SYSPROC concatenation and modify your site's existing ISR@PRIM or equivalent panel to invoke the CLIST.

Ensure the following:

1. The &ZTRAIL = .TRAIL statement *must* appear in the PROC section of the ISR@PRIM or equivalent panel.
2. Remember to reapply the Strobe/ISPF changes after performing any SMP/E maintenance.

Task 5.2 Measure a Sample Program

The Strobe *hlq*.SSTRSAMP sample library dataset provides a batch job to run a test measurement session. The job creates a sample dataset, lists the Strobe messages produced during the measurement session, and deletes the request. Submit member TESTSTR, shown in Figure 5, to test the production version of Strobe from the LINKLIST:

Figure 5. Measure a Sample Program (Member TESTSTR)

```
//STRBSSR  PROC
//STROBE   EXEC PGM=STRBCSR,REGION=1024K
//SYSPRINT  DD  SYSOUT=*
//SYSUDUMP  DD  SYSOUT=*
//         PEND
//MEASURE  EXEC  STRBSSR
 ADD *,PGM=STRBSAM1
//GO       EXEC  PGM=STRBSAM1
//STEPLIB  DD  DISP=SHR,DSN=STROBE.SSTRLOAD
//SYSUDUMP DD  SYSOUT=*
//SYSOUT   DD  SYSOUT=*
//HIBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(10,2),,CONTIG)
//LOBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(10,2),,CONTIG)
//NOBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(10,2),,CONTIG)
//*
//SMLIST  EXEC  STRBSSR
 LIST *,DELETE
//*
```

Edit member TESTSTR as follows:

1. Edit the job control statements in TESTSTR as needed for your site and supply a JOB statement.
2. Change STROBE.SSTRLOAD to the name of your unauthorized Strobe Load Library.
3. Execute the job.

   A return code 4 is acceptable.

Task 5.3 Create a Performance Profile

Complete the following steps to create a Strobe performance profile:

1. Access Strobe ISPF by entering **TSO EXEC '*hlq*.SSTRCLST(STROBE)'.**
2. Enter **4** (PROFILE) in the Option field.

   The Strobe – Produce a Performance Profile panel is displayed.

3. Type **F** in the Option field to initiate Foreground Processing.
4. Type into the Sample Dataset Name field the name of the Strobe sample dataset that was created when you submitted the TESTSTR job.

   To find the name of the sample dataset, execute the FIND command in the TESTSTR JES output for message STR6800I.

5. If not already selected, type **T** (Text Report) in the Output Format field.
6. Press Enter.

   Your Strobe Performance Profile is displayed.

Task 5.4 Verify Strobe for DB2/DDF and SQL Analysis

This task guides you through verifying the support for DB2 in Strobe. Proceed to Task 5.5 Create a Performance Profile with Indexed Source Support on page 34 if you are not licensed for DB2.

You can verify that Strobe DB2 measurement and SQL Analysis are operating and running correctly by creating a sample dataset and viewing it using iStrobe. Two JCL members called STRANSMP (Figure 6 on page 34) and STRANSMI (not shown) create a workload that you can measure and provide a sample dataset to generate a Performance Profile for iStrobe. STRANSMI runs the STRANVER installation verification program. It executes STRANVER 50 times. You can edit the STRANSMI member to increase or decrease the DB2 workload by changing the number of RUN statements in it.

1. Edit member STRANSMP as follows:
   a. Change the **CNTL** value to the name of your Strobe sample library dataset (*hlq*.SSTRAMP).
   b. Change the **DB2LOAD** value to the name of your DB2 load library that contains the DSNTIAR and connection modules.
   c. Change the **STRBLIB** value to the name of your unauthorized Strobe load library (*hlq*.SSTRLOAD) that contains the Strobe SQL Analysis load modules.
   d. Change the **STRBAUTH** value to the name of your authorized Strobe load library (*hlq*.SSTRAUTH) that contains Strobe load modules.
   e. Change the **SSID** value to the ID of the DB2 subsystem against which you will run Strobe SQL Analysis.
   f. Change the **PREFIX** value to the high-level qualifier(s) of your Strobe sample library dataset.
2. Execute the job.
3. Using the sample dataset created by member STRANSMP, use Strobe/ISPF to create the iStrobe Performance Profile, as described in the *Strobe User Guide*.
4. Download and view the measurement data with iStrobe.

