

# Comparex<sup>®</sup> 8.8.1 Readme

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This Readme file contains information about the new features and fixes in Comparex<sup>®</sup> 8.8.1 for z/OS<sup>®</sup>, z/VM<sup>®</sup>, and z/VSE<sup>®</sup>.

## General Information

Comparex, available on z/OS, z/VM and z/VSE platforms, is the most powerful tool on the market for comparing data, text, and directory files. The product performs fast, accurate, single-step comparisons of the contents of virtually any two-file types - libraries, directories, sequential files, or databases. Additionally, file records of any size are supported.

## Accessing the Documentation

All Comparex documentation is provided in Adobe<sup>®</sup> Portable Document Format (PDF). You can download the Comparex documentation from the Documentation page of the Micro Focus SupportLine website at <https://supportline.microfocus.com/productdoc.aspx>. A user ID and password is not required to access the Documentation page.

- Adobe<sup>®</sup> Reader<sup>®</sup> is available for free download at <http://get.adobe.com/reader/>. Version 9 or higher is recommended.
- Additions and corrections to documentation are frequently issued after the product release date. Updated Comparex Readme files and user manuals are published on the Micro Focus SupportLine website with the rest of the documentation for the product release. Updated Readme files and user manuals are flagged with an **Updated** date in the file name or description.



**NOTE** Change bars in the left margin of Comparex documentation identify substantive changes from the last published version, unless otherwise noted.

## Searching the Documentation

There is no cross-book index for the Comparex documentation suite. You can use the Advanced Search facility in Adobe Reader to search all Comparex manuals in the same or subordinate folders for information that you want.

## Online Help

**Online help** is available from the ISPF interface on z/OS and z/VM for customers who choose to install it. Request panel-level help by pressing F1.

z/VM customers can also request tutorial-assisted command entry by entering **Comparex** as a standalone line command.

## Customer Support

- **Online Support** — The Micro Focus SupportLine website at <http://supportline.microfocus.com> provides an easy way for customers to manage their support cases, download software patches, or search the Knowledgebase for the latest technical information about our products at any time.
- A user ID and password are required to access the Micro Focus SupportLine website. To obtain a user ID and password, sign up online or contact Customer Care by email or telephone.
- **Telephone Support** — Telephone contact numbers for Customer Care are posted by region at the following URL:

<https://www.microfocus.com/serena/support/>

No password is needed to access Customer Care contact information.

- **Email Support** — Customers can send support requests by email to [customer care@microfocus.com](mailto:customer care@microfocus.com).
- **Authorized Support Representative** — Some support contracts specify that support calls will be centrally managed within the customer organization. This practice enables related issues to be aggregated across multiple customer sites or functional groups, and it ensures accountability for the satisfactory resolution of open issues. You should determine whether you have such a support contract before contacting Customer Care. If you do have such a contract, submit your support request to the designated support manager within your organization and arrange for that person to contact Customer Care.

## New Features and Fixes

The following sections identify the new features in Comparex releases from Comparex 8.8.1 back through Comparex 8.7.x.

### New Features in Comparex 8.8.1

#### Comparex 8.8.1 Supports z/OS 2.3 Features

Comparex 8.8.1 supports the following z/OS 2.3 features:

- 8-character TSO user IDs.
- JES2 subsystem enhancements.
- Multiversioning of members in PDSE version 2 libraries:
  - Comparex has a new directory feature that allows superficial comparison based on directory information only. This feature is useful if you want to know which PDSE version 2 members are different without comparing the entire content of each member.

This directory-only feature is triggered by a new keyword option on the DIR parameter:

```
DIR=PDSE
```

This option displays the generation numbers as well as the absolute version for each member generation.

- MAXGENS is displayed on output. MAXGENS is the maximum number of member generations that has been set for your installation. It is displayed in the output as a reminder. (System programmers can set the upper limit for MAXGENS with the MAXGENS\_LIMIT keyword in the IGDSMSxx member of PARMLIB.)
- New keyword VERSIONS.

