



IBM DB2 Fast Copy Solution Pack for z/OS Overview and Customization

Version 1 Release 2



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Version 1 Release 2

Note:

Before using this information and the product it supports, read the "Notices" topic at the end of this information.

First Edition (September 2015)

This edition applies to Version 1 Release 2 of IBM DB2 Fast Copy Solution Pack for z/OS (product number 5697-DFM) and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this information

IBM DB2 Fast Copy Solution Pack for z/OS, Version 1 Release 1 combines several IBM components into a consolidated solution that leverages fast replication technology to optimize availability, performance, and resource utilization when you back up, recover, and clone DB2 subsystems or DB2 objects.

IBM DB2 Fast Copy Solution Pack for z/OS contains the following components:

- IBM DB2 Cloning Tool for z/OS Version 3.1
- IBM DB2 Recovery Expert for z/OS Version 3.1

These topics provide an overview of the components and capabilities that are delivered with IBM DB2 Fast Copy Solution Pack for z/OS and some common usage scenarios to help you understand the capabilities of the product. These topics also provide comprehensive instructions for customizing the solution pack after a successful SMP/E installation.

These topics are designed to help database administrators, system programmers, application programmers, and system operators perform the following tasks:

- Understand the capabilities of the functions that are associated with the solution pack
- Perform the pre-customization tasks for the components
- Customize the components of the solution pack
- Troubleshoot any errors that might occur during the customization process

To use the functions that are described in this information, you must have already installed IBM DB2 Fast Copy Solution Pack for z/OS by completing the SMP/E installation process that is documented in the program directory for IBM DB2 Fast Copy Solution Pack for z/OS, GI10-8934

To use these topics, you should have a working knowledge of:

- The z/OS operating system
- ISPF

Always check the DB2 Tools Product Documentation page for the most current version of this information:

<http://www.ibm.com/software/data/db2imstools/db2tools-library.html>

Chapter 1. DB2 Fast Copy Solution Pack overview

IBM® DB2® Fast Copy Solution Pack for z/OS® (also referred to as DB2 Fast Copy Solution Pack) combines powerful DB2 tools that help maintain highly available and fully recoverable DB2 production environments. You can copy these environments in near-real time to meet business requirements for business intelligence, testing, or training, with minimal or no disruption to source systems.

What is IBM DB2 Fast Copy Solution Pack for z/OS?

IBM DB2 Fast Copy Solution Pack for z/OS is a set of functionally compatible components that help you to quickly and efficiently back up, clone, and recover DB2 subsystems or DB2 objects on an enterprise scale.

DB2 Fast Copy Solution Pack includes the following components:

- IBM DB2 Cloning Tool for z/OS (also referred to as DB2 Cloning Tool)
- IBM DB2 Recovery Expert for z/OS (also referred to as DB2 Recovery Expert)

DB2 Cloning Tool

DB2 Cloning Tool meets your business requirements for creating and maintaining multiple operational environments that you might use to offload query processing to a different subsystem, test DB2 version migrations, or train users of your software. You can create fully operational clones of entire DB2 subsystems. DB2 Cloning Tool can also clone DB2 database objects directly from your existing data sets in DB2, such as catalogs, directories, table spaces, or index spaces. DB2 Cloning Tool performs these operations in a fraction of the time and cost that traditional methods require, significantly reducing downtime on your production systems. Use DB2 Cloning Tool with fast replication technology to achieve the greatest cost savings.

DB2 Recovery Expert

DB2 Recovery Expert is a high availability backup and recovery solution for local or disaster recovery environments that makes nearly instantaneous backups of DB2 subsystems, table spaces, or index spaces.

If you adopt fast replication technology with this solution, DB2 Recovery Expert can generate system-level backups, which are mirror copies of an entire DB2 environment at a point in time. DB2 Cloning Tool can then use the system-level backups as input to clone multiple instances of your DB2 subsystems without disrupting your production environments.

You can back up the entire subsystem or just individual table spaces (applications). If you implement fast replication technology to offload processing cycles from z/OS to the storage processor, your production systems and applications remain available while you take your backups. If an outage requires you to recover quickly, DB2 Recovery Expert restores your data much faster than traditional tools, whether you are recovering a dropped object, an application, or an entire DB2 subsystem.

Benefits

The IBM DB2 Fast Copy Solution Pack for z/OS protects your business from unplanned outages or disasters with minimal disruption to your production systems, and enables you to maintain as many independent DB2 environments as you require for business intelligence, testing, or training.

Consider the benefits of the solution as a whole, and the related advantages of its individual components:

- Benefits of DB2 Fast Copy Solution Pack
- Benefits of DB2 Cloning Tool
- Benefits of DB2 Recovery Expert

Benefits of DB2 Fast Copy Solution Pack

DB2 Fast Copy Solution Pack ensures that you can immediately recover from virtually any outage scenario, while drastically reducing the time and money that you spend creating recovery assets, image copies, and clones. The solution greatly reduces the total cost of ownership of a DB2 subsystem.

DB2 Cloning Tool and DB2 Recovery Expert are faster than traditional tools, thereby keeping resource utilization to an absolute minimum. They can exploit the power of fast replication by transferring copy operations to the storage processor instead of z/OS. Fast replication enables you to save valuable CPU and I/O resources for other critical business processes.

DB2 Fast Copy Solution Pack enables you to standardize processes and tooling across all your lines of business. The solution provides easy-to-use features that handle most technical issues for you behind the scenes, such as verifying recovery resources or managing storage options automatically.

The DB2 Fast Copy Solution Pack offers this unique combination of benefits:

- High availability
- Minimal resource utilization
- The ability to create and maintain multiple production-level environments
- Automated and standardized processes

High availability

The DB2 Fast Copy Solution Pack helps you to meet your service level agreements and maintain brand loyalty and good will. In a global enterprise with 24x7 online access, even a short period of downtime can cost millions of dollars. Protect customer satisfaction, revenue, and profits by keeping your data online as you back up, clone, or recover your data in near-real time.

A global enterprise can no longer afford to rely on time-consuming, manual recovery processes that are not scalable. While maintenance windows shrink and data volumes grow, you have to back up all your data more frequently. You no longer have the luxury of performing backup and recovery the traditional way.

DB2 Fast Copy Solution Pack keeps your DB2 production systems online. DB2 Recovery Expert can generate near-instantaneous system-level backups without affecting running applications. DB2 Cloning Tool can then use the backups to create or refresh cloned subsystems. This approach

enables you to maintain high availability as you create, maintain, and refresh multiple environments. For more information, see “Scenario: Cloning a DB2 subsystem from a specified point in time” on page 14.

Minimal resource utilization

DB2 Fast Copy Solution Pack provides high availability and reduces cost. You can back up, clone, and recover your DB2 environments in a fraction of the time that traditional tools require, regardless of your storage vendor. By taking system-level backups or copies on a more frequent basis and re-purposing the backups, you gain flexibility and reduce the need for image copies.

Fast replication

You can drastically reduce production downtime and copying overhead on z/OS by using storage-aware fast replication tools, such as IBM FlashCopy[®], in combination with the DB2 Fast Copy Solution Pack.

Requirement: Fast replication is required to perform system-level backups.

Although DB2 Fast Copy Solution Pack can recover your data faster than traditional methods without fast replication, you can reap tremendous performance benefits by using the storage processor to copy the data instead of using processing cycles on z/OS.

Fast replication technology enables you to back up your production systems more frequently because they remain online while the storage processor handles the copying. Unlike zIIP offload processing, you consume no CPU or I/O on z/OS to back up or copy your data.

Volume copying enables you to create system-level backups and clone entire subsystems. DB2 Fast Copy Solution Pack supports most fast replication products that use integrated copy blades for volume copying, including the following point-in-time (PIT) copy products:

- IBM FlashCopy
- IBM DFSMSdss
- EMC TimeFinder
- STK Snapshot
- HDS ShadowImage

You can also use fast replication technology to reduce storage requirements for target volumes. For more information about space efficient volumes, see the “Scenario: Cloning to space efficient target devices to reduce storage requirements” on page 15.

Cost effectiveness

The following examples summarize some of the most important cost savings:

- Offload copy operations to the storage processor by using fast replication technology.
- Take more frequent backups.

- Re-purpose your system-level backups to create and maintain production-level cloned environments.
- Save CPU and I/O resources by virtually eliminating the need to create image copies from production systems.
- Restore from a system-level backup or image copy, and then perform log-based recovery to restore to the point in time that you specify.
- Use the *recovery analysis* features in DB2 Recovery Expert to determine the fastest possible way to recover objects, applications, or groups of objects.
- Use recovery analysis to evaluate alternative recovery plans that satisfy different needs.
- Devote valuable database administrator (DBA) resources to other projects.

Balance requirements for fast recovery and copy time

You have the flexibility to choose between a faster recovery and a more precise, log-based SQL recovery. If your last backup was at 1:00 PM, and at 2:00 PM you discover that an application error caused a bad update to a table, you might require the fastest option, which is to recover the table space to the point in time just before the error. DB2 Recovery Expert can also identify the bad transaction and undo it by generating UNDO SQL.

As another example, consider a situation in which your latest backup was taken on Friday afternoon. On Saturday, schema changes occurred that you want to preserve. Although the fastest way to recover is to restore from Friday's backup, you can also use log-based recovery to include Saturday's changes.

Multiple production-level environments

In the past, point-in-time copies at the volume level have been used almost exclusively as disaster recovery backups. By using DB2 Fast Copy Solution Pack, you can now create and maintain image copies and clones for business intelligence, system or application testing, and training environments. See “Scenario: Business cases for DB2 Fast Copy Solution Pack” for more information.

DB2 Recovery Expert can create traditional image copies by using a system-level backup as input. You can then use these image copies as input to the DSN1COPY, RECOVER, UNLOAD, or LOAD utilities.

Automated and standardized processes

Protect your data by deploying automated solutions that rely on fully documented and scripted recovery plans, drastically reducing, and in some cases eliminating, the need for manual intervention in crisis situations. Simplify your cloning processes by standardizing on automated approaches across your lines of business. Manage processes and compliance by using the robust reporting capabilities that are built into the solution.

Benefits of DB2 Cloning Tool

DB2 Cloning Tool can dramatically reduce the cost of traditional cloning methods, regardless of your storage vendor. You can clone your infrastructure, your data, or both. You can make exact copies of subsystems, table spaces, or index spaces. If the

entire DB2 subsystem is not required, you have the flexibility to clone just an application. You can perform these clones while your system is online, without affecting availability or access to the objects that you are cloning. By using *log apply* technology to read the logs and apply changes to the cloned objects, DB2 Cloning Tool can synchronize all objects to a consistent point in time.

The tool can mask social security numbers, credit card information, or other sensitive data to help you meet data governance and auditing requirements.

Because DB2 Cloning Tool can automatically rename and catalog data sets and fix internals, you can create your clones on the same logical partition (LPAR). *Conditioning* features enable you to avoid volume conflicts automatically by updating the internal volume serial number, the volume table of contents (VTOC), the volume index (VTOCIX), and the VSAM volume data set (VVDS).

DB2 Cloning Tool automates the end-to-end process for you in the following ways:

- Updates the DB2 Catalog and DB2 Directory with required changes
- Updates the object identifiers for your data sets by performing OBID translation
- Resets relative byte addresses (RBA) and log record sequence numbers (LRSN) to make the cloned objects accessible on the target system
- Creates data description language (DDL) for cloned objects so that you can re-create them at any time

In addition to fast and automated copying, DB2 Cloning Tool can also drastically reduce cost. The circles in the following illustration, which represent CPU utilization, illustrate the cost savings that you can achieve. You can avoid CPU costs that are related to unloading your data, loading your data, and rebuilding indexes on target volumes by using DB2 Cloning Tool instead of traditional methods. As the following figure shows, CPU utilization can become very high if you have many indexes to rebuild:

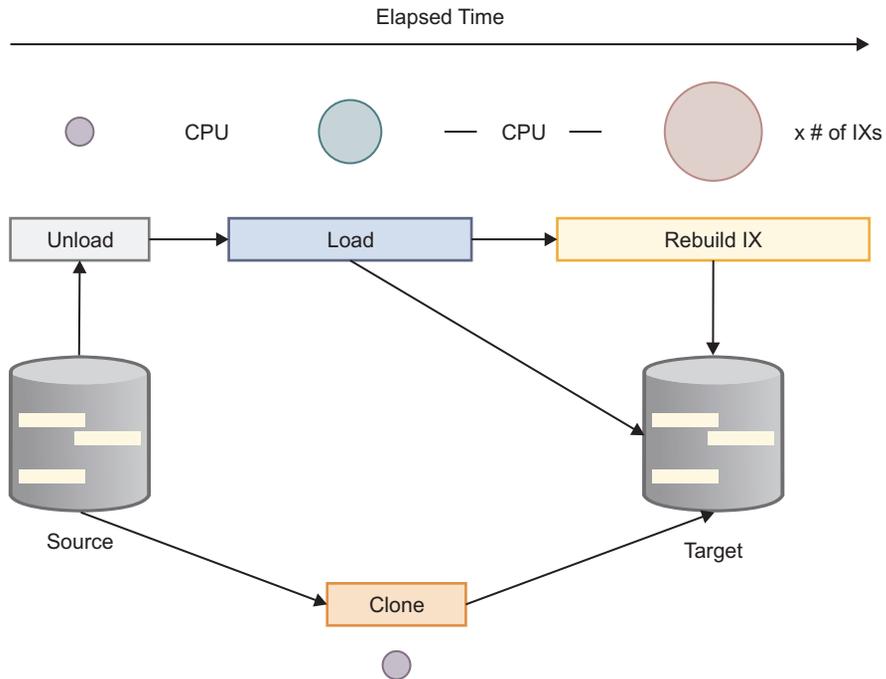


Figure 1. DB2 Cloning Tool eliminates costly unloading, loading, and rebuilding operations

DB2 Cloning Tool works with DB2 Recovery Expert to maximize availability and efficiency when your business requires multiple production-level environments.

Availability

Maintain 24x7 online access to your data. Keep production downtime to a minimum by creating your clones from system-level backups that were generated by DB2 Recovery Expert.

Data warehousing

Reduce the workload on your production systems by offloading business intelligence queries, data mining activities, and business reporting to data warehouses.

Testing environments

Provide quality assurance staff and other stakeholders with testing environments that simulate actual production workloads and stress levels. Analysis of production-level defect data reveals that nearly all reported problems with migrations and new releases do not appear until the systems are running under heavy production workloads.

You can also use DB2 Cloning Tool to test applications on a cloned subsystem that you have upgraded to a newer release of DB2.

Training environments

Create training environments that help users to learn about your products under production-level conditions.

Benefits of DB2 Recovery Expert

Businesses that rely on available data cannot tolerate unplanned outages, regardless of the cause. Lost data and downtime are costly, and availability is critical.

DB2 Recovery Expert can help you restore business operations fast, whether the outage is due to hardware, software, operational, or environmental causes. If your business operations are exposed to a significant loss of data as a result of a disaster, ensure that you can recover mission critical information immediately. Create disaster recovery plans that give you confidence, protect your data, and minimize cost. Without a reliable recovery plan, the potential effects on customer satisfaction, customer loyalty, revenue, and profit are incalculable. If too much recovery time is devoted to thinking, you cannot recover fast enough.

Information management professionals measure recovery in these terms:

Recovery time objective (RTO)

How much downtime can your business afford?

Recovery point objective (RPO)

How much data can you afford to lose?

The following examples describe some of the scenarios that DB2 Recovery Expert can address:

- An unplanned outage blocks or disrupts access to your data.
- An error in a batch program corrupts your data on a large scale.
- You make changes to the schema of your DB2 databases, only to discover that you must back them out.

The following benefits demonstrate the comprehensive backup and recovery capabilities of DB2 Recovery Expert:

Business requirements

Use DB2 Recovery Expert to help you meet your service level agreements (SLAs) and achieve the precise RTO and RPO that your business requires. Optimize RPO by creating backups more frequently, without downtime or business interruption.

Efficient, recoverable backups

Back up your entire production environment in seconds

DB2 Recovery Expert simplifies and automates the creation of system-level backups. Instead of running hundreds or thousands of backup jobs each night, you can back up all your DB2 data in a single job. You can then use that single backup for multiple purposes, such as restore operations, creating image copies, or cloning procedures.

You can combine all DB2 volumes with other data volumes that you specify to create a single system-level backup in near-real time, regardless of your storage vendor. By using storage-aware fast replication tools, such as FlashCopy, you can offload system-level backups to tape immediately and reduce the amount of storage that is required for target volumes.

Back out schema changes

If you perform multiple schema changes throughout the week, you can quickly back out some or all of them.

Fast, automated, and intelligent recovery

Intelligent recovery

DB2 Recovery Expert customizes your recovery jobs by calculating cost-based recovery estimates in real time and generating optimized JCL for your backup jobs. You can use DB2 Recovery Expert to rebuild damaged indexes, recover dropped objects, and analyze application relationships. Intelligent recovery managers and disaster recovery managers analyze and verify your assets and optimize your procedures. Health check functionality validates your ability to recover to selected points in time.

SQL-based recovery

Balance your requirements for recovery time and data integrity by using SQL-based recovery to restore the current state of your data from a previous point in time.

DB2 Recovery Expert can generate UNDO or REDO SQL to perform recoveries. You can use these features to recover data in a single table that is in a table space that contains multiple tables.

Parallel recovery

You can achieve significantly greater performance by configuring DB2 Recovery Expert to deploy multiple jobs that run in parallel to process your recovery.

Optimized processes

Use DB2 Recovery Expert to maintain a common backup and recovery process instead of leaving it to IT staff in different application groups to take independent responsibility for creating backup resources.

The following capabilities help you to streamline your common processes:

- Minimize the number of jobs that are required to recover.
- Eliminate error-prone manual processes by generating optimized and accurate plans, jobs, and JCL.
- Identify your most critical assets automatically.

Business continuity

The following capabilities ensure that your data is trustworthy and consistent across your lines of business:

- Maintain data consistency and integrity by freezing in-flight work and reducing your reliance on image copy restores of different database management systems.
- Detect and recover related objects automatically.
- Synchronize your application data by recovering the data for each application to the same point in time.
- Synchronize your z/OS data with your distributed data.

The following figure shows the wide range of data inputs and outputs that are supported by DB2 Recovery Expert:

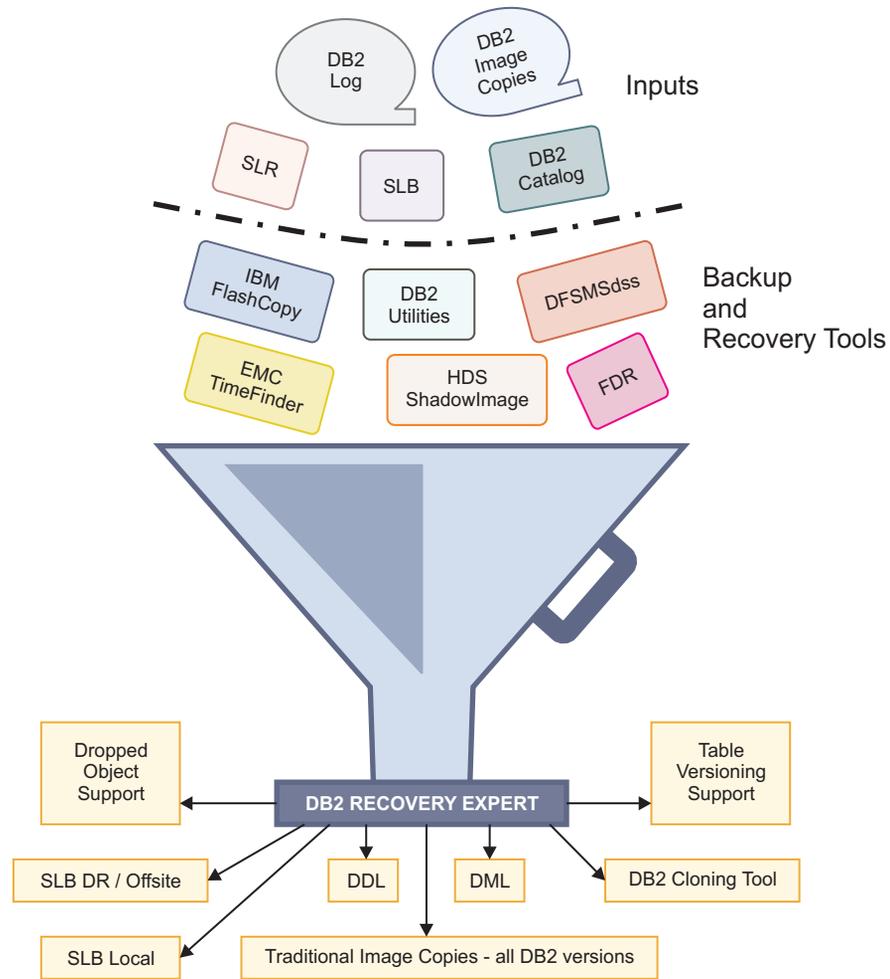


Figure 2. Supported data inputs and outputs for DB2 Recovery Expert

If you are not familiar with the abbreviations, data objects, tools, or languages that are described in the figure, use the following descriptions as a guide:

Inputs

Recovery Expert uses the following data sources as inputs:

DB2 log

A collection of data sets that consists of records that sequentially describe the events that occur in a DB2 subsystem.

Bootstrap data set (BSDS)

A data set that contains recovery information for the entire DB2 system, including a catalog of all the log data sets.

DB2 image copies

Exact reproductions of all or part of a table space, typically used to recover an object in place.

Schema-level repository (SLR)

A historical copy of the DB2 catalog that DB2 Recovery Expert can use to recover dropped objects and previous versions of objects.

System-level backup (SLB)

A volume level copy on disk or tape of all DB2 data sets. You can use a system-level backup for recovery operations, or to generate image copies and clones.

You can restore a system-level backup more quickly and easily than restoring your DB2 subsystem from image copies. You can also recover all DB2 objects to a specified point in time by applying log changes to a system-level backup. A single pass through the logs is typically sufficient.

DB2 catalog

A repository that contains definitions of database objects, such as tables, columns, and views, in data description language (DDL) format. The catalog contains important recovery information about how to recover database objects.

Backup and recovery tools

IBM FlashCopy

A fast replication storage technology that uses a combination of hardware and software to copy data sets or volumes at a specific point in time. Target volumes become available for processing immediately, with full read and write access.

Immediately after you issue FlashCopy commands, DB2 Cloning Tool can convert the replicas into usable clones.

DB2 utilities

- RECOVER
- LOAD
- UNLOAD
- CHECK DATA
- CHECK INDEX
- REPAIR
- DB2 BACKUP SYSTEM
- DB2 RESTORE SYSTEM
- DSN1COPY
- BIND

DFSMSdss

A base element of z/OS that is a functional component of the data facility storage management system (DFSMS). DFSMSdss provides data set services, such as functions for copying, moving, dumping, and restoring data sets and volumes.

EMC TimeFinder

A family of fast replication software from EMC that provides local storage replication.

HDS Shadow Image

A fast replication product from Hitachi Data Systems that provides point-in-time copying capabilities for Hitachi storage platforms.

Fast Dump Restore (FDR)

A management system from Innovation Data Processing that you can use to copy a system-level backup directly to tape.

Outputs (recovery resources, functions)

Dropped object support

Enables you to recover database objects that were dropped accidentally.

Table versioning support

Also called *schema version recovery*, features in DB2 Recovery Expert that use a schema-level repository to recover any dropped, altered, or re-created object to any previous version, including the data.

SLB DR/Offsite

A system-level backup for disaster recovery or tertiary site recovery. Your disaster recovery strategy might include sending system-level backups offsite by using a remote tape drive or a Virtual Tape System (VTS) on DASD.

DDL

Data description language that describes database objects, such as tables, indexes, and views. You can use DDL to re-create database objects on local or remote subsystems.

DML

Data manipulation language that DB2 Recovery Expert can use to recover selected objects to a specified point in time by inserting, updating, or deleting data in the database.

DB2 Cloning Tool

IBM DB2 Cloning Tool for z/OS can clone multiple operational DB2 subsystems from the system-level backups that RE creates.

SLB Local

A system-level backup that you can use at the local site to create cloned subsystems, recover applications at the object level, or recover entire subsystems.

Traditional Image Copies

Exact reproductions of all or part of a table space, typically used to recover an object in place. Some sources refer to traditional image copies as *object-level sequential backups*. DB2 Recovery Expert can create traditional image copies by using these inputs:

- System-level backups
- FlashCopy image copies in VSAM format that DB2 Recovery Expert created previously

Scenario: Business cases for DB2 Fast Copy Solution Pack

These scenarios demonstrate how DB2 Fast Copy Solution Pack helps you to meet critical business requirements for backup, cloning, and recovery.

Maintain data consistency across applications

A health care provider has several applications that use both DB2 and CICS® data. The business requires consistent backups across applications and the ability to recover from disasters with confidence.

The company meets the following critical business objectives by using DB2 Recovery Expert to create system-level backups:

- The company can now restore DB2 and CICS VSAM data to a consistent point in time.
- The business now meets its service level agreements for recovery point objective (RPO) and recovery time objective (RTO).
- The backup window for the IT organization is now minutes instead of hours.
- The company now ships backups to disaster recovery sites by using a Virtual Tape System (VTS).

Perform quality assurance testing under real-world conditions

- A large financial services company had stringent business requirements for testing and problem determination. Their quality assurance staff was unable to perform their tests on current versions of their production systems because their business could not afford to take their DB2 subsystems offline long enough to make the copies.

By using DB2 Cloning Tool, they now create three to five DB2 subsystems per week from specific points in time. By restoring system-level backups and copying them to different environments, the company meets its testing needs without interruption to their production systems.

- A large insurance company created heterogeneous system (HSC) copies of multiple SAP instances for development and unit testing. During peak periods of development, they had dozens of SAP instances. Because the copying process for a single SAP instance required two to three days to complete, they copied their systems only once or twice a month.

DB2 Cloning Tool reduced processing time to just minutes. Because the time savings are so dramatic, they can now clone their systems up to eight times a week when development activity is at its peak.

The company discovered many additional ways to use DB2 Fast Copy Solution Pack to analyze and test real-world environments. In a staged series of enhancements to its quality assurance capabilities, the IT department also implemented the following improvements:

- Created point-in-time clones of their DB2 environments to test any and all stages of the development process
- Tested migrations under real-world conditions
- Identified and fixed defects prior to release by testing their DB2 systems under heavy production workloads that reflected production conditions
- Performed function testing and stress testing on the latest level of their production systems by refreshing cloned DB2 environments
- Isolated DB2 subsystems to test an application or functional area without disrupting other applications
- Analyzed the root causes of logical data corruption by performing forensic analysis on a clone of their DB2 production system

Validate backups ahead of time

A large retailer regularly backed up multiple SAP instances running on DB2, and the features available in the base utilities did not provide a complete solution.

The company now uses DB2 Recovery Expert to create system-level backups, which provides the following advantages:

- They have now automated, enhanced, and standardized the recovery process for their DB2 subsystems.
- They now have full confidence in their ability to recover applications from system-level backups.
- They can now validate that all their data is included in a system-level backup.
- The tool can report on any invalid objects before taking a system-level backup.
- They can now restore their SAP environment without affecting the Hyperswap configuration for their geographically dispersed parallel sysplex (GDPS®).

Run reports and queries offline

- A large insurance company deployed a new customer reporting application that required three hours to generate daily reports. However, the maintenance window was only two hours. The company used DB2 Cloning Tool with space efficient FlashCopy to reduce their maintenance window and increase application availability.

The following results greatly increased their access to timely business information while maintaining availability:

- The IT department can now clone and condition a very large DB2 subsystem in a matter of minutes.
 - The business meets its requirements for application availability by using the clone as the data source for the daily reports.
 - Because they can easily repeat the process, the company deletes and re-creates the clone nightly to ensure data currency.
- A global auto parts company was unable to run reports on a current version of its data because it took 11 hours to clone an SAP environment that was running on multiple DB2 subsystems. DB2 Cloning Tool reduced cloning time to minutes. Now that they can clone their systems in a fraction of the time, the company is making their copies on a weekly basis instead of monthly. Business analysts now have access to timely and accurate information for critical business decisions.

Administer recovery assets efficiently

A large financial institution has to back up and manage multiple DB2 subsystems. The administration of their recovery assets is complicated and time consuming.

The Intelligent Recovery Manager in DB2 Recovery Expert can reduce the complexity of the overall backup and recovery process in the following ways:

- Database administrators (DBAs) now have an information repository that can record, track, and report on system backups for all DB2 subsystems in a single location.
- DBAs now use the sophisticated infrastructure and metadata in DB2 Recovery Expert to coordinate database management systems (DBMSs) and storage processors automatically.
- The IT organization can now analyze its backup and recovery resources to identify configuration issues ahead of time.

- The company greatly reduces the amount of storage it requires by utilizing storage efficient fast replication technology to provide a pool of shared DASD (direct access storage devices).
For more information, see the “Scenario: Cloning to space efficient target devices to reduce storage requirements” on page 15.

Scenario: Cloning a DB2 subsystem from a specified point in time

An organization can use DB2 Fast Copy Solution Pack to create or refresh a clone from a system-level backup, thereby enabling that organization to clone entire subsystems from the point in time when the backup was taken. This process can be accomplished without disruption to the production system.

Consider the following scenario in which a database administrator (DBA) at a large financial services company needs to create test environments that can reproduce the data volume of the production system. Migration testing currently occurs on subsystems with workloads that are too small. A great number of defects appear after the production system is online, which interferes with application processing and creates customer dissatisfaction.

By using DB2 Recovery Expert and fast replication, the DBA creates a system-level backup directly from the source DB2 subsystem without disrupting production. *Storage-based consistency* features in DB2 Recovery Expert enable her to suspend access to the production system for less than a second and still preserve transactional consistency. The DBA can then create cloned DB2 subsystems for testing directly from the system-level backup.

The following figure illustrates how DB2 Cloning Tool can use a system-level backup that was generated by DB2 Recovery Expert to create or refresh a clone of a DB2 subsystem:

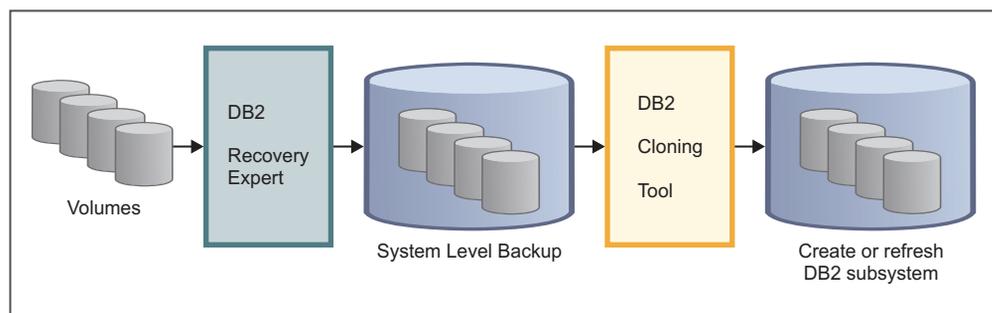


Figure 3. Using DB2 Fast Copy Solution Pack to clone, re-purpose, and maintain multiple DB2 subsystems

First, she creates a system backup profile in DB2 Recovery Expert. At build time, DB2 Recovery Expert passes the information in the system backup profile to the backup job. The profile specifies the source volumes, their related target units, the backup type, and the number of generations to keep. The DBA can edit, rename, reuse, or delete the backup profiles. Because the DBA plans to use the *log apply* features of DB2 Recovery Expert in the future to restore the production system to a point in time, she configures the subsystem for the most complete and accurate restoration before she creates her backup profiles. For more information, see “Creating system backup profiles.”

The next step is to build and submit a backup job from the system backup profile. See “Creating a system backup.”

In DB2 Cloning Tool, she then uses the system-level backup to generate and re-purpose cloned subsystems. For more information, see “DB2 subsystem cloning from other system level backups when backup volumes are online” or “DB2 subsystem cloning from other system level backups when backup volumes are offline.”

The DBA can now create cloned subsystems to perform testing under production workloads. She can generate as many clones as she needs and use log apply to restore the data to subsequent points in time, even if the production system is offline or unavailable. She can examine the subsystem clone setup in DB2 Recovery Expert to determine whether her cloning operations are ready.

In later stages of implementation, she also deploys clones to serve as data warehouses and training environments.

For more information about how system-level backups and cloned subsystems can help you to meet mission critical business requirements, see “Scenario: Business cases for DB2 Fast Copy Solution Pack” on page 11.”

Scenario: Cloning to space efficient target devices to reduce storage requirements

An IT organization can greatly reduce its requirements for allocated storage on target volumes by using IBM FlashCopy SE to save clones, image copies, and backups to space efficient target devices.

In the business case “Scenario: Cloning a DB2 subsystem from a specified point in time” on page 14, a database administrator at a large financial services company resolves issues with migration testing by using DB2 Recovery Expert and DB2 Cloning Tool to clone and refresh multiple DB2 subsystems for stress testing. Now that the company is testing its applications under production conditions and finding defects earlier in the migration process, the IT department wants to leverage fast replication technology to save storage. A storage administrator is assigned to learn more about how *space efficient storage* can save the company money.

He learns that, in addition to virtually eliminating CPU and I/O utilization on the DB2 subsystems that they use for production, the IT department can also reduce the amount of physical storage that they require. For cloning operations that move data directly to tape, the IT department can leverage the space-efficient storage capabilities of IBM FlashCopy SE.

Full background copies do not require space efficiency because target volumes must equal or exceed the physical capacity of source volumes. But the IT department does not always require a full background copy. Sometimes they copy their data directly to tape, which means that they are running with a **NOCOPY** option in effect. The storage administrator learns that his organization can save physical storage in these situations by deploying *space efficient volumes*.

FlashCopy SE pools the storage requirements of multiple source volumes into a common repository that is *thinly provisioned*, which means that it is physically

smaller than the full capacity of the source volumes. FlashCopy SE maps the data in the repository to virtual target volumes that are transparent to z/OS.

The following figure illustrates how FlashCopy SE uses a thinly provisioned repository with smaller capacity than the source volumes to map your data to virtual target volumes:

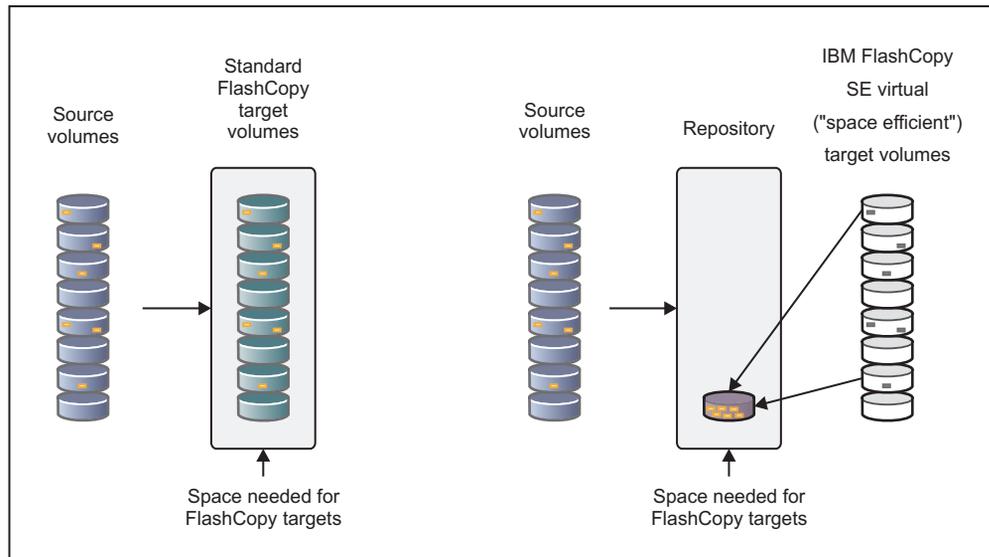


Figure 4. Comparison of traditional storage allocation with space efficient volumes managed by IBM FlashCopy SE

Because the repository is an object within an *extent pool*, the storage does not initially occupy physical space. FlashCopy SE can allocate storage as it writes data to the repository. Because the writes occur against cache resources, and the de-staging process from cache to disk is asynchronous, this *copy on write* process has no effect on the performance of the production system.

The organization greatly reduces its storage requirements by implementing space efficient storage for target volumes.

Tools Customizer overview

IBM Tools Customizer for z/OS (also referred to as Tools Customizer) standardizes many of the customization processes that are required to customize IBM Tools that run on z/OS. Tools Customizer is a component of IBM Tools Base for z/OS.

Tools Customizer provides a consistent ISPF interface to ensure that the customization process is the same for all IBM Tools products and solution pack components. It also provides the ability to "discover" parameter values from products or solution pack components that you previously customized manually or by using Tools Customizer.

Features and benefits

Tools Customizer provides the following features:

- A single, consistent ISPF interface ensures that the customization process is the same for all IBM Tools products and solution pack components.

- A Discover EXEC discovers values for common product, LPAR, and DB2 parameters from a product or solution pack component that you previously customized manually or by using Tools Customizer. Each IBM Tools product and solution pack component has a unique Discover EXEC. The discovered parameters are stored in the data store. If the product or solution pack component that you want to customize exists in the Tools Customizer data store, Tools Customizer issues a warning before it overwrites existing values. Use the Discover EXEC by issuing the DISCOVER command on the Customizer Workplace panel.
- The data store retains discovered and manually specified parameter values. Because the parameter information is persistently stored, you have to manually specify or discover parameter values only once. Tools Customizer uses these parameter values where they are applicable.
- A metadata repository contains the members that define the following customization attributes for products and solution pack components:
 - Parameters, tasks, and steps for the product or solution pack component to be customized. Some product or solution pack parameters, tasks, and steps are required.
 - LPAR parameters for the local LPAR. All of the LPAR parameters are required.
 - DB2 parameters for the DB2 subsystem, DB2 group attach name, or DB2 data sharing member on which you will customize the product or solution pack component. All of the DB2 parameters are required.
- Default values are provided for product parameters and solution pack component parameters, LPAR parameters, and DB2 parameters. The default values show examples of how to complete fields.