Figure 6. Create a Sample with SQLAF (Member STRANSMP)

```
//*
//VERIFY   PROC CNTL=,DB2LOAD=,STRBLIB=,STRBAUTH=
//*
//* STRBCSR IS THE DEFAULT PROGRAM NAME. PLEASE VERIFY THAT
//* THIS NAME IS CORRECT WHEN EXECUTING A TEST VERSION OF STROBE
//*
//STROBE   EXEC PGM=STRBCSR
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//*
//GO       EXEC PGM=IKJEFT01,DYNAMNBR=20,REGION=4096K
//STEPLIB  DD DISP=SHR,DSN=&DB2LOAD
//         DD DISP=SHR,DSN=&STRBLIB
//STRLIB   DD DISP=SHR,DSN=&STRBLIB
//         DD DISP=SHR,DSN=&STRBAUTH
//DBRMLIB  DD DISP=SHR,DSN=&CNTL
//SYSTSPRT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//         PEND
//*
//VERIFY   EXEC VERIFY,CNTL='STROBE.SSTRSAMP',
//         DB2LOAD='DB2.LOAD.LIB',STRBLIB='STROBE.STRBLOAD'
//         STRBAUT='STROBE.SSTRAUTH'
//STROBE.SYSIN  DD *
ADD *,STEP=GO,GOMIN=1,SAMPLES=15000,
DSNAME=PREFIX                                        <--- CHECK PREFIX
//GO.SYSTSIN    DD *
DSN SYSTEM(SSID)
//          DD DISP=SHR,DSN=&CNTL(STRANSMI)
//*
//VERIFY   PROC CNTL=,DB2LOAD=,STRBLIB=,STRBAUT=
//GO       EXEC PGM=IKJEFT01,DYNAMNBR=20,REGION=4096K
//STEPLIB  DD DISP=SHR,DSN=&STRBLIB
//         DD DISP=SHR,DSN=&DB2LOAD
//STRLIB   DD DISP=SHR,DSN=&STRBLIB
//         DD DISP=SHR,DSN=&STRBAUT
//DBRMLIB  DD DISP=SHR,DSN=&CNTL
//SYSTSPRT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//         PEND
//*
//VERIFY   EXEC VERIFY,CNTL='STROBE.SSTRSAMP'
//         DB2LOAD='DB2.LOAD.LIB',STRBLIB='STROBE.SSTRLOAD'
//         STRBAUT='STROBE.SSTRAUTH'
//SYSTSIN  DD *
DSN SYSTEM(SSID)
RUN PROGRAM(STRANVER) PLAN(STRANANA)
END
/*
//
```

Task 5.5 Create a Performance Profile with Indexed Source Support

This task guides you through verifying indexed Source Support in Strobe. Proceed to Task 5.6 Test in a Sysplex Environment on page 37 if your site does not intend to use indexed Source Support.

Members DDIOCOB1 and DDIOCOB2 in the *hlq*.SSTSRAMP sample library dataset (Figure 7 on page 35 and Figure 8 and Figure 9 on page 36) are jobs that test Strobe with DDIO mapping. DDIOCOB1 should be modified to conform to your installation's compile and link procedure, and then used to compile and link a sample source program (SAMPLEW). The Strobe STRBSSR procedure performs the mapping function using your DDIO dataset. After compilation, Strobe measures the test program and produces a sample dataset. The DDIO file and sample dataset are then used as input to job DDIOCOB2 to create a Performance Profile with indexed source support.