To compare versions of members in the same library, you can specify the new keyword VERSIONS. For version after version comparison within the same PDSE version 2 library, specify the same data set for SYSUT1 and SYSUT2.

For example, if MAXGENS is set to 10, version 0, the current version, is compared to version -1 and so on until version -10, if present, is compared to version -9.

To summarize, four conditions must be met in order to obtain version differences:

- 1 SYSUT1 and SYSUT2 must point to the same data set.
- 2 The data set must be a PDSE version 2 library.
- 3 A non-zero value is specified for MAXGENS.

- 4 The VERSIONS keyword must be specified in the SYSIN parameters.

## Comparex Supports VTOC-to-VTOC Data Set Level Comparison

Comparex can now process Volume Tables of Contents (VTOCs) and compare like named data sets on different volumes. For each matching data set, Comparex generates a separate job, for example, PDS to PDS, PDSE to PDSE, VSAM to VSAM, and so on.

Explicit JCL that does not involve catalog lookup is used to reference each data set that is to be compared. For example:

```
//SYSUTx      DD      DSN=datasetname,DISP=SHR,UNIT=3390,VOL=SER=volum1  
//SYSUT2      DD      DSN=datasetname,DISP=SHR,UNIT=3390,VOL=SER=volum2
```

A default limit (MAXDIFF) of 10 on the output is set because potential output could be very large. (You can override this limit if desired.)

Typical use of this functionality is to examine the VTOC report on differences and then submit a separate job to examine the specific differences for any data set pair that may be of interest.

Once all generated jobs have executed, Comparex produces a summary report on the differences encountered between the two volumes.

## Defects Fixed in Comparex 8.8.1

Access the following link for a list and description of the defects that have been fixed in Comparex 8.8.1:

[http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX\\_8.8.1\\_RESOLVED&channel=DEFECTS](http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX_8.8.1_RESOLVED&channel=DEFECTS)

## New Features in Comparex 8.8

Comparex 8.8 contains the following new features.

### Comparex Supports Comparison of Files with Comma-Separated Values

A Comma-Separated Values (CSV) file stores tabular data (numbers and text) in plain text. Plain text means that the file is interpreted as a sequence of characters, so that it is human-readable with a standard text editor. Each line of the file is a data record. Each record consists of one or more fields separated by commas.

Record 1 of a CSV file contains, by convention, a list of field names, also separated by commas. Beginning with Comparex 8.8, Comparex will extract these names and use them to define FIELD statements. Then, the text in subsequent records will be aligned in fixed columns suitable for comparison by smart fields logic.

See the sample JCL provided in the CSVXMP member of the SERCPX.V8R8M0.IFACE library.

This new feature applies only to Comparex for z/OS.

## New CPX Edit Macro Invokes Comparex within ISPF Edit

CPX is a new edit macro, and is delivered in the CPX member of the SERCPX.V8R8M0.CLIST library. You need to define cpx.clist as a sysexec, or copy it to a clist library that is available to your TSO session.

You can only enter the command to invoke this macro on the command line of an ISPF edit session. The various forms of the CPX edit macro are:

CPX Edit Macro	Description
CPX	Generates a difference report that shows the intended changes made during the current edit session (or since the last Save command). This report enables you to adjust the changes prior to the actual Save or PF3 command; or, Cancel the changes altogether.
CPX <i>member</i>	Compares the current member being edited against a different member in the same PDS.
CPX <i>'dataset'</i>	Compares the current member being edited against the named data set (flat file).
CPX <i>'dataset(member)'</i>	Compares the current member being edited against the named PDS and member.
CPX <i>/u/userid/directory1/...directoryn/filename.ext</i>	Compares the current file being edited against the named Hierarchical File System (HFS) file.
CPX <i>file.ext</i>	Compares the current HFS file being edited against the named HFS file in the same directory.