Service updates and support information

Service updates and support information for this product, including software fix packs, PTFs, frequently asked questions (FAQs), technical notes, troubleshooting information, and downloads, are available from the web.

To find service updates and support information, see the following website:

http://www.ibm.com/support/entry/portal/Overview/Software/Information_Management/DB2_Tools_for_z~OS

Product documentation and updates

DB2 Tools information is available at multiple places on the web. You can receive updates to DB2 Tools information automatically by registering with the IBM My Notifications service.

Information on the web

The DB2 Tools Product Documentation web page provides current product documentation that you can view, print, and download. To locate publications with the most up-to-date information, refer to the following web page:

<http://www.ibm.com/software/data/db2imstools/db2tools-library.html>

You can also access documentation for many DB2 Tools from IBM Knowledge Center:

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

Search for a specific DB2 Tool product or browse the **Information Management > DB2 for z/OS family**.

IBM Redbooks® publications that cover DB2 Tools are available from the following web page:

<http://www.redbooks.ibm.com>

The Data Management Tools Solutions website shows how IBM solutions can help IT organizations maximize their investment in DB2 databases while staying ahead of today's top data management challenges:

<http://www.ibm.com/software/data/db2imstools/solutions/index.html>

Receiving documentation updates automatically

To automatically receive emails that notify you when new technote documents are released, when existing product documentation is updated, and when new product documentation is available, you can register with the IBM My Notifications service. You can customize the service so that you receive information about only those IBM products that you specify.

To register with the My Notifications service:

1. Go to <http://www.ibm.com/support/mysupport>
2. Enter your IBM ID and password, or create one by clicking **register now**.
3. When the My Notifications page is displayed, click **Subscribe** to select those products that you want to receive information updates about. The DB2 Tools option is located under **Software > Information Management**.
4. Click **Continue** to specify the types of updates that you want to receive.
5. Click **Submit** to save your profile.

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other IBM product documentation, use one of the following options:

- Use the online reader comment form, which is located at <http://www.ibm.com/software/data/rcf/>.
- Send your comments by email to comments@us.ibm.com. Include the name of the book, the part number of the book, the version of the product that you are using, and, if applicable, the specific location of the text you are commenting on, for example, a page number or table number.

Accessibility features

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, to use a software product successfully.

The major accessibility features in this product enable users to perform the following activities:

- Use assistive technologies such as screen readers and screen magnifier software. Consult the assistive technology documentation for specific information when using it to access z/OS interfaces.
- Customize display attributes such as color, contrast, and font size.
- Operate specific or equivalent features by using only the keyboard. Refer to the following publications for information about accessing ISPF interfaces:
 - *z/OS ISPF User's Guide, Volume 1*
 - *z/OS TSO/E Primer*
 - *z/OS TSO/E User's Guide*
 These guides describe how to use the ISPF interface, including the use of keyboard shortcuts or function keys (PF keys), include the default settings for the PF keys, and explain how to modify their functions.

Volume copy products supported by DB2 Cloning Tool

DB2 Cloning Tool will rename and catalog data sets on target volumes created with any type of replication mechanism, where target volumes are exact replicas of source volumes.

If target volumes still have the source volume serial number (VOLSER), and are varied offline, DB2 Cloning Tool can re-label and vary the target volumes online.

Restriction: "Exact Replicas": The only exception to a target volume being an exact replica of its source volume counterpart is the internal volume serial number. Copies already partially modified are not acceptable – such as volume snaps via SIBBATCH where the SYS1.VVDS and SYS1.VTOCIX names may have already been modified.

Storage blades

The fast replication copy services outlined in this section can be used to create the volume copies used for DB2 system clones, or to create the data set copies used for table space and index space refreshes. A storage blade represents fast replication copy services invoked directly by DB2 Cloning Tool.

DB2 Cloning Tool executes the DFSMSdss blade to issue IBM FlashCopy or STK SnapShot copy commands either by volume or by data set. When cloning DB2 systems or table spaces that reside on EMC DASD, DB2 Cloning Tool uses the EMC API to invoke TimeFinder/Clone to copy the data by volume or by data set. When cloning DB2 subsystems that reside on EMC DASD and use TimeFinder/Mirror, or that reside on Hitachi Storage Systems, an appropriate process is performed before DB2 Cloning Tool cloning automation is invoked and a list of copied storage volumes are passed to DB2 Cloning Tool for use in later processing steps.

IBM storage blades

- IBM DFSMSdss blade
- ADRDSSU utility invoked
- Fast replication (preferred)
- By volume or data set
- FlashCopy V2 (IBM, EMC, HDS)
- SnapShot (STK, Ramac)

EMC storage blades

- EMC TimeFinder
- TimeFinder/Clone Mainframe Snap Facility's volume level support
- EMC Consistency Technology
- TimeFinder/Clone Mainframe Snap Facility's data set level support

IBM FlashCopy, STK SnapShot, and EMC TimeFinder/Clone allow the creation of what appears to be a copy of a volume, in a short period of time. The target volume of a copy will be a mirror image of the source volume, with the exception of the internal 'VOLSER', which remains as is, if the COPYVOLID option is not specified. DB2 Cloning Tool requires the target VOLSER to remain as is, which allows the target volume to remain varied online after the copy initiation, and therefore negates the need for a CLIP (re-label) and VARY ON.

Because the logical image of a target volume may be modified before the copy is actually complete, the DB2 Cloning Tool rename step may be executed while the background copy is still in progress. Likewise, should the DB2 Cloning Tool process complete before a volume is completely copied, the application may also begin using volumes before the background copy is complete.

Onsite mirror tools by volume

Other cloning mechanisms, such as IBM PPRC, Hitachi ShadowImage, EMC TimeFinder/Mirror, Softek Replicator, or Innovation Data Processing FDRPAS, allow the creation of a point-in-time image of a volume by establishing a mirror, and then splitting the mirror once the target volume is synchronized with the source volume. At the time of this publication, establishing and splitting mirrors must be accomplished with user-provided steps prior to execution of DB2 Cloning Tool.

Use of the U.S.A. EBCDIC code set

DB2 Cloning Tool uses the U.S.A. EBCDIC code set for specification and display of EBCDIC characters and for the extended ACS masking characters used for filtering.

If the code tables used by your installation are different, then you need to enter the EBCDIC character peculiar to your code tables that results in the binary value for the EBCDIC character specified in the product manuals.

- Data supplied as input to batch programs or input to ISPF panels:

For product code shipped in binary, when specifying input where the product takes special action based on specific characters, you must enter the EBCDIC character peculiar to your code tables that results in the binary value for the EBCDIC character specified in the product manuals, according to the U.S.A. EBCDIC code set.

For example, if an exclamation mark (!) is called for, and your code tables do not translate the ! character to a hexadecimal 5A, you must enter the character that your code table will translate to a 5A.

- Distributed ISPF panels:

Do not change distributed ISPF panels. Program code may reference ISPF panel attribute bytes. A panel change that affects an attribute byte may cause a program error.

- Product output:

Depictions of product output shown in the product manuals are based on the U.S.A. EBCDIC code set. Actual output may vary if your EBCDIC code tables are different.

- Extended ACS masking characters:

Your installation may need to specify different masking characters to achieve the desired result if your code tables are different from the U.S.A. EBCDIC code set. For more information about extended ACS masking characters, see the *DB2 Cloning Tools for z/OS User's Guide* Version 3, Release 1.

Filtering pattern masks

Many commands allow specification of powerful filtering masks. These filtering pattern masks can be specified with extended ACS masking characters, as specified in the table.

Note: Your installation may need to specify different masking characters to achieve the desired result if your code tables are different from the U.S.A. EBCDIC code set.

Table 1. Filtering pattern masks

Mask	Hex	Description
*	5C	<p>A single asterisk (*) represents 0–<i>n</i> characters. It can be used before and/or after an item to designate a wildcard character position. You cannot use an asterisk in the middle portion of a single item (except for data set names). Use the percent sign (%) character for that purpose.</p> <p>Example:*PROD</p> <p>In this example, an item is selected if the last four characters are PROD regardless of the starting characters. Using a single asterisk character before and after an item (i.e. *ZREM*) means that item is to be selected if any character string matches ZREM in its name.</p>
%	6C	<p>A percent sign (%) denotes a single-character placeholder value, which can be alpha-numeric or any special character. The percent sign can be used in any position order.</p> <p>Example:CRM%%ER6</p> <p>In this example, an item is selected if it is eight characters in length, the first three characters are CRM, and the last three characters are ER6. The two middle placeholder values (%%) can be any characters.</p>

Table 1. Filtering pattern masks (continued)

Mask	Hex	Description
<	4C	<p>Similar to the percent sign (%) value, the "less than" character (<) denotes a placeholder value <i>for only alpha characters</i>. The < character can be used in any position order.</p> <p>Example:CR<<ER*</p> <p>In this example, an item is selected if the first two characters are CR, the third and fourth characters are alpha, and the fifth and sixth characters are ER. Any remaining characters are also allowed.</p>
>	6E	<p>Similar to the percent sign (%) value, the "greater than" character (>) denotes a placeholder value <i>for only numeric characters</i>. The > character can be used in any position order.</p> <p>Example:CR>>ER*</p> <p>In this example, an item is selected if the first two characters are CR, the third and fourth characters are numeric, and the fifth and sixth characters are ER. Any remaining characters are also allowed.</p>
**	5C5C	<p>Using two asterisks (**) allows compatibility with standard ACS and <i>DFSMSdss</i> filtering masks. Only used for <i>partially</i> qualified data set names. The * or ** characters can be used in any qualifier position to denote a <i>wildcard</i> node.</p> <p>Example:CRFM*. *VER.**</p> <p>In this example, a data set entry is selected if it has at least two qualifiers, the first qualifier starts with CRFM, and the second qualifier ends with VER. Any remaining qualifiers are also allowed.</p> <p>Note: As with common data set name masking, any combination of *, **, %, < and/or > characters can be used for the item mask value.</p>
!	5A	<p>Similar to the percent sign (%) value, the exclamation point character (!) denotes a placeholder value <i>for only national characters</i>, based on the U.S.A. EBCDIC code set. Refer to the topic "Use of the U.S.A. EBCDIC code set" on page 20 for more information. The exclamation point (!) can be used in any position order.</p> <p>National characters (based on the U.S.A. EBCDIC code set) are: @ # \$</p>

DB2 Fast Copy Solution Pack documentation and updates

This topic explains where to find DB2 Tools information on the web and how to receive information updates automatically.

DB2 Fast Copy Solution Pack information on the Web

The DB2 Tools Product Page provides current product documentation that you can view, print, and download. To locate publications with the most up-to-date information, refer to the following web page:

<http://www.ibm.com/software/data/db2imstools/db2tools-library.html>

You can also access documentation for many DB2 for z/OS and IMS™ Tools from the Information Management Software for z/OS Solutions Information Center:

<http://publib.boulder.ibm.com/infocenter/imzic>

Documentation for many DB2 Tools that run on Linux, UNIX, and Windows systems can be found in the IBM DB2 Tools for Linux, UNIX, and Windows Information Center:

<http://publib.boulder.ibm.com/infocenter/mptoolic/v1r0/index.jsp>

IBM Redbooks publications that cover DB2 Tools are available from the following Web page:

<http://www.redbooks.ibm.com/cgi-bin/searchsite.cgi?query=DB2+AND+Tools>

You can access product support, including information about troubleshooting, planning and installing, service requests and PMRs, documentation, and communities, from the IBM Support page:

<http://www.ibm.com/software/data/db2imstools/support.html>

The Data Management Tools Solutions Web site shows how IBM solutions can help IT organizations maximize their investment in DB2 and IMS databases while staying ahead of today's top data management challenges:

<http://www.ibm.com/software/data/db2imstools/solutions/index.html>

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2. Enter your IBM ID and password, or create one by clicking **register now**.
3. When the My Support page is displayed, click **add products** to select those products that you want to receive information updates about. The DB2 and

IMS Tools category is located under **Software > Data and Information Management > Database Tools & Utilities**.

4. Click **Subscribe to e-mail** to specify the types of updates that you would like to receive.
5. Click **Update** to save your profile.

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 - *z/OS ISPF User's Guide, Volume 1*
 - *z/OS TSO/E Primer*
 - *z/OS TSO/E User's Guide*

These guides describe how to use the ISPF interface, including the use of keyboard shortcuts or function keys (PF keys), include the default settings for the PF keys, and explain how to modify their functions.

Chapter 2. Planning to customize the DB2 Fast Copy Solution Pack

Before customizing the DB2 Fast Copy Solution Pack, you must understand the customization requirements and options for each of the components of the solution pack.

These requirements and options are identical to the ones that apply to the stand-alone version of a component. You must also understand how Tools Customizer works, which is the tool that you use to customize each pack component.

Planning to customize DB2 Cloning Tool

Before you customize DB2 Cloning Tool, ensure that your environment meets the hardware and software requirements for this component.

Prerequisites

This topic describes the minimum hardware and software requirements for DB2 Cloning Tool.

Make sure you have the following minimum hardware and software requirements in place before you install DB2 Cloning Tool.

The operation of DB2 Cloning Tool depends on the following software levels:

- z/OS 1.11 and later.

Restriction: On z/OS 1.12 and later systems, the following restrictions apply:

- A source or target ICF catalog cannot be defined with extended addressability or EATTR(OPT).
- The VVDS on the volume where a source or target ICF catalog resides cannot be defined with EATTR(OPT).
- The VVDS on a source or target volume cannot be defined with EATTR(OPT).
- DB210 or DB2 11.
- Any available new PTFs.
- One or more of the cloning tools listed in section “Volume copy products supported by DB2 Cloning Tool” on page 19, or slow copy utilities, such as DFSMSdss copy or Innovation Data Processing products.
- If you will use DB2 Cloning Tool’s stored procedure for subsystem cloning, the DB2 administrative task scheduler must be configured and available on the DB2 systems where the stored procedure will be run.

Note: Only DB2 Version 9.1 and later administrative task schedulers are supported. For DB2 Version 9.1, APAR/PTF PM02658/UK60388 must be applied. The DB2 Version 8 administrative task scheduler is not supported.

- If you will use IBM FlashCopy for copying by data set, FlashCopy version 2 is required.
- If you will use the DB2 Cloning Tool ISPF interface, a minimum region size of 30000 KB is required.

Function authorization requirements

The level of authority required to perform certain DB2 Cloning Tool Subsystem Cloning and DB2 Cloning Tool Table Space Cloning is detailed in this topic.

For DB2 Cloning Tool subsystem or volume cloning

- DB2 Cloning Tool COPY and RENAME commands require ALTER authority to both the source and target user catalogs. DB2 Cloning Tool does NOT update the source catalog but requires ALTER authority to access the catalog via direct access.
 - The source ICF catalog(s) requires ALTER because an IDCAMS VERIFY and an IDCAMS EXAMINE INDEXTEST NODATATEST is done prior to reading it to ensure the source catalog is not broken.
 - The target ICF catalog(s) requires ALTER because it is opened and updated using a routine that manages catalog updates.
- DB2 Cloning Tool COPY command when using DATA-MOVER PGM(ADRDSU) may require the user ID running the command to have specific access to STGADMIN profiles in the FACILITY class.
 - The ADMINISTRATOR operand is always specified when invoking DFSMSdss. To avoid WTORs, ADRDSU ADMINISTRATOR is used to gain permission to overlay the target volume VTOCIX and/or VVDS during the COPY process. Because the ADMINISTRATOR operand is generated, the user ID running COPY must have READ access to FACILITY class profile STGADMIN.ADR.STGADMIN.COPY.
 - If FCSETGTOK is specified, READ access is needed to FACILITY class profile STGADMIN.ADR.COPY.FCSETGT if it exists.
 - If FCTOPPRCPPRIMARY is specified, READ access is needed to FACILITY class profile STGADMIN.ADR.COPY.FCTOPPRCP if it exists.
 - If FlashCopy is being used, READ access is needed to FACILITY class profile STGADMIN.ADR.COPY.FLASHCPY if it exists.
 - If CONSISTENT(YES) is specified, READ access is needed to FACILITY class profiles STGADMIN.ADR.COPY.FCFREEZE and STGADMIN.ADR.CGCREATE if they exist.
 - If the CONCURRENT option is being used, READ access is needed to FACILITY class profile STGADMIN.ADR.COPY.CNCURRENT if it exists.
- If DB2 Cloning Tool is going to relabel the target volumes, ICKDSF REFORMAT requires RACF[®] volume access of ALTER to RACF class DASDVOL or READ access to FACILITY class profile STGADMIN.ICK.REFORMAT. DB2 Cloning Tool will relabel the target volumes as part of COPY when VOLPAIRSDEVN or VOLPAIRSDEVN-DDN is used, or as part of VOLOPTIONS when CLIP, OFFLINECLIP, or UNCLIP are used.
- DB2 Cloning Tool RENAME command invokes ICKDSF to rebuild the VTOCIX, if VTOCIX_REBUILDER = IBM is specified in CKZINI or the volume is an Extended Address Volume. ICKDSF requires RACF volume access of ALTER to RACF class DASDVOL or READ access to FACILITY class profile STGADMIN.ICK.BUILDIX. If the default, VTOCIX_REBUILDER = MSC, is specified in CKZINI, ICKDSF is not used, unless the volume is an Extended Address Volume for which ICKDSF will always be used to rebuild the VTOCIX.
- DB2 Cloning Tool COPY-BY-DS command requires READ authority to the source data sets and ALTER authority to the target data sets.
- If DB2 Cloning Tool RENAME has NOTRENAMED(DELETE) in effect, READ access to FACILITY class profile STGADMIN.IGG.DLVVRNVR.NOCAT is required.

- DB2 Cloning Tool DB2UPDATE command requires authority to the target data sets.
- DB2 Cloning Tool COPYCHECK command requires UPDATE to the journal file.
- DB2 Cloning Tool FINDUCATS command invokes DCOLLECT to identify ALIAS names of the source volume data sets in order to identify the correct source user catalogs. DCOLLECT controls access to the DCOLLECT function, by issuing a security (RACF) check for a facility class profile of STGADMIN.IDC.DCOLLECT. If this profile exists, then Read authority is necessary.
- DB2 Cloning Tool DB2FIX command requires either DB2 install SYSADM or SYSADM2 authority.
- DB2 Cloning Tool DB2SQL command requires either DB2 install SYSADM or SYSADM2 authority.
- DB2 Cloning Tool DB2SETLOG command requires authorization to connect to the DB2 subsystem and to issue DB2 SET LOG commands.
- DB2 Cloning Tool DB2START command requires authorization to issue z/OS START DB2 commands and to connect to the DB2 subsystem. When the SPECIAL or MAINT keyword is used, it requires either DB2 install SYSADM or SYSADM2.
- DB2 Cloning Tool DB2STOP command requires authorization to connect to the DB2 subsystem and issue the DB2 STOP DB2 command. When the DB2 subsystem is running in maintenance mode, it requires either DB2 install SYSADM or SYSADM2.
- DB2 Cloning Tool RENAME command requires authorization to create an EMCS console and issue z/OS MODIFY CATALOG commands. Update authorization to the VVDS data sets on the target volumes is also required.
- DB2 Cloning Tool DB2UPDATE command (if DB2XCFCLEAN(Y) is specified) requires authority to clean up XCF structures. The ability to clean up XCF structures is controlled with profiles in the FACILITY class with names of IXLSTR.structurename. If profiles exist that cover the target DB2 structures, then UPDATE access is necessary.
- DB2 Cloning Tool DB2XCFCLEAN command requires authority to clean up XCF structures. The ability to clean up XCF structures is controlled with profiles in the FACILITY class with names of IXLSTR.structurename. If profiles exist that cover the target DB2 structures, then UPDATE access is necessary.
- DB2 Cloning Tool DB2GETBACKINFO command requires authority to issue HSM LIST COPYPOOL commands. The ability to issue HSM LIST COPYPOOL commands is controlled with profiles in the FACILITY class with names of STGADMIN.ARC.LC.copypoolname. If profiles exist that cover the copypoolname being used, then READ access is necessary.
- DB2 Cloning Tool RESTORE-FROM-DUMPTAPES command requires the following:
 - READ access to HSM dump tapes (for example, TAPEVOL profile HSMHSM, or READ access by data set name).
 - RACF volume access of ALTER to RACF class DASDVOL.
 - READ access to FACILITY class profile STGADMIN.ICK.REFORMAT.
 - READ access to STGADMIN.ADR.STGADMIN.RESTORE for the target volumes.
- DB2 Cloning Tool BCSCLEAN command requires READ authority to profiles in the FACILITY class with names of STGADMIN.IGG.DIRCAT and STGADMIN.IGG.DELETE.NOSCRATCH.

For DB2 Cloning Tool Table Space Cloning

- SELECT authority on the DB2 catalog tables is required for both source and target subsystems.
- EXECUTE authority on the CKZ plan is required on both source and target subsystems.
- DISPLAYDB authority is required on both source and target databases.
- STOPDB authority is required on the target database.
- STARTDB authority is required on the target database.
- ALTER authority is required for all target tables with identity columns.
- If FUZZY-COPY(Y) is used to not stop the source, and ADRDSSU is used, then RACF authority for "TOLERATE(ENQF)" is required.
- If FUZZY-COPY(N) (the default) is used, then STOPDB and STARTDB authority for the source database is required.
- If the TCP/IP server job is run as a started task, SYSCTL authority must be granted to the started task's user ID on the target DB2 subsystem.

Planning to customize DB2 Recovery Expert

Before you customize DB2 Recovery Expert, ensure that your environment meets the hardware and software requirements for this component.

Hardware and software requirements

These are the hardware and software requirements for the various components of DB2 Recovery Expert.

DB2 Recovery Expert server and agent component requirements

These are the requirements for the DB2 Recovery Expert server and agent components.

Hardware requirements

- Any hardware environment that supports the required software.

Software requirements

- z/OS Version 1 Release 11 or higher
- DB2 (one of the following versions)
 - DB2 UDB for z/OS Version 8 (NFM)
 - DB2 UDB for z/OS Version 9 (CM, ENFM, and NFM)
 - DB2 UDB for z/OS Version 10 (CM8, CM9, ENFM, and NFM)
 - DB2 UDB for z/OS Version 11 (CM and NFM)
- The DB2 Recovery Expert z/OS executables must be executed on an operating system version that is equal to the operating system version the product SMP/E install was performed on.
- The DB2 utilities that are used by DB2 Recovery Expert require execution under TSO/E. Refer to the DB2 version 8, DB2 version 9, DB2 V10, or DB2 V11 product support information for information regarding TSO/E support levels.
- The DB2 Recovery Expert client/server component supports object profiles created with any version of DB2 Automation Tool.
- DB2 Recovery Expert has no dependencies on Rocket Software, Inc. Common Code groups (FEC, DLC).

Web interface requirements

These are the requirements for the browser client interface of DB2 Recovery Expert.

Hardware requirements

There are no specific hardware requirements required to run the DB2 Recovery Expert web interface application. The web interface application runs in a browser and communicates directly with the DB2 Recovery Expert server.

No local disk storage is required for product intermediate or result data since all processing occurs remotely on the DB2 Recovery Expert server or on the DB2 database server systems. A reasonable amount of local disk space should be available if the user wants to export JCL, job results or other information.

Software requirements

Requires a Web browser running Adobe Flash Player 10.0 or higher.

DB2 Recovery Expert ISPF interface software and hardware requirements

These are the software and hardware requirements for DB2 Recovery Expert ISPF interface. DB2 Recovery Expert operates under a traditional mainframe environment running DB2 for z/OS.

Software requirements

DB2 Recovery Expert runs under ISPF and invokes ISPF services. DB2 Recovery Expert requires the following software:

- z/OS V1R11 or higher.
- DB2 UDB for z/OS V8 or higher

FlashCopy requirements

For FlashCopy backups, DB2 Recovery Expert requires the following:

- To use FlashCopy for a full system backup and restore, the storage subsystem must be FlashCopy V1 capable.
- To perform the object-level restore function, the storage subsystem must be FlashCopy V2 capable.

DB2 Recovery Expert uses IBM's FlashCopy interface to make a backup of a DB2 subsystem. This interface is designed for replicating data sets or volumes.

The invocation of the FlashCopy interface takes a point-in-time copy of data at the volume level. To use this feature, you must define source and target volumes to emulate identical device and model types. In addition, the source and target volumes must both be located in the same logical storage subsystem, and the storage subsystem must be able to execute the FlashCopy interface.

EMC BCV and SNAP requirements

For BCV and SNAP backups, DB2 Recovery Expert requires the following:

- EMC Symmetrix 6 and higher running with Microcode 5x67 or higher

- To use Engenuity Consistency Assist (ECA), Microcode 5x67 with patch 14882 or Microcode 5x68 with patch 18954 or Microcode 5x69 or higher is required. To use ECA with SNAP VOLUME technology, the EMC SNAP library must be level 5.5 or higher.

Note: DB2 Recovery Expert performs a “Protected BCV restore” in order to preserve the BCV backup point. This type of restore is not supported prior to Microcode 5x70. If any Symmetrix array is at a microcode level lower than 5x70, then a SNAP type restore will be performed instead.

Requirements for BCV backups

DB2 Recovery Expert uses EMC's TimeFinder/Mirror for z/OS to make a BCV backup of a DB2 subsystem. A BCV device can be established as a mirror of a standard device; whatever data is sent to the standard device is also sent to the BCV device when it is established. The two devices together are called a BCV pair. When the pair is synchronized and DB2 Recovery Expert is called to make a BCV backup, the BCV device currently mirroring the standard device is split from the standard device.

This BCV device is then available as a point-in-time volume backup. If you configured DB2 Recovery Expert to keep more than one generation of BCV backups, then another BCV is immediately established to the standard device. This next generation continues the standard device mirroring.

Standard devices and BCVs must be the same model type (for example, 3380 or 3390) and have the same number of cylinders (for example, 3390-3 or 3390-9). In addition, the source and target volumes must both be located in the same physical Symmetrix storage subsystem. If you have questions about your Symmetrix configuration, contact your EMC customer service representative.

Requirements for SNAP backups

DB2 Recovery Expert uses EMC's TimeFinder/Clone Mainframe SNAP Facility (hereafter referred to as the SNAP utility) to make a SNAP backup of a DB2 subsystem. This utility is designed for replicating data sets or volumes. The invocation of the SNAP utility takes a point-in-time copy of data at the volume level.

To use this feature, you must define source and target volumes to emulate identical device and model types. In addition, the source and target volumes must both be located in the same Symmetrix storage subsystem. The target volumes can be either standard volumes or BCV devices. If users have questions about their Symmetrix configuration, they can contact their EMC customer service representative.

DB2 backup method requirements

For DB2 system-level backups, the BACKUP SYSTEM utility uses copy pools, which are new constructs in z/OS DFSMSHsm V1R5. A copy pool is a defined set of storage groups that contain data that DFSMSHsm can backup and recover collectively. These copy pools must be defined before attempting to back up or restore a subsystem. For more information about copy pools, refer to the *z/OS DFSMSdftp Storage Administration Reference*. In addition, refer to the DB2 utilities guides for other requirements for the BACKUP SYSTEM and RESTORE SYSTEM utilities.

DFSMSDss requirements

DFSMSDss must be version 1.8 or higher to use DFSMSDss backups and to create a DB2 image copy from a system level backup.

To perform encryption during offloads, DFSMSDss requires the following software:

- Encryption Facility DFSMSDss Encryption Feature (FMID HCF773D).
- IBM Cryptographic Services Facility (ICSF) (HCR770B or higher)

DB2 subsystem architecture requirements

DB2 Recovery Expert helps make DB2 subsystem backup and restoration uncomplicated if your subsystem architecture follows best DB2 design practices. To ensure the most complete and accurate subsystem restoration, the DB2 subsystem should follow these recommendations:

- The user catalog(s) for the DB2 log and boot strap data sets should be separate from the user catalog(s) for DB2 object data (table spaces and indexes) and not reside on the same volume(s) as any other DB2 object data or DB2 object data catalog(s).
- The DB2 boot strap, active log, and archive log data sets should reside on separate volumes from the DB2 object data.

These requirements ensure that your DB2 object and log data are contained on separate sets of volumes. When you restore the volumes, the user catalogs will be restored and will reflect the data and log locations as they were at the time of the backup. DB2 Recovery Expert performs extensive validity checking for these requirements. If it detects any condition where log data and object data are not separated, a message is issued containing the volume name(s) that hold both types of data. The backup will still be allowed, but only full system restores will be allowed from the backup (called a “mixed data” backup). You must recover both object and log data from a mixed data backup.

You can use the DB2 Recovery Expert Subsystem Setup facility to get your DB2 subsystem(s) in optimal condition. The DB2 Recovery Expert Subsystem Setup facility analyzes your subsystem and provides information about the volume location and aliases of user catalogs, boot strap data sets, and active logs. It also provides detailed information about the volumes and the data sets in use by a subsystem. If your subsystem is not correctly configured, you can create MVS catalogs and aliases, rename or move boot strap data sets, log data sets, and/or DB2 object data sets to the proper location using the ISPF interface.

DB2 32 KB table space requirements

Beginning with DB2 V8, DB2 data sets can be defined with variable control interval sizes. However, if you are planning to suspend the logs during backups, DB2 Recovery Expert requires that DB2 V8 data sets defined with a page size of 32KB must have their control interval size defined as 32 KB. This ensures that when I/O to a device is stopped for backup, the control intervals of a data set are not spread across more than one track, possibly resulting in a broken page.

If DB2 Recovery Expert is going to suspend the logs, 32 KB data sets with 32 KB page sizes are checked during the backup. If the CI size is not 32 KB, the space is flagged, and it is skipped. If you want to use DB2 Recovery Expert on this space, you must alter the CI size and run an IBM REORG utility on the table space.

Product constraints

This information describes the constraints that must be taken into consideration when using DB2 Recovery Expert.

Simple table space limitation

A simple table space created in a version of DB2 prior to version 9 cannot be dropped and recreated in DB2 V9 because of a DB2 limitation. Dropped simple table spaces will be restored as segmented table spaces.

ROLES and Trusted contexts

DB2 Recovery Expert does not support recovery of dropped roles or dropped trusted contexts.

Tables with IDENTITY columns

You must be cautious when attempting to use DB2 Recovery Expert to recover a table that contains IDENTITY columns.

- If the data recovery does not require generated SQL then the IDENTITY column attributes require no alteration and the recovery will be generated without any IDENTITY column adjustments.
- If the data recovery does require generated SQL then the IDENTITY column attributes will be checked to determine if a table drop and create recovery is required. The IDENTITY column attributes will be assigned values based on the current SYSIBM.SYSSEQUENCES setting for that column. If a column is a user-defined sequence DB2 Recovery Expert reads the recovered column data and does not reset the starting IDENTITY column value. A recovery of this type can result in data corruption because of a different table definition and sequences.

Tables with EDITPROCs

DB2 Recovery Expert does not recover the executable module, or program, for module-based functions or procedures. This includes EDITPROCs. DB2 Recovery Expert cannot determine what library holds the program because that information is not stored in the DB2 system catalog. You must add the names of the user program load libraries that are required by the functions and procedures used by a table to the redo or undo SQL execution JCL STEPLIBs.

Tables without unique keys

When you are selecting objects for recovery, remember that any recovery plan might include undo or redo SQL. You must ensure that there is a primary, or unique, key on the tables for which you are generating SQL. Without a primary key, you might not get the desired results because of the inability to uniquely identify rows that were changed by the original SQL.

Table containing a GENERATED ALWAYS column

DB2 Recovery Expert cannot recover a table containing a GENERATED ALWAYS column when an update has been made that only changed the GENERATED ALWAYS column. The error message ARYA618W is issued and the recovery step STEPM issues a return code 4.

Chapter 3. Customizing the DB2 Fast Copy Solution Pack

You must use Tools Customizer for z/OS to customize the DB2 Fast Copy Solution Pack. Customizing the solution pack consists of customizing each of the components. You can customize the components in any order.

Before you customize any component, you must complete the pre-customization task for that component.

Pre-customization tasks

DB2 Recovery Expert for z/OS has pre-customization tasks that must be completed before you can customize the component. These tasks are identical to the ones that apply to the stand-alone version of DB2 Recovery Expert for z/OS (that is, as the separately orderable product). DB2 Cloning Tool for z/OS has no pre-customization tasks.

Installing the required common tools from the Tools Base

Before you customize the DB2 Fast Copy Solution Pack, you must install Tools Customizer, which is included in IBM Tools Base for z/OS.

About this task

Tools Customizer is required to customize the solution pack and must be installed through SMP/E. Tools Customizer is the only component of Tools Base that is required.

Pre-customization tasks: DB2 Cloning Tool

No pre-customization steps are required for DB2 Cloning Tool. You are ready to use DB2 Cloning Tool.

Customizing and starting DB2 Recovery Expert

This section describes each of the customization steps that you must perform after you install DB2 Recovery Expert for z/OS. You must complete all of the required customization steps before you can use DB2 Recovery Expert for z/OS.

Pre-customization required tasks and parameter information

This section includes a list of tasks that must be completed before proceeding with Tools Customizer. In addition it includes information that may be helpful when specifying parameter information specific to DB2 Recovery Expert.

Planning to use Tools Customizer:

This topic provides steps to take before using IBM® Tools Customizer to customize DB2 Recovery Expert.

About this task

Procedure

1. Become familiar with Tools Customizer. See “Tools Customizer terminology and data sets” on page 36.

2. If you are upgrading from DB2 Recovery Expert and you want to migrate your V2.2 data repository to use with DB2 Recovery Expert V3.1, ensure that all current maintenance has been applied to DB2 Recovery Expert V3.1 before beginning the customization process.

APF authorize the DB2 Recovery Expert LOAD library data set:

DB2 Recovery Expert V3.1 requires that the product LOAD library is APF authorized.

Refer to *z/OS V1R8.0 MVS System Commands* for more information on how to use SETPROG to APF authorize libraries.

Adding ARY\$TSOC to SYS1.PARMLIB:

Before starting the customization process you must add ARY\$TSOC to the IKJTSO00 member in SYS1.PARMLIB.

You will add the program ARY\$TSOC to the AUTHPGM and AUTHTSF sections of member IKJTSO00 in SYS1.PARMLIB. You can see how this member is setup by issuing the TSO PARMLIB command. This command shows the contents of the IJKTSOxx member that is active. For more information on IKJTSO00, refer to *IBM DB2 UDB for OS/390 and z/OS: Initialization and Tuning Guide. Chapter 5. Configuring DB2 Recovery Expert.*

Create RBA Capture utility PDS library:

The DB2 Recovery Expert RBA Capture utility records the current RBA of a DB2 subsystem at regular intervals based on the store clock time. This utility is optional. It uses a started task to capture the RBAs and clock times, and stores the data in its own repository that is separate from the backup and restore system repository.

In order to use this feature you must perform the following tasks before customization:

- You must create a product parmlib data set PDS if one does not exist.
- You must create the member ARYSSID in the parmlib data set.
- You must create the contents of ARYSSID.

The member ARYSSID will contain all the SSID's of the DB2 subsystems that will be monitored by the RBA Capture utility. Each new SSID should start as a new row in the first column. ARYSSID must only contain the list of SSID's to be monitored, no other lines such as comments can be entered.

In order to support multiple LPARs, a different data set with member ARYSSID will have to be created for each LPAR.

Table 2. Example of multiple LPAR support

LPAR	PDS	Member
RS22	<i>anydatasetname</i>	ARYSSID (includes SSID's for this LPAR)
RS23	<i>anydatasetname</i>	ARYSSID (includes SSIDs for this LPAR)

You will specify the name of the PDS that contains the ARYSSID member using the Tools Customizer in the **Required Parameters** input field **Product parmlib dataset**.

Undiscovered DB2 parameters:

Many of the parameters that you will specify on the Tools Customizer DB2 Parameters panel may be discovered automatically when you use DB2 Recovery Expert Discover EXEC.

There are three DB2 parameters that are not discovered using the Discover EXEC. The three parameters are the DB2 version level number, the run library, and the database name where the DB2 Recovery Expert objects will be stored.

You must manually specify these parameters from the Tools Customizer DB2 Parameters panel as follows:

- Specify your version of DB2 in the **Level Number** field that is found under the **General DB2 Information** heading. You may specify 810, 910, 101, or 111 depending on the version of DB2 that you are using.
- Specify the name of the run library for DB2 Recovery Expert in the **Load Library** field that is found under the **DB2 Libraries** heading.
- Specify the name of the database that will hold the DB2 Recovery Expert objects in the **Database for Recovery Expert objects** field that is found under the **Recovery Expert DB2 vars** heading.

Specifying DB2 load libraries in the correct order:

DB2 Recovery Expert requires its DB2 load libraries to be in a specific order when they are defined in the Product Parameters panel.

There are two possible situations where the DB2 load libraries for DB2 Recovery Expert may be specified in the wrong order. The first situation is when you do not use the DB2 Recovery Expert Discover EXEC to discover product information and the second situation is when you are upgrading from DB2 Recovery Expert V2.2.

DB2 Recovery Expert requires both the DB2 SDSNLOAD library and the DB2 SDSNEXIT library to be defined. The SDSNEXIT must be the first library that is defined. The SDSNLOAD library must be the second library defined. You define these libraries using the **DB2 Libraries Load Library** field from the **DB2 Parameters** panel. You define the first library. Then you must click **Add** to define the second library from the **Multiple Value Parameter** panel.

Installing the web interface:

The DB2 Recovery Expert web interface is installed using the Tools Customizer. The web interface files are unpacked using the UNPAXSH JCL job. Tools Customizer will edit and run this job.

Before starting the customization process:

- Obtain write access to the UNPAXSH path. If necessary you can update the UNPAXSH file path to use your own specific file path.
- Identify the HFS directory where the web interface files will be installed. The directory must not already exist and will be created by the UNPAXSH job. The HFS directory will need 2 MB of memory.