Figure 7. Member DDIOCOB1 (partial)

```
//*STROBE   JOB 0,STROBE
//*
.
.
.
//*********************************************************************
//*             SAMPLE JCL FOR THE COBOL PREPROCESSOR                 *
//*   PROGRAM CWPCMAIN IS AVAILABLE VIA COMPUWARE SHARED SERVICES     *
//*********************************************************************
//*                                                                   *
//*********************************************************************
//*  IF THE COMPILER LOAD LIBRARY IGY.SIGYCOMP IS NOT ON THE LINK  *//
//*  LIST, YOU SHOULD ADD IT TO THE COMPILE STEP'S STEPLIB.        *//
//*********************************************************************
//*
//COB      EXEC  PGM=CWPCMAIN,REGION=0M,
//         PARM='LANGUAGE(COBOLZ/OS)'                 <--- CHECK
//STEPLIB  DD  DISP=SHR,DSN=COMPWARE.LCXNNN.SLCXLOAD  <--- CHECK DSN
//*        DD  DISP=SHR,DSN=IGY.SIGYCOMP              <--- SEE NOTE
//SYSIN    DD  DISP=SHR,DSN=STROBE.SSTRSAMP(SAMPLEW)  <--- CHECK DSN
//SYSPRINT DD  SYSOUT=*
//*SYSPRINT DD  DSN=LISTDSN,DISP=(,CATLG,DELETE),     <--- OPTIONAL
//*             UNIT=SYSDA,SPACE=(2904,(400,200)),
//*             DCB=(RECFM=FBA,LRECL=121,BLKSIZE=2904)
//SYSPUNCH DD  DUMMY
//SYSUDUMP DD  SYSOUT=*
//SYSUT1   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT2   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT3   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT4   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT5   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT6   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT7   DD  UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSLIN   DD  DSN=&&LOADSET,DISP=(MOD,PASS),
//             UNIT=SYSDA,SPACE=(3120,(150,100)),
//             DCB=(BLKSIZE=3120,LRECL=80)
//*********************************************************************
//*   REFER TO THE COMPUWARE SHARED SERVICES INSTALLATION AND         *
//*   CUSTOMIZATION GUIDE FOR THE PROCESSOR PARAMETER SETTINGS.       *
//*                                                                   *
//*   SOME PROCESSOR PARAMETERS MAY REQUIRE ADDITIONAL JCL CHANGES.   *
//*                                                                   *
//* CXLPCOBB - FOR BATCH PROGRAMS                                     *
//* CXLPCOBC - FOC CICS PROGRAMS                                      *
//*********************************************************************
//*
//CWPDDIO  DD DISP=SHR,DSN=COMPWARE.CX.DDIO           <--- CHECK DSN
//CWPPRMO  DD *
 MAP
 CONDDDIO(4)
 COBOL(OUTPUT(NOPRINT))
 COBOL(OUTPUT(NODDIO))
 PROCESSOR(OUTPUT(PRINT))
 PROCESSOR(OUTPUT(DDIO))
 PROCESSOR(TEXT(NONE))
 LANGP(OBJECT,LIB,LIST,NOOFFSET,NOSEQ,FLAG(W),TRUNC(BIN))
 LANGP(NOADV,APOST)
 DDIO(OUTPUT(LIST,FIND,NOXREF,NOCLIST,NOOFFSET,COMPRESS))
/*
//LINK     EXEC PGM=IEWL,REGION=0M,
//             PARM='MAP,LIST,XREF',COND=(8,LT)
//SYSUT1   DD  UNIT=VIO,SPACE=(1700,(900,450))
//SYSLIB   DD  DISP=SHR,DSN=CEE.SCEELKED
//SYSLIN   DD  DISP=SHR,(OLD,DELETE),DSN=&&LOADSET
//SYSLMOD  DD  DSN=&&TEMPLOD(SAMPLEW),DISP==(NEW,PASS),
//             SPACE=(1024,(50,20,1)),UNIT=SYSDA
//SYSPRINT DD  SYSOUT=*
//*
//STRBSSR  PROC
//STROBE   EXEC PGM=STRBCSR,REGION=0M,COND=(8,LT)
//SYSPRINT  DD  SYSOUT=*
//SYSUDUMP  DD  SYSOUT=*
//         PEND
//*
```