This new feature applies only to Comparex for z/OS.

## Defects Fixed in Comparex 8.8

Access the following link for a list and description of the defects that have been fixed in Comparex 8.8:

[http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX\\_8.8\\_RESOLVED&channel=DEFECTS](http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX_8.8_RESOLVED&channel=DEFECTS)

## New Features in Comparex 8.7.1.02

Comparex 8.7.1.02 contains the following new features.

### Comparex Now Honors the TSO PROFILE PREFIX Setting

By default, TSO assigns the current TSO user ID as the high-level qualifier to a data set name if you specify that name without enclosing it in apostrophes in the Name field of the Other Partitioned, Sequential or VSAM Data Set, or z/OS UNIX file field on an ISPF panel:

Other Partitioned, Sequential or VSAM Data Set, or z/OS UNIX file:

Name . . . . .

Comparex now honors the TSO profile prefix setting as a high-level qualifier if you do not enclose the data set name in apostrophes.

You can specify the following command on the ISPF Command Shell panel (Option 6 on the ISPF Primary Option panel):

```
PROFILE PREFIX(newprefix)
```

or the following command on the command line of any Comparex panel:

```
TSO PROFILE PREFIX(newprefix)
```

## New TRUNCATE Keyword

A new TRUNCATE keyword has been added to the input processing options that you specify on the Other Input Options (CPXOPOTI) panel. When the TRUNCATE keyword is set to YES, spaces at the end of input records are truncated.

```
CPXOPOTI ----- Other Input Options -----
Command ===>                                     Profile: DEL PVT

RECORDS TO SKIP BEFORE COMPARE:
  SKIPUT1 (SYSUT1)  ===>
  SKIPUT2 (SYSUT2)  ===>

CONTINUE COMPARING AFTER MAXIMUM DIFFERENCES REACHED:
                    ===> NO          (YES or NO)

ABSOLUTE LIMIT ON RECORDS TO READ FROM EITHER FILE:
  STOPAFT          ===>
  END: Displacement ===>           Op ===>           Arg ===>

PROCESS DIRECTORY  ===> NO          (YES, NO, USER, SPF, PDF or LOAD or HFS)

HALT ON SYNTAX    ===>              (YES, NO, or CONDitional)

TRANSLATION       ===>              (EBCIDIC, ASCII, or UNICODE)

TRUNCATE         ===>              (YES, NO)

Press ENTER to register and stay; Enter END Command to register and exit.
```

The TRUNCATE (TRUNC) keyword can also be specified in the SYSIN command stream in a Comparex batch job. For example:

```
000005 //*      C O M P A R E X   BATCH EXECUTION
000006 //*
000008 //COMPARE EXEC PGM=COMPAREX
000009 //STEPLIB DD DISP=SHR,DSN=CMNPRD.CMN.CP87.#000006.LOD
000010 //        DD DISP=SHR,DSN=CPXPRD.CPX87.LOAD
```

```
000011 // DD DISP=SHR,DSN=CPXSUP.COMPAREX.CPXLOAD
000012 //SERLIC DD DISP=SHR,DSN=SERDEV.LICENSE.DATA
000013 //SYSUT1 DD DISP=SHR,DSN=USER123.COMPAREX.FB(A)
000014 //SYSUT2 DD DISP=SHR,DSN=USER123.COMPAREX.VB(A)
000015 //SYSPRINT DD SYSOUT=*
000016 //SYSIN DD *
000017 KILLSPIE
000018 TEXT=$.
000019 PRINT=MLC
000020 BUFF=1024
000021 TRUNC
000022 /*
```

TRUNCATE only applies to TEXT processing. The effect is the same as SQUEEZE=C", but applies only to the trailing blanks of each record.