During the customization process you will be asked to enter the following information:

- In the HFSHTDOC variable you will specify the name that will be used for the HFS directory.

- In the MVSHDOCs variable you will specify the name of the paxed data set.

Customizing components by using Tools Customizer

Before you begin the customization process, review the steps that are summarized in this topic.

Before you begin

Complete the pre-customization tasks for the components that you want to customize. See “Pre-customization tasks” on page 33 for information about the specific tasks that are required for each component.

Procedure

1. Become familiar with Tools Customizer. See Tools Customizer terminology and data sets.
2. Use Tools Customizer to customize DB2 Fast Copy Solution Pack components. See Customizing Components in the DB2 Fast Copy Solution Pack

Important: To complete the customization process, you might need to use the information in “Reference” on page 77. The reference topics provide additional information that you might need to customize DB2 Fast Copy Solution Pack, details about the tasks, steps, and parameters that are displayed on the Component Parameters panel in Tools Customizer, and information about the jobs that will be generated.

Tools Customizer terminology and data sets

Before you use Tools Customizer, you should understand the Tools Customizer terminology and the data sets that Tools Customizer uses during customization.

Tools Customizer terminology

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Products and components

How an IBM Tool is packaged determines whether it is referred to as a product or as a component in the Tools Customizer documentation and interface. An IBM Tool that is ordered as a stand-alone entity (that is, not as part of a solution pack) is referred to as a product. An IBM Tool that is part of a solution pack is referred to as a component. Some IBM Tools are available in both formats; therefore, the same IBM Tool can be referred to as a product or as a component depending on how it is packaged.

DB2 entry

You can customize a component on one or more DB2 entries. A DB2 entry can be any of the following items:

DB2 subsystem

A distinct instance of a relational database management system (RDBMS) that is not part of a data sharing group. An example of a DB2 subsystem name is DB01.

DB2 group attach name

The name that is used by the TSO/batch attachment, the call attachment facility (CAF), DL/I batch, utilities, and the Resource

Recovery Services attachment facility (RRSAF) as a generic attachment name. An example of a group attach name is DSG1.

does not support DB2 group attach names.

DB2 data sharing member

A DB2 subsystem that is assigned by the cross-system coupling facility (XCF) to a data sharing group. An example of a DB2 data sharing member name is DB02.

Tools Customizer maintains the following lists of DB2 entries:

Associated list

The list of DB2 entries that are associated with a component. If the component to be customized requires DB2 entries, you can customize the component only on DB2 entries that are in the associated list. When you customize a component, this list is displayed in the DB2 Entries, Associations, and Parameter Status section of the Customizer Workplace panel.

You can add and copy DB2 entries to the associated list. When you add or copy DB2 entries to the associated list, the entries are associated with the component.

Master list

The list of all DB2 entries that are defined but are not associated with a component. Tools Customizer obtains information about these DB2 entries either from entries that were created manually or from the customizations of other components that were discovered. If you remove a DB2 entry from the associated list, the DB2 entry is added to the master list. When you create a new DB2 entry, it is added to the master list, and when you associate the new entry with a component, it is removed from the master list and added to the associated list. The master list is displayed on the Associate a DB2 Entry for Component panel.

If the associated list does not have the DB2 entries on which you want to customize a component, you can associate existing entries from the master list to the associated list.

You can create new DB2 entries and copy existing entries to the master list.

High-level qualifier

The high-level qualifier is considered to be all of the qualifiers except the lowest level qualifier. A high-level qualifier includes a mid-level qualifier.

Component parameters

Parameters that are specific to the component. These parameters are defined by the component and are stored in a data member that is defined by the component.

LPAR parameters

Parameters on the local LPAR that are required to customize . These parameters are defined by Tools Customizer and are stored in an LPAR parameter data member.

DB2 parameters

Parameters for a DB2 entry. These parameters are defined by Tools Customizer and are stored in a DB2 parameter data member.

Status type

Component, LPAR, and DB2 entry status type

After you specify the component that you want to customize, the component, the LPAR, and the DB2 entries have a status. The status is partly based on whether required parameters are defined. For some components, LPAR parameters or DB2 parameters might not be required. In these cases, the status is Not Required.

To customize a component, all of the required parameters must be defined.

If required parameters for the the component parameters, LPAR parameters, or DB2 parameters are not defined, the status of the parameters is Incomplete. Define values for parameters by manually editing them or by generating the customization jobs and specifying values for all of the required parameters that are displayed on the panels.

When values for all of the required parameters are defined, the status is Ready to Customize. Customization jobs can be generated only when all of the required parameters are defined and the status is Ready to Customize or Customized for the component parameters, LPAR parameters, and DB2 parameters for the DB2 entries on which a component will be customized.

The following table shows the meaning of the status types. Each status is defined differently for each type of parameter.

Table 3. Status types for the component, the LPAR, and the DB2 entries

Status	Component	LPAR	DB2 entries
Incomplete	The required component parameters are not defined, or the required component parameters are defined but LPAR parameters, DB2 parameters, or both are not defined.	The required parameters are not defined.	The required parameters are not defined.
Discovered	The component parameter definitions were discovered by using the component Discover EXEC.	N/A	N/A
Ready to Customize	The required component, LPAR, and DB2 parameters are defined, the status is Ready to Customize or Customized for the LPAR and at least one associated DB2 entry. You can generate the customization jobs.	The required LPAR parameters are defined or LPAR parameters are not required.	The required DB2 parameters are defined or DB2 parameters are not required.

Table 3. Status types for the component, the LPAR, and the DB2 entries (continued)

Status	Component	LPAR	DB2 entries
Customized	The jobs are customized on the local LPAR.	The jobs are customized for the product or for all of the associated DB2 entries on the local LPAR.	The jobs are customized for the DB2 entry.
Errors in Customization	N/A	N/A	Errors occurred while the customization jobs were being generated.
Not Required	N/A	LPAR parameters are not required.	DB2 parameters are not required.

Component status type

Each of the components in a solution pack has a status, and the status is partly based on whether the component is customized.

The following table shows the meaning of the status types.

Table 4. Status types for the component, the LPAR, and the DB2 entries

Status	Meaning
Customized	The customization process is finished, and the component is customized.
Pending Customization	The customization process is not finished, and the component is not customized.
Not Found	The metadata library for the component was not found.
Not Applicable	The component cannot be customized by using Tools Customizer.

Related tasks:

“Creating and associating DB2 entries” on page 59

You can create new DB2 entries and associate them with components in the DB2 Fast Copy Solution Pack.

“Copying DB2 entries” on page 69

You can copy associated and not associated DB2 entries to other DB2 entries or to new DB2 entries.

“Removing DB2 entries” on page 71

You can remove DB2 entries from the associated list.

Data sets that Tools Customizer uses during customization

Tools Customizer uses several unique data sets during the customization process. Familiarize yourself with these data sets before you begin to use Tools Customizer.

Several different data sets are required to customize component with Tools Customizer. These data sets are supplied by component, supplied by Tools Customizer, or allocated by Tools Customizer.

The pack provides the following data sets:

Metadata library

Contains the metadata for the pack to be customized. Tools Customizer

uses the metadata to determine which tasks, steps, and parameters to display on the Component Parameters panel, the LPAR Parameters panel, and the DB2 Parameters panel. This data set also contains the templates that Tools Customizer uses to generate the customization jobs.

The metadata library naming convention is *high_level_qualifier*.SBBXDENU, where *high_level_qualifier* is all of the segments of the data set name except the lowest-level qualifier.

You specify the metadata library on the Specify the Metadata Library panel. READ access to this data set is required.

Discover EXEC library

Contains the component Discover EXEC. Each component in the pack has a unique Discover EXEC. When you customize a component, you can use the Discover EXEC to automatically retrieve and store component information, such as parameter values from an already customized component. Tools Customizer saves the discovered information in the data store.

The default name of the data set is the high-level qualifier for the metadata library plus a lowest-level qualifier. For example, the lowest-level qualifier for most components is SXYZDENU, where XYZ is the three-character component prefix. You can change the default value on the Discover Customized Component Information panel. EXECUTE access to this data set is required.

Tools Customizer provides the following data sets:

Tools Customizer metadata library

Contains the metadata for the DB2 and LPAR parameters that are required to customize components in the DB2 Fast Copy Solution Pack. Tools Customizer uses the metadata to determine which parameters to display on the DB2 Parameters panel and the LPAR Parameters panel. In addition, Tools Customizer uses information in the metadata library to determine whether additional DB2 and LPAR parameters need to be displayed on these panels. As you customize different components, different DB2 and LPAR parameters might need to be defined.

The default name of the data set is DB2TOOL.CCQ110.SCCQDENU. You can change the default value on the Tools Customizer Settings panel. READ access to this data set is required.

Tools Customizer table library

Stores information about jobs that are customized. Job information that is stored includes a description of the job, its member name and template name, the SSID, group attach name, and when the job was generated.

The default name of the data set is DB2TOOL.CCQ110.SCCQTENU. WRITE access to this data set is required.

Tools Customizer requires that the following data sets exist during the customization process. If the data sets do not exist, Tools Customizer automatically allocates them.

Discover output data set

Contains the output that is generated when you run the component Discover EXEC. The component Discover EXEC retrieves the metadata and values for the parameters from a previous customization of the component.

The default name of the data set is DB2TOOL.CCQ110.DISCOVER. You can change the default value on the Tools Customizer Settings panel or the Discover Customized Component Information panel. WRITE access to this data set is required.

Data store data set

Contains component, LPAR, and DB2 parameter values, and DB2 entry associations. Tools Customizer uses this data set to permanently store all information that is acquired about the component, DB2 subsystems or data sharing groups, and LPAR when you customize products on the local LPAR.

The default name of the data set is DB2TOOL.CCQ110.DATASTOR. You can change the default value on the Tools Customizer Settings panel. WRITE access to this data set is required.

Customization library

Contains the customization jobs that Tools Customizer generates for the component.

Tools Customizer checks whether a customization library name was specified for more than one instance of the same version of the same product. If the same customization library name is specified for more than one product of the same version, the CCQD123E message is issued to prevent you from overwriting previously generated customization jobs. Ensure that you specify unique qualifier for the customization library for each instance of the product.

To customize a component, submit the members of the data set in the order in which they are displayed on the Finish Component Customization panel.

The data set naming convention is *hlq.\$LPAR_name\$.xyzvm*, where:

- *hlq* is the value of the **Customization library qualifier** field on the Tools Customizer Settings panel (CCQPSET)
- *LPAR_name* is the four-character LPAR name
- *xyzvm* is the three-letter pack identifier with the version, release, and modification level

For example, the data set name might be DB2TOOL.PRODUCT.CUST.\$MVS1\$.XYZ410.

WRITE access to this data set is required.

Tools Customizer allocates the data sets for the discover output, the data store, and the customization library with the attributes that are shown in the following table:

Table 5. Data set attributes for allocating the Discover output, data store, and customization library data sets

Data set	Organization	Record format	Record length	Block size	Data set name type
Discover output data set	PO	Variable block	16383	32760	LIBRARY
Data store data set	PO	Variable block	16383	32760	LIBRARY

Table 5. Data set attributes for allocating the Discover output, data store, and customization library data sets (continued)

Data set	Organization	Record format	Record length	Block size	Data set name type
Product customization library	PO	Fixed block	80	32720	LIBRARY

Restrictions:

- Multiple users cannot simultaneously share the discover output data set, data store data set, Tools Customizer metadata library, and metadata library.
- You cannot share the data store data set across multiple LPARs with shared DASD or copy the data store data set to another LPAR. Tools Customizer creates many cross-references between product and DB2 associations. Therefore, if you share or copy the data store data set, member names that are empty or that do not exist might be generated.

Starting and preparing Tools Customizer for use

Use the provided REXX EXEC to start Tools Customizer. The first time that you use Tools Customizer, you must modify the settings that Tools Customizer uses to customize your components.

Best Practice: SMP/E and runtime libraries maintenance strategy for Tools Customizer

Tools Customizer creates relationships between the values for the Product Parameters, LPAR Parameters, and DB2 Subsystem Parameters for each Tools Customizer enabled product. Determining the correct maintenance strategy for your Tools Customizer runtime libraries, after SMP/E processing, can reduce problems working with Tools Customizer and the enabled products through their life cycles.

Tools Customizer has very specific requirements for data set names:

- Only one DATASTOR data set exists per LPAR
- The product metadata library data set names do not change during the life of that release of the Tools Customizer enabled product.

The DATASTOR data set is the repository for all the information that Tools Customizer requires to generate customization JCL for enabled products.

When you update and save the Tools Customizer Settings panel (CCQPSET), as described in “Modifying Tools Customizer user settings” on page 47, the name of the DATASTOR data set is saved in the ISPF profile. This allows Tools Customizer to know the active DATASTOR data set when the TSO user id logs in and starts the Tools Customizer EXEC.

Maintenance scenarios

IBM expects maintenance to be applied to libraries which are then used by Tools Customizer. In practice, different customer shops distribute SMP/E APPLY maintenance in different ways.

The following scenarios explain some considerations and alternatives for determining your maintenance strategy. The one overriding objective is to preserve and maintain the same data set names for the Tools Customizer instance.

Apply SMP/E maintenance to the same data sets (using the SMP/E APPLY command):

If you apply SMP/E maintenance (using the SMP/E APPLY command) using the same data set names with each maintenance cycle, you can either use these target libraries as your Tools Customizer runtime libraries or you can copy the SMP/E target data sets to the runtime libraries that are used by Tools Customizer to customize enabled products.

Tools Customizer assumes that if the product metadata library (*DENU) has the same name, this metadata library is for the same release of the enabled product. For example, assume that you customize DB2 Log Analysis Tool v3.3 and name the metadata library SYS2.DB2T00L.SALADENU, with no indication of the version or release. You then upgrade to DB2 Log Analysis Tool v3.4 and employ the same naming convention, SYS2.DB2T00L.SALADENU. Tools Customizer will assume that you are continuing to work with DB2 Log Analysis Tool v3.3 and will report v3.3 on panels and continue to use the same v3.3 Customization Library data set.

A more sustainable approach to naming the data sets is to include a product version, release identifier, or other distinguishing qualifier in the name of the metadata library, so that Tools Customizer can determine the new product release when you upgrade. For example, using metadata library names that include a product version, release identifier, or other distinguishing qualifier, similar to the following, can make product maintenance and upgrades easier:

- DB2T00L.R330.SALADENU for DB2 Log Analysis Tool v3.3
- DB2T00L.R340.SALADENU for DB2 Log Analysis Tool v3.4

Apply SMP/E maintenance to new data sets (using the SMP/E APPLY command):

If you apply SMP/E maintenance (using the SMP/E APPLY command) to new data sets rather than to the same data sets, the next time you open the product metadata library, Tools Customizer will return a data set error that indicates that the library name is being used by another product or component.

For example, assume that you name the DB2 High Performance Unload for z/OS target metadata libraries to reflect the date of an upgrade or to reflect a specific RSU, as follows:

- To reflect a specific upgrade date (August 2014):
 - DB2T00L.PTF420.SINZDBRM.D201408
 - DB2T00L.PTF420.SINZDENU.D201408
 - DB2T00L.PTF420.SINZLOAD.D201408
- To reflect a specific RSU (RSU 1406):
 - DB2T00L.PTF420.SINZDBRM.RSU1406
 - DB2T00L.PTF420.SINZDENU.RSU1406
 - DB2T00L.PTF420.SINZLOAD.RSU1406

Using either of these naming conventions, the next time you start the Tools Customizer EXEC, it will return a data set error.

To handle this type of SMP/E maintenance processing, you can do either of the following:

- Define aliases (using ALIAS control statements) to reference the appropriate libraries for Tools Customizer processing.
- Copy the SMP/E libraries to a set of runtime libraries that are specifically for Tools Customizer processing.

Define aliases (using ALIAS control statements) to reference the appropriate libraries for Tools Customizer processing:

Defining aliases (using ALIAS control statements) for the SMP/E created new product data set names is likely the best strategy when planning for Tools Customizer.

If you are setting up Tools Customizer for the first time, consider specifying the product library data set names with an indicator that these data sets will be used for Tools Customizer processing. For example, use data set names similar to the following names:

- TCZ.PTF420.SINZDBRM
- TCZ.PTF420.SINZDENU
- TCZ.PTF420.SINZLOAD

After applying maintenance using SMP/E, which creates new product library data sets, you should define aliases (using ALIAS control statements) for the new data set names to the data set names that Tools Customizer originally processed. For example, the following maintenance data sets have aliases defined to the original data sets:

- DB2T00L.PTF420.SINZDBRM.RSU1406 --> TCZ.PTF420.SINZDBRM
- DB2T00L.PTF420.SINZDENU.RSU1406 --> TCZ.PTF420.SINZDENU
- DB2T00L.PTF420.SINZLOAD.RSU1406 --> TCZ.PTF420.SINZLOAD

You will need to define an alias (using ALIAS control statements) to each of the following IBM-distributed Tools Customizer data sets:

- SCCQDENU
- SCCQEXEC
- SCCQLOAD
- SCCQMENU
- SCCQPENU
- SCCQSAMP
- SCCQTENU

If you have already set up Tools Customizer and customized the product, you will have to define aliases (using ALIAS control statements) for the newly created data set names to the data sets that were specified when the product was originally customized using Tools Customizer.

After defining the aliases, you should be able to run Tools Customizer successfully.

Note: Only define aliases for IBM-distributed SMP/E libraries.

Restriction: Do not define an alias for any Tools Customizer created data sets, like the following three data sets on the Tools Customizer Settings panel (CCQPSET):

- Customization library qualifier
- Discover output data set
- Data store data set

Do not define an alias for any data sets that you create on behalf of a product, for example the DB2 High Performance Unload for z/OS parameter library (INFPLIB).

Copy the SMP/E libraries to a set of runtime libraries that are specifically for Tools Customizer processing:

If you are setting up Tools Customizer for the first time, consider specifying the product library data set names with an indicator that these data sets will be used for Tools Customizer processing. For example, use data set names similar to the following names:

- TCZ.R420.SINZDBRM
- TCZ.R420.SINZDENU
- TCZ.R420.SINZLOAD

After applying maintenance using SMP/E, which creates new product library data sets, you should copy the new data sets to the data sets that Tools Customizer originally processed. For example, copy the following maintenance data sets to the original data sets:

- DB2TOOL.PTF420.SINZDBRM.RSU1406 --> TCZ.R420.SINZDBRM
- DB2TOOL.PTF420.SINZDENU.RSU1406 --> TCZ.R420.SINZDENU
- DB2TOOL.PTF420.SINZLOAD.RSU1406 --> TCZ.R420.SINZLOAD

You will need to copy each of the following IBM-distributed Tools Customizer data sets:

- SCCQDENU
- SCCQEXEC
- SCCQLOAD
- SCCQMENU
- SCCQPENU
- SCCQSAMP
- SCCQTENU

If you have already set up Tools Customizer and customized the product, you will have to copy the newly created data sets to the data sets that were specified when the product was originally customized using Tools Customizer).

After copying the SMP/E data sets to the Tools Customizer instance libraries, you should be able to run Tools Customizer successfully.

Note: Only copy IBM-distributed SMP/E libraries.

Restriction: Do not copy any Tools Customizer created data sets, like the following three data sets on the Tools Customizer Settings panel (CCQPSET):

- Customization library qualifier

- Discover output data set
- Data store data set

Do not copy any data sets that you create on behalf of a product, for example the DB2 High Performance Unload for z/OS parameter library (INFPLIB).

Related tasks:

Modifying Tools Customizer user settings

Before you can customize a product or a component with Tools Customizer, you must review the settings that Tools Customizer uses.

Related information:

The SMP/E APPLY command

The APPLY command specifies which of the received SYSMODs are to be selected for installation in the target libraries.

Alias processing: SMP/E for z/OS Commands

When an element with aliases is processed, both the element and its aliases are updated. SMP/E does not check the aliases against elements maintained in the target zone.

Starting Tools Customizer

Start Tools Customizer by running a REXX EXEC from the ISPF Command Shell panel.

Before you begin

Tools Customizer must be SMP/E installed. You must know the high-level qualifier of where the Tools Customizer libraries reside. The high-level qualifier is considered to be all the segments of the data set name except the lowest-level qualifier, which is SCCQEXEC.

Attention: Ensure that Tools Customizer load libraries are not APF authorized. APF authorizing Tools Customizer libraries results in an abend.

About this task

To run the REXX EXEC, you must either change the placeholder in the EXEC for the high-level qualifier of the Tools Customizer EXEC library or pass the high-level qualifier as a parameter when you run the EXEC. The REXX EXEC is in the CCQTCZ member of the EXEC library.

Procedure

1. Optional: Change the placeholder for the high-level qualifier in the REXX EXEC:
 - a. Find the EXEC library data set for Tools Customizer. The name of the data set is *high_level_qualifier.SCCQEXEC*.
 - b. Edit data set member CCQTCZ and replace the <TCZ HLQ> string with the high-level qualifier of the EXEC library data set. For example, if the name of the Tools Customizer EXEC library is CCQTCZ.USABSAND.SCCQEXEC, replace <TCZ HLQ> with CCQTCZ.USABSAND.

You have to change the placeholder for the high-level qualifier only once. When you run the REXX EXEC, you do not have to pass the high-level qualifier as a parameter.

2. Run the REXX EXEC (CCQTCZ):

- a. From the ISPF Primary Option Menu, select option 6. The ISPF Command Shell panel is displayed.
- b. Specify the EX command to run the REXX EXEC. For example, if the Tools Customizer EXEC library is CCQTCZ.USABSAND.SCCQEXEC and you changed the placeholder for the high-level qualifier in the REXX EXEC, specify: EX 'CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)'
 If you did not change the placeholder for the high-level qualifier in the REXX EXEC, specify: EX 'CCQTCZ.USABSAND.SCCQEXEC(CCQTCZ)'
 'CCQTCZ.USABSAND'

Results

The IBM Customizer Tools for z/OS main menu panel is displayed.

What to do next

If you are running Tools Customizer for the first time, you must modify the Tools Customizer user settings. If you have already set the Tools Customizer user settings, either customize or recustomize DB2 Fast Copy Solution Pack.

Modifying Tools Customizer user settings

Before you can customize components in the DB2 Fast Copy Solution Pack with Tools Customizer, you must review the settings that Tools Customizer uses. You might have to change the default values to suit your environment. In most cases, you can change the Tools Customizer values at any time. For example, after you have customized components in the DB2 Fast Copy Solution Pack and are customizing a different product or solution pack, you might have to change the settings.

Procedure

1. On the IBM Tools Customizer for z/OS main panel (CCQPHME), specify option 0, **User settings for Tools Customizer**. The Tools Customizer Settings panel (CCQPSET) is displayed, as shown in the following figure:

```

CCQPSET          Tools Customizer Settings          14:03:51
Command ==>>>
Enter the settings for customizing a product or press End to save and exit.

Commands: SAVE - Save user settings

Product Customization Settings
Customization library qualifier . . DB2TOOL.PRODUCT.CUST
Use DB2 group attach . . . . . YES (YES/NO)

Tools Customizer Library Settings
Metadata library . . . . . DB2TOOL.CCQ110.SCCQDENU
Discover output data set . DB2TOOL.CCQ110.DISCOVER
Data store data set . . . DB2TOOL.CCQ110.DATASTOR

User Job Card Settings for Customization Jobs
==> //          JOB
==>
==>
==>
==>

```

Figure 5. The Tools Customizer Settings panel (CCQPSET)

- Review the values for the following required fields. Use the default value or specify your own value. You must have appropriate read and write access to the data sets that are specified.

Customization library qualifier

The high-level qualifier that is used as the prefix for the customization library. The customization library is a data set in which the generated jobs to customize components in the DB2 Fast Copy Solution Pack are stored. Write access to this qualifier is required.

For each component to be customized, the first value that is specified for the qualifier is always used, even if you change it after you have generated the customization jobs. For example, if you customize a component and then specify a new qualifier for recustomization, although the new qualifier is saved and displayed, the original value is used.

To maintain multiple instances of Tools Customizer, specify a unique customization library qualifier for each instance of Tools Customizer. Data set names that exceed 42 characters must be enclosed in single quotation marks (').

Use DB2 group attach

Determines the value that is used in the CONNECT statements in the generated customization jobs. Specify YES for data sharing environments, which causes the group attach name to be used. Specifying NO, in most cases, causes the SSID to be used in the DB2 CONNECT statement.

Important: This field has no effect when you are customizing a product on a DB2 subsystem that is not a member of a data sharing group. In this case, the DB2 subsystem ID (SSID) is always used in the CONNECT statements in the generated customization jobs.

When you are customizing a component on a DB2 subsystem that is a member of a data sharing group, how the DB2 subsystem is defined and the value of the **Use DB2 group attach** field determines the value that is used in the CONNECT statements in the generated jobs. The following table shows whether the SSID or the group attach name is used:

Table 6. The effect of the value of the Use DB2 group attach field in a data sharing environment

DB2 subsystem definition	Value of the Use DB2 group attach field	Value that is used in the CONNECT statements
The DB2 subsystem is defined with an SSID.	Yes	Group attach name
	No	SSID ¹
The DB2 subsystem is not defined with an SSID.	Yes or No	Group attach name

Note 1: If you generate jobs for multiple DB2 subsystems that are defined with an SSID and belong to the same data sharing group, the SSID of the first DB2 subsystem that is selected is used.

For example, assume that on the Customizer Workplace panel, you generated jobs for the following DB2 subsystems:

- V91C, which is a stand-alone DB2 subsystem

- V91A, which is a DB2 subsystem that is a member of data sharing group DSG1
- A DB2 subsystem that was not defined with an SSID that is a member of data sharing group DSGA

The following figure shows how these DB2 entries might be listed on the Customizer Workplace panel:

```

Associated DB2 Entries and Parameter Status
Line commands: G - Generate jobs E - Edit B - Browse C - Copy R - Remove
Cmd SSID GrpAttch Lvl Mode User ID Date Status Message
V91C -- 910 NFM SYSADM 2010/11/09 Ready to Customize
V91A DSG1 910 NFM SYSADM 2010/11/09 Ready to Customize
-- DSGA 910 NFM SYSADM 2010/11/09 Ready to Customize
----- End of DB2 entries -----

```

The following table shows which values are used in the CONNECT statements in the generated jobs, based on the value of the **Use DB2 group attach** field.

Table 7. Value that is used in the CONNECT statements in the generated jobs

SSID	GrpAttch	Value of the Use DB2 group attach field	Value that is used in the CONNECT statements
V91C	--	Yes	SSID
		No	SSID
V91A	DSG1	Yes	Group attach name
		No	SSID
--	DSGA	Yes	Group attach name
		No	Group attach name

does not support DB2 group attach names. You must specify NO in the **Use DB2 group attach** field.

Tools Customizer metadata library

The name of the data set that contains the metadata that is used to display the DB2 and LPAR parameters. The parameters that are displayed on the LPAR Parameters panel and the DB2 Parameters panel depend on the parameters that you define and the tasks and steps that you select on the Component Parameters panel for the component that you are customizing. For example, the DB2 parameters that are required, based on the selected tasks and steps, are displayed on the DB2 Parameters panel, and you can edit them. If they are not required, they are not displayed. Read access to this data set is required. Data set names that exceed 42 characters must be enclosed in single quotation marks (').

Discover output data set

The name of the data set in which the output from the component Discover EXEC is stored. Each component has its own Discover EXEC. The Discover EXEC retrieves the component, LPAR, and DB2 parameters from a previously customized component. Write access to this data set is required. Data set names that exceed 42 characters must be enclosed in single quotation marks (').

Data store data set

The name of the data set where Tools Customizer stores information about component, LPAR, and DB2 parameter values. Information about which components are associated with which DB2 entries (DB2 subsystems, DB2 group attach names, and DB2 data sharing members) is also stored in this data set. Data set names that exceed 42 characters must be enclosed in single quotation marks ('). The specified data store data set can be used with only one invocation of Tools Customizer at a time. Data set names that exceed 42 characters must be enclosed in single quotation marks (').

User job card settings for customization jobs

The job card information to be inserted into the generated jobs for customizing a component. The default value is the job statement information from the ISPF Batch Selection panel.

The first line of the job card automatically begins with the following information:

```
//          JOB
```

where characters 3 - 10 are reserved by Tools Customizer for the job name and includes a blank space after JOB. This name cannot be edited. Information that you specify on the first line of the job card cannot exceed 57 characters. This character limit includes a continuation character. All other lines of the job card cannot exceed 72 characters.

3. Press End to save and exit. If the Discover output data set and the data store data set that you specified do not exist, Tools Customizer creates them.

Important: If the ISPF sessions unexpectedly ends before you exit Tools Customizer, the fields on the Tools Customizer Settings panel (CCQPSET) will be repopulated with default values, and you will be required to review them or specify new values again.

Results

The values are saved, and the IBM Tools Customizer for z/OS main menu panel (CCQPHME) is displayed again.

What to do next

You are ready to customize or recustomize components in the DB2 Fast Copy Solution Pack or to change parameter settings.

Related concepts:

“Customizing components in the DB2 Fast Copy Solution Pack” on page 51
Using Tools Customizer to customize components in the DB2 Fast Copy Solution Pack consists of identifying the pack to customize; selecting components of the pack to customize; defining any required component, LPAR, and DB2 parameters; generating the customization jobs; and submitting the jobs.

Hiding and displaying panel text

After you are familiar with Tools Customizer, you might want to hide the instructions and some of the basic descriptions that are displayed by default on Tools Customizer panels.

About this task

By using the `OPTIONS` command, you can choose to show or hide the following information on Tools Customizer panels:

- The instructions on all panels
- The Product to Customize section on the Customizer Workplace panel (CCQPWRK)
- The Usage Notes section on the Product Parameters panel (CCQPPRD), the LPAR Parameters panel (CCQPLPR), and the DB2 Parameters panel (CCQPDB2).

By hiding this information, more data can be displayed on the panels. Later, you can redisplay this information also by using the `OPTIONS` command.

Procedure

1. On any Tools Customizer panel, issue the `OPTIONS` command. The Panel Display Options panel (CCQPOPT) is displayed, as shown in the following figure. By default, all options are preselected with a slash (/) to be shown.

```
CCQPOPT                Panel Display Options

Select panel display options and press Enter. To cancel, press End.

Panel Display Options
Specify a slash (/) to select options.
/ Show the panel instructions
/ Show the Product to Customize section
/ Show the Usage Notes section
Command ==>
```

Figure 6. The Panel Display Options panel (CCQPOPT)

2. To hide any of the options, remove the slash, and press Enter.

Customizing components in the DB2 Fast Copy Solution Pack

Using Tools Customizer to customize components in the DB2 Fast Copy Solution Pack consists of identifying the pack to customize; selecting components of the pack to customize; defining any required component, LPAR, and DB2 parameters; generating the customization jobs; and submitting the jobs.

Customization roadmaps describe the steps that you must complete to customize one or more components in the DB2 Fast Copy Solution Pack. Separate roadmaps are provided for the three most common types of customizations.

Use the following table to determine which roadmap corresponds to your environment.

Table 8. Customization roadmaps

Environment description	Roadmap
You do not have customized versions of the components in the DB2 Fast Copy Solution Pack, and you need to customize one or more of them for the first time.	"Roadmap: Customizing components for the first time" on page 52

Table 8. Customization roadmaps (continued)

Environment description	Roadmap
You already customized one or more components in the DB2 Fast Copy Solution Pack as stand-alone products. Now, you have installed the DB2 Fast Copy Solution Pack, and you want to use the same parameter values to customize these components.	"Roadmap: Customizing new versions of components from a previous customization" on page 53
You have customized versions of the components in the of DB2 Fast Copy Solution Pack, but you want to change one or more parameter values.	"Roadmap: Recustomizing components" on page 54

Roadmap: Customizing components for the first time

This roadmap lists and describes the steps that are required to customize one or more components in the DB2 Fast Copy Solution Pack for the first time.

If you are customizing a previous version of one or more components in the DB2 Fast Copy Solution Pack, see "Roadmap: Customizing new versions of components from a previous customization" on page 53.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the pack customization steps that must be done before Tools Customizer is started are complete.
- The LPAR ISPF libraries that are required to submit the jobs are known.
- Tools Customizer is started.
- The Tools Customizer settings have been reviewed or modified, and saved.

Complete the steps in the following table to customize components for the first time.

Table 9. Steps for customizing for the first time

Step	Description	Instructions
1	Specify the product metadata library for the pack that you want to customize. The name of this library is <i>hlq.SDENU</i> .	"Specifying the metadata library for the pack to customize" on page 55
2	Select the components of the pack that you want to customize.	"Selecting components to customize" on page 56
3	Create new DB2 entries and associate them with components of the pack.	"Creating and associating DB2 entries" on page 59
4	Define the required parameters.	"Defining parameters" on page 61
5	Generate the customization jobs for the component or for the DB2 entries on which the component is ready to be customized.	"Generating customization jobs" on page 66
6	Submit the generated customization jobs.	"Submitting customization jobs" on page 67

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 10. Administrative tasks

Description	Instructions
Browse the different types of parameters.	"Browsing parameters" on page 69
Copy an existing DB2 entry to the list of DB2 entries on which a component can be customized.	"Copying DB2 entries" on page 69
Remove one or more DB2 entries from the associated list.	"Removing DB2 entries" on page 71
Delete one or more DB2 entries from the master list.	"Deleting DB2 entries" on page 71
Display a list of customization jobs that have been previously generated.	"Displaying customization jobs" on page 72
Maintain the customization jobs in the customization library.	"Maintaining customization jobs" on page 72

Roadmap: Customizing new versions of components from a previous customization

This roadmap lists and describes the steps for customizing new versions of components in the DB2 Fast Copy Solution Pack based on the existing customization values of a previous version of the same components in the pack.

Use this roadmap even if the previous version of DB2 Fast Copy Solution Pack was not customized by using Tools Customizer.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the pack customization steps that must be done before Tools Customizer is started are complete.
- Tools Customizer is started.
- The Tools Customizer settings have been reviewed or modified, and saved.

Complete the steps in the following table to customize new versions of components in the DB2 Fast Copy Solution Pack from a previous customization.

Table 11. Steps for customizing new versions of components in the DB2 Fast Copy Solution Pack from a previous customization

Step	Description	Instructions
1	Specify the product metadata library for the pack that you want to customize. The name of this library is <i>hlq.SDENU</i> .	"Specifying the metadata library for the pack to customize" on page 55
2	Select the components of the pack that you want to customize.	"Selecting components to customize" on page 56
3	Use the component Discover EXEC to discover information about the version of that you previously customized manually.	"Discovering component information automatically" on page 57
4	Define the required parameters.	"Defining parameters" on page 61
5	Generate the customization jobs for the component or for the DB2 entries on which the component is ready to be customized.	"Generating customization jobs" on page 66

Table 11. Steps for customizing new versions of components in the DB2 Fast Copy Solution Pack from a previous customization (continued)

Step	Description	Instructions
6	Submit the generated customization jobs.	"Submitting customization jobs" on page 67

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 12. Administrative tasks

Description	Instructions
Browse the different types of parameters.	"Browsing parameters" on page 69
Copy an existing DB2 entry to the list of DB2 entries on which a component can be customized.	"Copying DB2 entries" on page 69
Remove one or more DB2 entries from the associated list.	"Removing DB2 entries" on page 71
Delete one or more DB2 entries from the master list.	"Deleting DB2 entries" on page 71
Display a list of customization jobs that have been previously generated.	"Displaying customization jobs" on page 72
Maintain the customization jobs in the customization library.	"Maintaining customization jobs" on page 72

Roadmap: Recustomizing components

This roadmap lists and describes the steps to change parameter values and regenerate customization jobs for components in the DB2 Fast Copy Solution Pack after you have customized it for the first time.

The new customization jobs will replace the customization jobs that were previously generated and stored in the customization library. Part of the recustomization process includes selecting or deselecting optional tasks or steps, changing the definitions of parameters that have already been defined, or both. Use the method in this roadmap instead of deleting customization jobs from the customization library.

Before you complete these steps, ensure that the following prerequisites have been met:

- All of the pack customization steps that must be done before Tools Customizer is started are complete.
- Tools Customizer is started.

Complete the steps in the following table to recustomize components.

Table 13. Required steps for recustomizing components

Step	Description	Instructions
1	Specify the product metadata library for the pack that you want to recustomize. The name of this library is <i>hlq.SDENU</i> .	"Specifying the metadata library for the pack to customize" on page 55
2	Select the components of the pack that you want to recustomize.	"Selecting components to customize" on page 56

Table 13. Required steps for recustomizing components (continued)

Step	Description	Instructions
3	Edit the specific tasks, steps, or parameters that need to be changed.	<ul style="list-style-type: none"> • “Defining component parameters” on page 61 • “Defining LPAR parameters” on page 63 • “Defining DB2 parameters” on page 64
4	Generate the customization jobs for the component or for the DB2 entries on which the component is ready to be customized.	“Generating customization jobs” on page 66
5	Submit the new generated customization jobs.	“Submitting customization jobs” on page 67

The following table lists some of the common administrative tasks that you might need to do during the customization process.

Table 14. Administrative tasks

Description	Instructions
Browse the different types of parameters.	“Browsing parameters” on page 69
Copy an existing DB2 entry to the list of DB2 entries on which a component can be customized.	“Copying DB2 entries” on page 69
Remove one or more DB2 entries from the associated list.	“Removing DB2 entries” on page 71
Delete one or more DB2 entries from the master list.	“Deleting DB2 entries” on page 71
Display a list of customization jobs that have been previously generated.	“Displaying customization jobs” on page 72
Maintain the customization jobs in the customization library.	“Maintaining customization jobs” on page 72

Specifying the metadata library for the pack to customize

You must specify a metadata library for the pack that you want to customize.

About this task

The product metadata library contains the information that determines which tasks, steps, and parameters are required to customize DB2 Fast Copy Solution Pack. This information controls what is displayed on the Component Parameters panel, the LPAR Parameters panel, and the DB2 Parameters panel.