Figure 8. Member DDIOCOB1 (partial) Continued

```
//* ************************************************************* *//
//* ADD A MEASUREMENT REQUEST FOR THE COBOL PROGRAM               *//
//* A RETURN CODE OF 04 FROM THE 'MEASURE' STEP IS ACCEPTABLE.    *//
//* MAKE SURE "PREFIX" MATCHES THE DSN SPECIFIED ON THE DD STRSAMPL *//
//* IN THE SECOND IVP JOB DDIOCOB2.                               *//
//* ************************************************************* *//
//*
//MEASURE  EXEC  STRBSSR,COND=(8,LT)
 ADD *,PGM=SAMPLEW,SAMPLES=20000,
SAMD=PREFIX
//*
//* ************************************************************* *//
//* MEASURE AND PRODUCE A REPORT ON THE NEWLY COMPILED PROGRAM.   *//
//* IF STROBE IS NOT EXECUTING FROM A LINKLIST LIBRARY, YOU MUST  *//
//* ADD THE STROBE AUTHORIZED RUNTIME LIBRARY TO THE STEP LIB     *//
//* AND TO THE STRMTLIB DD STATEMENT                              *//
//* ************************************************************* *//
//*
//GO      EXEC  PGM=SAMPLEW,COND=(8,LT)
//STEPLIB  DD  DSN=&&TEMPLOD,DISP=(OLD,DELETE)
//*         DD  DISP=SHR,DSN=STROBE.APF.LOAOLIB
//*STRMTLIB DD  DISP=SHR,DSN=STROBE.APF.LOADLIB
//SYSUDUMP DD  SYSOUT=*
//SYSOUT   DD  SYSOUT=*
//HIBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(5,2))
//LOBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(5,2))
//NOBLOCK  DD  UNIT=SYSDA,SPACE=(CYL,(5,2))
//*
//*********************************************************************
//* RUN DDIOCOB2 TO PRODUCE THE STROBE REPORT
//*********************************************************************
```

Figure 9. Member DDIOCOB2 (partial)

```
//*STROBE   JOB 0,STROBE
//*
.
.
.
//* ************************************************************* *//
//*  PRODUCE THE STROBE REPORT                                    *//
//* ************************************************************* *//
//REP    EXEC  PGM=STROBEDT,REGION=5M
//*            PARM=('REPNAME=,RESLTN=,SORTSIZ=,LINEMAX=',
//*            'DETAIL=,COMPRES=,NOPROC=,NODASD=,NOTRAN=',
//*            'ATTR=,NOATTR=,RPTPARM=',
//*            'WAITLOC=,PAGELOC=,PUBP=,DASD=')
//*
//STEPLIB  DD  DISP=SHR,DSN=STROBE.SSTRLOAD           <--- CHECK DSN
//         DD  DISP=SHR,DSN=COMPWARE.LCXNNN.SLCXLOAD,  <--- CHECK DSN
//SYSPRINT DD  SYSOUT=*,DCB=(LRECL=121,BLKSIZE=2904)
//SYSOUT   DD  SYSOUT=*
//SYSUDUMP DD  SYSOUT=*
//STRSAMPL DD  DISP=SHR,DSN=PREFIX.JOBNAME.S001D001    <--- CHECK DSN
//SLSF001  DD  DISP=SHR,DSN=COMPWARE.CX.DDIO           <--- CHECK DSN
//STRMAP   DD  DUMMY,DCB=BLKSIZE=1692
//SYSUT1   DD  UNIT=SYSDA,SPACE=(1672,(400,400))
//SORTWK01 DD  SPACE=(1700,(300)),UNIT=SYSDA
//SORTWK02 DD  SPACE=(1700,(300)),UNIT=SYSDA
//SORTWK03 DD  SPACE=(1700,(300)),UNIT=SYSDA
//SORTWK04 DD  SPACE=(1700,(300)),UNIT=SYSDA
//SORTWK05 DD  SPACE=(1700,(300)),UNIT=SYSDA
//SORTWK06 DD  SPACE=(1700,(300)),UNIT=SYSDA
```

1. Make the following edits to DDIOCOB1:
   a. If you are not running Strobe from a linklist dataset, change **STROBE.APF.LOADLIB** to your Strobe non-linklist, APF-authorized library name. Uncomment the changed JCL statements.
   b. Supply a **JOB** statement.
   c. Change **STROBE.SSTRSAMP** to the name of your Strobe sample library dataset.

d. Change **PREFIX** to the high-level qualifier name of the sample dataset Strobe generates.

e. Change **COMPWARE.LCXNNN.SLCXLOAD** to the name of your Compuware Shared Services load library.

f. Change **COMPWARE.CX.DDIO** to the name of your DDIO file.

g. If this is the test version, change **STRBCSR** to **STRTCSR**.