## Defects Fixed in Comparex 8.7.1.02

Access the following link for a list and description of the fixes in Comparex 8.7.1.02:

[http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX\\_8.7.1.02\\_RESOLVED&channel=DEFECTS](http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX_8.7.1.02_RESOLVED&channel=DEFECTS)

## New Features in Comparex 8.7.1.01

Comparex 8.7.1.01 does not contain any new enhancements, only fixes.

## Defects Fixed in Comparex 8.7.1.01

Access the following link for a list and description of the fixes in Comparex 8.7.1.01:

[http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX\\_8.7.1.01\\_RESOLVED&channel=DEFECTS](http://knowledgebase.serena.com/InfoCenter/index?page=content&cat=CPX_8.7.1.01_RESOLVED&channel=DEFECTS)

## New Features in Comparex 8.7.1

### Advanced Encryption Standard (AES) in Comparex 8.7.1

Comparex 8.7.1 supports both decryption and encryption of data sets and files in accordance with the National Institute of Standards and Technology (NIST) Federal Information Processing Standards publication 197. This feature is only available with Comparex for z/OS. The z/VM and z/VSE versions will be added at a later release depending on customer demand.

AES details are in the following publication:

<http://csrc.nist.gov/publications/fips/fips197/fips-197.pdf>

### Key Specification

Comparex users are custodians of their own keys; the keys are specified in a DD statement that can be RACF protected "for your eyes only." Comparex will not show the keys in printed output or on the joblog or system console. Comparex will erase the keys in memory so that they cannot be observed in program dumps and abends.

The key file contains exactly 2 records - record 1 is for SYSUT1 - record 2 is for SYSUT2. The key file is required for both decrypt and encrypt operations and is the same format in both cases. The actual key is expected to be a hexadecimal string. If a character form is preferred the key is enclosed in quotes. An example of an encryption key is shown below, along with a description of the fields:

```
-----1-----2-----3-----4-----5
000
128 0123456789AABBCCDDEEFF
```

Field	Column Position	Description
Key Type	1-3	Values can be 128, 192, or 256. 000 means no key.
Space	4	Must be a single space followed by the key.
Key	5-68	Key, in hexadecimal characters 0-9, a-f, or A-F. The character form of the key is enclosed in quotes, for example: 128 'CYPHER KEY'

The maximum hexadecimal and character length for each key type are:

Key Type	Maximum Hexadecimal Key Length	Maximum Character Key Length
128	32	16
192	48	24
256	64	32

## Decrypt

Comparex will decrypt either SYSUT1 or SYSUT2 records, or both, prior to normal comparison logic. Redacting commands such as MASK, FIELD, and FLDSONLY operate as normal. The keyword DECRYPT causes Comparex to read a //DECRYPT key file such as the one illustrated above. In this example, the key type for SYSUT1 is 000, resulting in records that remain unaltered. The key type for SYSUT2 is 128 followed by a key specified in hexadecimal. SYSUT2 records are read and decrypted using this key definition and are then passed back to Comparex for normal processing.

If both keys are present, both SYSUT1 and SYSUT2 will be decrypted. Typically, they will have been encrypted with different keys and/or key types. Sample JCL:

```
//SYSUT1 DD DISP=SHR,DSN=somnode.user.text.file
//SYSUT2 DD DISP=SHR,DSN=somnode.encrypted.file
//DECRYPT DD DISP=SHR,DSN=user.id.safe.keys(KEY11)
```

```
//SYSIN DD *  
KILLSPIE  
MODE=SYSTEMS  
DECRYPT  
DATA,BUFF=8000,FORMAT=16
```

## Encrypt

Comparex will encrypt either SYSUT1 or SYSUT2 or both prior to normal comparison logic. The keyword ENCRYPT in turn will cause Comparex to expect an //ENCRYPT DD statement consisting of precisely two records. If users are only interested in comparing the encrypted forms, the differences report will be meaningless; it is supported nevertheless.