After DB2 Fast Copy Solution Pack has been SMP/E installed, the default name of the pack metadata library is *high_level_qualifier.SBBXDENU*, where *high_level_qualifier* is all of the segments of the data set name except the lowest-level qualifier.

Procedure

1. Specify option 1 on the Tools Customizer for z/OS panel. The Specify the Metadata Library panel is displayed. This panel contains a list of the product

metadata libraries that you specified most recently. If you are using Tools Customizer for the first time, this list is empty, as shown in the following figure:

```
CCQPHLQ          Specify the Metadata Library          13:09:50
Command ==>>>          Scroll ==>> PAGE

Type the name of the metadata library for the pack or the product in the
Metadata library field, or select the library in the list of previous
libraries and press Enter to populate the field. Press Enter to continue.

The default name of the metadata library after the pack or product has been
SMP/E installed is <hlq>.SxxxDENU, where <hlq> is the high-level qualifier for
the pack or the product, and xxx is the 3-character prefix for the pack or
the product.

Metadata library . BBX.ALIAS.SBBXDENU

Previously Used Metadata Library:

=>
=>
=>
=>
```

Figure 7. The Specify the Metadata Library panel

2. Use one of the following methods to specify the pack metadata library:
 - Type the name of a fully qualified partitioned data set (PDS) or an extended partitioned data set (PDSE) in the **Metadata library** field. Double quotation marks (") cannot be used around the name. Single quotation marks (') can be used but are not required. If you are customizing DB2 Fast Copy Solution Pack for the first time, you must use this method.
 - Place the cursor on the library name in the Recent Metadata Libraries list, and press Enter.

Results

The Select the Components to Customize panel is displayed.

What to do next

- Select the components of the pack that you want to customize.

Selecting components to customize

If you are customizing a solution pack, you must select which components of the pack to customize. If you are customizing a product, skip this step.

Procedure

1. On the Select the Components to Customize panel, specify / next to the names of the components that you want to customize. The following figure shows an example of the Select the Components to Customize panel.

```

CCQPSEC          Select the Components to Customize      Row 1 to 4 of 4
Command ==>>>                                     Scroll ==>> PAGE

Select one or more components to customize. Press Enter to continue
or End to cancel.

Pack metadata library . : BBX.ALIAS.BBXDENU
Pack to customize . . . : DB2 Fast Copy Solution Pack   > Version . : 1.2.0

Line commands: / - Select
  Cmd Name                                     Version Customization Status
  ----->----->----->----->----->----->----->----->----->
    DB2 Cloning Tool for z/OS                   3.2.0   Pending Customization
    DB2 Recovery Expert for z/OS                3.2.0   Pending Customization
----->----->----->----->----->----->----->----->----->
                                                                End of components ----->----->----->----->

```

Figure 8. The Select the Components to Customize panel

2. Press Enter.

Results

If you are customizing components in the DB2 Fast Copy Solution Pack for the first time, the Run Discover EXEC panel is displayed. Otherwise, the Customizer Workplace panel is displayed.

What to do next

Complete the steps that correspond to your environment:

Customizing components in the DB2 Fast Copy Solution Pack for the first time

Do not run the Discover EXEC. Press End. The Customizer Workplace panel is displayed. If your environment requires associated DB2 entries, ensure that they are created and associated. If your environment does not require associated DB2 entries, skip this step, and edit component parameters.

Customizing new versions of components in the DB2 Fast Copy Solution Pack from a previous or current customization

Press Enter to run the Discover EXEC. The Discover Customized Product Information panel is displayed. Specify the required information for running the EXEC.

Discovering component information automatically

You can use the Discover EXEC to discover information from a previous or current customization of the component.

About this task

Tip: Using the Discover EXEC to discover information from a previous or current customization saves time and reduces errors that can occur when parameters are specified manually.

The component provides the Discover EXEC that you will run. Therefore, the information that can be discovered depends on the pack.

Parameter values that are discovered and parameter values that are specified manually are saved in the data store. If parameter values for the component that you want to customize exist in the data store, Tools Customizer issues a warning before existing values are replaced.

Procedure

1. On the Customizer Workplace panel, issue the DISCOVER command. If you chose to run the Discover EXEC on the pop-up panel after you specified the component to customize, skip this step.

Tip: You can run any Tools Customizer primary command by using either of the following methods:

- Place the cursor on the name of the primary command, and press Enter.
- Type the primary command name in the command line, and press Enter.

The Discover Customized Pack Information panel is displayed, as shown in the following figure:

```

CCQPDCS          Discover Customized Component Information          16:38:37
Command ==>>>                               Scroll ==>> PAGE

For the component you are customizing, the Discover EXEC retrieves component
information from an already customized component. Specify the required
information. To save your information and run the Discover EXEC, issue the RUN
command. To save your information and stay on this panel, issue the SAVE
command. To verify the syntax of your information without saving it, press
Enter. To save and exit, press End.

Commands: RUN  SAVE

Pack to Customize                               Version . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDENU >LPAR . . : MVS1
Component name . . . . . : DB2 Recovery Expert   Version . : 3.2.0

                                                    More:   +
Discover EXEC for Extracting Information from an Already Customized Product
Discover EXEC library . . . ARY.WRK031C.SARYDENU
Discover EXEC name . . . . . ARYDISC
Discover output data set . . ARY.TCZ.DISCOVER

Information for Discover EXEC
Current ARY LOAD library . . . . . ARY.SARYLOAD                >
Current ARY ISPM library . . . . . ARYABC.SARYISPM            >
Discover from this ARY control file . . . ARY.CONTROL         >
Discover from this ARY CLIST library . . . ARY.SARYCLST       >
Discover from this BIND JCL library and member
                                                    ARY.SABCSAMP(ARYBIND) >

```

Figure 9. The Discover Customized Component Information panel

2. Either accept the default values for the following input fields that Tools Customizer generates, or replace the default values with your own values:

Discover EXEC library

The fully qualified data set name that contains the Discover EXEC.

Discover EXEC name

The name of the Discover EXEC.

Discover output data set

The fully qualified data set where output from the Discover EXEC is stored.

3. Either accept or change the default values in the **Information for Discover EXEC** fields. These fields are generated by the component to be customized. They show the information that is required to run the component Discover EXEC. These fields vary by component.
4. Issue the RUN command to run the component Discover EXEC. Alternatively, save your information without running the component Discover EXEC by issuing the SAVE command. If you issue the RUN command to run the

component Discover EXEC, the parameter information is discovered for a component, and the Customizer Workplace panel is displayed.

Results

The discovered parameter values for a component replace any existing values.

What to do next

The next step depends on your environment:

- If DB2 entries were not discovered, or if you need to customize the component on new DB2 entries, create and associate the entries.
- If DB2 entries were discovered and you want to customize the component on only these entries, define the parameters.

Related tasks:

“Creating and associating DB2 entries”

You can create new DB2 entries and associate them with components in the DB2 Fast Copy Solution Pack.

“Defining parameters” on page 61

To customize a component, you must define component parameters, LPAR parameters, and DB2 parameters, if your customization requires DB2 entries.

Creating and associating DB2 entries

You can create new DB2 entries and associate them with components in the DB2 Fast Copy Solution Pack.

About this task

The list of associated DB2 entries is on the Customizer Workplace panel.

Procedure

1. Issue the ASSOCIATE command on the Customizer Workplace panel. The Associate DB2 Entry for Component panel is displayed, as shown in the following figure:

```
CCQPDAD          Associate DB2 Entry for Component          10:07:28
Command ==>>>                               Scroll ==>>> CSR

Select any of the following DB2 entries to add them to the Customizer
Workplace panel. You use the Customizer Workplace panel to choose the DB2
subsystems, data sharing members, and group attach names on which to
customize the product.

Commands: CREATE - Create a new DB2 entry

Pack to Customize                               Version . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDE > LPAR . . : MVS1
Component name . . . . . : DB2 Recovery Expert Version . : 3.2.0

Line commands: A - Associate C - Copy

Cmd SSID GrpAttch
----- End of DB2 entries -----
```

Figure 10. The Associate DB2 Entry for Component panel

2. Create DB2 entries. If you need to associate DB2 entries that are already in the master list, skip this step and go to step 3.

- a. Issue the CREATE command. The Create DB2 Entries panel is displayed, as shown in the following figure:

```

CCQPDCR          Create a DB2 Entry
Command ==>>>

Specify a DB2 subsystem ID, a DB2 group attach name, or both for the
new DB2 entry. Press Enter to continue or End to cancel.

New DB2 Entry Information
DB2 subsystem ID . . . . .
DB2 group attach name . .

```

Figure 11. The Create a DB2 Entry panel

- b. In the appropriate columns, specify a DB2 subsystem ID, DB2 group attach name, or DB2 data sharing member name for the DB2 entry that you want to create, and press Enter. Valid values are 1 - 4 characters. You can use symbolic characters. You cannot use blanks.

Tips:

- To insert multiple DB2 entries, specify the *Inn* line command, where *nn* is the number of DB2 entries to be inserted.
- You will define specific parameters for these new DB2 entries, such as parameters that define a subsystem as primary, on the DB2 Parameters panel. This panel is displayed after you select these new DB2 entries and issue the line command to generate the jobs, after you issue the primary command to generate the jobs for all associated DB2 entries, or when you manually edit the DB2 parameters.

The Associate DB2 Entry for Component panel is displayed, and the new DB2 entry is displayed in the master list, as shown in the following figure:

```

CCQPDA          Associate DB2 Entry for Component          10:07:28
Command ==>>>                                          Scroll ==>>> CSR

Select any of the following DB2 entries to add them to the Customizer
Workplace panel. You use the Customizer Workplace panel to choose the DB2
subsystems, data sharing members, and group attach names on which to
customize the product.

Commands: CREATE - Create a new DB2 entry

Pack to Customize                                     Version . . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDE > LPAR . . : MVS1
Component name . . . . . : DB2 Recovery Expert Version . . : 3.2.0

Line commands: A - Associate C - Copy

Cmd SSID GrpAttch
DB0 --
----- End of DB2 entries -----

```

Figure 12. The Associate DB2 Entry for Component panel with a new DB2 entry in the master list

- c. Repeat steps b and c for each DB2 entry that you want to create.
 - d. When you have created all the DB2 entries, associate them with the component, or press End to display the Customizer Workplace panel.
3. Associate DB2 entries.
 - a. Specify A against one or more DB2 entries in the master list, and press Enter to associate them with the component.

Results

The Customizer Workplace panel is displayed with the associated DB2 entries displayed in the associated list.

What to do next

Define the parameters.

Related concepts:

“Tools Customizer terminology” on page 36

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Defining parameters

To customize a component, you must define component parameters, LPAR parameters, and DB2 parameters, if your customization requires DB2 entries.

About this task

You must define the component parameters first for the following reasons:

- If you ran the component Discover EXEC, you must review the values that were discovered.
- If you select optional tasks and steps on the Component Parameters panel that affect the DB2 entry on which you will customize a component, additional parameters might be displayed on the DB2 Parameters panel.
- If other steps must be completed in a specific sequence, customization notes on the Component Parameters panel will display the correct sequence.

Defining component parameters:

Component parameters are specific to a component.

About this task

If you ran the component Discover EXEC, you must review the parameters that were discovered.

Procedure

1. Specify E next to the **Component parameters** field on the Customizer Workplace panel, and press Enter. The Component Parameters panel is displayed, as shown in the following figure. If other steps must be completed in a specific sequence before you define the component parameters, a note labeled **Important** will display the correct sequence on this panel.

```

CCQPPRD                               Component Parameters                               13:26:32
Command ==>                           Scroll ==> PAGE

Complete the following tasks to customize the components. The required tasks and
steps are preselected. Ensure that all parameters are specified for each
selected step within a task. Press End to save and exit.

Commands: SAVE - Save parameter values
Line Commands: / - Select

Pack to Customize                       Version . . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDENU > LPAR. . . : MVS1
Component name . . . . . : DB2 Recovery Expert for z > Version . . : 3.2.0

Component customization library : PDBOB.TCZ.$RS25$.ARY310
More: +

Required parameters
Startup Clist library. . . . . DB2TOOLS.ARY310.CLIST
Startup Clist 2 . . . . . ARYV310
Recovery Expert production load library . . . DB2TOOLS.ARY310.SARYLOAD
Control file . . . . . DB2TOOLS.ARY310.DB2.CONTROL
Profile VSAM repository . . . . . DB2TOOLS.ARY310.PROFILES
Profile mappings VSAM repository . . . . . DB2TOOLS.ARY310.PROFILE.MAPS
System catalogs VSAM repository . . . . . DB2TOOLS.ARY310.PROFILE.CATS
System Backups VSAM repository . . . . . DB2TOOLS.ARY310.SYSBACK
System Backups Volumes VSAM repository . . . DB2TOOLS.ARY310.SYSBACK.VOLS
System Backups SSIDs VSAM repository . . . . DB2TOOLS.ARY310.SYSBACK.SSIDS
System Backups Objects VSAM repository . . . DB2TOOLS.ARY310.SYSBACK.OBJS
System Backups Objects VSAM repository . . . DB2TOOLS.ARY310.OBJECTS
System Backup Reports VSAM repository . . . . DB2TOOLS.ARY310.BREPORT
Offload options VSAM repository . . . . . DB2TOOLS.ARY310.OFFOPTS
System configuration VSAM repository . . . . . DB2TOOLS.ARY310.MOVDATA
Product parmlib dataset. . . . . DB2TOOLS.ARY310.PARMLIB
Product parmlib member. . . . . ARY#PARM

/ Customize the Agent job
Recovery Expert ISPF skeleton library. : DB2TOOLS.ARY310.SARYSLIB
Agent Configuration file . . . . . : DB2TOOLS.ARY310.AGTCNFG

/ Customize the Server job
Server Configuration file . . . . . : DB2TOOLS.ARY310.SRVCNFG

```

Figure 13. The Component Parameters panel

2. Select any required tasks and steps, and specify values for any parameters. After you select a task or step with a slash (/), put the cursor in the selected field and press Enter. If tasks, steps, and parameters are required, they are preselected with a slash (/). Otherwise, they are not preselected. All of the required parameters have default values, which you can either accept or change.

Tips:

- In the command line, specify the KEYS command, and map EXPAND to one of the function keys.
- For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.
- The following elements apply to specific fields:
 - **Add...** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add...**, and press Enter. Use the displayed panel to add or delete additional values.
 - **List...** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List...**, and press F1 or the key that is mapped to Help.

- **More...** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More...**, and press Enter.
3. Optional: Select other tasks and steps with a slash (/) and press Enter to activate the input fields. Either accept or change the default values that are displayed.
 4. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the Component Parameters panel.

Results

The Customizer Workplace panel is displayed, and the status of the product parameters is Ready to Customize.

What to do next

If the status of other parameters on the Customizer Workplace panel is Incomplete or Discovered, edit these parameters.

Related tasks:

“Defining LPAR parameters”

LPAR parameters are parameters on the local LPAR that are required to customize a component.

“Defining DB2 parameters” on page 64

DB2 parameters are parameters for a DB2 entry.

Defining LPAR parameters:

LPAR parameters are parameters on the local LPAR that are required to customize a component.

Procedure

1. Specify E next to the **LPAR parameters** field, and press Enter. The LPAR Parameters panel is displayed, as shown in the following figure:

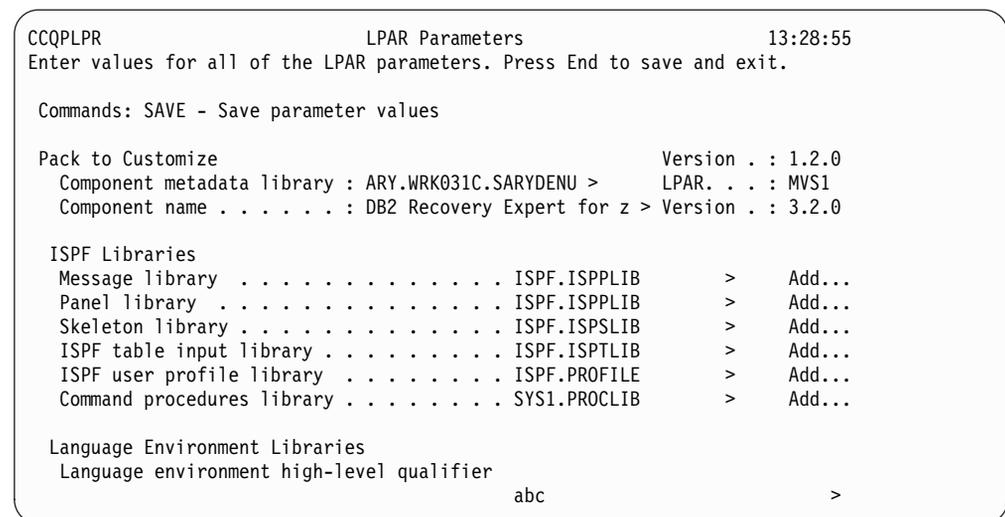


Figure 14. The LPAR Parameters panel

2. Specify values for all required parameters that are displayed. Many parameters have default values, which you can either accept or change.

Tips:

- In the command line, specify the KEYS command, and map EXPAND to one of the function keys.
- For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.
- The following elements apply to specific fields:
 - **Add...** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add...**, and press Enter. Use the displayed panel to add or delete additional values.
 - **List...** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List...**, and press F1 or the key that is mapped to Help.
 - **More...** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More...**, and press Enter.

The following LPAR parameters can contain 1 - 64 values:

- LPAR macro library
 - Message library
 - Panel library
 - Skeleton library
 - ISPF table input library
 - ISPF user profile library
 - File tailoring output library
 - Link list library
 - Command procedures library
 - Macro library
 - Link-edit library
 - Load library
 - Started task library name
3. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the same panel.

Results

The Customizer Workplace panel is displayed, and the status of the LPAR parameters is Ready to Customize.

What to do next

If the status of other parameters on the Customizer Workplace panel is Incomplete or Discovered, edit these parameters.

Related tasks:

“Defining component parameters” on page 61

Component parameters are specific to a component.

“Defining DB2 parameters”

DB2 parameters are parameters for a DB2 entry.

Defining DB2 parameters:

DB2 parameters are parameters for a DB2 entry.

About this task

If you did not run the component Discover EXEC, you must create and associate one or more DB2 entries before you can define the DB2 parameters. For more information, see “Creating and associating DB2 entries” on page 59.

Procedure

1. Specify E next to one or more DB2 entries in the associated list, which is in the Associated DB2 Entries and Parameter Status section on the Customizer Workplace panel, and press Enter. The DB2 Parameters panel is displayed, as shown in the following figure:

```
CCQPDB2                DB2 Parameters                13:36:01
Enter values for all of the DB2 parameters. Press End to save and exit.

Commands: SAVE - Save parameter values

Pack to Customize                      Version . . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDENU > LPAR. . . : MVS1
Component name . . . . . : DB2 Recovery Expert for z > Version . . : 3.2.0

                                                More:      +

DB2 subsystem ID . . . . . : DB01
Group attach name . . . . . :

General DB2 Information
Mode . . . . . NFM      (CM,CM8,CM9,NFM)
Level Number . . . . . 101 (810,910,101)

DB2 Libraries
Load Library . . . . . DSN.SDSNLOAD      >  Add...
Run Library . . . . . DSN.SDSNRLIB      >  Add...
Exit Library . . . . . DSN.SDSNEXIT     >  Add...
Sample library . . . . . DSN.SDSNSAMP   >  Add...
Macro library . . . . . DSN.SDSNMACS    >  Add...

DB2 Bufferpools
Name of the 4 KB bufferpool . . . . . BP0
Name of the 8 KB bufferpool . . . . . BP8K0

DB2 Utilities
Plan name for the DSNTIAD utility . . . .

DB2 Tools Objects
Database name . . . . . SYSTOOLS
Storage group name . . . . . SYSTOOLS      >
```

Figure 15. The DB2 Parameters panel

2. Specify values for all parameters that are displayed.

Tips:

- In the command line, specify the KEYS command, and map EXPAND to one of the function keys.
- For a detailed description of all input fields, put the cursor in the field, and press F1 or the key that is mapped to Help.
- The following elements apply to specific fields:
 - **Add...** is displayed when parameters can have multiple values but currently have only one value. To specify multiple values in these fields, place the cursor on **Add...**, and press Enter. Use the displayed panel to add or delete additional values.

- **List...** is displayed when the complete list of valid values for the fields is too long to be displayed on the panel. To see the complete list of values, place the cursor on **List...**, and press F1 or the key that is mapped to Help.
- **More...** is displayed when input fields contains multiple values. To see all of the values in the field, place the cursor on **More...**, and press Enter.

Many parameters have default values, which you can either accept or change.

3. Press End to save your changes and exit, or issue the SAVE command to save your changes and stay on the same panel.

Results

The status of the DB2 entries that you selected on the Customizer Workplace panel is Ready to Customize.

What to do next

If the status of other parameters on the Customizer Workplace panel is Incomplete or Discovered, edit these parameters.

Related tasks:

“Defining component parameters” on page 61

Component parameters are specific to a component.

“Defining LPAR parameters” on page 63

LPAR parameters are parameters on the local LPAR that are required to customize a component.

Generating customization jobs

To generate customization jobs for a component and any associated DB2 entries, issue the GENERATEALL command, or select one or more DB2 entries on which to customize a component.

Procedure

Generate the customization jobs by using one of the following methods.

- If you want to generate customization jobs at the component level and for any associated DB2 entries, issue the GENERATEALL command, and press Enter.
- If you want to generate customization jobs for specific DB2 entries, select the DB2 entries by specifying the G line command against them, and press Enter. The available DB2 entries are in the associated list in the Associated DB2 Entries and Parameter Status section.

Important: Regenerating customization jobs will replace any existing jobs, including jobs that you might have manually modified after they were generated.

Results

If the status is Incomplete or Discovered for component parameters, LPAR parameters, or DB2 parameters, Tools Customizer automatically starts an editing session for the types of parameters that are required. The session continues until the panel for each type of required parameter has been displayed.

What to do next

If an automatic editing session is started, accept the displayed parameter values or define values for the required types of parameters, select optional parameters,

tasks, or steps for your environment, and save the parameter values. Otherwise, the customization jobs are generated, and you can submit them.

Tip: If the customization jobs are generated, but you are not ready to submit them, you can see them later by issuing the JOBLIST command on the Customizer Workplace panel. The JOBLIST command displays the Finish Component Customization panel, which you can use to submit the jobs.

Submitting customization jobs

Submit the customization jobs to customize a component.

Before you begin

Ensure that the correct jobs are generated.

About this task

The following figure shows part of the Finish Component Customization panel. The table on this panel shows the customization jobs that are generated by Tools Customizer. They are grouped by job sequence number.

```

CCQPCST                               Finish Component Customization          Row 1 to 23 of 41

Submit the members in the order in which they apply to each DB2 entry. To
submit the job, edit the member and issue the TSO SUBMIT command, or edit
the customized library and submit the jobs from there.

Pack to Customize                       Version . : 1.2.0
Component metadata library : ARY.WRK031C.SARYDENU >      LPAR . . : MVS1
Component name . . . . . : DB2 Recovery Expert > Version . : 3.2.0

Line Commands: E - Edit  B - Browse

Component customization library . : PDBOB.TCZ.$RS22$.ARY310

Cmd Member  SSID GrpAttch  Template Generated  Description
-----
A0V31      -- --      ARYV31  2012/11/14  Configure Startup Clist 1
A1V310     -- --      ARYV310 2012/11/14  Configure Startup Clist 2
A3DDLAX EA1A --      ARYDDLDB 2012/11/14  Create IBM Recovery Expert DB
B2DXNFAX EA1A --      ARYDXNF1 2012/11/14  Create DB2 Objects V10
B5DXNFAX EA1A --      ARYDXNF2 2012/11/14  Create DB2 Objects V10 #2
B8DXNFAX EA1A --      ARYDXNF3 2012/11/14  Create DB2 Objects V10 #3
B9HAAAX EA1A --      ARYHAA   2012/11/14  Create Autotool objects
CODRAAX EA1A --      ARYDRA   2012/11/14  Create DRA objects
C1INDEAX EA1A --      ARYINDEX 2012/11/14  Create indexes on DB2 catalog
C4BXNFAX EA1A --      ARYBXNF1 2012/11/14  V10 Bind Packages
C7BXNFAX EA1A --      ARYBXNF2 2012/11/14  V10 Bind Plans
D0BXNFAX EA1A --      ARYBXNF3 2012/11/14  V10 Bind DRA
D3BXNFAX EA1A --      ARYBXNF4 2012/11/14  V10 Bind Autotool
D4GRANAX EA1A --      ARYGRANT 2012/11/14  Grant privileges
D5CNTFL  -- --      ARYCNTFL 2012/11/14  Create Control File
D6REPO    -- --      ARYREPO  2012/11/14  Create VSAM Repository Files
D7GDG     -- --      ARYGDG   2012/11/14  Create backup GDG files
D8CF1UAX EA1A --      ARYCF1UP 2012/11/14  Update Control File 1
D9SLRAX EA1A --      ARYSLR   2012/11/14  Load the SLR
E0UNPAX   -- --      ARYUNPAX 2012/11/14  Unpack and install browser inter
E1SJAGT   -- --      ARYSJAGT 2012/11/14  Customize the Agent job.
E2CFGA    -- --      ARYCFGA  2012/11/14  Customize Agent config file
E3SJSRV   -- --      ARYSJSRV 2012/11/14  Customize the Server job.
E4CFGS    -- --      ARYCFGS  2012/11/14  Customize Server config file
E5IVP     -- --      ARYIVP   2012/11/14  Install Verification
-----
End of customized jobs -----

```

Figure 16. The Finish Component Customization panel

The member-naming conventions depend on whether the customization jobs are for DB2 entries, and LPAR, or the component.

Customization jobs for DB2 entries

The members use the following naming convention:

<job_sequence_number><job_ID><DB2_entry_ID>

where

job_sequence_number

Two alphanumeric characters, A0 - Z9, that Tools Customizer assigns to a customization job. The number for the first template in the sequence is A0, the number for the second template is A1, and so on.

job_ID Characters 4 - 7 of the template name, if the template name contains five or more characters. Otherwise, only character 4 is used. The component to be customized assigns the template name.

DB2_entry_ID

Two alphanumeric characters, AA - 99, that Tools Customizer assigns to a DB2 entry.

For example, the XYZBNDDDB2_entry_ID_1 and XYZBNDDDB2_entry_ID_2 jobs are generated from the XYZBNDGR template, and the XYZ4DB2_entry_ID_1 and XYZ4DB2_entry_ID_2 jobs are generated from the XYZ4 template. If the jobs are generated on two DB2 entries, the following member names are listed sequentially: A0BNDGAA, A0BNDGAB, A14AA, A14AB.

Customization jobs for an LPAR or the component

The members use the following naming convention:

<job_sequence_number><job_ID>

where

job_sequence_number

Two alphanumeric characters, A0 - Z9, that Tools Customizer assigns to a customization job. The number for the first template in the sequence is A0, the number for the second template is A1, and so on.

job_ID Characters 4 - 8 of the template name, if the template name contains five or more characters. Otherwise, only character 4 is used. For example, for the XYZMAKE template, the job ID is MAKE. For the XYZM template, the job ID is M. The component to be customized assigns the template name, and it is displayed in the Template column.

For example, the XYZBNDGR job is generated from the XYZBNDGR template, and the XYZ4 job is generated from the XYZ4 template. The following member names are listed sequentially: A0BNDGR, A14.

Procedure

1. Submit the generated customization jobs by following the process that you use in your environment or by using the following method:
 - a. Specify B against a customization job or the customization library, and press Enter. An ISPF browsing session is started.

- b. Browse the customization job or each member in the library to ensure that the information is correct.
 - c. Run the TSO SUBMIT command.
2. Press End.

Results

The component is customized, and the Customizer Workplace panel is displayed. The status is Customized for the DB2 entries on which the component was customized.

What to do next

You can generate more customization jobs for other DB2 entries, view a list of customization jobs that you previously generated, or recustomize a component.

Browsing parameters

You can browse the component parameters, the LPAR parameters, and the DB2 parameters in read-only mode.

Procedure

1. On the Customizer Workplace panel, specify B next to the **Component parameters** field, the **LPAR parameters** field, or the DB2 entry that you want to browse, and press Enter. The panel that corresponds to your specification is displayed.
2. Press End to exit.

Copying DB2 entries

You can copy associated and not associated DB2 entries to other DB2 entries or to new DB2 entries.

About this task

Go to the step that applies to your environment:

- To copy an associated DB2 entry to another associated DB2 entry or to an entry that is not associated, go to step 1.
- To copy an associated DB2 entry to a new entry, go to step 2.
- To copy a DB2 entry that is not associated to a new entry, go to step 3.

Procedure

1. To copy an associated DB2 entry to another associated DB2 entry or to an entry that is not associated, complete the following steps:
 - a. Specify C against a DB2 entry in the associated list of DB2 entries on the Customizer Workplace panel, and press Enter. The Copy Associated DB2 Entry panel is displayed.
 - b. Select one or more DB2 entries to which information will be copied by specifying the / line command, and press Enter. The Associated column indicates whether the DB2 entry is associated.

Tip: To copy information into all of the DB2 Entries in the list, issue the SELECTALL primary command, and press Enter. The Copy DB2 Parameter Values panel is displayed.

- c. Specify an option for copying common and product-specific DB2 parameter values. Common DB2 parameter values apply to all DB2 entries for all products that you have customized by using Tools Customizer. Product-specific DB2 parameter values apply only to the product that you are currently customizing.
 - To copy the common DB2 parameter values and the product-specific DB2 parameter values, specify option 1, and press Enter.
 - To copy only the product-specified DB2 parameter values, specify option 2, and press Enter.

In some cases, the DB2 parameter values might contain the DB2 subsystem ID as an isolated qualifier in data set names. For example, in the DB01.DB01TEST.DB01.SANLLOAD, data set name, the DB01 subsystem ID is isolated in the first and third qualifiers but is not isolated in the second qualifier. When the DB2 subsystem ID is an isolated qualifier in data set names, the Change DB2 Subsystem ID in DB2 Parameter Values panel is displayed. Otherwise, the Customizer Workplace panel is displayed.

- d. If the Change DB2 Subsystem ID in DB2 Parameter Values panel is displayed, specify an option for changing the subsystem IDs. Otherwise, skip this step.
 - To change the subsystem ID in isolated qualifiers in data set names, specify option 1, and press Enter.
 - To use the same subsystem ID in all values, specify option 2, and press Enter.

The Customizer Workplace panel is displayed with the copied associated entry in the list.

2. To copy an associated DB2 entry to a new entry, complete the following steps:
 - a. Specify C against a DB2 entry in the associated list of DB2 entries on the Customizer Workplace panel, and press Enter. The Copy Associated DB2 Entry panel is displayed.
 - b. Issue the CREATE command. The Create DB2 Entries panel is displayed.
 - c. Specify the SSID, the group attach name, or both in the appropriate columns for each new DB2 entry, and press Enter.

Tip: To add rows for additional entries, specify the *mm* line command, where *mm* is the number of entries to be created, and press Enter. The Copy Associated DB2 Entry panel is displayed with the new entries in the list. The new entries are preselected.

- d. Press Enter to complete the copy process. The Customizer Workplace panel is displayed with the copied entries in the list.
3. To copy a DB2 entry that is not associated to a new entry, complete the following steps:
 - a. Issue the ASSOCIATE command on the Customizer Workplace panel. The Associate DB2 Entry for Product panel is displayed.
 - b. Select one or more DB2 entries by specifying the / line command, and press Enter. The Copy a DB2 Entry panel is displayed.
 - c. Specify the SSID, the group attach name, or both in the appropriate columns for the new DB2 entry, and press Enter. The Associate DB2 Entry for product panel is displayed with the copied entry in the list.
 - d. If you want to associate the copied entry, specify A against it, and press Enter. The Customizer Workplace panel is displayed with the copied entries in the list.

What to do next

Edit any of the parameters or generate the jobs.

Related concepts:

“Tools Customizer terminology” on page 36

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Removing DB2 entries

You can remove DB2 entries from the associated list.

About this task

When you remove DB2 entries from the associated list, any customization jobs for the entries are removed from the list of jobs on the Finish Component Customization panel, and they are deleted.

Procedure

On the Customizer Workplace panel, specify R next to one or more DB2 entries that you want to remove, and press Enter. The selected DB2 entries are removed from the associated list and added to the master list on the Associate DB2 Entry for Component panel, and the customization jobs are deleted.

Related concepts:

“Tools Customizer terminology” on page 36

Tools Customizer uses several unique terms that you should be familiar with before you begin to use Tools Customizer.

Deleting DB2 entries

You can delete DB2 entries from the master list.

About this task

When you delete DB2 entries from the master list, any associations and all customization jobs for components that are customized on the entries will be deleted.

Procedure

1. On the Customizer Workplace panel, issue the ASSOCIATE command. The Associate DB2 Entry for Component panel is displayed.
2. Specify D next to one or more DB2 entries that you want to delete, and press Enter. If the entry is associated with any components, the Delete Associated DB2 Entry panel for the first DB2 entry that you selected is displayed. Otherwise, the Delete DB2 Entry panel is displayed.
3. To delete the DB2 entries, press Enter. If the DB2 entries are associated with any components in the table on the Delete Associated DB2 Entry panel, any associations and all customization jobs for the components that are customized on it are deleted. Otherwise, only the DB2 entries are deleted. If you selected multiple DB2 entries to delete, the next DB2 entry that you selected is displayed on either the Delete Associated DB2 Entry panel or the Delete DB2 Entry panel. Otherwise, the Associate DB2 Entry for Component panel is displayed.

What to do next

If you selected multiple DB2 entries to delete, repeat step 3 until all selected entries are deleted. Then, continue the customization process.

Displaying customization jobs

You can view a list of the members that contain the customization jobs before or after you submit the jobs.

About this task

The customization jobs that you generate for one DB2 entry are also displayed when you customize a component for another DB2 entry later.

Procedure

On the Customizer Workplace panel, issue the JOBLIST command. The Finish Component Customization panel is displayed. This panel shows the list of jobs that you have previously generated. They are grouped by job sequence number. Use this panel to browse or edit the generated jobs before you submit them.

Maintaining customization jobs

Instead of deleting customization jobs outside of Tools Customizer, you can maintain the correct jobs for a component by completing the steps for recustomization.

About this task

You cannot delete or rename customization jobs from the customization library by starting an ISPF browse or edit session from the Finish Component Customization panel. If you try to delete customization jobs by using this method, the CCQC034S message is issued. If you try to rename customization jobs, the CCQC035S message is issued.

If you delete or rename customization jobs from the customization library by using ISPF outside of Tools Customizer, Tools Customizer will not recognize that the jobs were deleted, and the Finish Component Customization panel will still display them. If you browse or edit jobs that were deleted from the library outside of Tools Customizer, the CCQC027S message is issued.

Procedure

To maintain the correct customization jobs in the customization library, complete the steps for recustomization.

Using Tools Customizer in a multiple-LPAR environment

Currently, Tools Customizer supports only the local LPAR; however, you can propagate customizations to additional LPARs by using either of two different methods.

About this task

In a multiple-LPAR environment, Tools Customizer identifies the LPAR to which you are logged on. Tools Customizer uses this LPAR name for several different parameter settings, one of which is the data store. When you use the data store during the customization of the component that is on a different LPAR, Tools

Customizer issues message CCQD586S, which indicates that the product has already been customized based on values from the data store on the first LPAR. This message is issued to prevent the data store from becoming corrupted.

This behavior occurs in the following conditions:

- Tools Customizer is installed on a DASD device that is shared by multiple LPARs.
- After a product is customized by using Tools Customizer, the data store is copied to another LPAR.

Procedure

To customize products running against a DB2 subsystem on an LPAR where Tools Customizer is not installed, consider using one of the following methods:

Install one instance of Tools Customizer on one LPAR

If you intend to reuse the customization values for all the instances of your products on all LPARs, use this method.

1. Associate all the DB2 entries in this one instance of Tools Customizer. The LPARs on which the DB2 subsystems reside do not matter.
2. Generate the customization jobs for each DB2 entry.
3. Copy the generated customization jobs to the LPAR to run against the specific DB2 entries. Some LPAR-specific edits might be required. You can make these edits in the customized jobs that you copied. Note that this situation is one of the few situations where you might need to make manual changes to the jobs that are customized by Tools Customizer.

Install one instance of Tools Customizer on each LPAR

If you do not want to reuse previous customization values and you want to start new customizations, use this method.

Important: This method will likely not be the preferred approach for most organizations because most organizations tend to use similar or identical customization values for each product instance on all LPARs.

Post-customization tasks

After you customize the components of the solution pack, some components have post-customization tasks that you might need to perform depending on the environment that you want to set up. DB2 Cloning Tool for z/OS has post-customization tasks, and DB2 Recovery Expert for z/OS does not.

Post-customization tasks: DB2 Cloning Tool

The following topics describe optional tasks that might be completed immediately after DB2 Cloning Tool is customized and tasks that might need to be performed if you migrate to a new version of DB2 after customizing DB2 Cloning Tool.

Reviewing the CKZINI PARMLIB member variables

The keywords in the CKZINI PARMLIB member provide flexibility and control of product execution, and security of system parameters. Make sure to review and update the generated CKZINI member to ensure all keywords are appropriate for your installation and operation requirements.

This member is a read-only library during execution of the product. You can alter the keyword values by either:

- Using Tools Customizer to update and re-generate the CKZINI member. See the topic Task: Create and update CKZINI for more information.
- Directly updating the CKZINI member. “CKZINI customization values” on page 77 contains descriptions and coding rules for the keywords in the CKZINI member. Use ISPF Edit to update the CKZINI configuration values.