2. Execute the job.

3. Make the following edits to DDIOCOB2:

   a. Supply a **JOB** statement.

   b. Change **STROBE.SSTRLOA**D to the name of your unauthorized Strobe load library.

   c. Change **COMPWARE.LCXNNN.SLCXLOAD** to the name of your Compuware Shared Services load library.

   d. Change **COMPWARE.CX.DDIO** to the name of the DDIO file you compiled to in DDIOCOB1.

   e. Change **PREFIX.JOBNAME.S001D001** to the name of the sample dataset Strobe generated in DDIOCOB1.

4. Execute the job.

Members DDIOPLI1 and DDIOPLI2 (not shown) provide the same functionality for testing a sample PL/I program. Member INDEXFOR (also not shown) provides similar functionality for testing a sample FORTRAN program without the use of DDIO. DDIOCOB1, DDIOCOB2, DDIOPLI1, DDIOPLI2, and INDEXFOR are included in the *hlq*.SSTRSAMP sample library dataset.

Task 5.6 Test in a Sysplex Environment

If you installed Strobe on several systems within an MVS sysplex, you can first determine that Strobe is correctly functioning in the sysplex environment, and then verify that the Strobe version you are using recognizes the other systems where Strobe is installed:

1. When you start Session Manager as described in Task 5.1.1 Start the Strobe Address Space on page 31 and you have installed Strobe in a sysplex environment, ensure that the following messages appear in the Session Manager log:

   – STR6169I Strobe environment is now created on system *sysname* (as member of XCF group *xcfgroup*)

   – STR6402I Strobe-XCF group members are: *localsysname sysname1 sysname2...sysnamenn*

2. To verify that Strobe is installed on other systems in the sysplex and that Strobe on each system recognizes the other installed versions, perform the following steps after you install the ISPF panels and start Strobe:

   a. From the Strobe – Add Queued Request panel, clear the System field and press Enter.

      Strobe lists all systems contained within the sysplex where a version of Strobe is installed.

   b. Submit a request to measure a job on each system listed in the XCF-GROUP, and verify it is successfully measured.

Milestone 6: Deploy Strobe

This milestone provides information to assist in deploying Strobe to other LPARs.

The Strobe installer is required for this milestone.

Task 6.1 Implement Deployment Methods

Strobe uses space switching system LX PC routines when the Measurement Services Address space (MSAS) or the SQL Agent Address space (SSA) is active. By doing so, when either address space terminates (normally or abnormally), the ASID used for that address space is no longer available for reuse until the system is IPLed again. All Strobe address spaces are meant to be persistent, although these LX PC routines may impact the availability of reusable ASIDs for sites running 24/7 operations.

Compuware recommends using one of the following two methods to deploy Strobe to another LPAR.

- **Method 1:** Conduct a full installation to ensure a smooth and correct Strobe installation for the LPAR.
- **Method 2:** If you do not require or want to conduct a complete SMP/E installation on another LPAR, you can instead copy the existing SMP/E Target libraries from one LPAR to the other LPAR. Follow the configuration tasks for each of the components. If there is an existing release of Strobe, follow the instructions in Milestone 4: Configure Strobe — Upgrade. Otherwise, use Milestone 3: Configure Strobe — New Installation.

Troubleshooting

This Strobe troubleshooting information can help you diagnose some common installation problems.

Typical Errors

Messages received when generating a profile for iStrobe that contains DB2 information and SQL Analysis has been requested.

******STR2968S FATAL ERROR, RC= 72 FROM SQLAF INIT

An attempt to connect to a DB2 subsystem has failed. Typically, this error is due to an invalid DB2 subsystem or the DB2 subsystem is not active on the LPAR that the Strobe Profile job is being executed on. Verify that the SSID from the sample file and 'PF=(SSID=????)' if coded is correct. Also, verify that the DB2 libraries accessed are compatible with the release of DB2 being used and that the LPAR that the profile job is being executed on can access that DB2 subsystem.