A more typical use is to have SYSUT1 defined as DUMMY with a key of 000 and have the text file to be encrypted defined as SYSUT2. Then, with the addition of keyword COPYDIFF, the encrypted SYSUT2 records will be written to SYSUT3 after conversion using the key specified in the second record of the ENCRYPT key file. Sample JCL:

```
//SYSUT1 DD DUMMY  
//SYSUT2 DD DISP=SHR,DSN=somnode.user.text.file  
//SYSUT3 DD DISP=SHR,DSN=somnode.encrypted.file  
//ENCRYPT DD DISP=SHR,DSN=userid.safe.keys(KEY11)  
//SYSIN DD *  
ENCRYPT  
COPYDIFF  
PRINT=(MATCH,NOMISMATCH)  
DATA,BUFF=8000,FORMAT=16
```

Note the addition of PRINT=(MATCH,NOMISMATCH). This suppresses the reporting of the encrypted records as being inserted on SYSUT2; each record is a blob (big load of binary), so there is little point in printing these. The fact that there are differences between SYSUT1 and SYSUT2 causes the differing records to be written to SYSUT3 but also raises an RC of 4; this is normal and is to be expected.

Note also that when you compare encrypted files without decrypting (that is, at the binary level), a single byte difference within the record will cause the entire record to be different. This is a feature of the encryption algorithm.

## Standard Verification Patterns

The FIPS 197 specification, published by NIST, contains a set of patterns and a sample job to verify the accuracy of the decrypting logic. Use their samples to verify that Comparex is installed properly before you use the encryption feature. Once encrypted, file contents can never be recovered unless the proper keys are presented.

## Comparex 8.7.1 Supports EAV Data Sets

Comparex 8.7.1 supports Extended Attribute Volume (EAV) data sets (requires Sernet/ZMF 7.1.3 or above). The Properties attribute display for a selected data set includes new fields for Extended Attributes, Create Job, and Create Step. The Allocate Data Set dialog also provides a new field for setting extended attributes.

## Comparex 8.7.1 Supports z/VSE 5.1

You can refer to the Supported Platform List associated with Comparex 8.7.1 on the Micro Focus SupportLine website for information about the operating system releases that Comparex 8.7.1 supports.

## Comparing Two CSECTs with Different Names

You can now compare two CSECTs that have different names. The following JCL is provided as an example:

```
//ENH12942 EXEC PGM=COMPAREX,COND=EVEN
//STEPLIB DD DISP=SHR,DSN=somnode.LOD
// DD DISP=SHR,DSN=somnode.LOAD
// DD DISP=SHR,DSN=somnode.CPXLOAD
//SERLIC DD DISP=SHR,DSN=SERDEV.LICENSE.DATA
//SYSPRINT DD SYSOUT=*
//SYSUT1 DD DISP=SHR,DSN=somnode.COMPAREX.LOAD(CPXIMEM1)
//SYSUT2 DD DISP=SHR,DSN=somnode.COMPAREX.LOAD(CPXIMEM2)
//SYSIN DD *
DATA=(CSECT,ADCON=NO)
MODE=SYSTEMS
BUFF=4096
MAXDIFF=3
CONTINUE
MBRHDR=COND
//*****
```

## DIRECTORY=LOAD Keyword Is Enhanced

Load modules can be identical except for CSECT order. The DIRECTORY=LOAD keyword is enhanced to treat two load modules as identical if only the CSECT order differs. (ENH167907)

Identical load modules can also be linked into load libraries that have different block sizes. The DIRECTORY=LOAD keyword is enhanced to treat identical load modules as identical even if they belong to load libraries with different block sizes.

## LBI Is Enabled in Comparex 8.7.1

Comparex 8.7.1 supports the Large Block Interface (LBI) feature of DFSMSdfp for its primary input and output files. The LBI allows tape block sizes larger than 32K bytes, depending on the tape control unit used.