Some keywords may be coded with default values. You should review the following keywords in particular, but make sure to review all of the CKZINI to ensure the values are correct for your installation:

- Verify the DB2 plan name(s) in the DB2_OPTIONS section. All DB2 subsystems that DB2 Cloning Tool and DB2 Cloning Tool Table Space Cloning will access must have a plan defined. This plan name is provided to DB2 Cloning Tool and DB2 Cloning Tool Table Space Cloning using the DB2_PLAN value.
- Verify the CA-MIM/MII token values in RESOURCE_SERIALIZATION section. Installations running CA-MIM/MII with multiple systems and shared DASD need to set the following CKZINI parameter found in the :RESOURCE_SERIALIZATION section to YES to ensure that when CA-MIM/MII GDIF is inactive, the DB2 Cloning Tool data sets are protected from data corruption.

```
:RESOURCE_ SERIALIZATION  
MIM_GDIF = YES
```

- Verify the TCP/IP name in the TCPIP-OPTIONS section. If you are planning to use the TCP/IP option of DB2 Cloning Tool Table Space Cloning and your TCP/IP started task name is not TCPIP, update the TCPIP_STC_NAME to match your installation's started task name.

Managing CKZINI when running DB2 Cloning Tool on several systems

For those customers with DB2 Cloning Tool running on several systems, the CKZINI PARMLIB member can be managed either by:

- Using separate copies of the CKZINI, editing them independently and running INIMERGE on each individually.
- Using the same text (multi-image INI) for all systems; this requires replicating sections with sysplex and/or system names qualifications for those sections that need token/values unique to an image. Refer to “CKZINI customization values” on page 77 for more information related to qualified section names. Use the CKZIVIEW member of the SCKZJCL data set to view the contents of the multi-image INI that will be used by any image.

Ensure proper authorizations

You can prevent unauthorized personnel from executing DB2 Cloning Tool commands. To use DB2 Cloning Tool Table Space Cloning, specific authorizations are also required.

In addition to user authorizations, some functions require other authorizations; refer to “Function authorization requirements” on page 26.

Authorizations for DB2 Cloning Tool

You can prevent unauthorized personnel from executing DB2 Cloning Tool commands for subsystem or volume cloning. The following items need to be secured (or protected) in order to ensure that only authorized personnel can have access.

- DB2 Cloning Tool requires ALTER authority to both the source and target user catalogs. By protecting ALTER authority, unauthorized personnel are prevented from executing the COPY and RENAME commands.
- DB2 Cloning Tool requires UPDATE authority to the target data sets. By protecting UPDATE authority, unauthorized personnel are prevented from executing the DB2UPDATE command.
- The COPY command requires authorization to ADRDSSU ADMIN. By protecting ADRDSSU ADMIN, unauthorized personnel are prevented from executing the COPY command. This only applies for FlashCopy where ADRDSSU is used.
- The COPYCHECK command could be used by an unauthorized person using an authorized person's journal file. To prevent this, secure the journal files.

Authorizations for DB2 Cloning Tool Table Space Cloning

The following authorizations are required to use DB2 Cloning Tool Table Space Cloning:

- SELECT authority on the DB2 catalog tables for both source and target subsystems
- EXECUTE authority on the CKZPLAN on both source and target subsystems
- DISPLAYDB authority on both source and target databases
- STOPDB authority on the target database
- STARTDB authority on the target database
- ALTER authority for all target tables with identity columns
- If FUZZY-COPY(Y) is used to not stop the source, and ADRDSSU is used, then RACF authority for "TOLERATE(ENQF)" is required
- If FUZZY-COPY(N) (the default) is used, then STOPDB and STARTDB authority for the source database is required

Verifying successful customization

When customization is completed, you can verify that DB2 Cloning Tool and DB2 Cloning Tool Table Space Cloning have been successfully installed.

Once the customization tasks have been completed, the FINDUCATS command can be run against one volume to verify that DB2 Cloning Tool has been successfully customized. To verify that DB2 Cloning Tool Table Space Cloning has been successfully installed, select a DB2 table space and all its index spaces; copy it, and ensure it can be accessed on the target subsystem.

If you have configured the ISPF interface, verify successful customization of the interface by running the CKZCLIST CLIST.

Adding DB2 Cloning Tool to the DB2 Admin Launchpad

The DB2 Admin Launchpad is used to start installed IBM DB2 tools directly from a centralized panel. You can add DB2 Cloning Tool to the DB2 Admin Launchpad.

About this task

For instructions for adding DB2 Cloning Tool to the DB2 Admin Launchpad, go to the DB2 Admin Launchpad configuration topics in the DB2 Administration Tool for z/OS online product documentation in the IBM Knowledge Center.

DB2 version migration considerations

Once DB2 Cloning Tool has been installed and configured, follow these steps if a DB2 subsystem being used with DB2 Cloning Tool is migrated to a later version or must fallback to a previous version.

DB2 Cloning Tool Subsystem Cloning

During configuration, the DB2 subsystem cloning plan and package should have been bound as part of the customization process. The plan and package are release-independent; therefore, once the plan and package is bound, no further action is required when a DB2 subsystem is migrated.

DB2 Cloning Tool Table Space Cloning

When migrating from one DB2 version to a later version, a rebind on the new subsystem is required for the plans and packages that were used by DB2 Cloning Tool Table Space Cloning on DB2 subsystems. Rebind the plans and packages on each subsystem on which DB2 Cloning Tool Table Space Cloning will be used. In general, the steps are:

1. Start Tools Customizer and specify to customize DB2 Cloning Tool.
2. On the Customizer workplace panel, edit the product parameters.
3. On the Product Parameters panel, select the Run Table Space Cloning plan bind task, the Run Table Space Cloning package binds task, and optionally the Run Table Space Cloning package binds for DDF location task. Save and exit.
4. Create and associate the new DB2 subsystem.
5. On the Customizer Workplace panel, edit the new subsystem.
6. On the DB2 Parameters panel, specify the mode, level, and other required DB2 subsystem parameters. Save and exit.
7. Generate the jobs for the subsystem.

Refer to “Roadmap: Recustomizing components” on page 54 for additional information.

Fallback instructions

If after migrating to a later DB2 version, you must fall back to the prior version of DB2:

- For DB2 Cloning Tool Subsystem Cloning, the plan and package are release-independent; therefore, once the plan and package is bound, no further action is required.
- For DB2 Cloning Tool Table Space Cloning, the plan and packages must be rebound on each subsystem on which DB2 Cloning Tool Table Space Cloning will be used. In general, the steps are:
 1. Start Tools Customizer and specify to customize DB2 Cloning Tool.
 2. On the Customizer workplace panel, edit the product parameters.

3. On the Product Parameters panel, select the Run Table Space Cloning plan bind task, the Run Table Space Cloning package binds task, and optionally the Run Table Space Cloning package binds for DDF location task. Save and exit.
 4. If not already done, create and/or associate the prior version DB2 subsystem.
 5. On the Customizer Workplace panel, edit the prior version subsystem.
 6. On the DB2 Parameters panel, specify the mode, level, and other required DB2 subsystem parameters. Save and exit.
 7. Generate the jobs for the subsystem.
- Refer to “Roadmap: Recustomizing components” on page 54 for additional information.

Post-customization tasks: DB2 Recovery Expert

No post-customization steps are required for DB2 Recovery Expert. You are ready to use DB2 Recovery Expert.

Reference

Use reference information for DB2 Cloning Tool when you need more information about the customization of the component. You can find details about the tasks, steps, and parameters that are displayed on the Component Parameters panel, and information about the generated jobs. DB2 Recovery Expert has no supplemental reference information, and you are ready to use DB2 Recovery Expert when you have completed the customization steps in Tools Customizer.

Reference

Reference information supports the tasks that you must complete to install, customize, and use DB2 Cloning Tool.

CKZINI customization values

The CKZINI member (the product initialization member) defines global information regarding DB2 Cloning Tool usage and options within your installation. This topic provides guidelines, values, and syntax used in the CKZINI member.

Structure of the CKZINI member: The CKZINI member is organized in sections. Each section contains a set of individual parameter specifications known as tokens. A single CKZINI member is recommended for use by all users of DB2 Cloning Tool at the installation site.

Syntax rules: The CKZINI consists of token assignment statements that are organized by sections. The general format for a token statement is:

Keyword = Parameter(s)

Leading blanks from the beginning of the logical card-image records are allowed for all statements. Syntax scan processing locates the first non-blank character in each logical record. The entire length of the 80-byte logical record is considered for valid data. Do not renumber the CKZINI member; sequence numbers assigned in columns 73 through 80 will cause errors.

You may add a notes token to document your changes to any section including the initial/unnamed section. The INIMERGE program will retain these notes along with any comments that continue from the notes token.

Notes = Updated by Dan on 2011/04/23 +
Updated by John on 2011/02/20

Section names

A *section name* is indicated by the colon character (:), immediately followed by the section name string. Section names are to be changed or added only under the direction of IBM Software Support.

For a multi-image CKZINI, the section name can be qualified by sysplex and/or system name, except for the PRODUCT_INFO and INIMERGE_VALUES sections:

Sysplex-name and system-name qualification:

:section-name.sysplex-name.system-name

Sysplex-name only qualification:

:section-name.sysplex-name

System-name only qualification:

:section-name..system-name

The sysplex and system names must be explicitly specified with no wild-card characters allowed.

INIMERGE will retain your qualified sections and merge new tokens for those sections.

DB2 Cloning Tool will use only the first matching section in the CKZINI member. All other variations of that section will be ignored. You may specify qualified sections for those images with unique requirements, followed by an unqualified section that applies to all of the other images.

Token name

A *token name* is a keyword value that can be specified under particular section names. They are specified as a blank-delimited character string to the left of an equal (=) sign. Token names are to be changed or added only under the direction of IBM Software Support except where noted.

Token value

A *token value* is data that is specified as a set of strings to the right of the equal (=) sign after a token name. Token values may be keywords, user values, or a keyword with a token value, shown as KEYWORD(uservalue).

Values may be enclosed in either single or double quotes. The quotes are stripped away before the product uses the value. Quotes may be supplied as data by:

- Using the opposite quote symbol as delimiters (e.g., " ' " will yield a single quote as data).
- Specifying two to get one (e.g., ' ' ' will yield a single quote as data).

Continuation rules

Statements can be continued, using either a minus (-) or plus (+) character anywhere within the text. All data to the right of the continuation character on that

logical record is interpreted as a comment and ignored.

Comments

Both line mode and block mode methods of commenting are supported:

- An asterisk (*) or slash-asterisk (/*) in column-1 marks the entire line as a comment. This style of comment is not allowed inside a continued /* */ type comment but is allowed in a continued token/value statement. A line that is entirely blank can also be considered a comment.
- Entire lines, blocks of lines, or portions of a line may be commented by beginning the comment with a slash-asterisk (/*) and terminating the comment with an asterisk-slash (*). Nested comments are honored.

About DB2 Cloning Tool Table Space Cloning token errors: Many tokens in CKZINI have default values. If a token has a default value and there is an error in the token, DB2 Cloning Tool Table Space Cloning substitutes the default value. DB2 Cloning Tool Table Space Cloning then outputs a message describing the error and the default value substitution and produces a return code of four (4).

- If MAX_RC=4, DB2 Cloning Tool Table Space Cloning continues to run to completion.
- If MAX_RC=0, DB2 Cloning Tool Table Space Cloning stops after parameter validation.

CKZINI keyword syntax and descriptions: The tables in this topic show the syntax and describe the keywords used in the many sections in the CKZINI member. Read through this topic to locate the keywords you want to understand or modify.

:PRODUCT_INFO section

Table 15. Keywords and values for the :PRODUCT_INFO section

Keywords and Values	Description and Usage
DB2_CLONING_TOOL_REL = <i>version/release number</i>	Used to verify product version and release. Do not alter.
DB2_CLONING_TOOL_REL_DATE = <i>release date</i>	Used to verify product release date. Do not alter.

:INIMERGE_VALUES section

Important: This section is critical for the INIMERGE process and should not be changed except by authorized IBM Software Support personnel.

Table 16. Keywords and values for the :INIMERGE_VALUES section

Keywords and Values	Description and Usage
SPECIAL_SECTIONS =	<p>The value for this token will be updated only by IBM. For this release, the values are:</p> <p>SPECIAL_SECTIONS=SI040_VALUES SI027_VALUES</p> <ul style="list-style-type: none"> • :SI027_VALUES <p>Changes or additions to this section must be authorized by and under the direction of IBM Software Support.</p> <ul style="list-style-type: none"> • :SI040_VALUES <p>Changes or additions to this section must be authorized by and under the direction of IBM Software Support.</p>

DB2 Cloning Tool Subsystem Cloning sections

The following sections are used for DB2 Cloning Tool Subsystem Cloning.

:DB2_CLONING_TOOL_OPTIONS section

Table 17. Keywords and values for the :DB2_CLONING_TOOL_OPTIONS section

Keywords and Values	Description and Usage
SPACE_MANAGEMENT = <i>option</i>	<p>Valid options are: HSM, DMS, ABR(#), or NONE. HSM, DMS, and ABR(#) can be specified as a single option, or, together. NONE may not be specified with any other option.</p> <p>HSM and ABR(#) indicate that DB2 Cloning Tool should use a volume serial of "MIGRAT" as an indication that a data set has been migrated.</p> <p>DMS indicates that DB2 Cloning Tool should use a volume serial of "ARCIVE" as an indication that a data set has been migrated.</p> <p>The default is HSM.</p>
CONCURRENT_EXECUTIONS = Y <u>N</u>	<p>This option addresses the situation where multiple jobs are running concurrently and need exclusive control over the same BCS.</p> <p>An N indicates that if another job has exclusive control over a BCS, the DB2 Cloning Tool job that wants exclusive control of the same BCS will fail with an error.</p> <p>The Y indicates that if another job has exclusive control over a BCS, the DB2 Cloning Tool job that wants exclusive control of the same BCS will wait until the BCS is available. The maximum time to wait is specified with the CONCURRENT_EXECUTIONS_WAIT_TIME keyword.</p> <p>The default is N.</p>
CONCURRENT_EXECUTIONS_WAIT_TIME = <i>nnn</i> <u>5</u>	<p>Specifies the maximum wait time in minutes to be used if CONCURRENT_EXECUTIONS = Y is specified. The maximum value that can be specified is 999.</p> <p>The default is 5.</p>

:COPY_OPTIONS section

Table 18. Keywords and values for the :COPY_OPTIONS section

Keyword and Values	Description and Usage
<p>CATWORK_ATTR= <i>catalog work data set allocation attributes</i></p>	<p>Catalog "work" data sets contain catalog entries captured during the COPY step and passed to other steps. This token controls allocation attributes for these data sets if not specified by the COPY CKZIN control statements.</p> <p>Specify attributes in TSO ALLOCATE syntax, e.g., UNIT(SYSALLDA) SPACE(10 10) CYLINDERS.</p> <p>The attributes that can be specified are:</p> <ul style="list-style-type: none"> • DATACLAS(data class name) • MGMTCLAS(management class name) • SPACE(quantity increment) • STORCLAS(storage class name) • TRACKS/CYLINDERS • UNIT(unit) • VOLUME(serial)
<p>TARGET_VOLS_SHOULD_BE_EMPTY = Y <u>N</u></p>	<p>Performs a check during the volume pairing process to ensure the target volumes are empty before issuing FlashCopy or SnapShot. Consider the following items:</p> <ul style="list-style-type: none"> • In the event a subsequent RENAME fails and the COPY must be rerun, DB2 Cloning Tool will not clean off the target volumes if "Y" was specified for this parameter. Either initialize the target volumes or change this keyword to "N". • If the "eliminated" target volumes cause there to be more source volumes than targets, the COPY will fail. • If the "eliminated" target volumes still leave at least as many target volumes as source volumes, the pairing will continue as usual. <p>The default is N.</p>

:DB2_CLONING_TOOL_DEFAULTS section

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section

Keywords and Values	Description and Usage
GDG_ALL_MIGRATED = <u>SKIP</u> RETAIN	<p>This option addresses the situation where a GDG matches a RENAME mask and all of the generations have been migrated.</p> <p>The GDG may be skipped, or the GDS entry may be retained with its new target name.</p> <ul style="list-style-type: none"> • SKIP = BCS update should skip the entry. • RETAIN = the migrated entries should be copied as is to the target BCS. <p>Note: If RETAIN is used, because the migrated generations do not exist under the new name, subsequent access to any generation will fail whether it is accessed specifically or via specification of the base name only. This option is provided to retain relativity.</p> <p>Important Note: To avoid destroying the relativity of active generations, DB2 Cloning Tool does NOT allow removing selected generations. For data that is migrated and is required on the target volumes, they must be recalled prior to the COPY.</p> <p>The default is SKIP.</p>
GDG_ALL_MIGRATED_RETAIN_RC = blank 0 4	Specifies the return code to be used if GDG_ALL_MIGRATED = RETAIN is specified.
GDG_EMPTY = <u>SKIP</u> RETAIN	<p>This option addresses an empty base GDG that matches a RENAME mask.</p> <p>The GDG entry can be skipped, or the new base entry can be added to the target user catalog.</p> <p>The default is SKIP.</p>
GDG_EMPTY_RETAIN_RC = blank 0 4	Specifies the return code to be used if GDG_EMPTY = RETAIN is specified.

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
GDG_MIGRATED = <u>ERROR</u> RETAIN	<p>This option addresses the situation where a GDG matches a rename mask and at least one generation is indeed found on a volume, yet one or more generations are migrated.</p> <p>The migrated generation may be treated as an ERROR, or the GDS entry in the GDG base record may be RETAINED with a corresponding return code of 0 or 4.</p> <ul style="list-style-type: none"> • ERROR - BCS update should terminate. • RETAIN - The migrated entry should be copied as is to the target BCS. <p>Note: If RETAINED, because the migrated generation does not exist under the new name, subsequent access to the generation will fail whether it is accessed specifically or via specification of the base name only.</p> <p>To avoid destroying the relativity of active generations, DB2 Cloning Tool does not allow removing selected generations.</p> <p>Retaining non-existent migrated generations may be suitable for situations such as overstated GDG limits (where it is normal for older generations to be migrated and hopefully never accessed), Log Files, etc. where perhaps only the current generation is kept on primary and older migrated generations are kept as a safety factor.</p> <p>The default is ERROR.</p>
GDG_MIGRATED_RETAIN_RC = blank 0 4	Specifies the return code to be used if GDG_MIGRATED = RETAIN is specified.

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
GDG_TAPE = <u>ERROR</u> RETAIN	<p>This option addresses the situation where a GDG matches a RENAME mask and at least one generation is indeed found on a volume, yet one or more generations are on tape.</p> <p>The tape generation may be treated as an ERROR, or the GDS entry in the GDG base record may be RETAINED with a corresponding return code of 0 or 4.</p> <ul style="list-style-type: none"> • ERROR - BCS update should terminate. • RETAIN - The tape entry should be copied as is to the target BCS. <p>Note: If RETAIN is specified, accessing a target tape GDS will cause a S813 ABEND whether it is accessed specifically or via specification of the base name only.</p> <p>To avoid destroying the relativity of active generations, DB2 Cloning Tool does not allow removing selected generations.</p> <p>Retaining non-existent tape generations may be suitable for situations such as overstated GDG limits where older generation may have been created on tape.</p> <p>The default is ERROR.</p>
GDG_TAPE_RETAIN_RC = blank 0 4	<p>Specifies the return code to be used if GDG_TAPE = RETAIN is specified.</p>
ISSUE_CKZ14141I = option	<p>Issues the message CKZ14141I when a data set matches the RENAME-MASKS, but was not on the DB2 Cloning Tool source volumes.</p> <p>You can customize which data set the error reports on using the option(s) specified in the CKZINI member. The DASD, MIG, and TAPE options may be specified in any combination.</p> <ul style="list-style-type: none"> • <u>ALL</u> - Issue message for any data set that matches the RENAME-MASKS, but is not on the source volumes. • DASD - Issue message for any DASD data set that matches the RENAME-MASKS, but is not on the source volumes. • MIG - Issue message for any migrated data set that matches the RENAME-MASKS. • TAPE - Issue message for any tape data set that matches the RENAME-MASKS. • NOMSG - Do not issue message CKZ14141I. <p>The default is ALL.</p>

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
MAX_RENAME_TASKS = <i>nnn</i>	<p>The <i>nnn</i> value specifies the maximum number of subtasks used by the RENAME command for volume processing if the RENAME CKZIN MAXTASKS is not supplied. At some point, increasing the number of subtasks will cease to increase performance, due to resource contention. Specifying a value that is too large may result in termination due to memory constraints. The maximum allowed value is 255.</p> <p>The default is 5.</p>
MISSING_USERCAT_DISP = DELETE <u>KEEP</u>	<p>Specifies the disposition of target volume data sets where the VVDS catalog back-pointer is not a catalog in the list supplied to the COPY step. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is KEEP.</p>
MISSING_USERCAT_RC = 0 <u>4</u> 8	<p>Specifies the return code to be generated for the RENAME command if one or more target volume data sets contain a VVDS catalog back-pointer not in the list supplied to the COPY step. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is 4.</p>
NOT_RENAMED_DISP = DELETE <u>KEEP</u>	<p>Specifies the disposition of target volume data sets not-renamed because they do not match a rename mask. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is KEEP.</p>
NOT_RENAMED_RC = 0 4 <u>8</u>	<p>Specifies the return code to be generated for the RENAME command if one or more target volume data sets are not-renamed because they do not match a rename mask. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is 8.</p>
ORPHAN_CATENTRY_DISP = DELETE <u>KEEP</u>	<p>Specifies the disposition of target volume data set catalog entries where in some circumstances the data set is not found on the volume. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is KEEP.</p>

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
ORPHAN_CATENTRY_RC = 0 4 <u>8</u>	<p>Specifies the return code to be generated for the RENAME command if one or more target volume data set catalog entries do not have a corresponding volume data set. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is 8.</p>
RECATALOG = Y <u>N</u>	<p>Specifies, if "Y", that catalog entries may be replaced if encountered when cataloging target volume data sets. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is N.</p>
TEMP_DATASET_DISP = <u>DELETE</u> KEEP	<p>Specifies the disposition of temporary data sets found on target volumes. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is DELETE.</p>
TEMP_DATASET_RC = 0 <u>4</u> 8	<p>Specifies the return code to be generated for the RENAME command if one or more temporary data sets are found on target volumes. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is 4.</p>
VTOCIX_REBUILDER = <u>MSC</u> /* (MSC OR IBM) */	<p>Specifies the method for rebuilding the VTOCIX during the RENAME command.</p> <ul style="list-style-type: none"> • IBM - ICKDSF will be used to rebuild the VTOCIX. • MSC- The "on-board" VTOCIX rebuild will be used. <p>For Extended Address Volumes, ICKDSF will always be used to rebuild the VTOCIX.</p> <p>The default is MSC.</p>

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
RENAME_ERROR = <u>ABORT</u> CONTINUE	<p>This option specifies how processing proceeds when a RENAME error is encountered. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>ABORT will terminate with an RC=8 after the first error to preserve integrity. ABORT is recommended.</p> <p>CONTINUE will continue processing after most errors and the RENAME command will complete with the specified return code unless an error not handled by the CONTINUE logic is encountered.</p> <p>WARNING: The use of CONTINUE can cause inconsistencies between the contents of the volumes and catalogs. Possible problems include:</p> <ul style="list-style-type: none"> • Data sets could be cataloged but are not renamed on disk. • Data sets could be renamed on disk but are not cataloged. • Data sets that are not renamed on disk may not be deleted from disk. • GDG base and GDS entries will not exist in the catalog when there is a missing GDS. • A catalog entry may not point at the correct volume, a catalog entry may be invalid. • CONTINUE could leave uncataloged data sets on SMS managed volumes. <p>If this keyword is specified, DB2 Cloning Tool will not guarantee integrity and the given results will not be fixed by DB2 Cloning Tool.</p> <p>The default is ABORT.</p>
RENAME_ERROR_CONTINUE_RC = 0 4 <u>8</u>	<p>Specifies the return code to be used if RENAME_ERROR = CONTINUE is specified. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is 8.</p>

Table 19. Keywords and values for the :DB2_CLONING_TOOL_DEFAULTS section (continued)

Keywords and Values	Description and Usage
ISSUE_VCLOSE = <u>YES</u> NO BEFORE AFTER	<p>Specifies if a catalog modify command will be issued as part of the volume RENAME processing. The catalog modify command is: F CATALOG,VCLOSE(<i>targetvolser</i>)</p> <p>The Catalog address space (CAS), caches VVDS information. The modify command requests that the VVDS information cached for the target volume be refreshed. This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>Possible values for this keyword are:</p> <ul style="list-style-type: none"> • NO specifies the modify command will NOT be issued. • BEFORE specifies that the modify command will be issued only before the VVDS is updated. • AFTER specifies that the modify command will be issued only after the VVDS has been updated. • YES specifies the modify command will be issued both before the VVDS is updated and after the VVDS has been updated. <p>The default is YES.</p>
ISSUE_VCLOSE_SCOPE = <u>LOCAL</u> SYSPLEX	<p>If the CKZINI parameter ISSUE_VCLOSE = YES NO BEFORE AFTER is set to YES, BEFORE, OR AFTER, use one of the following values for the ISSUE_VCLOSE_SCOPE keyword:</p> <ul style="list-style-type: none"> • LOCAL – The catalog modify command, F CATALOG,VCLOSE(<i>targetvolser</i>) will be issued only on the system that RENAME is running on. • SYSPLEX – The catalog modify command, F CATALOG,VCLOSE(<i>targetvolser</i>), will be issued on the local system, and the modify command will be routed to all the other systems in the Sysplex, via an MVS ROUTE *OTHER command, after the VVDS has been updated. <p>This value is used if the corresponding keyword is not specified in the RENAME CKZIN control statements.</p> <p>The default is LOCAL.</p>

:DB2_OPTIONS section

Table 20. Keywords and values for the :DB2_OPTIONS section

Keyword or Value	Description
DB2_XCFCLEAN = <u>Y</u> N Restrictions: This parameter is only used if DB2 data sharing is being used.	Specifies that DB2UPDATE should clean up the target DB2 data sharing group XCF structures and group members. This value is used if the corresponding keyword is not specified in the DB2UPDATE CKZIN control statements. The default is Y.
DB2_PLAN = <i>planname</i>	Specifies the plan name that will be used to process SQL statements with DB2. The default is CKZPLAN.

:RESOURCE_SERIALIZATION section

Installations running CA-MIM/MII with multiple systems and shared DASD need to set the following parameter to "YES" to ensure that when CA-MIM/MII GDIF is inactive, the DB2 Cloning Tool data sets are protected from data corruption.

Table 21. Keywords and values for the :RESOURCE_SERIALIZATION section

Keyword or Value	Description
MIM_GDIF = <u>NO</u> YES	If you have CA-MIM/MII with multiple systems and shared DASD, this token should be changed to YES to ensure that when CA-MIM/MII GDIF is inactive, the DB2 Cloning Tool data sets are protected from data corruption. The default is NO.

DB2 Cloning Tool Table Space Cloning sections

The following sections are used for DB2 Cloning Tool Table Space Cloning.

:DSN_PRODUCT_PERF section

Table 22. Keywords and values for the :DSN_PRODUCT_PERF section

Keyword or Value	Description
MAX_COPY_RC = <u>0</u> 4 8	STOP JOB WHEN > MAX_COPY_RC OCCURS WHEN COPYING DATA. This parm only applies to copy processing return codes. This allows one or more copies to fail and the others to continue. The default is 0.

Table 22. Keywords and values for the :DSN_PRODUCT_PERF section (continued)

Keyword or Value	Description
MAX_RC = <u>0</u> 4	<p>STOP JOB WHEN > MAX_RC</p> <p>This is the maximum value a return code from a DB2 Cloning Tool Table Space Cloning process may be and the job allowed to continue to run. This excludes data set copy processing (see MAX_COPY_RC).</p> <p>If some table spaces or index spaces are not found on the target and this parm is set to zero (0), no table spaces or index spaces will be copied. Set MAX_RC to four (4) if you want to complete the cloning process for table spaces and index spaces that can be copied, even if the remainder of the table spaces and index spaces cannot be cloned.</p> <p>Example:</p> <p>To stop a job on any warning message, set MAX_RC=0. To allow DB2 Cloning Tool Table Space Cloning to complete with one or more warning messages, set MAX_RC=4.</p> <p>The default is 0.</p>
MAX_SUBTASKS = <u>1</u> ... 99	<p>Valid values range from 1 to 99.</p> <p>DB2 Cloning Tool Table Space Cloning uses subtasks to perform several functions, such as catalog access in the source job and SYNCDB2 command processing in the target job. These subtasks allow multiple IOs to be performed concurrently. Changing the number of subtasks DB2 Cloning Tool Table Space Cloning uses may improve performance.</p> <p>Raising the limit of the number of subtasks that can be specified may reduce the elapsed time of the target job. At some point, the larger number of subtasks will place a burden on z/OS and the elapsed time will start to go back up. Each different set of objects may have its own optimal target job value for the number of subtasks.</p> <p>The larger number of subtasks available normally is useful only for the target job. When using more than 18 subtasks in the target job, use a PARMLIB member for the source job and another for the target job. From one to four subtasks is generally sufficient for the source job. The TCPIP server job uses only one subtask, regardless of how many are specified. If the SET command is used, the source and target jobs get the same number of subtasks. This SET value also overrides the value in PARMLIB.</p> <p>The default is 1.</p>

:TCPIP_OPTIONS section

Table 23. Keywords and values for the :TCPIP_OPTIONS section

Keyword or Value	Description
TCPIP_SERVER_PORT = <u>5099</u>	<p>TCPIP SERVER PORT #</p> <p>This is the port that the DB2 Cloning Tool Table Space Cloning TCP/IP server job listens on for client connects. It must be known to the source job and the TCP/IP server job and must be the same value. It should be an unused number less than 65536.</p> <p>One TCP/IP server only connects to a single DB2 subsystem. If multiple servers are required on a single LPAR image, use a different port number for each server.</p> <p>The default port for this product is 5099.</p>
TCPIP_STC_NAME = <u>TCPIP</u>	<p>LOCAL TCPIP STC NAME</p> <p>This defines the name of the TCP/IP started task.</p> <p>TCPIP is the default used by this product, as it is the MVS™ default.</p>

:DSN_COPY_OPTIONS section

This section defines the options to be used for the data set copies. These may be overridden on the COPY command for the target.

Table 24. Keywords and values for the :DSN_COPY_OPTIONS section

Keyword or Value	Description
ALWAYS_COPY_INDEXSPACES = <u>Y</u> <u>N</u>	<p>This token determines how index spaces are included in LISTDEFS. When the value is set to Y, all index spaces are included for every table space included in a LISTDEF. No INCLUDE INDEXSPACES syntax is required in the LISTDEF.</p> <p>The default is N.</p>
AUTO_START_SOURCE_SPACE = <u>Y</u> <u>N</u> <u>R</u>	<p>This token allows the source job to optionally start each source DB2 table spaces and index spaces after the copy process is complete.</p> <p>When the value is Y, DB2 Cloning Tool Table Space Cloning starts the source table spaces and index spaces after the copy is complete.</p> <p>When the value is N, source spaces are left stopped after the copy is complete.</p> <p>When the value is R, the source table spaces and index spaces are restored to the status they were before executing the source job.</p> <p>If you set this parm to Y or R, and a table space or index space has a status that is not STOP, RW, RO or STOPP, a RC of eight (8) is issued.</p> <p>The default is Y.</p>

Table 24. Keywords and values for the :DSN_COPY_OPTIONS section (continued)

Keyword or Value	Description
AUTO_START_TARGET_SPACE = <u>Y</u> N	<p>DB2 Cloning Tool Table Space Cloning will issue a START command for the target space.</p> <p>This token determines if SYNCDB2 processing in the target job issues a DB2 START DATABASE SPACENAM command for the table space or index space being processed after all the Sync IO to the data set is complete. This value determines the value of the START-SPACE command in each invocation of the SYNCDB2 command in the target job.</p> <p>Note: There is one SYNCDB2 command for each target data set in the SYNCDB2 command member.</p> <p>When DB2 Cloning Tool Table Space Cloning builds the SYNCDB2 commands, it uses the value of AUTO-START-TARGET-SPACE from PARMLIB and/or the COPY command to add a similar command to the SYNCDB2 command output member. Note that the COPY command value overrides PARMLIB.</p> <p>The default is Y.</p>
AUTO_STOP_TARGET_SPACE = <u>Y</u> N	<p>This parm determines if DB2 Cloning Tool Table Space Cloning issues a STOP DATABASE SPACENAM DB2 command for each target table space and index space. If the value is Y, DB2 Cloning Tool Table Space Cloning will issue a STOP command before the copy begins.</p> <p>Note: If a STOP is issued, it must complete before the copy can begin as DB2 Cloning Tool Table Space Cloning must have exclusive control of the target data set.</p> <p>If the value is N, DB2 Cloning Tool Table Space Cloning assumes the space is already stopped and no DB2 command is issued before the copy begins. If the space is not stopped, an allocation error is issued.</p> <p>The default is Y.</p>
COPY_IF_NO_DB2_TARGET_OBJECTS = Y <u>N</u>	<p>Copy even if no DB2 table spaces or index spaces exist on the target.</p> <p>This parm enables DB2 Cloning Tool Table Space Cloning to copy data sets when no target table spaces or index spaces exist. DB2 Cloning Tool Table Space Cloning will use defaults for the high level qualifier (DEFVCAT subcommand from the COPY command) and the fifth level qualifier (F0001) when creating the target data set names.</p> <p>The default is N, which means do not copy the source table spaces or index spaces if no target table spaces or index spaces exist.</p>
DSNS_PER_COPY = 255	<p>The number of data sets to include in each DSS copy command. Valid range: 1 to 255. A performance benefit may be realized by changing this value.</p>

Table 24. Keywords and values for the :DSN_COPY_OPTIONS section (continued)

Keyword or Value	Description
DSS_COPY_COMMANDS = 24	The number of DSS copy commands in each DSS call. Valid range: 1 to 256. A performance benefit may be realized by changing this value. Specifying a large value may result in a storage shortage and S878 abends. When cloning a large number of data sets, the default of 24 might be too high.
REPLACE_TARGET_DSN = <u>Y</u> N	<p>Replace the data set on the target if it exists.</p> <p>When the value is Y, this parm allows DB2 Cloning Tool Table Space Cloning to overlay the target data set with the source data set.</p> <p>When the value is N, DB2 Cloning Tool Table Space Cloning will create another data set with the same name as the target data set except for the fifth level qualifier.</p> <p>Note that the target fifth level qualifier will be obtained from the target catalog for the table space or index space being copied. If there is no target table space or index space and parms allow the source data set to be copied if no DB2 table space or index space exists, F0001 is used.</p> <p>The default is Y.</p>
RESET_LOGRBA = <u>Y</u> N	<p>Reset the LOGRBA in the target table space and index space data sets.</p> <p>This parm determines if SYNCDB2 processing in the target job resets the LOGRBA in the copied table space and index space data sets. This value determines the value of the RESET_LOGRBA command in each invocation of the SYNCDB2 command in the target job.</p> <p>Note there is one SYNCDB2 command for each target data set in the SYNCDB2 command member. Failure to specify Y may result in the DB2 table spaces and index spaces being unusable after completion of the target job.</p> <p>The default is Y.</p>

Customization reference: DB2 Recovery Expert V3.1

This section provides additional information about the customization of DB2 Recovery Expert for z/OS.

Discover product information for customization

You can use the Tools Customizer Discover EXEC to discover and store product information from a previous or current customization of DB2 Recovery Expert.

Discover panel - Product to Customize section

If you do not have a previous version of DB2 Recovery Expert installed or if you wish to manually provide parameters for a new customization of DB2 Recovery Expert, you may skip running the Discover EXEC. Instead, you can manually provide the information required to customize DB2 Recovery Expert on the Product Parameters panel.

Parameter values that are discovered and parameter values that are specified manually are saved in the *hlq.DATASTOR* data set. If the product that you want to customize already exists in the data store data set, Tools Customizer issues a warning before existing values are replaced.

The parameters listed in the Product to Customize section are read-only; they contain information that was provided on other panels, by Tools Customizer, or by the DB2 Recovery Expert metadata data set.

Table 25. Parameter values for Product to Customize section

Parameter	Description	Default value
Product metadata library	This value is the library you specified on the Specify the Product to Customize panel. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	User-specified on the Specify the Product to Customize panel (CCQPHLQ)
LPAR	The LPAR field displays the LPAR on which you are customizing DB2 Recovery Expert.	Supplied by Tools Customizer
Product name	This value displays the current product being customized. In this example, DB2 Recovery Expert should be displayed in this field. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	Provided by product metadata file
Version	The Version field displays the version, release and maintenance of the product you are customizing in the format Vn.Rn.nn.	Provided by product metadata file
Product customization library	This value displays the name of the data set in which the generated library customization jobs will be stored.	Derived from the user-specified customization library qualifier on Tools Customizer Settings panel (CCQPSET)

Discover panel - Discover EXEC for Extracting Information from an Already Customized Product section

On the Discover Customized Product Information panel, either accept the default values for the following input fields that Tools Customizer generates, or replace the default values with your own values:

Table 26. Parameter values for the Discover EXEC for Extracting Information from an Already Customized Product section

Parameter	Description	Default value
Discover EXEC library	The fully qualified data set name that contains the product Discover EXEC.	The default value is the product metadata library that you specified on the Specify the Product to Customize panel.
Discover EXEC name	The name of the Discover EXEC.	ARYDISC
Discover output data set	The name of the data set for the output from the product Discover EXEC.	The default value is the same data set you specified in option 0 User Settings from the Tools Customizer main menu.