******STR2968S FATAL ERROR, RC= 76 FROM SQLAF INIT

An error occurred while attempting to CONNECT to Strobe's DB2 Plan STRANANA. Typically, this error is due to a failure to BIND or GRANT access to STRANANA. Please ensure that installation processes SBDB2INS or SBDB2UPG have been performed for each DB2 subsystem that Strobe will execute on.

******STR2968S FATAL ERROR, RC= 89 FROM SQLAF INIT

An invalid SQLCODE was returned while attempting to access DB2. Typically, this code is returned when DBRM STRDNMOD has not been properly bound. lease ensure that installation processes SBDB2INS or STRBDB2UPG has been executed and that the correct Collection ID has been bound into Strobe's plan STRANANA.

Compuware Customer Support may request output from the DB2 IVP, STRANVER (see below).

Strobe DB2 IVP – STRANVER

The installation verification program, STRANVER, creates a report showing which Strobe DB2 load modules are installed, analyzes the Strobe DB2 plan, collection, and packages for the correct DBRMs, and lists the DB2 execute authorizations. Member SQLAFVER in the *hlq*.SSTRSAMP sample library dataset provides JCL to run STRANVER.

To verify the installation, edit and run SQLAFVER against any DB2 subsystems where Strobe DB2 processing will be used:

3. Edit SQLAFVER as follows:
   a. Change the **CNTL** value to the name of your PDS that contains the copy of the Strobe sample library dataset.
   b. Change the **DB2.LOAD.LIB** value to the name of your DB2 load library that contains the DSNTIAR and connection modules.

c. Change the **STRBLIB** value to the name of your unauthorized Strobe load library (SSTRLOAD) that contains the Strobe SQL Analysis load modules.

d. Change the **STRBAUT** value to the name of your authorized Strobe load library (SSTRAUTH) that contains Strobe load modules.

4. Each time you verify a different DB2 subsystem, change the SSID to the ID of the DB2 subsystem you are targeting for the test.
5. Execute the job and read the SYSPRINT output to make sure the Load Module, Bind, and Grant permissions are correct for the DBRM versions that you are using.
   a. The load module version information should match the DBRM version information.
   b. That version should be bound into the STROBE collection.
   c. The STROBE collection should be bound into Strobe's plan STRANANA.
   d. The plan should have EXECUTE authorization granted to PUBLIC.
   e. The plan should also show that the SQL Agent Authorization ID has been granted TRACE and MONITOR2 authorization.
6. See Figure 10 on page 43 for SQLAFVER sample output.