## Comparex 8.7.1 Can Compare SASC Load Modules

A new QCON option to the DATA keyword enables you to compare SASC Load Modules with QCONs as follows:

```
DATA [=CSECT [ , QCON={YES} ] ]
      {NO}
```

If you specify QCON=YES (the default), all QCONS are treated as nulls in the comparison. If you specify QCON=NO, QCONS are not treated as nulls.

### Comparex No Longer Falsely Detects a CSECT Difference if the CSECTs in Two Load Modules Are Identical

Comparex used to flag a CSECT difference if the PDSs that contained the load modules that were being compared each had only one member. A CSECT difference is no longer reported in this circumstance if the CSECTs are identical.

## Defects Fixed in Comparex 8.7.1

The following customer-reported issues have been fixed in Comparex 8.7.1. You can use the Item ID numbers to search for additional information in the Knowledgebase on the [Micro Focus SupportLine](#) website.

Item ID	Knowledgebase Title
DEF190327	Compare of CSECTS results in extra CSECT in SYSUT1
DEF191712	Adabas-natural following comparex job execution, entry for job placed in queue
DEF201736	Comparex 8.7 LICTEST utility. Incorrect product ID
DEF213068	CSECT compare with PDS vs PDSE shows CSECT as inserted
DEF218435	IFACE(CPXUNITS) not comparing values correctly with decimal placement
DEF218580	S0C4 in COMPAREX processing csects in PDSE to PDSE compare
DEF218641	S0C7 when UNIT option and invalid data in field
DEF218913	product installer has 'view ftp log' missing
DEF220612	invalid packed field not getting CPX55I warning message
DEF221490	GDG dataset on panels sysut1 and sysut2 results in IKJ56709I INVALID DATA SET NAME
DEF222426	'DSN non-existent' results using TSO PROFILE NOPREFIX unless dataset in quotes
DEF222473	PDSE to PDSE compare erroneously reporting differences for modules
DEF222474	PDSE to PDSE compare using cpx 8.7.0 pkg4 does not process any csects
DEF222952	S0C3 in Comparex using Panvalet
DEF223579	VSE: DSNUT1 and DSNUT2 not specified on CPX21I and CPX22I messages
DEF225604	CPX00I - FORMAT=2 results in RC=16
DEF227676	maintenance level needs update on panel CPX@PRMR
DEF227762	override of MLC not accepted in cpx 8.7.0

Item ID	Knowledgebase Title
DEF228332	CPX 8.7 for z/VSE: error messages not produced consistently in CPX 8.7.0
DEF231492	freeform keywords on shortcut panel not registering in background job generated from options 7 or 8

## New Features in Comparex 8.7.0.01

Comparex 8.7.0.01 had no new features. See "[Defects Fixed in Comparex 8.7.0.01](#)" on page 12 for a list of fixed issues. This maintenance is accumulated in Comparex 8.7.1.

## Defects Fixed in Comparex 8.7.0.01

The following customer-reported issues have been fixed in Comparex 8.7. You can use the Change Request ID numbers to search for additional information in the Knowledgebase on the [Micro Focus SupportLine](#) website.

Solution ID	Solution Title
DEF149535	CPX97A - S0CE abend when using the UNITS Option
DEF201464	CPXIFACE still has the old version values
DEF203431	LNKISPF results in ASMA044E Undefined symbol
DEF203643	CPX46A - Binder error 83000009
DEF204422	CPX870: LICTEST sample JCL has product code=100 when 101
DEF207904	Panel CPXDB2S1 exceeds screen size and doesn't support 24x80
DEF209779	Frame=YES truncates line number on difference report
DEF214132	IEW2149S 0283 PARAMETER NUMBER 7 COULD NOT BE ACCESSED / CPX46A Binder Error 83000009
DEF216251	Sample CPX870 REXX EXEC should have hardcoded data sets removed
DEF216328	Job hangs when doing LIBRARIAN compare and member does not exist
DEF216754	CPX pds compare results in S0C4

## New Features in Comparex 8.7

The following features and enhancements were new in Comparex 8.7. Applicable operating system editions of the product are shown in parentheses following the description of the enhancement.