Discover panel - Information for Discover EXEC section

On the Discover Customized Product Information panel, under the Information for Discover EXEC section, you must provide the following parameter values before running the Discover command:

Table 27. Parameters for the Information for Discover EXEC section

Parameter	Description	Default value
ARY V3.1 LOAD library	The LOAD library for the current V3.1 release of DB2 Recovery Expert.	DB2TOOL.ARY310.SARYLOAD
V2.2 control file	The name of the VSAM data set that contains the control information for the DB2 Recovery Expert V2.2. This KSDS VSAM file contains product customization information for the previous version of the product.	DB2TOOL.ARY220.DB2.CONTROL
V2.2 CLIST library	The name of the PDS library that will contain the DB2 Recovery Expert V2.2 product CLISTS used to invoke DB2 Recovery Expert V2.2 online under ISPF.	DB2TOOL.ARY220.CLIST
V2.2 CLIST member	The name of the PDS library member that will contain the DB2 Recovery Expert V2.2 product CLISTS.	ARYV220

DB2 Recovery Expert Product parameters

To customize DB2 Recovery Expert you must discover or define product parameter information that is specific to DB2 Recovery Expert.

The following table provides additional information about the product parameters that must be discovered or specified during the customization process.

Table 28. Product parameter values

Parameter	Description	Default value
Product metadata library	This value is the library you specified on the Specify the Product to Customize panel. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	User-specified on the Specify the Product to Customize panel (CCQPHLQ)
LPAR	The LPAR field displays the LPAR on which you are customizing DB2 Recovery Expert.	Supplied by Tools Customizer
Product name	This value displays the current product being customized. In this example, DB2 Recovery Expert. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	Provided by product metadata file
Version	The Version field displays the version, release and maintenance of the product you are customizing in the format Vn.Rn.nn.	Provided by product metadata file
Product customization library	This value displays the name of the data set in which the generated library customization jobs will be stored.	Derived from the user-specified customization library qualifier on Tools Customizer Settings panel (CCQPSET)
Startup CLIST library	The library for the ARYV31 and ARYV310 CLISTs. These CLISTs are used to invoke DB2 Recovery Expert online under ISPF.	DB2TOOL.ARY310.CLIST
Work file device type	The default work file unit device to be used in generated jobs. Example values are SYSDA and DISK.	SYSALLDA
ARY JCL Library	The library for the server and agent jobs, the server and agent configuration files and also for the RBA cleanup job.	DB2TOOL.ARY310.JCLLIB
ARY Proc Library	The library for the server and agent started task procedures.	DB2TOOL.ARY310.PROCLIB
Startup CLIST 2	The name of the second startup CLIST.	ARYV310

Table 28. Product parameter values (continued)

Parameter	Description	Default value
Recovery Expert production load library	The Recovery Expert load library for production. Specify the fully qualified data set name without quotation marks.	DB2TOOL.ARY310.SARYLOAD
Control file	The name of the VSAM data set that contains the control information for DB2 Recovery Expert. This KSDS VSAM file contains product customization information, including DB2 specific information like plan names. After installation, the control file can be further modified by using option 0 from the primary selection menu.	DB2TOOL.ARY310.DB2.CONTROL
Profile VSAM repository	The name of the VSAM repository data set that contains information about profiles.	DB2TOOL.ARY310.PROFILES
Coordinated Profile VSAM repository	The name of the VSAM repository data set that contains information about coordinated recovery profiles.	DB2TOOL.ARY310.CPROFILE
Profile mappings VSAM repository	The name of the VSAM repository data set that contains information about profile mappings.	DB2TOOL.ARY310.PROFILE.MAPS
Profile catalogs VSAM repository	The name of the VSAM repository data set that contains information about a DB2 system's user catalogs.	DB2TOOL.ARY310.PROFILE.CATS
System backups VSAM repository	The name of the VSAM repository data set that contains information about system backups.	DB2TOOL.ARY310.SYSBACK
System backups volumes VSAM repository	The name of the VSAM repository data set that contains information about system backup volumes.	DB2TOOL.ARY310.SYSBACK.VOLS
System backups SSIDS VSAM repository	The name of the VSAM repository data set that contains information about system backup subsystem IDs.	DB2TOOL.ARY310.SYSBACK.SSIDS
System backups objects VSAM repository	The name of the VSAM repository data set that contains information about objects that were backed up.	DB2TOOL.ARY310.SYSBACK.OBJS

Table 28. Product parameter values (continued)

Parameter	Description	Default value
Objects VSAM repository	The name of the VSAM repository data set that contains objects in an object profile.	DB2TOOL.ARY310.OBJECTS
System backup reports VSAM repository	The name of the VSAM repository data set that contains information about system backup reports.	DB2TOOL.ARY310.BREPORT
Offload options VSAM repository	The name of the VSAM repository data set that contains information about system backup offload options.	DB2TOOL.ARY310.OFFOPTS
System configuration VSAM repository	The name of the VSAM repository data set that contains information about subsystem configuration.	DB2TOOL.ARY310.MOVDATA
System RBA capture VSAM repository	The name of the VSAM repository data set that contains information about each DB2 subsystem's captured RBAs.	(no default)
The prefix for the repository backups	The prefix that is used for the repository backups.	DB2TOOL
The suffix for the repository backups	The suffix that is used for the repository backups.	ARYBUSUF
EMC load library	The EMC load library. This library is optional.	(no default)
Innovation FDR load library	The Innovation FDR load library. This library is optional.	(no default)
Product PARMLIB data set	The data set that contains the Recovery Expert sample library.	DB2TOOL.ARY310.SARYSAMP
Product PARMLIB member	The name of the member that contains product customizable variables.	ARY#PARM
Server address	The name of the server address that is used for agent-server communications.	machine.company.com
ISPF client listener port number	The client port number that is used for agent-server communications.	9875
Qualifier for repository objects	The high-level qualifier for repository table names. This high-level qualifier is used where repository objects are created, altered, referenced in SQL, or bound into packages.	ARY

Table 28. Product parameter values (continued)

Parameter	Description	Default value
Volser for repository files	Volume of the VSAM data set that contains the control information for Recovery Expert (control file). This field is only required to create a new control file. A new control file is only required if a control file does not exist. Recovery Expert can share the same control file with other DB2 Tools products that use the same type of control file.	(no default)
Recovery Expert ISPF message library	The data set that contains ISPF messages that are defined and used by Recovery Expert.	DB2TOOL.ARY310.SARYMENU
Browser HFS file location	The HFS directory where the GUI will be installed.	(no default)
Server configuration file	The DB2 Recovery Expert server requires a configuration file for input. The file must be allocated to the ARYCFG DD. The file can be a sequential data set, a PDS or PDSE member, or an HFS file.	DB2TOOL.ARY310.JCLLIB (ARYCFGS)
Server-agent listener port number	The server port number that is used for agent-server communications.	9876
Agent configuration file	The DB2 Recovery Expert agent requires a configuration file for input. The file must be allocated to the ARYCFG DD. The file can be a sequential data set, a PDS or PDSE member, or an HFS file.	DB2TOOL.ARY310.JCLLIB (ARYCFGA)
Recovery Expert ISPF skeleton library	The suffix that is used for the skeleton library.	DB2TOOL.ARY310.SARYSLIB
Create CLIST library	Create the PDS library that will contain the product clist.	Y
Create JCL library	Create the PDS library that will contain the jobs created for the product.	Y
Create PROC library	Create the PDS library that will contain the stored procedures created for the product.	Y
Recovery Expert sample library	The data set that contains the SARYSAMP data set.	DB2TOOL.ARY310.SARYSAMP
Startup CLIST1	The name of the first startup CLIST.	ARYV31

Table 28. Product parameter values (continued)

Parameter	Description	Default value
High-level qualifier for load library	The high-level qualifier that is used for the load library.	DB2TOOL.ARY310
Suffix for the message library	The suffix that is used for the message library.	SARYMENU
Suffix for the panel library	The suffix that is used for the panel library.	SARYPENU
Suffix for the skeleton library	The suffix that is used for the skeleton library.	SARYSLIB
Suffix for the load library	The suffix that is used for the load library.	SARYLOAD
Suffix of the table library	The suffix used for the table library.	SARYTENU
IMS CLIST library name	The location of IMS Recovery Expert that will be used in coordinated recovery.	(no default)
IMS CLIST member name	The member for the version of IMS Recovery Expert that will be used in coordinated recovery.	(no default)
Qualifier for DB2 Automation Tool objects	The high-level qualifier for DB2 Automation Tool table names. Optional field that must be specified if you are creating objects for DB2 Automation Tool. To create DB2 Automation Tool objects you must select the following job: / Create objects for DB2 Automation Tool	HAA
Recovery Expert DBRM library	The Recovery Expert library that contains the product-supplied DBRMs. These DBRMs are inputs to the bind process.	DB2TOOL.ARY310.SARYDBRM
Owner of Recovery Expert packages	The name of the package owner to be used in package binds.	ARYUSER
Volser for control files	Volume of the VSAM data set that contains the control information for Recovery Expert (control file). This field is only required to create a new control file. A new control file is only required if a control file does not exist. Recovery Expert can share the same control file with other DB2 Tools products that use the same type of control file.	(no default)
The number of backup generations	The number of generations for the repository backups.	00005

Table 28. Product parameter values (continued)

Parameter	Description	Default value
Browser MVS doc file location	The data set that contains the directory archived using the pax utility.	DB2TOOL.ARY310.SARYGUIW (ARYGUIW)
Web client listener port number	The HTTP port number that is used for agent-server communications.	9975
Socket policy port number	The socket policy port number that is used for agent-server communications.	9999
RBA Capture Cleanup data set	The RBA capture utility will occasionally require cleanup. When a cleanup job is run old entries will be written to an output GDG file and this value will specify the data set name of the GDG file.	DB2TOOL.ARY310.RBACLEAN
RBA Capture Cleanup Generations	The RBA capture utility will occasionally require cleanup. When a cleanup job is run old entries will be written to an output GDG file and this value will specify the number of generations to use for that GDG file.	010

LPAR parameters

To customize DB2 Recovery Expert you must discover or define LPAR parameter information that is specific to DB2 Recovery Expert.

The following table provides additional information about the LPAR parameters that must be discovered or specified during the customization process.

Table 29. LPAR parameter values

Parameter	Description	Default value
Product metadata library	This value is the library you specified on the Specify the Product to Customize panel. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	User-specified on the Specify the Product to Customize panel (CCQPHLQ)
LPAR	The LPAR field displays the LPAR on which you are customizing DB2 Recovery Expert.	Supplied by Tools Customizer
Product name	This value displays the current product being customized. In this example, DB2 Recovery Expert. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	Provided by product metadata file

Table 29. LPAR parameter values (continued)

Parameter	Description	Default value
Version	The Version field displays the version, release and maintenance of the product you are customizing in the format Vn.Rn.nn.	Provided by product metadata file
Message library	Some parts of Recovery Expert run under batch TSO/ISPF. The ISPF message library is required in the JCL to start ISPF in batch. This library is optional. Specify the third library that was supplied by IBM for ISPF.	ISPF.SISPMLIB
ISPF table input library	Some parts of Recovery Expert run under batch TSO/ISPF. The ISPF table library is required in the JCL to start ISPF in batch. This library is optional. Specify the library that was supplied by IBM for ISPF.	ISPF.SISPTLIB
Link list library	Some parts of Recovery Expert run under batch TSO/ISPF. The ISPF link list library is required in the JCL to start ISPF in batch. This library is optional. Specify the library that was supplied by IBM for ISPF.	ISPF.ISPLINK

DB2 Parameters

To customize DB2 Recovery Expert you must discover or define DB2 system parameter information that is specific to DB2 Recovery Expert.

The following table provides additional information about the DB2 parameters that must be discovered or specified during the customization process.

Table 30. DB2 parameter values

Parameter	Description	Default value
Product metadata library	This value is the library you specified on the Specify the Product to Customize panel. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	User-specified on the Specify the Product to Customize panel (CCQPHLQ)
LPAR	The LPAR field displays the LPAR on which you are customizing DB2 Recovery Expert.	Supplied by Tools Customizer
Product name	This value displays the current product being customized. In this example, DB2 Recovery Expert. This field is scrollable. Place your cursor anywhere on the field and press PF11 to view its full contents.	Provided by product metadata file
Version	The Version field displays the version, release and maintenance of the product you are customizing in the format Vn.Rn.nn.	Provided by product metadata file

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
DB2 subsystem ID	The ID of the DB2 subsystem.	IA1A
Group attach name	The group attach name.	IA1A
Mode	The mode for the DB2 subsystem. Values can be NFM, CM, CM8, CM9	NFM
Level Number	Version level for DB2. Values can be 810, 910, 101.	101
Load Library	DB2 load library.	RSRTE.DSN.SDSNLOAD
Run Library	DB2 run library.	RSRTE.RUNLIB.SDSNLOAD
Bootstrap data set	Boot strap data set name.	IA1ALOG.BSDS01
Plan name for the DSNTEP2 utility	Plan name for DSNTEP2 utility.	DSNTEP2
Use Archive Log 1	Specify Y for log services to use archive log 1. Otherwise, specify N.	Y
Use Archive Log 2	Specify Y for log services to use archive log 2. Otherwise, specify N.	N
Active log priority	Specify Y to use the active log whenever an active log is available and contains data that also resides on an archive log, Specify N to indicate that archive logs have priority over active logs.	Y
Data set name prefix	The data set name prefix used when creating temporary work files. If this is left blank the user's ID will be used.	DB2TOOL.ARY310
Capture Automation Tool profiles	Specify whether to capture Automation Tool profiles. The following values are valid: Y - to capture the profiles. N - to not capture the profiles.	N
Load authorization information into SLR	Specify Y to load authorization information into SLR. Otherwise, specify N.	Y
Load plan and package information into SLR	Specify Y to load plan and package information into SLR. Otherwise, specify N.	Y
Elapsed time per CPU second	The elapsed time per CPU second. The valid range is 1.00-999.00.	010.00
Elapsed time per tape mount	The elapsed time per tape mount. The valid range is 1.00-999.00.	120.00
Quiet Time group owner	The name of the Quiet Time group owner.	ARYQTGO
Quiet Time group table name	The name of the Quiet Time group table name.	ARYQTG
Quiet Time group index owner	The name of the Quiet Time group index owner.	ARYQTGXO
Quiet Time group index name	The Quiet Time group index name.	ARYQTGX

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
Quiet Time entry name	The Quiet Time entry name.	ARYQT
Quiet Time entry owner	The name of the Quiet Time entry owner.	ARYQTOWN
Quiet Time table space name	The Quiet Time table space name.	ARYQTTS
Quiet Time database name	The Quiet Time database name.	ARYQTDB
Log Analysis Tool data set prefix	The Log Analysis Tool data set prefix.	(no default)
Log Analysis Tool volsers	The Log Analysis Tool volume serial numbers.	(no default)
Log Analysis Tool data unit	The Log Analysis Tool data unit.	C
Log Analysis Tool data pri quantity	The Log Analysis Tool data primary quantity.	00005
Log Analysis Tool data sec quantity	The Log Analysis Tool data secondary quantity.	00005
Log Analysis Tool index unit	The Log Analysis Tool index unit. value can be C or T.	C
Log Analysis Tool index primary quantity	The Log Analysis Tool index primary quantity.	00005
Log Analysis Tool index secondary quantity	The Log Analysis Tool index secondary quantity.	00005
Log Analysis Tool SMS data class	The Log Analysis Tool SMS data class.	(no default)
Log Analysis Tool SMS storage class	The Log Analysis Tool SMS storage class.	(no default)
Log Analysis Tool SMS management class	The Log Analysis Tool SMS management class.	(no default)
Log Analysis Tool can use DB2 sort	Specify whether Log Analysis Tool can use DB2 Sort.	N
File tailoring device type	The default work file unit device to be used for file tailoring.	SYSALLDA
File tailoring allocation unit	The file tailoring allocation unit. Value can be C or T.	C
File tailoring primary quantity	The file tailoring primary space quantity.	00001
File tailoring secondary quantity	The file tailoring secondary space quantity.	00001
File tailoring SMS data class	The file tailoring SMS data class.	(no default)
File tailoring SMS storage class	The file tailoring SMS storage class.	(no default)

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
File tailoring SMS management class	The file tailoring SMS management class.	(no default)
Local primary data set name mask	The default data set name mask to be used for local primary copies.	(no default)
Local primary device type	The default work file unit device to be used for local primary copies. Sample values are SYSDA and DISK.	SYSALLDA
Local primary catalog image copy	The local primary catalog image copy.	Y
Local primary allocation unit	The local primary allocation unit. Value can be C or T.	C
Local primary primary quantity	The local primary space quantity.	00001
Local primary secondary quantity	The local primary secondary space quantity.	00001
Local primary SMS data class	The local primary SMS data class.	(no default)
Local primary SMS storage class	The local primary SMS storage class.	(no default)
Local primary SMS management class	The local primary SMS management class.	(no default)
Local primary volume count	The local primary volume count.	(no default)
Local primary expiration date	The local primary expiration date.	(no default)
Local backup retention period	The local backup retention period.	(no default)
Local backup data set name mask	The default data set name mask to be used for local backup copies.	(no default)
Local backup device type	The default work file unit device to be used for Local backup copies. Sample values are SYSDA and DISK.	SYSALLDA
Local backup catalog image copy	The local backup catalog image copy.	Y
Local backup allocation unit	The local backup allocation unit. Value can be C or T.	C
Local backup primary quantity	The local backup primary space quantity.	00001
Local backup secondary quantity	The local backup secondary space quantity.	00001
Local backup SMS data class	The local backup SMS data class.	(no default)
Local backup SMS storage class	The local backup SMS data class.	(no default)
Local backup SMS management class	The local backup SMS management class.	(no default)
Local backup volume count	The local backup volume count.	(no default)

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
Local backup expiration date	The local backup expiration date.	(no default)
Local backup retention period	The local backup retention period.	(no default)
Remote primary data set name mask	The default data set name mask to be used for remote primary copies.	(no default)
Remote primary device type	The default work file unit device to be used for remote primary copies. Sample values are SYSDA and DISK.	SYSALLDA
Remote primary catalog image copy	The remote primary catalog image copy.	Y
Remote primary allocation unit	The remote primary allocation unit.	C
Remote primary quantity	The remote primary space quantity.	00001
Remote primary secondary quantity	The remote primary secondary space quantity.	00001
Remote primary SMS data class	The remote primary SMS data class.	(no default)
Remote primary SMS storage class	The remote primary SMS storage class.	(no default)
Remote primary SMS management class	The remote primary SMS management class.	(no default)
Remote primary volume count	The remote primary volume count.	(no default)
Remote primary expiration date	The remote primary expiration date.	(no default)
Remote primary retention period	The remote primary retention period.	(no default)
Remote backup data set name mask	The default data set name mask to be used for remote backup copies.	(no default)
Remote backup device type	The default work file unit device to be used for remote backup copies. Sample values are SYSDA and DISK.	SYSALLDA
Remote backup catalog image copy	The remote backup catalog image copy.	Y
Remote backup allocation unit	The remote backup allocation unit.	C
Remote backup primary quantity	The remote backup primary space quantity.	00001
Remote backup secondary quantity	The remote backup secondary space quantity.	00001
Remote backup SMS data class	The remote backup SMS data class.	(no default)
Remote backup SMS storage class	The remote backup SMS storage class.	(no default)

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
Remote backup SMS management class	The remote backup SMS management class.	(no default)
Remote backup volume count	The remote backup volume count.	(no default)
Remote backup expiration date	The remote backup expiration date.	(no default)
Remote backup retention period	The remote backup retention period.	(no default)
Remote output device type	The default work file unit device to be used for recovery output.	SYSALLDA
Recovery output allocation unit	The recovery output allocation unit.	C
Recovery output primary quantity	The recovery output primary space quantity.	00001
Recovery output secondary quantity	The recovery output secondary space quantity.	00001
Recovery output SMS data class	The recovery output SMS data class.	(no default)
Recovery output SMS storage class	The recovery output SMS storage class.	(no default)
Recovery output SMS management class	The recovery output SMS management class.	(no default)
Recovery output volume count	The recovery output volume count.	(no default)
Recovery output expiration date	The recovery output expiration date.	(no default)
Recovery output retention period	The recovery output retention period.	(no default)
Generate system-level backups	Specify Y to generate system-level backups. Otherwise, specify N.	Y
DB2 ZPARMS member	The ZPARM load module member name that is generated for the DB2 subsystem.	DSNZPARM
Plan for display data extract	The name of the plan that includes the modules that are used for extracting data. The displayed value might be the name of an existing plan, if a version of Recovery Expert exists.	ARYP3101
Plan for the SLR load	The name of the plan that includes the modules that load the schema level repository. The displayed value might be the name of an existing plan, if a version of Recovery Expert exists.	ARYP3102

Table 30. DB2 parameter values (continued)

Parameter	Description	Default value
Plan for recovery plan generation	The name of the plan that includes the modules that are used for generating recovery plans. The displayed value might be the name of an existing plan, if a version of Recovery Expert exists.	ARYP3103
Plan for JCL gen and SQL execution	The name of the plan that includes the modules that are used to generate JCL and run SQL. The displayed value might be the name of an existing plan, if a version of Recovery Expert exists.	ARYP3104
Plan for log analysis services	The name of the plan that includes the modules that are used for log analysis services. The displayed value might be the name of an existing plan, if a version of Recovery Expert exists.	ARYP3105
VCAT name for optional index creation	The high-level qualifier that is used to create an optional index on SYSIBM.SYSCOPY.	ARY
Database for Recovery Expert objects	The database name for Recovery Expert repository objects.	ARYDB
Storgroup for Recovery Expert objects	The storgroup name for Recovery Expert repository objects.	SYSDEFLT

DB2 Recovery Expert customization jobs

The customization jobs are grouped by the job sequence number. Run the jobs in the sequence in which they are displayed for all DB2 entries.

The jobs use an 8-character naming convention that follows the format of ssjjjdd:

where:

- ss - The job sequence number, which is an alphabetic character (A - Z) followed by a numeric character (0 - 9). For example, a job sequence number is A0, A1, ..., Z9.
- jjjj - The first four characters of the job name. The product assigns the job name.
- dd - Two alphanumeric characters (AA - 99) that Tools Customizer assigns to identify a DB2 entry.

Table 31. Parameter values

Member name	Template	Required	Product Parameters panel field
ssEXECS	ARYEXECS	Yes	<p>/ Configure Required Execs</p> <p>This job copies the required execs into the clist library. You must also specify the customization fields Create CLIST library, Create JCL library, Create PROC library, and Recovery Expert sample library.</p>
ssV31	ARYV31	Yes	<p>/ Configure CLIST library</p> <p>This job step configures the first startup CLIST.</p>
ssV310	ARYV310	Yes	<p>/ Configure start CLISTS</p> <p>This job step configures the second startup CLIST.</p>
		Optional	<p>/ Create Recovery Expert objects for DB2</p> <p>This job creates the Recovery Expert objects for your version of DB2. Ensure that the mode and levels are correct for each SSID. Run the generated job on the LPAR that is appropriate for the subsystem. You can reuse or continue to use existing objects. This job consists of the steps ARYDRODB, ARYDDKSG, ARYDDKDB, ARYDDKSG, ARYDDKDB, ARYDAL1, ARYDAL2,, ARYDDL1, ARYDDL2, ARYDDL3, ARYHAA, and ARYINDEX.</p>
ssDRPDdd	ARYDRODB	Optional	<p>/ Drop the Recovery Expert database</p> <p>This job drops the DB2 Recovery Expert database.</p>
ssDDKSdd	ARYDDKSG	Optional	<p>/ Create the IBM Recovery Expert stogroup</p> <p>This job creates the Recovery Expert stogroup. Select this step only when you install DB2 Recovery Expert for the first time.</p>
ssDDLDDdd	ARYDDKDB	Optional	<p>/ Create Recovery Expert database</p> <p>This job creates the Recovery Expert database. Select this step only when you install DB2 Recovery Expert for the first time.</p>
ssDAL1dd	ARYDAL1	Optional	<p>/ Alter existing Recovery Expert objects #1</p> <p>This job needs to be run when migrating from V2.2 to V3.1. It alters existing objects that were changed in Recovery Expert V3.1.</p>

Table 31. Parameter values (continued)

Member name	Template	Required	Product Parameters panel field
ssDALRdd	ARYDALT2	Optional	<p>/ Alter existing Recovery Expert objects #2</p> <p>This job needs to be run when migrating from V2.2 to V3.1. It creates new views on new objects for Recovery Expert V3.1.</p>
ssDDL1dd	ARYDDL1	Optional	<p>/ Create schema-level repository</p> <p>Creates the DB2 Recovery Expert schema-level repository. This step creates all of the DB2 objects that Recovery Expert uses. Select this step only when you install Recovery Expert for the first time.</p>
ssDDL2dd	ARYDDL2	Optional	<p>/ Create views on schema-level repository</p> <p>This job creates the views needed for the schema-level repository. Select this step only when you install DB2 Recovery Expert for the first time.</p>
ssDDL3dd	ARYDDL3	Optional	<p>/ Create views on system catalog</p> <p>This job creates the views on the DB2 system catalog tables. Select this step only when you install DB2 Recovery Expert for the first time.</p>
ssHAAAdd	ARYHAA	Optional	<p>/ Create objects for DB2 Automation Tool</p> <p>This job creates the objects that are necessary to interface with the DB2 Automation Tool object profiles. You must also specify a qualifier for the DB2 Automation Tool objects.</p>
ssINDEdd	ARYINDEX	Optional	<p>/ Create indexes on DB2 catalog</p> <p>This job creates optional indexes on the DB2 catalog tables to help improve the performance of the SLR update.</p>
	ARYBIND	Yes	<p>/ Bind plans and packages</p> <p>This job has three steps ARYBIND1, ARYBIND2, and ARYBIND3 that will bind the packages and plans for the product. You must also specify the Recovery Expert DBRM library and Owner of Recovery Expert packages.</p>
ssBINDdd	ARYBIND1	Yes	<p>/ Bind product packages</p> <p>This job binds the product packages.</p>
ssBINDdd	ARYBIND2	Yes	<p>/ Bind product plans</p> <p>This job binds product plans.</p>

Table 31. Parameter values (continued)

Member name	Template	Required	Product Parameters panel field
ssBINDdd	ARYBIND3	Optional	<p>/ Bind product plans to support DB2 Auto Tool</p> <p>This job binds product plans to support DB2 Automation Tool.</p>
ssGRANdd	ARYGRANT	Optional	<p>/ Grant Recovery Expert privileges</p> <p>This job grants the privileges that are required to run Recovery Expert.</p>
ssHAAGdd	ARYHAAG	Optional	<p>/ Grant privileges to support DB2 Auto Tool</p> <p>This job grants the privileges that are required to run DB2 Recovery Expert.</p>
ssCNTFL	ARYCNTFL	Optional	<p>/ Create control file</p> <p>Creates the control file, which is a required VSAM KSDS that is used by Recovery Expert to store certain product and product-DB2 related values. If a control file exists, you do not need to create a new file. You must also specify the volume serial number for the control file in the Volser for control file field.</p>
ssREPO	ARYREPO	Optional	<p>/ Create VSAM repository files</p> <p>Creates the VSAM repository files that Recovery Expert uses to store metadata information. If these files exist, you do not need to create new files.</p>
ssCARUP	ARYCARUP	Optional	<p>/ Create optional CAR VSAM repository file</p> <p>The job generates the VSAM repository file that will be used for coordinated application recovery.</p>
ssGDG	ARYGDG	Optional	<p>/ Create backup GDG files</p> <p>This job creates the GDG files that are used to back up the repository file. You must also specify the number of backup generations when selecting this job.</p>
ssCF1Udd	ARYCF1UP	Yes	<p>/ Update control file</p> <p>This job updates the DB2 Recovery expert control file.</p>
ssOMIG	ARYOMIG	Optional	<p>/ Object Profile Migration</p> <p>This utility will migrate object profiles from the V2.2 VSAM repository to the new V3.1 DB2 tables that will hold object profile information.</p>

Table 31. Parameter values (continued)

Member name	Template	Required	Product Parameters panel field
ssSLRdd	ARYSLR	Yes	/ Load the schema-level repository This job loads the schema level repository.
ssUNPAX	ARYUNPAX	Yes	/ Install browser interface This job will install the web browser interface. If you select to run this you must specify the Browser MVS doc file location .
ssSRVCF	ARYSRVCF	Yes	/ Customize server configuration This job will customize the server configuration. For this job to run successfully you must also specify the Web client listener port number and the Socket policy port number .
ssSRVJB	ARYSRVJB	Yes	/ Customize server job This job customizes the server.
ssSRVSP	ARYSRVSP	Yes	/ Customize server started task This job customizes the server started task.
ssAGTCF	ARYAGTCF	Yes	/ Customize agent configuration This job customizes the agent configuration file.
ssAGTJB	ARYAGTJB	Yes	/ Customize agent job This job customizes the agent specifications.
ssAGTSP	ARYAGTSP	Yes	/ Customize agent started task This job will customize the agent started task procedure.
	ARYRBAC		Steps include ARYRBARP, ARYRBAGD, ARYRBACL and ARYRBASP
ssRBARP	ARYRBARP	Yes	/ Create RBA Capture VSAM repository file This step will create the RBA Capture VSAM repository file.
ssRBAGD	ARYRBAGD	Yes	/ Create RBA Capture GDG file used for cleanup This step will create the RBA Capture GDG file used for cleanup.
ssRBACL	ARYRBACL	Yes	/ Customize RBA Capture cleanup job This step will customize the RBA Capture cleanup job.

Table 31. Parameter values (continued)

Member name	Template	Required	Product Parameters panel field
ssRBASP	ARYRBASP	Yes	<p>/ Customize RBA stored procedure</p> <p>This job step will customize the RBA capture stored procedure. Note: The RBA Capture stored procedure requires an input PDS member to be created for each LPAR that it will be run on. This member will be input into the SYSIN DD statement and will contain each SSID for that LPAR in which the RBAs should be collected.</p>
ssIVP	ARYIVP	Optional	<p>/ Install verification</p> <p>This job will verify that DB2 Recovery Expert has been installed correctly.</p>

Chapter 4. Troubleshooting and messages

Use this information to diagnose and correct problems that you might experience when you customize the components of the DB2 Fast Copy Solution Pack.

Important: This section includes only the messages that you might encounter during the Tools Customizer customization process. It does not include that can be issued by a solution pack component. For the complete set of messages that are associated with any solution pack component, see the component user's guide.

Tools Customizer troubleshooting

Use this information to diagnose and correct problems that you experience with Tools Customizer.

Gathering diagnostic information

Before you report a problem with Tools Customizer to IBM Software Support, you need to gather the appropriate diagnostic information.

Procedure

Provide the following information for all Tools Customizer problems:

- A clear description of the problem and the steps that are required to re-create the problem
- Relevant screen captures
- All messages that were issued as a result of the problem
- Product release number and the number of the last program temporary fix (PTF) that was installed
- The version of DB2 that you are using and the type and version of the operating system that you are using
- The Tools Customizer trace data set
- The Tools Customizer data store data set and the *high_level_qualifier*.SCCQTENU data set

Determining the trace data set name

You will need to identify the name of the trace data set if you cannot allocate the trace data set, the trace data set runs out of space, or IBM Software Support asks for it.

The name of the trace data set depends on the prefix setting in the TSO profile. To identify the name of the trace data set, you must know the prefix setting.

- If PREFIX is set, the name of the trace data set is *prefix*.CCQ.TRACE, where *prefix* is the TSO prefix that you specified in the profile.
- If NOPREFIX is set, the name of the trace data set is *user_ID*.CCQ.TRACE, where *user_ID* is your TSO user ID.

Tools Customizer messages

Use the information in these messages to help you diagnose and solve Tools Customizer problems.

CCQB000I The component parameter data was saved in the data store.

Explanation: Changes that were made to the component parameters were saved in the data store.

System action: None.

User response: No action is required.

CCQB001I The DB2 parameter data was saved in the data store.

Explanation: Changes that were made to the DB2 parameters were saved in the data store.

System action: None.

User response: No action is required.

CCQB002I The LPAR parameter data was saved in the data store.

Explanation: Changes that were made to the LPAR parameters were saved in the data store.

System action: None.

User response: No action is required.

CCQB003E At least one step must be selected in a selected task. The selected task is *task_description*.

Explanation: When a task is selected, at least one step must be selected. A selected step is missing from the specified task.

System action: Processing stops.

User response: Select a step in the specified task or deselect the task.

CCQB004I The required information to run the Discover EXEC was saved in the data store.

Explanation: The data store contains all the information that is required to run the Discover EXEC.

System action: None.

User response: No action is required.

CCQB005E The conflicting values for the *parameter_name* parameter must be resolved before the information can be saved.

Explanation: Two values for one parameter conflict

with each other, and they must be resolved to save the information.

System action: Processing stops.

User response: Resolve the conflicting values for the parameter.

CCQB006E One row must be selected.

Explanation: One row in the table must be selected.

System action: Processing stops.

User response: Select one row.

CCQB007E Only one row can be selected.

Explanation: Multiple rows in the table are selected, but only one row is allowed to be selected.

System action: Processing stops.

User response: Select only one row.

CCQC000I The jobs have been customized on the selected DB2 entries.

Explanation: The jobs were customized on the DB2 entries that were selected.

System action: None.

User response: Press Enter to clear the message.

CCQC001W The jobs were not generated on one or more of the selected DB2 entries. Press PF3 to check the DB2 entries that were not customized.

Explanation: The component was not customized on one or more of the DB2 entries that were selected.

System action: None.

User response: Press PF3 to see the DB2 entries on which the component was not customized. The status of these DB2 entries is Errors in Customization.

CCQC002I The edit session was started automatically because values for required parameters are missing or must be verified.

Explanation: If component, LPAR parameters, or DB2 parameters are not defined or if parameter definitions must be verified, an editing session for the undefined or unverified parameters starts automatically.

System action: None.

User response: Define values for all required component, LPAR parameters, or DB2 parameters.

CCQC003W The *template_name* template in the *library_name* metadata library does not contain any parameters.

Explanation: The specified template does not have parameters.

System action: None.

User response: No action is required.

CCQC004S The value of the "type" attribute for the *template_name* template in the *library_name* metadata library does not match the value that was previously specified. The value is *value_name*, and the previously specified value is *value_name*.

Explanation: The value of the "type" attribute must match the value that was previously specified.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC005S The *template_name* template exceeds the number of allowed templates for a customization sequence. The template is in the *library_name* metadata library.

Explanation: The customization sequence can process only *number* templates. The specified template cannot be processed because the customization sequence already contains the maximum number of templates.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC006E The jobs could not be generated for the *group_attach_name* DB2 group attach name.

Explanation: The customization jobs could not be generated for the specified DB2 group attach name.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC007E The jobs could not be generated for the *subsystem_ID* DB2 subsystem.

Explanation: The customization jobs could not be generated for the specified DB2 subsystem.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC008E The jobs could not be generated for the *member_name* DB2 member.

Explanation: The customization jobs could not be generated for the specified DB2 member.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC009S The jobs were not generated for the DB2 entries.

Explanation: One or more errors occurred while customization jobs were being generated for the selected DB2 entries.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC010S The *template_name* template could not be accessed in the *library_name* metadata library.

Explanation: The specified template could not be accessed because the user does not have RACF access to the data set, the data set has incorrect data characteristics, or the data set is not cataloged.

System action: Processing stops.

User response: Ensure that you have RACF access to the data set, that the characteristics are correct according to the specifications of the component that you are customizing, and that the data set is cataloged. If the problem persists, contact IBM Software Support.

CCQC011S The *template_name* template could not be written to the *library_name* customization library.

Explanation: The specified template could not be accessed because the user does not have RACF access to the data set, the data set has incorrect data characteristics, or the data set is not cataloged.

System action: Processing stops.

User response: Ensure that you have RACF access to the data set, that the characteristics are correct according to the specifications of the component that you are customizing, and that the data set is cataloged. If the problem persists, contact IBM Software Support.

CCQC012W The job card was generated with default values because the JOB keyword was missing.

Explanation: Default values were used to generate the job card because the JOB keyword was not specified in the first line of the job card.

System action: The job card was generated with default values.

User response: No action is required. To generate the job card with your own values, add the JOB keyword in the first line of the job card.

CCQC013W The job card was generated with the default value for the programmer name because the specified programmer name exceeded 20 characters.

Explanation: Default values were used to generate the job card because the specified programmer name contained too many characters.

System action: The job card was generated with default values.

User response: No action is required. To generate the job card with your own values, add a valid programmer name in the job card. A valid programmer name is 1 - 20 characters.

CCQC014W The job card was generated with default values because the JOB keyword was not followed by a space.

Explanation: Default values were used to generate the job card because a space did not follow the JOB keyword.

System action: The job card was generated with default values.

User response: No action is required. To generate the job card with your own values, add a space after the JOB keyword in the job card.

CCQC015S The *template_name* template in the *library_name* metadata library contains the following file-tailoring control statement: *statement_name*. This control statement is not valid in a *template_type* template.

Explanation: The *template_type* template cannot contain the specified type of file-tailoring control statement.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC016S The)DOT file-tailoring control statement exceeded the number of allowed occurrences for the *template_name* template in the *library_name* metadata library.

Explanation: The)DOT file-tailoring control statement can occur only a limited number of times in the specified template.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC017S The nested)DOT file-tailoring control statements exceeded the number of allowed occurrences in the *template_name* template in the *library_name* metadata library.

Explanation: Nested)DOT file-tailoring control statements can occur only *number* times.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC018S The *template_name* template in the *library_name* metadata library is not valid because it does not contain any data.

Explanation: The specified template is missing required data.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC019S The *template_name* template in the *library_name* metadata library is not valid because an)ENDDOT file-tailoring control statement is missing.

Explanation: A)ENDDOT file-tailoring control statement is required in the specified template.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQC021S The *template_name* template in the *library_name* metadata library is not valid because the template must start with the *parameter_name* job card parameter.

Explanation: The specified template must start with the specified job card parameter.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC022S The parameters used in a)DOT file-tailoring control statement exceeded the number of allowed parameters in the *template_name* template. The template is in the *library_name* metadata library. The error occurs in)DOT section *section_number*.