Figure 10. Successful Sample SQLAFVER Run

```
Strobe* DB2 Installation Verification - Subsystem: DSN1

Load Module Information for Strobe DB2 modules found in //STRLIB:

        Load Module          DBRM Name          Load Module Version Information
        STRANMOD             STRDNMOD           180200 18FEB17 PTF SGABAS
        STRANSQL             STRDNSVC           180200 18FEB17 PTF SGABAS
        STRBDSNA             N/A                180200 18FEB17 PTF SGABAS
        STRBDSNM             N/A                180200 18FEB17 PTF SGABAS
        STRBDSNS             N/A                180200 18FEB17 PTF SGABAS
        STRBDSNY             N/A                180200 18FEB17 PTF SGABAS
        STRBDSN1             N/A                180200 18FEB17 PTF SGABAS
        STRBDSN4             N/A                180200 18FEB17 PTF SGABAS
        STRBD2PP             N/A                180200 18FEB17 PTF SGABAS
        STRBD2SQ             STRDFIFM           180200 18FEB17 PTF SGABAS
        STRBFIFA             N/A                180200 18FEB17 PTF SGABAS
        STRBFIFM             N/A                180200 18FEB17 PTF SGABAS
        STRBFIFR             N/A                180200 18FEB17 PTF SGABAS
        STRBFIFT             N/A                180200 18FEB17 PTF SGABAS
        STRBFIF0             N/A                180200 18FEB17 PTF SGABAS
        STRSQINT             N/A                180200 18FEB17 PTF SGABAS
        STRZD2SQ             STRDFIFM           180200 18FEB17 PTF SGABAS
        STRZED2              N/A                180200 18FEB17 PTF SGABAS

DBRM 'STRDNMOD' in //DBRMLIB is at VERSION '180200 18FEB17 PTF SGABAS' CONTOKEN X'195E529109BB848C'.

  A query against SYSIBM.SYSPACKAGE indicates that the following package versions for 'STRDNMOD' have been bound:

  Collection         VERSION                                CONTOKEN                 BINDTIME
  STROBE             180200 15FEB17 PTF SGABAS              X'195E529109BB848C'      2017-03-20-12.03.05.820045

DBRM 'STRDNSVC' in //DBRMLIB is at VERSION '180200 18FEB17 PTF SGABAS' CONTOKEN X'195E529109BB848C'.

  A query against SYSIBM.SYSPACKAGE indicates that the following package versions for 'STRDNSVC' have been bound:

  Collection         VERSION                                CONTOKEN                 BINDTIME
  STROBE             180200 15FEB17 PTF SGABAS              X'195E529109BB848C'      2017-03-20-12.03.05.920045

DBRM 'STRDFIFM' in //DBRMLIB is at VERSION '180200 18FEB17 PTF SGABAS' CONTOKEN X'195E529109BB848C'.

  A query against SYSIBM.SYSPACKAGE indicates that the following package versions for 'STRDFIFM' have been bound:

  Collection         VERSION                                CONTOKEN                 BINDTIME
  STROBE             180200 15FEB17 PTF SGABAS              X'195E529109BB848C'      2017-03-20-12.03.05.620045

A query against SYSIBM.SYSPACKLIST indicates that the following Collections are bound into Strobe  Plan 'STRANANA':

  Collection         Bind Timestamp
  STROBE             2017-03-20-12.04.49.060268

A query against SYSIBM.SYSPLANAUTH indicates that 'EXECUTE'  authority on Strobe Plan 'STRANANA' has been granted  to:

  Granted To         Granted By         Granted Timestamp
  PUBLIC             SYSADM             2017-03-20-12.03.06.559845
```

Compuware Customer Solutions

Visit the Compuware Support Center, **https://go.compuware.com**, to find product documentation, knowledge articles, and other technical resources. You can open a case with the Customer Solutions team, order products, and much more.

Contact Customer Solutions by phone:

- USA and Canada: 1-800-538-7822 or 1-313-227-5444.
- All other countries: Contact your local Compuware office. Contact information is available at **https://go.compuware.com**.

Visit Compuware on the web at **http://www.compuware.com** for additional product information.

Information for Customer Solutions

If you suspect a Strobe program or documentation problem, report the trouble to Customer Solutions. To help us resolve the problem, please include the following information:

General Information:

- Brief description of the issue
- Is it repeatable?
- Does the issue only occur on a specific LPAR or sub-system? If so, please describe.

Strobe measurement abends:

- Strobe session manager JES log
- Strobe SSA JES log for sites running DB2
- z/OS system log for the time when the error occurred
- Strobe log dataset
- Strobe sample dataset if available
- Dump if available.

Strobe session manager errors:

- Strobe session manager JES log
- Strobe SSA JES log for sites running DB2
- z/OS system log for the time when the error occurred
- Strobe log dataset
- Strobe sample dataset if available
- Dump if available.

Strobe/ISPF errors:

- Strobe log dataset
- Screen print of the Strobe/ISPF panel displaying the error message
- An account of the sequence of events leading up to the error
- Strobe/ISPF panel and option chosen
- Complete error message numbers.

Application or region abends:

- JES log from the abending address space
- Strobe session manager JES log
- Strobe SSA JES log for sites running DB2
- z/OS system log for the time when the error occurred
- Strobe log dataset
- Strobe sample dataset if available
- Dump if available.

Profile generation errors:

- Strobe sample dataset
- Profile JES log
- Generated XML if profile generated for iStrobe
- Dump if available.

Profiles with errors in Index Source Support:

- DDIO file
- Compiler SYSPRINT listing showing source program
- Strobe map dataset.

Profiles with errors in SQL Analysis (SQLAF) support:

1. Resubmit profile job with the following changes:

```
//SYSIN   DD *
DEBUG-4,PF=TRACE=31,     <== Add this to the beginning of SYSIN PARMs
```

2. Send in the entire output from the profile job.

Strobe DB2/SSA issues:

- Strobe session manager JES log
- Strobe SSA JES log for sites running DB2
- z/OS system log for the time when the error occurred
- DB2 master address space log (ssidMSTR) from the applicable DB2 subsystem
- Strobe log dataset
- Strobe sample dataset if available
- Dump if available.

Strobe MSAS issues:

- Strobe session manager JES log
- Strobe SSA JES log for sites running DB2
- z/OS system log for the time when the error occurred
- Strobe log dataset
- Strobe sample dataset if available
- Dump if available.

Strobe MNAS issues:

- Strobe MNAS JES log
- z/OS system log for the time when the error occurred
- Dump if available.

Strobe documentation problems:

- Description of the problem
- Book name and page number or help panel on which you found the problem.

To make it simpler for you to send this information to Compuware Customer Solutions, Strobe provides a packaging utility. Refer to the *Strobe User Guide* for more information.

Checklist of Milestones and Tasks

- ❑ Milestone 1: Ensure Installation and Configuration of Companion Products
  - ❑ Task 1.1 Install/Upgrade Enterprise Common Components
  - ❑ Task 1.2 Apply ECC Maintenance
  - ❑ Task 1.3 Update CMSC PARMLIB Member DDSN*nnnn*
  - ❑ Task 1.4 Import Strobe License
- ❑ Milestone 2: Install Strobe Using SMP/E
  - ❑ Task 2.1 Follow the Compuware Installer Guide
- ❑ Milestone 3: Configure Strobe — New Installation
  - ❑ Task 3.1 Allocate the Required Datasets
  - ❑ Task 3.2 Review External Security Considerations
    - ❑ **Task 3.2.1 Strobe Started Tasks**
    - ❑ **Task 3.2.2 User IDs**
  - ❑ Task 3.3 Integrate Strobe with MVS
    - ❑ **Task 3.3.1 Copy Runtime Libraries**
    - ❑ **Task 3.3.2 Authorize and Add the Strobe SSTRAUTH Library to the System LINKLIST Concatenation**
  - ❑ Task 3.4 Implement the Strobe PARMLIB Under CMSC
    - ❑ **Task 3.4.1 Create PARMLIB Member STRB00**
    - ❑ **Task 3.4.2 Review Strobe Parameters**
    - ❑ **Task 3.4.3 Update CMSC with STRB00**
  - ❑ Task 3.5 Configure the Strobe for DB2 Options
    - ❑ **Task 3.5.1 Bind Strobe DB2 Packages and Plan and Grant Required Privileges**
    - ❑ **Task 3.5.2 Create DB2 Explain Tables**
    - ❑ **Task 3.5.3 Validate Unicode Conversion Tables**
- ❑ Milestone 4: Configure Strobe — Upgrade

- Task 4.1 Allocate the Required Datasets and Provide Migration Information
- Task 4.2 Migrate Strobe Requests
  - **Task 4.2.1 Stop Strobe Session Manager**
  - **Task 4.2.2 Verify and Execute the $09MGSTR job**
- Task 4.3 Integrate Strobe with MVS
  - **Task 4.3.1 Copy Runtime Libraries**
  - **Task 4.3.2 Authorize and Add the Strobe SSTRAUTH Library to the System LINKLIST Concatenation**
- Task 4.4 Implement the Strobe PARMLIB Under CMSC
  - **Task 4.4.1 Strobe Parameter Migration**
  - **Task 4.4.2 Strobe Parameters To Review**
  - **Task 4.4.3 Update CMSC with STRB00**
- Task 4.5 Configure the Strobe for DB2 Options
  - **Task 4.5.1 Bind Strobe DB2 Packages**

Milestone 5: Verify Product Installation

- Task 5.1 Start and Configure Strobe for Testing
  - **Task 5.1.1 Start the Strobe Address Space**
  - **Task 5.1.2 Verify the Strobe CLIST**
- Task 5.2 Measure a Sample Program
- Task 5.3 Create a Performance Profile
- Task 5.4 Verify Strobe for DB2/DDF and SQL Analysis
- Task 5.5 Create a Performance Profile with Indexed Source Support
- Task 5.6 Test in a Sysplex Environment

Milestone 6: Deploy Strobe

- Task 6.1 Implement Deployment Methods