Explanation: A)DOT file-tailoring control statement can contain only a limited number of parameters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC023S The)DOT file-tailoring control statement must include the *table-name* table name in the *template_name* template. The template is in the *library_name* metadata library. The error occurs in)DOT section *section_number*.

Explanation: The)DOT file-tailoring control statement is missing a required table name.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC024S ISPF file tailoring failed for the *template_name* template in the *library_name* metadata library.

Explanation: An error occurred during ISPF file tailoring for the specified template.

System action: Processing stops.

User response: Review the Tools Customizer-generated trace data set and the ISPF file tailoring trace data set. To create an ISPF file tailoring trace data set, complete the following steps:

1. Run Tools Customizer until the error is about to occur.
2. Specify the ISPFTRC command, and press Enter.

3. Issue the Tools Customizer command that issues the error.
4. Specify the ISPFTRC command, and press Enter. The ISPF file tailoring trace data set is created. It adheres the following naming convention: *TSO_ID*.ISPF.TRACE, where *TSO_ID* is the TSO user ID that is being used.

If the problem persists, gather the following information and contact IBM Software Support.

- A screen capture of the Tools Customizer error. Ensure that the complete error message is displayed by pressing PF1.
- The Tools Customizer trace data set. It adheres to the following naming convention: *TSO_ID*.CCQ.TRACE, where *TSO_ID* is the TSO user ID that is running Tools Customizer.
- The ISPF file tailoring trace data set.

CCQC025I Customized jobs do not exist because they have not been generated.

Explanation: The list of customized jobs cannot be displayed because the component has not been customized for any DB2 entries.

System action: None.

User response: Complete the steps to customize a component. Customized jobs are generated when all required component, LPAR parameters, and DB2 parameters are defined and at least one DB2 entry on which to customize the component has been selected.

CCQC026S The value of the "customized" attribute for the *parameter_name* parameter in the *library_name* metadata library template does not match the value that was previously specified. The value is *value_name*, and the previously specified value is *value_name*.

Explanation: The value for the "customized" attribute for a parameter must match the value that was previously specified.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC027S The *job_name* customization job was not found in the *library_name* customization library.

Explanation: The selected customization job does not exist in the customization library.

System action: Processing stops.

User response: See “Gathering diagnostic

information” on page 115. Contact IBM Software Support.

CCQC028S The *library_name* customization library was not found.

Explanation: The customization library does not exist.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC029I The customization jobs were generated for *component_name*.

Explanation: The customization jobs were generated for the specific component.

System action: None.

User response: No action is required.

CCQC030S The customization jobs cannot be generated because at least one DB2 entry must be associated with this component.

Explanation: The component that you are customizing requires at least one DB2 entry to be associated with it before customization jobs can be generated.

System action: None.

User response: Associate a DB2 entry with the component that you are customizing, and regenerate the jobs.

CCQC031I The jobs were generated for the associated DB2 entries.

Explanation: The customization jobs were generated for the DB2 entries that are associated with the component.

System action: None.

User response: No action is required.

CCQC032S The customization jobs were not generated for *component_name*.

Explanation: A severe error occurred while the jobs were being generated for the specified component.

System action: None.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQC033S The *customization_library_name* has no customized jobs.

Explanation: The specified customization library cannot be browsed or edited because it is empty.

System action: None.

User response: Generate customization jobs for the specified library, and browse or edit the library again.

CCQC034S The specified operation is not allowed.

Explanation: Issuing commands against customization jobs from the customization library from an ISPF browse or edit session that was started on the Finish Component Customization panel is restricted.

System action: None.

User response: To make changes to customization jobs, follow the steps for recustomization.

CCQC035E Before you generate customization jobs, edit the component parameters to select one or more tasks or steps, and then issue the G line command or the GENERATEALL command again.

Explanation: One or more tasks or steps must be selected before customization jobs can be generated.

System action: None.

User response: Edit the component parameters to select one or more tasks or steps. Then, issue the G line command or the GENERATEALL command again.

CCQC036E Before you exit the Component Parameters panel, you must select one or more tasks or steps to generate customization jobs or issue the CANCEL command.

Explanation: One or more tasks or steps must be selected to generate customization jobs or the CANCEL command must be issued before you can exit the Component Parameters panel.

System action: None.

User response: Select one or more tasks or steps, or issue the CANCEL command.

CCQD000W The *member_name* environment index member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the specified environment index member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQD001S The *member_name* environment index member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the specified environment index member is valid, the PL/I XML parser issued an exception error code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the error.

CCQD002S The XML structure of the *member_name* environment index member is not valid. The *element_name* element is unknown.

Explanation: The specified environment index member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD003S The XML structure of the *member_name* environment index member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: Content was found in an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD004S The XML structure of the *member_name* environment index member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD005S The XML structure of the *member_name* environment index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD006S The XML structure of the *member_name* environment index member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD007S The XML structure of the *member_name* environment index member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD008S The XML structure of the *member_name* environment index member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD009S The XML structure of the *member_name* environment index member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD010S The XML structure of the *member_name* environment index member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: Content was found in an attribute that cannot contain content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD011S The XML structure of the *member_name* environment index member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: An attribute does not contain required content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD012S The XML structure of the *member_name* environment index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: An element contains too many characters. The name of the element and the maximum number of allowed characters are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD013S The XML structure of the *member_name* environment index member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The environment index member contains an unknown attribute. The name of the unknown attribute and the name of the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD050S The following LPAR serial number is duplicated in the environment index member: *serial_number*.

Explanation: The environment index member contains duplicate LPAR serial numbers. The duplicate serial number is indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD051S The following DB2 serial number is duplicated in the environment index member: *serial_number*.

Explanation: The environment index member contains duplicate DB2 serial numbers. The duplicate serial number is indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD052S The following DB2 group attach name is duplicated in the environment index member: *group_attach_name*.

Explanation: The environment index member contains duplicate group attach names.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD053S The reference to the following DB2 subsystem for a DB2 group attach name is duplicated in the environment index member: *subsystem_ID*.

Explanation: The environment index member contains

duplicate references to a DB2 subsystem for a DB2 group attach name.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD054S The reference to the following DB2 subsystem for the *LPAR_name* LPAR is duplicated in the environment index member: *subsystem_ID*.

Explanation: The environment index member contains duplicate references to a DB2 subsystem for an LPAR. The duplicate subsystem ID is indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD055S The following DB2 group attach name was not found in the environment index member: *group_attach_name*.

Explanation: A group attach name that is referenced by a DB2 member does not exist in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD056S The following LPAR was not found in the environment index member: *LPAR_name*.

Explanation: The LPAR does not exist in the environment index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD057S The following LPAR is duplicated in the environment index member: *LPAR_name*.

Explanation: The environment index member contains duplicate LPARs. The name of the duplicate LPAR name is indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD100W The *member_name* component index member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the component index member is valid, the PL/I XML parser issued the specified exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception warning code.

CCQD101S The *member_name* component index member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the component index member is valid, the PL/I XML parser issued the specified exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception error code. Ensure that the Tools Customizer data store data set DCB is the same as the sample SCCQSAMP(CCQCDATS) data set DCB.

CCQD102S The XML structure of the *member_name* component index member is not valid. The *element_name* element is unknown.

Explanation: The specified component index member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD103S The XML structure of the *member_name* component index member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: Content was found for an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD104S The XML structure of the *member_name* component index member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD105S The XML structure of the *member_name* component index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD106S The XML structure of the *member_name* component index member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times in the component index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD107S The XML structure of the *member_name* component index member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times in the component index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD108S The XML structure of the *member_name* component index member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: An attribute occurs too many times. The

name of the attribute and the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD109S The XML structure of the *member_name* component index member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times in the component index member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD110S The XML structure of the *member_name* component index member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: An attribute cannot contain content. The name of the attribute and the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD111S The XML structure of the *member_name* component index member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: An attribute requires content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD112S The XML structure of the *member_name* component index member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD113S The XML structure of the *member_name* component index member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the component index member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD118S The content of the *member_name* component index member is not valid. The *configuration_ID* configuration ID for the *configuration-name* configuration name is not unique.

Explanation:

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD120S The content of the *member_name* product index member is not valid. The pack ID *pack_ID* that is referenced by product prefix *product_prefix* in the metadata library *library_name* could not be found.

Explanation: The specified pack ID could not be found in the metadata library.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD121I The specified pack contains the *component_name*, which was previously specified as a stand-alone product.

Explanation: The specified component of the pack was previously specified as a stand-alone product.

System action: None.

User response: No action is required.

CCQD122I The specified component metadata library was previously specified as part of the *pack_name*.

Explanation: The specified metadata library for the component was previously specified as part of a pack.

System action: None.

User response: No action is required.

CCQD123E The customization library name *library_name* is being used by another product or component. Specify another customization library qualifier on the Tools Customizer Settings panel.

Explanation: A different product or component is using the specified customization library.

System action: None.

User response: Specify another customization library qualifier on the Tools Customizer Settings panel.

CCQD300W The *member_name* component environment member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the component environment member is valid, the PL/I XML parser issued the specified exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception warning code.

CCQD301S The *member_name* component environment member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the component environment member is valid, the PL/I XML parser issued the specified exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the specified exception error code.

CCQD302S The XML structure of the *member_name* component environment member is not valid. The *element_name* element is unknown.

Explanation: The specified component environment member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD303S The XML structure of the *member_name* component environment member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: Content was found for an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD304S The XML structure of the *member_name* component environment member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD305S The XML structure of the *member_name* component environment member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD306S The XML structure of the *member_name* component environment member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times in the component environment member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD307S The XML structure of the *member_name* component environment member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times in the component environment member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD308S The XML structure of the *member_name* component environment member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times. The name of the attribute and the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD309S The XML structure of the *member_name* component environment member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times in the component environment member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD310S The XML structure of the *member_name* component environment member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot contain content. The name of the attribute and the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD311S The XML structure of the *member_name* component environment member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute requires content. The name of the attribute and the name of the element that contains it are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD312S The XML structure of the *member_name* component environment member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD313S The XML structure of the *member_name* component environment member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the component environment member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD350I The *subsystem_ID* DB2 subsystem is associated with this component.

Explanation: The specified DB2 subsystem was added and saved in the Tools Customizer data store for the component to be customized.

System action: Processing continues.

User response: No action is required.

CCQD351I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is associated with this component.

Explanation: The specified DB2 member for the group attach name was added and saved in the Tools

Customizer data store for the component to be customized.

System action: Processing continues.

User response: No action is required.

CCQD352I The *group_attach_name* DB2 group attach name is associated with this component.

Explanation: The specified DB2 group attach name was added and saved in the Tools Customizer data store for the component to be customized.

System action: Processing continues.

User response: No action is required.

CCQD353E The *subsystem_ID* DB2 subsystem is already associated with this component.

Explanation: The specified DB2 subsystem cannot be added for the component to be customized because it already exists in the component environment in the data store.

System action: None.

User response: Ensure that the DB2 subsystem is specified correctly. If the problem persists, contact IBM Software Support.

CCQD354E The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is already associated with this component.

Explanation: The specified DB2 member for the group attach name cannot be added for the component to be customized because it already exists in the component environment in the data store.

System action: None.

User response: Ensure that the DB2 group attach name is specified correctly. If the problem persists, contact IBM Software Support.

CCQD355E The *group_attach_name* DB2 group attach name is already associated with this component.

Explanation: The specified DB2 group attach name cannot be added for the component to be customized because it already exists in the component environment in the data store.

System action: Processing stops.

User response: Ensure that the DB2 group attach name is specified correctly. If the problem persists, contact IBM Software Support.

CCQD356S The *library_name* metadata library is already associated with the maximum number of allowed DB2 entries for this component.

Explanation: The specified metadata library cannot be associated with more DB2 entries because it is already associated with the number of DB2 entries that are allowed.

System action: Processing stops.

User response: Delete an associated DB2 entry, and associate the specified library with another DB2 entry again.

CCQD357I The *subsystem_ID* DB2 subsystem is unassociated with this component.

Explanation: The specified DB2 SSID was unassociated with the component that you are customizing.

System action: Processing continues.

User response: No action is required.

CCQD358I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is unassociated with this component.

Explanation: The specified DB2 member for the DB2 group attach name was unassociated with the component that you are customizing.

System action: Processing continues.

User response: No action is required.

CCQD359I The *group_attach_name* DB2 group attach name is unassociated with this component.

Explanation: The specified DB2 group attach name was unassociated with the component that you are customizing.

System action: Processing continues.

User response: No action is required.

CCQD360S The *library_name* metadata library is not associated with the specified DB2 subsystem *subsystem_ID*.

Explanation: The specified DB2 subsystem and metadata library are not associated with each other.

System action: None.

User response: Ensure that the DB2 subsystem and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD361S The *library_name* metadata library is not associated with the specified DB2 data sharing group member *member_name* for the *group_attach_name* DB2 group attach name.

Explanation: The specified DB2 data sharing group member for the group attach name and metadata library are not associated with each other.

System action: None.

User response: Ensure that the DB2 data sharing group member for the group attach name and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD362S The *library_name* metadata library is not associated with the specified *group_attach_name* DB2 group attach name.

Explanation: The specified DB2 group attach name and metadata library are not associated with each other.

System action: None.

User response: Ensure that the DB2 group attach name and the metadata library are associated. If the problem persists, contact IBM Software Support.

CCQD400W The customization parser issued the *code_number* warning code while it parsed the component customization member *member_name*. See the PL/I programming guide for more information about this XML parser continuable exception code.

Explanation: While determining if the specified member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQD401S The customization parser issued the *code_number* error code while it parsed the component customization member *member_name*. See the PL/I programming guide for more information about this XML parser terminating exception code.

Explanation: While determining if the specified member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS*

Programming Guide for more information about the error.

CCQD500W The *data_set_name* data store data set was not found.

Explanation: Tools Customizer could not find the specified data store data set.

System action: None.

User response: No action is required.

CCQD501W The *data_set_name* data store data set was not found, so it was created.

Explanation: Tools Customizer created the specified data set because it could not be found.

System action: None.

User response: No action is required.

CCQD502E The *data_set_name* data store data set is not writable.

Explanation: Tools Customizer cannot write to the specified data set.

System action: None.

User response: Ensure that the data set is writable.

CCQD503E The *data_set_name* data store data set could not be opened with the *disposition_type* disposition.

Explanation: Tools Customizer could not open the data set with the specified disposition.

System action: Processing stops.

User response: Ensure that you have WRITE authority access to this data set.

CCQD504E The *data_set_name* data store data set could not be opened with the *option_name* option.

Explanation: Tools Customizer could not open the data set with the specified option.

System action: Processing stops.

User response: Ensure that you have WRITE authority access to this data set.

CCQD505E The *data_set_name* data store data set could not be created.

Explanation: Tools Customizer could not create the specified data set.

System action: Processing stops.

User response: Ensure that you have the authority to

create data sets and that the DASD is not full.

CCQD510I The DB2 SSID and DB2 group attach name were created.

Explanation: The DB2 SSID and DB2 group attach name were created and saved in the data store.

System action: None.

User response: No action is required.

CCQD511E The DB2 entry already exists in the list of DB2 entries to be associated.

Explanation: The DB2 entry cannot be added because it already exists in the list of DB2 entries to be associated.

System action: None.

User response: Specify a different DB2 entry.

CCQD512S An error occurred while a DB2 entry was being created.

Explanation: A severe error occurred while a DB2 entry was being created.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQD513E The specified DB2 entry already exists and is associated with the current component on the Customizer Workplace panel.

Explanation: The DB2 entry cannot be added because it already exists, and it is already associated with the component to be customized.

System action: None.

User response: Press F3 to go to the Customizer Workplace panel to see the DB2 entry, or specify a different DB2 entry.

CCQD514E A value is required for a DB2 subsystem, a DB2 group attach name, or both before they can be created.

Explanation: Required information is missing. A DB2 subsystem, a DB2 group attach name, or both must be specified.

System action: None.

User response: Specify a DB2 subsystem, a DB2 group attach name, or both.

CCQD515E The specified DB2 entry already exists in the list of DB2 entries and is already associated with the current component.

Explanation: The DB2 entry has already been created and associated with the component that you want to customize.

System action: None.

User response: Specify a different DB2 entry.

CCQD516E The specified DB2 entry already exists in the list of DB2 entries on the Associate DB2 Entry with Component panel but is not associated with the current component.

Explanation: The DB2 entry exists, but it must be associated with the component to be customized.

System action: None.

User response: On the Customizer Workplace panel, issue the ASSOCIATE command to associate the DB2 entry with the component.

CCQD517S An error occurred while a DB2 entry was being copied.

Explanation: A severe error occurred while a DB2 entry was being copied

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQD518E A value is required for a DB2 subsystem, a DB2 group attach name, or both before they can be copied.

Explanation: Required information is missing. A DB2 subsystem, a DB2 group attach name, or both must be specified.

System action: None.

User response: Specify a DB2 subsystem, a DB2 group attach name, or both.

CCQD519I The DB2 entry was copied.

Explanation: The DB2 entry was copied and saved in the Tools Customizer data store.

System action: None.

User response: No action is required.

CCQD520S The DB2 entry was copied to the list of DB2 entries but was not associated because the component is already associated with the allowed number of DB2 entries.

Explanation: The DB2 entry was not completely copied because a component can be associated with only 1200 DB2 entries.

System action: Processing stops.

User response: Remove a DB2 entry from the list, and copy the specified DB2 entry again.

CCQD521E *Line_command* is not a valid line command.

Explanation: The specified line command is not valid. Valid line commands are on the panel.

System action: Processing stops.

User response: Specify a valid line command.

CCQD522E The *subsystem_ID* DB2 subsystem ID occurs more than once in the list. Each row must be unique.

Explanation: The specified DB2 subsystem ID can be used only once.

System action: Processing stops.

User response: Specify a different DB2 subsystem ID.

CCQD523E The *group_attach_name* DB2 group attach name occurs more than once in the list. Each row must be unique.

Explanation: The specified DB2 group attach name can be used only once.

System action: Processing stops.

User response: Specify a different DB2 group attach name.

CCQD524E The *member_name* DB2 member for the DB2 group attach name occurs more than once in the list. Each row must be unique.

Explanation: The specified DB2 member for the DB2 group attach name can be used only once.

System action: Processing stops.

User response: Specify a different DB2 member for the DB2 group attach name.

CCQD525I The DB2 entries were created.

User response: No action is required.

CCQD526E The *subsystem_ID* DB2 subsystem ID occurs more than once in the list. Each DB2 subsystem ID must be unique.

Explanation: The specified DB2 subsystem ID can be used only once.

System action: Processing stops.

User response: Specify a different DB2 subsystem ID.

CCQD527I DB2 group attach names cannot be created during the copy process.

Explanation: The ability to create DB2 group attach names is not available during the copy process.

System action: None.

User response: Create DB2 group attach names by issuing the CREATE command on the Customizer Workplace panel.

CCQD528E The *metadata_library* metadata library is already associated with *number* DB2 entries. The maximum number of associated DB2 entries for this metadata library is 256.

Explanation: A metadata library can be associated with a maximum of 256 DB2 entries. The specified metadata library is already associated with 256.

System action: Processing stops.

User response: Remove an existing association between the specified metadata library and a DB2 entry, and associate the specified the metadata library with another entry.

CCQD529I At least one row is required.

CCQD560E The *subsystem_ID* DB2 subsystem already exists and is associated with the current component on the Customizer Workplace panel.

Explanation: The specified DB2 subsystem exists and is associated with the component that you are customizing.

System action: None.

User response: Specify another DB2 subsystem.

CCQD561E The *member_name* DB2 member for the *group_attach_name* DB2 group attach name already exists and is associated with the current component on the Customizer Workplace panel.

Explanation: The specified DB2 data sharing group for the DB2 group attach name exists and is associated with the component that you are customizing.

System action: None.

User response: Specify another DB2 subsystem.

CCQD562E The *group_attach_name* DB2 group attach name already exists and is associated with the current component on the Customizer Workplace panel.

Explanation: The specified DB2 group attach name exists and is associated with the component that you are customizing. The subsystem is in the table on the Customizer Workplace panel.

System action: None.

User response: Specify another DB2 group attach name.

CCQD563E A value is required for a DB2 subsystem, a DB2 group attach name, or both before they can be created.

Explanation: A DB2 subsystem, a DB2 group attach name, or both are not specified so one or both of them cannot be created.

System action: None.

User response: Specify a value for the DB2 subsystem, the DB2 group attach name, or both.

CCQD565E The *subsystem_ID* DB2 subsystem already exists in the list of DB2 entries and is already associated with the current component.

Explanation: The specified subsystem is already associated.

System action: None.

User response: Specify a different DB2 subsystem.

CCQD566E The *member_name* DB2 member for the *group_attach_name* DB2 group attach name already exists in the list of DB2 entries and is already associated with the current component.

Explanation: The specified DB2 member is already associated.

System action: None.

User response: Specify a different DB2 member.

CCQD567E The *group_attach_name* DB2 group attach name already exists in the list of DB2 entries and is already associated with the current component.

Explanation: The specified DB2 group attach name is already associated.

System action: None.

User response: Specify another DB2 group attach name.

CCQD568I To customize *product_name*, at least one DB2 entry must be associated with this product.

Explanation: The specified product requires at least one associated DB2 entry.

System action: None.

User response: To continue the customization process for the specified product, associate one or more DB2 entries with it.

CCQD569I To customize the *product_name* product configuration, at least one DB2 entry must be associated with this configuration.

Explanation: The configuration for the specified product requires at least one associated DB2 entry.

System action: None.

User response: To continue the customization process for the configuration of the specified product, associate one or more DB2 entries with the configuration.

CCQD577W The *mode_name* DB2 mode of the *subsystem_ID* DB2 subsystem is not supported by the product.

Explanation: The product does not support the specified DB2 mode.

System action: None.

User response: Specify a supported DB2 mode.

CCQD578W The *mode_name* DB2 mode of the *member_name* DB2 member for the DB2 group is not supported by the product.

Explanation: The product does not support the specified DB2 mode.

System action: None.

User response: Specify a supported DB2 mode.

CCQD579W The *mode_name* DB2 mode of the *group_name* DB2 group attach name is not supported by the product.

Explanation: The product does not support the specified DB2 mode.

System action: None.

User response: Specify a supported DB2 mode.

CCQD580S The *subsystem_ID* DB2 subsystem was copied to the list of DB2 entries but was not associated because the component is already associated with the allowed number of DB2 entries.

Explanation: The copied DB2 subsystem was not associated with the component because the component is associated with the maximum number of DB2 entries.

System action: None.

User response: Remove an associated DB2 entry and associate the component with the copied DB2 subsystem.

CCQD581S The *member_name* DB2 member for the *group_attach_name* DB2 group attach name was copied to the list of DB2 entries but was not associated because the component is already associated with the allowed number of DB2 entries.

Explanation: The copied DB2 member for the DB2 group attach name was not associated with the component because the component is associated with the maximum number of DB2 entries.

System action: None.

User response: Remove an associated DB2 entry and associate the component with the copied DB2 member.

CCQD582S The *group_attach_name* DB2 group attach name was copied to the list of DB2 entries but was not associated because the component is already associated with the allowed number of DB2 entries.

Explanation: The copied DB2 group attach name was not associated with the component because the component is associated with the maximum number of DB2 entries.

System action: None.

User response: Remove an associated DB2 entry and associate the component with the copied DB2 group attach name.

CCQD584I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is copied to the *subsystem_ID* DB2 subsystem.

Explanation: The specified DB2 member was copied.

System action: None.

User response: No action is required.

CCQD585I The *group_attach_name* DB2 group attach name cannot be copied because a DB2 member is required.

Explanation: The specified DB2 group attach name was not copied because a DB2 member was missing.

System action: None.

User response: No action is required.

CCQD586S The current LPAR is *LPAR_name*, but the data store contains information about the *LPAR_name* LPAR. You must use the *LPAR_name* LPAR to customize the component.

Explanation: The LPAR that is stored in the data store data set must be used to customize the component.

System action: Processing stops.

User response: Use the LPAR that is stored in the data store data set.

CCQD587W The *level_number* DB2 level of the *subsystem_name* DB2 subsystem is not supported by the product.

Explanation: The product does not support the specified DB2 level.

System action: Processing continues.

User response: Specify a supported level of DB2.

CCQD588W The *level_number* DB2 level of the *member_name* DB2 member of the *group_name* DB2 group is not supported by the product.

Explanation: The product does not support the specified DB2 level.

System action: Processing continues.

User response: Specify a supported level of DB2.

CCQD589W The *level_number* DB2 level of the *group_name* DB2 group attach name is not supported by the product.

Explanation: The product does not support the specified DB2 level.

System action: Processing continues.

User response: Specify a supported level of DB2.

CCQD593I The *subsystem_ID* DB2 subsystem was deleted.

User response: No action is required.

CCQD594I The *member_name* DB2 for the *group_attach_name* DB2 group attach name was deleted.

User response: No action is required.

CCQD595I The *group_attach_name* DB2 group attach name was deleted.

User response: No action is required.

CCQD596E The *subsystem_ID* DB2 subsystem was not deleted.

Explanation: An internal error occurred while the specified DB2 subsystem was being deleted.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQD597E The *member_name* DB2 member for the *group_attach_name* DB2 group attach name was not deleted.

Explanation: An internal error occurred while the specified DB2 member was being deleted.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQD598E The *group_attach_name* DB2 group attach name was not deleted.

Explanation: An internal error occurred while the specified DB2 group attach name was being deleted.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQD600W The *member_name* component customization member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the XML structure of the component customization member is valid, the

PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD601S The *member_name* component customization member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the XML structure of the component customization member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

CCQD602S The XML structure of the *member_name* component customization member is not valid. The *element_name* element is unknown.

Explanation: The data store member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD603S The XML structure of the *member_name* component customization member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD604S The XML structure of the *member_name* component customization member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic

information” on page 115. Contact IBM Software Support.

CCQD605S The XML structure of the *member_name* component customization member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD606S The XML structure of the *member_name* component customization member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD607S The XML structure of the *member_name* component customization member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD608S The XML structure of the *member_name* component customization member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD609S The XML structure of the *member_name* component customization member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD610S The XML structure of the *member_name* component customization member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD611S The XML structure of the *member_name* component customization member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD612S The XML structure of the *member_name* component customization member is not valid. The content length for the *element_name* element exceeds *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD613S The XML structure of the *member_name* component customization member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the data store member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD614S The content of the *member_name* component customization member is not valid. The value of the *element_name* element is not valid. The value is *value_name*.

Explanation: The specified value is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQD700W The *member_name* DB2 data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the XML structure of the DB2 data member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD701S The *member_name* DB2 data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the XML structure of the DB2 data member is valid, the PL/I XML parser issued an exception error code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

CCQD750W The *value_number* value in the DB2 parameter *parameter_name* was skipped because only *maximum_number* values are allowed.

Explanation: The specified value was skipped because

it exceeds the number of allowed values in the DB2 parameter.

System action: Processing continues.

User response: No action is required. To stop this message from being issued, remove the extra values from the DB2 parameter.

CCQD800W The *member_name* LPAR data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the XML structure of the LPAR data member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD801S The *member_name* LPAR data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the XML structure of the LPAR data member is valid, the PL/I XML parser issued an exception error code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code.

CCQD850W The *value_number* value in the LPAR parameter *parameter_name* was skipped because only *maximum_number* values are allowed.

Explanation: The specified value was skipped because it exceeds the number of allowed values in the LPAR parameter.

System action: Processing continues.

User response: No action is required. To stop this message from being issued, remove the extra values from the LPAR parameter.

CCQD851I The *subsystem_ID* DB2 subsystem is copied to the *member_name* DB2 member for the *group_attach_name* DB2 group attach name.

User response: No action is required.

CCQD852I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name is copied to the *member_name* DB2 member for the *group_attach_name* DB2 group attach name.

User response: No action is required.

CCQD854I The *member_name* DB2 member for the *group_attach_name* DB2 group 'attach name is copied to multiple DB2 entries.

User response: No action is required.

CCQD900W The *member_name* component data member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the XML structure of the component data member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD901S The *member_name* component data member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the XML structure of the component data member is valid, the PL/I XML parser issued an exception error code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQD950W The *value_number* value in the component parameter *parameter_name* was skipped because only *maximum_number* values are allowed.

Explanation: The specified value was skipped because it exceeds the number of allowed values in the component parameter.

System action: Processing continues.

User response: No action is required. To stop this message from being issued, remove the extra values from the component parameter.

CCQD960I The *subsystem_ID* DB2 subsystem was changed to the *member_name* DB2 member for the *group_attach_name* DB2 group attach name.

User response: No action is required.

CCQD961I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name was changed to the *subsystem_ID* DB2 subsystem.

User response: No action is required.

CCQD962I The *member_name* DB2 member for the *group_attach_name* DB2 group attach name was changed to the *member_name* DB2 member for the *group_attach_name* DB2 group attach name.

User response: No action is required.

CCQD963E The DB2 group attach name cannot be blank when the DB2 subsystem ID is blank.

Explanation: A DB2 group attach name, DB2 subsystem ID, or both must be specified.

System action: Processing stops.

User response: Specify a DB2 group attach name, DB2 subsystem ID, or both.

CCQE000S The specified message field name or message *message_ID* was not found.

Explanation: An error occurred while displaying a message field name or the specified message.

System action: Processing stops.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQE001E An incorrect trace level was specified. Valid trace levels are 0 - 4.

Explanation: A wrong trace level was specified. Valid trace levels are 0 - 4.

System action: Processing stops.

User response: Specify a valid trace level 0 - 4.

CCQH001W The specified option *option_name* is not valid.

Explanation: The option that was specified is not a valid option on the panel.

System action: Tools Customizer stops.

User response: Specify a valid option on the panel.

CCQH006W Before you customize a component, verify your user settings.

Explanation: The user settings must be verified before a component can be customized.

System action: Tools Customizer stops.

User response: Verify the user settings.

CCQH007E Check the user settings. One or more current values are not valid.

Explanation: One or more of the values in the user settings is not valid.

System action: Tools Customizer stops.

User response: Ensure that the specified values for the user settings are valid.

CCQH008W Before you use Tools Customizer, you must select option 0 to verify your user settings.

Explanation: The user settings must be changed before a component can be customized.

System action: Tools Customizer stops.

User response: Change the user settings.

CCQH009E You must select option 0 to change your user settings.

Explanation: User settings must be changed before a component can be customized.

System action: Tools Customizer stops.

User response: Change the user settings.

CCQI000W The XML structure of the *member_name* DB2 parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the DB2 parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI001S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the DB2 parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI002S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *element name* element is unknown.

Explanation: The specified element in the DB2 parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI003S The XML structure of the *member_name* DB2 parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI004S The XML structure of the *member_name* DB2 parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element requires content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI005S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI006S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation: The specified element does not contain enough characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI007S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI008S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI009S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute did not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI010S The XML structure of the *member_name* DB2 parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot have content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI011S The XML structure of the *member_name* DB2 parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI012S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI013S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the DB2 parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI014S The content of the *member_name* DB2 parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value of the element is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI015S The content of the DB2 parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value of the attribute is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI016S The content of the DB2 parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI017S The content of the DB2 parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI050S The *member_name* DB2 parameter metadata member was not found in the *data_set_name* data set.

Explanation: Tools Customizer could not find the specified DB2 parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI051S The *parameter_name* LPAR parameter in the *template_name* template does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation: The specified template does not contain metadata for an LPAR parameter. The name of the LPAR parameter metadata member, the name of the LPAR parameter, and the name of the template are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI052S The *parameter_name* component parameter in the *template_name* template does not have associated metadata in the *member_name* component parameter metadata member.

Explanation: The specified template does not contain metadata for a component parameter. The name of the component parameter metadata member, the name of the component parameter, and the name of the template are indicated in the message text.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI053E The following metadata data set was not found: *data_set_name*.

Explanation: Tools Customizer could not find the specified metadata data set.

System action: Processing stops.

User response: Ensure that the metadata data set is specified correctly. If the problem persists, contact IBM Software Support.

CCQI054E The following metadata data set could not be opened: *data_set_name*.

Explanation: Tools Customizer could not open the specified LPAR metadata data set.

System action: Processing stops.

User response: Ensure the metadata data set was specified correctly.

CCQI055S The CCQ\$\$DB2 DB2 parameter metadata member was not found in the *data_set_name* Tools Customizer metadata data set.

Explanation: Tools Customizer could not find the DB2 parameter metadata member in the specified Tools Customizer metadata data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI056S The CCQ\$\$LPR LPAR parameter metadata member was not found in the *data_set_name* data set.

Explanation: Tools Customizer could not find the specified LPAR parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI057S The *member_name* component parameter metadata member was not found in the *data_set_name* data set.

Explanation: The component parameter metadata member was not found in the specified data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI058I *component_name* does not have any DB2 parameters.

Explanation: DB2 parameters are not required to customize the specified component.

System action: Processing continues.

User response: No action is required.

CCQI059I *component_name* does not have any LPAR parameters.

Explanation: LPAR parameters are not required to customize the specified component.

System action: Processing continues.

User response: No action is required.

CCQI060S The *parameter_name* DB2 parameter in the *task_description* task condition does not have associated metadata in the *member_name* DB2 parameter metadata member.

Explanation: Associated metadata is missing for the specified DB2 parameter in a task.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI061S The *parameter_name* LPAR parameter in the *task_description* task condition does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation: Associated metadata is missing for the specified LPAR parameter in a task.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI062S The *parameter_name* component parameter in the *task_description* task condition does not have associated metadata in the *member_name* component parameter metadata member.

Explanation: Associated metadata is missing for the specified component parameter in a task.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI063S The *parameter_name* DB2 parameter in the *task_description* task and the *step_description* step does not have associated metadata in the *member_name* DB2 parameter metadata member.

Explanation: Associated metadata is missing for the specified DB2 parameter in a task and step.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI064S The *parameter_name* LPAR parameter in the *task_description* task and the *step_description* step does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation: Associated metadata is missing for the specified LPAR parameter in a task and step.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI065S The *parameter_name* component parameter in the *task_description* task and the *step_description* step does not have associated metadata in the *member_name* parameter metadata member.

Explanation: Associated metadata is missing for the specified parameter in a task and step.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI066S The *parameter_name* DB2 parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* DB2 parameter metadata member.

Explanation: Associated metadata is missing for the specified DB2 parameter in a task, step, and template.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI067S The *parameter_name* LPAR parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* LPAR parameter metadata member.

Explanation: Associated metadata is missing for the specified LPAR parameter in a task, step, and template.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI068S The *parameter_name* component parameter in the *task_description* task, *step_description* step, and *template_name* template condition does not have associated metadata in the *member_name* component parameter metadata member.

Explanation: Associated metadata is missing for the specified component parameter in a task, step, and template.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI069S Component metadata does not support multiple configurations, but the *template_name* component template contains the *parameter_name* parameter. Enable multiple configurations support for this component, and try again.

Explanation: The specified template contains a parameter for multiple configurations, but the component is not enabled to support multiple configurations.

System action: Processing stops.

User response: Enable multiple configurations support, and try again.

CCQI070E The *parameter_name* DB2 parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation: The specified length cannot be shorter than the default length.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI071E The *parameter_name* LPAR parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation: The specified length cannot be shorter than the default length.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI072E The *parameter_name* component parameter metadata member is not valid. The default length for the *parameter-element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation: The specified length cannot be shorter than the default length.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI073S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation: The specified value already exists for an attribute.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI074S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation: The specified value already exists for an attribute.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI075S The XML structure of the *member_name* component parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation: The specified value already exists for an attribute.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI076S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *parameter_name* parameter refers to the *section-name* section. This section was not found in the DB2 parameter metadata member.

Explanation: The specified value already exists for an attribute.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI077S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *parameter_name* parameter refers to the *section-name* section. This section was not found in the LPAR parameter metadata member.

Explanation: The specified parameter refers to a section that is not in the LPAR parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI078S The XML structure of the *member_name* component parameter metadata member is not valid. The *parameter_name* parameter refers to the *section-name* section. This section was not found in the component parameter metadata member.

Explanation: The specified parameter refers to a section that is not in the component parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI080S The content of the *member_name* DB2 parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value for an attribute in the DB2 parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI081S The content of the *member_name* LPAR parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value for an attribute in the LPAR parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI082S The content of the *member_name* component parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value for an attribute in the component parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic

information” on page 115. Contact IBM Software Support.

CCQI090S The component-defined DB2 parameter *parameter_name* in the *member_name* parameter metadata member references the *section_ID* section ID, but this ID does not exist in either the parameter metadata member or the DB2 parameter metadata member.

Explanation: A section that does not exist in the parameter metadata member or the DB2 parameter metadata member is referenced by the specified DB2 parameter.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI091S The component-defined LPAR parameter in the *member_name* parameter metadata member references the *section_ID* section ID, but this ID does not exist in either the parameter metadata member or the LPAR parameter metadata member.

Explanation: A section that does not exist in the parameter metadata member or the LPAR parameter metadata member is being referenced by the specified LPAR parameter.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI092S The overridden DB2 parameter *parameter_name* in the *member_name* parameter metadata member does not exist in the DB2 parameter metadata member.

Explanation: The specified parameter does not exist.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI093S The overridden LPAR parameter *parameter_name* in the *member_name* parameter metadata member does not exist in the LPAR parameter metadata member.

Explanation: The specified parameter does not exist.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI094S The CCQ\$\$PRD product customization parameter metadata member was not found in the *data_set_name* data set.

Explanation: The specified data set must contain the CCQ\$\$PRD product customization parameter metadata member

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI100W The XML structure of the *member_name* LPAR parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the LPAR parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI101S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the LPAR parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI102S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified element in the LPAR parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI103S The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI104S The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element requires content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI105S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI106S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation: The specified element does not contain enough characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI107S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI108S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI109S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute did not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI110S The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot have content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI111S The XML structure of the *member_name* LPAR parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI112S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI113S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the LPAR parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI114S The content of the *member_name* LPAR parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an element in the LPAR parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI115S The content of the *member_name* LPAR parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value for an attribute in the LPAR parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI116S The content of the *member_name* LPAR parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an element in the LPAR parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI117S The content of the *member_name* LPAR parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an attribute in the LPAR parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI120S The XML structure of the *member_name* DB2 parameter metadata member is not valid. The *element_name* element in the *parameter_name* parameter contains duplicate values for the *element_name* element. The duplicate value is *value_name*.

Explanation: An element contains the specified duplicate value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

information” on page 115. Contact IBM Software Support.

CCQI121S The XML structure of the *member_name* LPAR parameter metadata member is not valid. The *element_name* element in the *parameter_name* parameter contains duplicate values for the *element_name* element. The duplicate value is *value_name*.

Explanation: An element contains the specified duplicate value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI122S The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element in the *parameter_name* parameter contains duplicate values for the *element_name* element. The duplicate value is *value_name*.

Explanation: An element contains the specified duplicate value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI123S The XML structure of the *member_name* discover metadata member is not valid. The *element_name* element in the *parameter_name* parameter contains duplicate values for the *element_name* element. The duplicate value is *value_name*.

Explanation: An element contains the specified duplicate value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI124S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *element_name* element in the *parameter_name* parameter contains duplicate values for the *element_name* element. The duplicate value is *value_name*.

Explanation: An element contains the specified duplicate value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI200W The XML structure of the *member_name* information metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the information metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI201S The XML structure of the *member_name* information metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the information metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI202S The XML structure of the *member_name* information metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified element in the information metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI203S The XML structure of the *member_name* information metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI204S The XML structure of the *member_name* information metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element requires content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI205S The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI206S The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation: The specified element does not contain enough characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI207S The XML structure of the *member_name* information metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI208S The XML structure of the *member_name* information metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI209S The XML structure of the *member_name* information metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute did not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI210S The XML structure of the *member_name* information metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot have content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI211S The XML structure of the *member_name* information metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI212S The XML structure of the *member_name* information metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI213S The XML structure of the *member_name* information metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the information metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI214S The content of the *member_name* information metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an element in the information metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI215S The content of the *member_name* information metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an attribute in the information metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI216S The content of the *member_name* information metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an element in the information metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI217S The content of the *member_name* information metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an attribute in the information metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI218S The content of the *member_name* information metadata member is not valid. The length of the *value_name* value that of the *attribute_name* attribute is longer than the *value_name* value of the *attribute_name* attribute.

Explanation: The first specified value cannot be longer than the second specified value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI219S The content of the *member_name* information metadata member is not valid. The *value_name* value of the *attribute_name* attribute contains the *value_name* value.

Explanation: The first specified value cannot be longer than the second specified value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI220S The XML structure of the *member_name* information metadata member is not valid. Content for the *attribute_name* attribute in the *element_name* element exceed *maximum_number* characters.

Explanation: The specified attribute contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI223S The XML structure of the *member_name* information metadata member is not valid. The value that is specified for the DB2 Level already exists. The value is *value_name*.

Explanation: The specified value already exists.

System action: Processing stops.

User response: Specify a different DB2 level. If the problem persists, contact IBM Software Support.

CCQI224S The XML structure of the *member_name* information metadata member is not valid. The value that is specified for the DB2 Mode already exists. The value is *value_name*.

Explanation: The specified value already exists.

System action: Processing stops.

User response: Specify a different DB2 mode. If the problem persists, contact IBM Software Support.

CCQI250S The information metadata member was not found in the *data_set_name* data set.

Explanation: Tools Customizer could not find the information metadata member in the specified data set.

System action: Processing stops.

User response: If this message was issued on the Specify the Metadata Library (CCQPHLQ) panel, specify the product metadata library. The name of this library is *hlq.SDENU*.

Do not specify the Tools Customizer metadata library, which is *hlq.SCCQDENU*.

If the problem persists, identify the name of the Tools Customizer trace data set and contact IBM Software Support.

CCQI251E The *member_name* member was not accessible in the *data_set_name* data set.

Explanation: The specified member could not be accessed in the data set.

System action: Processing stops.

User response: Specify the correct metadata library.

CCQI252S The information metadata member was not found in the *library_name* component metadata library that is part of the *library_name* pack metadata library. The name of the pack is *pack_name*.

Explanation: The specified component metadata library does not contain the information metadata member.

System action: Processing stops.

User response: Specify the correct metadata library.

CCQI253E The *library_name* Tools Customizer metadata library is not current. Update the metadata library on the Tools Customizer Settings panel.

Explanation: The specified metadata library is not current.

System action: Processing stops.

User response: Specify a current metadata library on the Tools Customizer Settings panel.

CCQI300W The XML structure of the *member_name* sequence metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the sequence metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI301S The XML structure of the *member_name* sequence metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the sequence metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception error code, and contact IBM Software Support.

CCQI302S The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified element in the sequence metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI303S The XML structure of the *member_name* sequence metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI304S The XML structure of the *member_name* sequence metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI305S The XML structure of the *member_name* sequence metadata member is not valid. Content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI306S The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI307S The XML structure of the *member_name* sequence metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI308S The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI309S The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI310S The XML structure of the *member_name* sequence metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI311S The XML structure of the *member_name* sequence metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI312S The XML structure of the *member_name* sequence metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI313S The XML structure of the *member_name* sequence metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the sequence metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI314S The content of the *member_name* sequence metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an element in the sequence metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI315S The content of the *member_name* sequence metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an attribute in the sequence metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI316S The content of the *member_name* sequence metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an element in the sequence metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI317S The content of the *member_name* sequence metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an attribute in the sequence metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI350S The XML structure of the *member_name* sequence metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: A specified value for an attribute in the sequence metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI351S The *member_name* sequence metadata member was not found in the *data_set_name* metadata data set.

Explanation: Tools Customizer could not find the specified sequence metadata member in the metadata data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI352S The *template_name* component template was not found in the *data_set_name* metadata data set.

Explanation: Tools Customizer could not find the specified component template in the data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI353S The sequence metadata member was not found in the *data_set_name* component data set that is part of the *data_set_name* pack.

Explanation: Tools Customizer could not find the sequence metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI360S The XML structure of the *member_name* sequence metadata member is not valid. The value of the *attribute_name* attribute in the *element_name* element already exists.

Explanation: The specified attribute contains a value that already exists.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI361S The XML structure of the *member_name* sequence metadata member is not valid. The condition element on the *level_type* level already contains a relational operator.

Explanation: A relational operator already exists for the condition element on the specified level.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI362S The XML structure of the *member_name* sequence metadata member is not valid. The condition element on the *level_type* level must contain only one content string or content number element.

Explanation: Only one content string element or content number element can be contained in the condition element on the specified level.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI363S The XML structure of the *member_name* sequence metadata member is not valid. The condition element in the *element_name* element with the *attribute_name* attribute must contain either the content string element or content number element.

Explanation: Either the content string element or the content number element must be in the condition element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI400W The XML structure of the *member_name* parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining the parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI401S The XML structure of the *member_name* parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the parameter

metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQI402S The XML structure of the *member_name* parameter metadata member is not valid. The *element name* element is unknown.

Explanation: The specified element in the parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI403S The XML structure of the *member_name* parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI404S The XML structure of the *member_name* parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element requires content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI405S The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic

information” on page 115. Contact IBM Software Support.

CCQI406S The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element must be at least *minimum_number* characters.

Explanation: The specified element does not contain enough characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI407S The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI408S The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI409S The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI410S The XML structure of the *member_name* parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot have content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI411S The XML structure of the *member_name* parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI412S The XML structure of the *member_name* parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI413S The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI414S The content of the *member_name* parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an element in the parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI415S The content of the *member_name* parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an attribute in the parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI416S The content of the *member_name* parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an element in the parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI417S The content of the *member_name* parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an attribute in the parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI420S The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element is unknown for the overridden DB2 parameter.

Explanation:

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI421S The XML structure of the *member_name* parameter metadata member is not valid. The *element_name* element is unknown for the overridden LPAR parameter.

Explanation:

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI422S The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown for the overridden DB2 parameter.

Explanation:

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI423S The XML structure of the *member_name* parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown for the overridden LPAR parameter.

Explanation:

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI450S The *member_name* component parameter metadata member was not found in the *data_set_name* data set.

Explanation: Tools Customizer could not find the specified component parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI510W The *data_set_name* data store data set does not exist.

Explanation: The specified data store data set does not exist.

System action: Processing continues.

User response: Ensure that the data store data set exists.

CCQI511S The *data_set_name* data store data set cannot be opened by using the *disposition_type* disposition.

Explanation: The specified data store data set could not be opened with the specified disposition.

System action: Processing continues.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI512S The *data_set_name* data store data set cannot be opened by using the *option-type* option.

Explanation: The specified data store data set was unable to be opened with the specified option.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI600W The XML structure of the *member_name* component customization parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the component customization parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI601S The XML structure of the *member_name* component customization parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the component

customization parameter metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI602S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified component customization parameter metadata member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI603S The XML structure of the *member_name* component customization parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: Content was found in an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI604S The XML structure of the *member_name* component customization parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI605S The XML structure of the *member_name* component customization parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI606S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times in the component customization parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI607S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times in the component customization parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI608S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times in the component customization parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI609S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times in the component customization parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI610S The XML structure of the *member_name* component customization parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: Content was found in an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI611S The XML structure of the *member_name* component customization parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI612S The XML structure of the *member_name* component customization parameter metadata member is not valid. The content length for the *attribute_name* attribute in the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified attribute contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI613S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified component customization parameter metadata member contains an unknown attribute.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI614S The XML structure of the *member_name* component customization parameter metadata member is not valid. The value of the *element_name* element is not valid. The value *value_name*.

Explanation: The specified value of the element is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI615S The XML structure of the *member_name* component customization parameter metadata member is not valid. The value of the *attribute_name* attribute for the *element_name* element is not valid. The value is *value_name*.

Explanation: The specified value of the attribute is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI616S The XML structure of the *member_name* component customization parameter metadata member is not valid. The data type of the *element_name* element is 'not valid. The value of the element is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI617S The XML structure of the *member_name* component customization parameter metadata member is not valid. The data type of the *attribute_name* attribute for the *element_name* element is not valid. The value of the attribute is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI650S The XML structure of the *member_name* component customization parameter metadata member is not valid. The following value of the *attribute_name* attribute in the *element_name* element already exists: *value_name*.

Explanation: The specified value for an attribute already exists.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI651S The XML structure of the *member_name* component customization parameter metadata member is not valid. The *parameter_name* parameter refers to the following section, which was not found in the *member_name* component customization parameter metadata member: *section-name*.

Explanation: The specified section is not in the component customization parameter metadata member.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI652S The *member_name* component customization metadata member not valid. The default length for the *element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation: The specified length cannot be shorter than the default length.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI653S The content of the *member_name* component customization parameter metadata member is not valid. The value of the *attribute_name* attribute in the *element_name* element is not valid. The value of the attribute is *value_name*.

Explanation: The specified value of the attribute is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI700W The XML structure of the *member_name* solution pack metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the specified solution pack metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the warning.

CCQI701S The XML structure of the *member_name* solution pack metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the specified solution pack metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the error.

CCQI702S The XML structure of the *member_name* solution pack metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified solution pack metadata member contains an unknown element.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI703S The XML structure of the *member_name* solution pack metadata member is not valid. Content is not allowed for the *element_name* element, but content was found

Explanation: Content was found in an element that cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI704S The XML structure of the *member_name* solution pack metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element does not contain required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI705S The XML structure of the *member_name* solution pack metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI706S The XML structure of the *member_name* solution pack metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI707S The XML structure of the *member_name* solution pack metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI708S The XML structure of the *member_name* solution pack metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI709S The XML structure of the *member_name* solution pack metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI710S The XML structure of the *member_name* solution pack metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot have content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI711S The XML structure of the *member_name* solution pack metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute is missing content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI712S The XML structure of the *member_name* solution pack metadata member is not valid. The content length for the *attribute_name* attribute in the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified attribute contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI713S The XML structure of the *member_name* solution pack metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute in the solution pack metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI714S The XML structure of the *member_name* solution pack metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value of the element is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI715S The XML structure of the *member_name* solution pack metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified value of the attribute is not a valid value.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI716S The XML structure of the *member_name* solution pack metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI717S The XML structure of the *member_name* solution pack metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value of the attribute is *value_name*.

Explanation: The specified data type is not a valid data type.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI720S The XML structure of the *member_name* solution pack metadata member is not valid. The *msg* element is required for the *component_name* component that is not customizable.

Explanation: The *msg* element is required for the specified component, which cannot be customized by using Tools Customizer.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI750S The solution pack metadata member was not found in the *library_name* metadata library.

Explanation: Tools Customizer could not find the solution pack metadata member in the specified library.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI751S The version in the *library_name* solution pack metadata library is different than the version in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation: The version in the solution pack metadata library does not match the version in the component metadata library.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI752S The release in the *library_name* solution pack metadata library is different than the release in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation: The release in the solution pack metadata library does not match the release in the component metadata library.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQI753S The modification level in the *library_name* solution pack metadata library is different than the modification level in the *library_name* component metadata library. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation: The modification level in the solution pack metadata library does not match the modification level in the component metadata library.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQM002E The *command_name* line command is not valid: .

Explanation: The specified line command is not valid.

System action: Processing continues.

User response: Specify a valid line command on the panel.

CCQO000W The XML structure of the *member_name* discover parameter metadata member is not valid. The PL/I XML parser issued the following exception warning code: *code_number*.

Explanation: While determining if the discover parameter metadata member is valid, the PL/I XML parser issued an exception warning code.

System action: Processing continues.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code.

CCQO001S The XML structure of the *member_name* discover parameter metadata member is not valid. The PL/I XML parser issued the following exception error code: *code_number*.

Explanation: While determining if the Discover metadata member is valid, the PL/I XML parser issued an exception error code.

System action: Processing stops.

User response: See the *Enterprise PL/I for z/OS Programming Guide* for more information about the exception warning code. Contact IBM Software Support.

CCQO002S The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element is unknown.

Explanation: The specified element in the discover parameter metadata member is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO003S The XML structure of the *member_name* discover parameter metadata member is not valid. Content is not allowed for the *element_name* element, but content was found.

Explanation: The specified element cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO004S The XML structure of the *member_name* discover parameter metadata member is not valid. Content is required for the *element_name* element, but content was not found.

Explanation: The specified element is missing required content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO005S The XML structure of the *member_name* discover parameter metadata member is not valid. The content length for the *element_name* element cannot exceed *maximum_number* characters.

Explanation: The specified element contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO006S The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified element occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO007S The XML structure of the *member_name* discover parameter metadata member is not valid. The *element_name* element must occur at least *minimum_number* times.

Explanation: The specified element does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO008S The XML structure of the *member_name* discover parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element cannot occur more than *maximum_number* times.

Explanation: The specified attribute occurs too many times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO009S The XML structure of the *member_name* discover parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element must occur at least *minimum_number* times.

Explanation: The specified attribute does not occur enough times.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO010S The XML structure of the *member_name* discover parameter metadata member is not valid. Content is not allowed for the *attribute_name* attribute in the *element_name* element, but content was found.

Explanation: The specified attribute cannot contain content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO011S The XML structure of the *member_name* discover parameter metadata member is not valid. Content is required for the *attribute_name* attribute in the *element_name* element, but content was not found.

Explanation: The specified attribute requires content.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO012S The XML structure of the *member_name* discover parameter metadata member is not valid. The content length for the *attribute_name* attribute in the *element_name* element in the cannot exceed *maximum_number* characters.

Explanation: The specified attribute contains too many characters.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO013S The XML structure of the *member_name* discover parameter metadata member is not valid. The *attribute_name* attribute in the *element_name* element is unknown.

Explanation: The specified attribute is unknown.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO014S The content of the *member_name* discover parameter metadata member is not valid because the value of the *element_name* element is incorrect. The value is *value_name*.

Explanation: A The specified value for an element in the discover parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO015S The content of the *member_name* discover parameter metadata member is not valid because the value of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified value for an attribute in the discover parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO016S The content of the *member_name* discover parameter metadata member is not valid because the data type of the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an element in the discover parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO017S The content of the *member_name* component parameter metadata member is not valid because the data type of the *attribute_name* attribute in the *element_name* element is incorrect. The value is *value_name*.

Explanation: The specified data type value for an attribute in the component parameter metadata member is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO050S The *data_set_name* Discover REXX EXEC data set could not be initialized or was not found.

Explanation: Tools Customizer could not find or could not initialize the specified Discover REXX EXEC data set.

System action: Processing stops.

User response: Ensure that the Discover REXX EXEC is specified correctly.

CCQO051W The *data_sharing_group_ID* data sharing group ID cannot contain more than four characters.

Explanation: The specified data sharing group ID contains too many characters.

System action: Processing continues.

User response: Ensure that the specified data sharing group ID does not exceed four characters.

CCQO052S The *REXX_EXEC_name* Discover REXX EXEC was not found in the *data_set_name* Discover data set.

Explanation: Tools Customizer could not find the Discover REXX EXEC in the specified data set.

System action: Processing stops.

User response: Ensure that the Discover data set was specified correctly.

CCQO053W The *LPAR_name* LPAR name cannot contain more than eight characters.

Explanation: The specified LPAR name contains too many characters.

System action: Processing continues.

User response: Ensure that the specified LPAR name does not exceed eight characters.

CCQO054W The *subsystem_ID* DB2 SSID cannot contain more than four characters. The record was not processed.

Explanation: The specified DB2 SSID contains too many characters.

System action: Processing continues.

User response: Ensure that the specified DB2 SSID does not exceed four characters.

CCQO055W The *parameter_name* DB2 group attach name parameter is in the *record_name* Discover record, but a DB2 group attach name was not specified. The record was not processed.

Explanation: The Discover record contains a data sharing group parameter, but a DB2 group attach name was not specified.

System action: Processing continues.

User response: Ensure that information is specified correctly on the Discover Customized Component Information panel.

CCQO056W The *parameter_name* DB2 parameter in the *record_name* Discover record did not have a DB2 group attach name or a DB2 SSID. The record was not processed.

Explanation: The Discover record did not have a DB2 group attach name or a DB2 subsystem ID in the DB2 parameter.

System action: Processing continues.

User response: Ensure that information is specified correctly on the Discover Customized Component Information panel.

CCQO057W The Discover EXEC could not find the *parameter_name* parameter in the metadata for the component to be customized. The record was not processed.

Explanation: The specified parameter could not be found in the metadata for the component to be customized.

System action: Processing continues.

User response: Ensure that information is specified correctly on the Discover Customized Component Information panel.

CCQO058W The *parameter_name* component parameter name in the *record_type* Discover record does not start with CCQ_LPR_, CCQ_DB2_, or CCQ_PRD_. The record was not processed.

Explanation: The parameter in the record does not start with CCQ_DB2_, CCQ_LPAR_, or CCQ_PRD_.

System action: Processing continues.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQO059W The *parameter_name* component parameter cannot contain more than 72 characters. The record was not processed.

Explanation: The specified component parameter contains too many characters.

System action: Processing continues.

User response: Ensure that the specified component parameter does not exceed 72 characters.

CCQO060W The *record_name* Discover record from the REXX EXEC output must start with the following record type: *record_type*. The record was not processed.

Explanation: A Discover record from the REXX EXEC output must start with the specified DB2 record type.

System action: Processing continues.

User response: See "Gathering diagnostic information" on page 115. Contact IBM Software Support.

CCQO061I If you do not have a previously customized version of the component, do not run the Discover EXEC. Press END to go to the Customizer Workplace panel.

Explanation: This message is issued when you customize a component for the first time. It prompts you to use the Discover EXEC to discover data from a previous customization of the specified component.

System action: Processing continues.

User response:

Tip: Using the Discover EXEC saves time and reduces errors that can error when parameters are specified manually. If you want to use the Discover EXEC, specify the required information on the Discover Customized Component Information panel. Otherwise, press End to continue without discovering data from a previous customization of the component.

CCQO062W The Discover EXEC could not find the following *parameter_name* parameter in the DB2 metadata. The record was not processed.

Explanation: The specified parameter is missing in the DB2 metadata.

System action: Processing continues.

User response: If this parameter is required, contact IBM Software Support.

CCQO064W The *Discover-record* Discover record did not have a parameter name. The record was not processed.

Explanation: A parameter name was missing in the Discover record.

System action: Processing continues.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO065W The value for the *parameter_name* parameter is ignored because it has more than *maximum_number* characters, which is the maximum length that is defined in the metadata. The value is *parameter_value*.

Explanation: The specified value exceeded the maximum allowed length, which was defined in the metadata. Tools Customizer truncated the extra characters.

System action: Processing continues.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO066W The *record_name* Discover record from the Discover REXX EXEC output does not have a parameter value. The record was not processed.

Explanation: The Discover record was missing a parameter value from the Discover EXEC output.

System action: Processing continues.

User response: Ensure that information was specified correctly on the Discover Customized Component Information panel.

CCQO067W The *parameter_name* parameter is defined in the metadata to support one value, but more than one value was found. The last value was used.

Explanation: The definition of the parameter in the metadata supports one value, but more than one value was specified. Only the last value was used.

System action: Processing continues.

User response: Ensure that information was specified correctly on the Discover Customized Component Information panel.

CCQO068W The value of the *parameter_name* parameter is ignored because the parameter is defined as *internal=true*. The value is *value_name*.

Explanation: The specified value of the parameter is ignored because it is defined as *internal=true*.

System action: Processing continues.

User response: Ensure that information was specified correctly on the Discover Customized Component Information panel.

CCQO069W The Discover EXEC did not find the *parameter_name* parameter in the LPAR metadata. The record was not processed.

Explanation: The specified parameter is missing from the LPAR metadata.

System action: Processing continues.

User response: Ensure that information was specified correctly on the Discover Customized Component Information panel.

CCQO070W The *record_type* Discover record contains an incorrect delimiter between the Environment section and the Data section. The record was not processed.

Explanation: Tools Customizer found an incorrect delimiter between the Environment section and the Data section.

System action: None.

User response: No action is required.

CCQO071W The *member_name* member could not be found in the *data_set_name* Discover data set.

Explanation: Tools Customizer could not find the specified Discover data set.

System action: None.

User response: No action is required.

CCQO072S The *member_name* discover metadata member was not found in the *data_set_name* metadata data set.

Explanation: Tools Customizer could not find the specified metadata member in the data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO073E The *member_name* discover metadata member is not valid because the default length for the *element_name* parameter element exceeds the length of the parameter. The default length is *default_length*, and the specified length is *specified_length*. The default length will be truncated accordingly.

Explanation: The default length for the specified parameter element is longer than the parameter.

System action: Processing continues.

User response: No action is required.

CCQO074S The content of the *member_name* discover metadata member is not valid. The value of the *attribute_name* attribute in the *element_name* element is not valid. The value of the attribute is *value_name*.

Explanation: The specified value is not valid.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO075W The *configuration_ID* configuration ID in the *record_name* Discover record is incorrect. The record was not processed.

Explanation: The specified configuration ID is not correct.

System action: Processing continues.

User response: No action is required.

CCQO076W The *configuration_ID* configuration ID cannot contain more than *maximum_number* characters. The record was not processed.

Explanation: The specified configuration ID contains too many characters.

System action: Processing continues.

User response: No action is required.

CCQO077S The discover metadata member was not found in the *data_set_name* component data set that is part of the *data_set_name* pack.

Explanation: The discover metadata member was not found in the specified component data set.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQO080I *Product_name* does not support the Discover process.

Explanation: The specified product does not support the Discover process.

System action: None.

User response: No action is required.

CCQP000E The value of the *mode_name* DB2 mode is not valid for the *level_name* DB2 level.

Explanation: The specified DB2 mode is not valid for the DB2 level.

System action: Processing stops.

User response: Specify a valid DB2 mode for the DB2 level.

CCQP001E The value of the *mode_name* DB2 mode is missing.

Explanation: The specified DB2 mode is not defined.

System action: Processing stops.

User response: Specify a value for the DB2 mode.

CCQP002E The value of the *mode_name* DB2 level is missing.

Explanation: The specified DB2 level is not defined.

System action: Processing stops.

User response: Specify a value for the DB2 level.

CCQP003E The value of the *level_name* DB2 level is not valid.

Explanation: The specified DB2 level does not have a valid name.

System action: Processing stops.

User response: Specify a valid value for the DB2 level.

CCQP004S The *parameter_name* parameter does not exist in the CCQ\$\$DB2 DB2 parameter metadata member.

Explanation: The CCQ\$\$DB2 DB2 parameter metadata member does not contain the specified parameter.

System action: Processing stops.

User response: See “Gathering diagnostic information” on page 115. Contact IBM Software Support.

CCQP005E The value of the *subsystem_ID* DB2 SSID is missing.

Explanation: The specified DB2 SSID is not defined.

System action: Processing stops.

User response: Specify a valid value for the DB2 SSID.

CCQP006E The value of the *group_attach_name* DB2 group attach name is missing.

Explanation: The specified DB2 group attach name is not defined.

System action: Processing stops.

User response: Specify a valid DB2 group attach name.

CCQQ000E Specify a valid metadata library. Each qualifier of the library must start with an alphabetic character and must be 1-8 alphanumeric characters. The library name must be 1-44 characters.

Explanation: The metadata library was not specified in the correct format. The high-level qualifier must contain alphanumeric characters, and the first character cannot be numeric. The name cannot contain wildcard characters, such as asterisks (*) and percent signs (%).

System action: Tools Customizer prompts for the correct library name.

User response: Specify a library in the correct format. If the message was issued on the Specify the Metadata Library (CCQPHLQ) panel, specify the product metadata library. The name of this library is *hlq.SDENU*.

Do not specify the Tools Customizer metadata library, which is *hlq.SCCQDENU*.

CCQQ001E The *data_set_name* data set name that was specified for the metadata library was not found.

Explanation: The data set does not exist, or the data set name was written in the incorrect format. The high-level qualifier must contain alphanumeric characters, and the first character cannot be numeric. The name cannot contain wildcard characters, such as asterisks (*) and percent signs (%).

System action: Tools Customizer prompts for the correct data set name.

User response: Specify a data set name in the correct format.

CCQQ002E The data set name that was specified for the *library_name* metadata library cannot be opened.

Explanation: Tools Customizer could not open the data set.

System action: Tools Customizer prompts for an available data set.

User response: Ensure that the specified data set is available for Tools Customizer to open it.

CCQQ003E The *data_set_name* data set name that was specified for the metadata sample library is not valid. The data set must be in the following format: **HLQ.SxxxSAMP**.

Explanation: The specified data set name was not specified in the correct format.

System action: None.

User response: Specify the data set name in the following format: *HLQ.SxxxSAMP*, where *xxx* is the three-character prefix for the component.

CCQQ004E The *data_set_name* data set is being used by another user. Try again when the data set is not being used.

Explanation: Another user is using the specified data set.

System action: None.

User response: Ensure that the specified data set is not being used.

CCQQ009E The *data_set_name* data set name that was specified for the metadata library is not valid because the data set is empty.

Explanation: The specified data set is empty.

System action: Tools Customizer prompts for an available data set.

User response: Ensure that the specified data set is available for Tools Customizer to open it.

CCQQ011E The *library_name* metadata library for the component that is part of the *library_name* pack was not found in the catalog. The name of the pack is *pack_name*, and the name of the component is *component_name*.

Explanation: The specified metadata library is not in the catalog.

System action: None.

User response: Specify another metadata library.

CCQQ012E The *library_name* metadata library for the component that is part of the *library_name* pack cannot be opened.

Explanation: The specified metadata library cannot be opened.

System action: None.

User response: Ensure that the name of the library is specified correctly.

CCQS000I Tools Customizer is being invoked for the first time or the previous ISPF session ended before Tools Customizer was exited. In both cases, the fields on this panel are populated with default values. Review these default values or specify new values to be used to customize products or packs.

Explanation: When you customize a stand-alone product or a solution pack for the first time, or when an ISPF session unexpectedly ends before the ISPF profile is saved, you must specify or review your Tools Customizer user settings.

System action: Processing stops.

User response: Review and accept the default settings, or specify new settings.

CCQS001E The following command is not valid: *command_name*.

Explanation: The specified command is not a valid command on the panel.

System action: Processing stops.

User response: Specify a valid command.

CCQS002W The *data_set_name* Discover data set could not be found.

Explanation: Tools Customizer could not find the specified data set.

System action: The data set will be allocated, and processing continues.

User response: Ensure that the data set name is specified correctly because the data set will be allocated with this name after the values are saved.

CCQS003W The *data_set_name* Discover data set was not found so it was created.

Explanation: Tools Customizer could not find the specified data set.

System action: Processing continues.

User response: Ensure that the data set name is specified correctly.

CCQS004I The settings were saved.

Explanation: The settings that you changed were saved.

System action: Processing continues.

User response: No action is required.

CCQS006W The length of a qualifier for the *data_set_name* customization library data set exceeds 26 characters.

Explanation: The qualifier for the customization library data set is too long. The qualifier cannot exceed 26 characters.

System action: Processing continues.

User response: Specify a qualifier that is 26 characters or less.

CCQS007E The discover data set *data_set_name* could not be opened with the *option-type* option.

Explanation: The specified option could not open the Discover data set.

System action: None.

User response: Specify a data set to which you have WRITE access.

CCQS008E An error occurred while the *data_set_name* Discover data set was being created.

Explanation: While the specified data set was being created, an error occurred.

System action: Processing continues.

User response: Ensure that you have WRITE authority access to this data set.

CCQS010E The customization library qualifier is not valid.

Explanation: The customization library qualifier that was specified is not valid.

System action: None.

User response: Specify a valid qualifier for the customization library.

CCQS011E The group attach option is not valid.

Explanation: The group attach option that was specified is not valid.

System action: None.

User response: Specify a valid option for the group attach option.

CCQS012E The Tools Customizer metadata library is not valid.

Explanation: The metadata library that was specified is not a valid data set.

System action: None.

User response: Specify a valid data set for the metadata library.

CCQS013E The Discover data set is not valid.

Explanation: The Discover data set that was specified is not a valid data set.

System action: None.

User response: Specify a valid Discover data set.

CCQS014E The data store data set is not valid.

Explanation: The data set that was specified is not a valid data set.

System action: None.

User response: Specify a valid data store data set.

CCQS015E Tools Customizer is already running.

Explanation: A session of Tools Customizer is already running in your environment. Only one Tools Customizer session is allowed.

System action: None.

User response: The trace data set is being used. Free the trace data set, and start Tools Customizer again.

CCQS018E Information on the first line of the job card exceeds 57 characters.

Explanation: The first line of the job card can contain only 57 characters. This character limit includes a continuation character.

System action: Tools Customizer clears the first line of the job card.

User response: Specify information that does not exceed 57 characters on the first line of the job card.

CCQS019E The required trace data set, *data_set_name*, is currently not accessible.

Explanation: The trace data set must be accessible.

System action: Processing stops.

User response: Ensure that the trace data set is accessible.

CCQS020E An error occurred while the customization library data set was being created. ALTER authority on the high-level qualifier for the customization library data set is required.

Explanation: To create the customization library data set, ALTER authority on the specified high-level qualifier must be granted.

System action: None.

User response: Ensure that ALTER authority for the specified customization library data set is granted.

CCQS021E The value *value_name* in the field that contains the cursor position is not valid.

Explanation: The specified value is not valid.

System action: None.

User response: Specify a valid value.

CCQS022E An error occurred while the customization library data set was being opened. UPDATE authority on the high-level qualifier for the customization library data set is required.

Explanation: To open the customization library data set, UPDATE authority on the specified high-level qualifier must be granted.

System action: None.

User response: Ensure that UPDATE authority for the specified customization library data set is granted.

CCQS023E An error occurred while the customization library data set was being opened. UPDATE authority on the high-level qualifier for the customization library data set is required.

Explanation: To open the customization library data set, UPDATE authority on the specified high-level qualifier must be granted.

System action: None.

User response: Ensure that UPDATE authority for the specified customization library data set is granted, or specify a different high-level qualifier for the customization library data set on the Tools Customizer Settings panel.

CCQS024E An error occurred while the customization library data set was being created. ALTER authority on the high-level qualifier for the customization library data set is required.

Explanation: To create the customization library data set, ALTER authority on the specified high-level qualifier must be granted.

System action: None.

User response: Ensure that ALTER authority for the specified customization library data set is granted, or specify a different high-level qualifier for the customization library data set on the Tools Customizer Settings panel.

CCQS030E The following command is not a valid CREATE statement: *command_statement*.

Explanation: The specified CREATE command statement is invalid because it contains blanks or alphabetic characters.

System action: Processing stops.

User response: Specify a valid CREATE command statement. The correct syntax is CREATE *nm*, where *nm* is 1 - 99.

CCQS031E The following command is not a valid CREATE statement: *command_statement*. The number that can be specified with the CREATE command is 1 - 99.

Explanation: The specified CREATE command statement is invalid because it contains either 0 or a number greater than 99.

System action: Processing stops.

User response: Specify a valid CREATE command

statement. The correct syntax is CREATE *nm*, where *nm* is 1 - 99.

CCQT000I The component configuration ID *copied_configuration_ID* was successfully copied from *configuration_ID*.

Explanation: The specified configuration ID was copied.

System action: None.

User response: No action is required.

CCQT001E The *command_name* line command was specified more than once, which is not allowed.

Explanation: The specified line command cannot be specified more than one time.

System action: Processing stops.

User response: Specify the line command only once.

CCQT002E The *configuration_ID* configuration ID already exists. Specify a different configuration ID.

Explanation: The specified configuration ID exists.

System action: Processing stops.

User response: Ensure that the specified configuration ID is unique.

CCQT003I The component configuration ID *configuration_ID* was created.

Explanation: The specified configuration ID was created.

System action: None.

User response: No action is required.

CCQT004I The component configuration ID *configuration_ID* was removed.

Explanation: The specified configuration ID was removed.

System action: None.

User response: No action is required.

CCQT005E The component configuration ID *configuration_ID* is not valid. The component configuration ID cannot contain a colon (:).

Explanation: The specified configuration ID contains a colon (:), but a colon is not valid.

System action: Processing stops.

User response: Specify a configuration ID that does not contain a colon.

CCQT006E The *configuration_ID* configuration ID exists. Specify a different configuration ID.

Explanation: The specified configuration ID exists.

System action: Processing stops.

User response: Specify another configuration ID.

CCQT007E The *configuration_ID* configuration ID exists but was removed from the list of configurations. To use this configuration ID, you must restore it.

Explanation: The specified configuration ID exists but was removed from the list of available configuration.

System action: Processing stops.

User response: Specify another configuration ID. To restore the specified configuration ID, issue the CREATE command, and specify the same configuration ID again.

CCQT008E The *configuration_ID* configuration ID exceeds *maximum_number* characters.

Explanation: The specified configuration ID contains too many characters.

System action: Processing stops.

User response: Specify another configuration ID that does not exceed the maximum number of characters that was set by .

CCQT010I Create request for *configuration_ID* configuration was cancelled by user.

Explanation: The request to create the specified configuration was canceled.

System action: Processing stops.

User response: No action is required.

CCQT011I The *configuration_ID* configuration was not copied.

Explanation: The specified configuration was not copied.

System action: Processing stops.

User response: No action is required.

CCQT012I The *configuration_ID* configuration was not removed.

Explanation: The specified configuration was not removed.

System action: Processing stops.

User response: No action is required.

CCQT013I None of the configurations were copied or removed. All of the previously selected configurations are deselected.

Explanation: The selected configurations were not copied or removed, and they are deselected.

System action: Processing stops.

User response: No action is required.

CCQT014E Specify Y or N and press Enter to continue, or press End to cancel.

Explanation: A function requires input.

System action: Processing stops.

User response: To continue, specify Y or N and press Enter. Otherwise, press End to cancel.

CCQT015E The *command_name* command is not allowed during the process of "Select" configuration line command.

Explanation: The specified command is not allowed while the line command for selecting configurations is processing.

System action: Processing stops.

User response: Remove the specified line command.

CCQT016I The *configuration_ID* configuration was not created

Explanation: The specified configuration was not created.

System action: Processing stops.

User response: No action is required.

CCQT017I The *configuration_ID* configuration was not copied.

Explanation: The specified configuration was not copied.

System action: Processing stops.

User response: No action is required.

CCQT018E Specify Y or N, and press Enter.

Explanation: A function requires input.

System action: Processing stops.

User response: To continue, specify Y or N, and press Enter.

CCQT019I The select *configuration_ID* configuration process ended.

Explanation: The select process for the specified configuration is finished.

System action: Processing stops.

User response: No action is required.

CCQT020E The *configuration_ID* configuration was not created because the data store was not accessible.

Explanation: The specified configuration was not created because the data store could not be accessed.

System action: Processing stops.

User response: Ensure that the data store is accessible and create the configuration again.

CCQT021E The *configuration_ID* configuration was not copied because the data store was not accessible.

Explanation: The specified configuration was not copied because the data store could not be accessed.

System action: Processing stops.

User response: Ensure that the data store is accessible and copy the configuration again.

CCQT025I The *configuration_ID* configuration was not updated.

Explanation: The specified configuration was not updated because the edit process was canceled.

System action: Processing stops.

User response: No action is required.

CCQT027I The component configuration was successfully updated.

Explanation: The configuration was updated.

System action: Processing continue.

User response: No action is required.

CCQX001S *Product_name* has already been customized by using values from *data_set_name* data store data set. Switch to the specified data store data set to continue customizing this product.

Explanation: The specified product was customized by using values from the specified data store data set.

System action: Processing stops.

User response: Use the specified data store data set to continue customizing the product.

CCQX002S *component_name* has already been customized by using values from *data_set_name* data store data set. Switch to the specified data store data set to continue customizing this component.

Explanation: The specified component was customized by using values from the specified data store data set.

System action: Processing stops.

User response: Use the specified data store data set to continue customizing the component.

CCQX011I *component_name* was not found.

Explanation: The specified component was not found.

System action: Processing stops.

User response: Specify another component.

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