- **z/OS Unix Hierarchical File System (HFS) files and directory structures** may now be compared using DATA comparison logic in Comparex for z/OS. Unix-style long file names and path names up to 256

bytes are supported in all data set fields in Comparex ISPF panels. For file-level comparisons, the new HFS and PATH keywords are used to associate the SYSUT1 and SYSUT2 input files with an HFS file and path. For directory-level comparisons, a new keyword parameter, DIR=HFS, invokes the new functionality in much the way that DIR=PDF does for partitioned data sets. An optional EXPAND keyword requests the recursive expansion of subdirectories in the directory comparison. HFS directories may be compared against PDS or PDS/E data sets, are frequently used to back up HFS directories. (z/OS)

- **Unicode character encoding** is supported in comparisons with any z/OS file system. Both UTF-8 and UTF-16 are supported and UCS-2 is tolerated, so files containing double-byte diacritic or ideographic characters can easily be compared. A new UNICODE keyword invokes the new comparison logic in a manner similar to the ASCII keyword. Optionally, particular character code pages may be associated with SYSUT1 and SYSUT2 using the new CCSID1 and CCSID2 keywords. (z/OS)
- **DB2 table comparisons** can now be performed from the ISPF interface, and from the batch interface in native mode. Long table names are fully supported. Native support for DB2 functionality means that a CPXIFACE interface to DB2 is no longer required, although support for this interface is retained to ensure backward compatibility with preexisting function in versions 8.6.2 or earlier. However, the new DB2 features are not supported in CPXIFACE. (z/OS)
- **SQL-generated data streams are accepted as SYSUT1 and SYSUT2 input** to the new native DB2 interface of Comparex for z/OS.
- **New sample code modules for the REXX interface** make it simpler for customers to use the REXX support provided by Comparex. Customers can adapt these to their own requirements. (z/OS, z/VM, z/VSE)
- **COPYSAME can now build directory comparison member lists in SYSUT3** like COPYDIFF does. Set COPYSAME=MEMBER to request this functionality. (z/OS, z/VM, z/VSE)
- **Comparex user options may now be saved to and reloaded from the ISPF ISPPROF profile** data set for the current user when selecting primary option menu **Option 3 - Save** and **Option 4 - Load** in the ISPF interface. This feature was implemented in patch 8.6.2.02 but was not previously documented. (z/OS, z/VM)
- **Licensing has changed** in Comparex 8.7. License keys or certificates for prior versions of Comparex are NOT compatible with Comparex 8.7. All customers migrating to Comparex 8.7 from version 8.6.2 or earlier should contact Customer Support to obtain a new license key.
- **The OS editions of COMPAREX have been renamed** for currency.
  - COMPAREX MVS is now COMPAREX for z/OS.
  - COMPAREX CMS is now COMPAREX for z/VM.
  - COMPAREX VSE is now COMPAREX for z/VSE.

This is a name change only. All predecessor operating systems supported by COMPAREX 8.6.2 continue to be supported in COMPAREX 8.7.

## Defects Fixed in Comparex 8.7

The following customer-reported issues have been fixed in Comparex 8.7. You can use the Change Request ID numbers to search for additional information in the Knowledgebase on the [Micro Focus SupportLine](#) website.

Change Request	Knowledgebase Title
DEF127413	How can Comparex/VSE support ICCF on multi-volume data sets?
DEF149535	CPX97A - S0CE abend when using the UNITS Option
DEF172787	Text processing options selected on panel CPXOPTXP does not show up in SYSIN.
DEF173137	Format=21 specified in display processing option locks foreground comparison screen
DEF173153	FIELD comparison under TEXT option compares the entire record
DEF176359	S0C4 in CPX when interfacing with DB2 v8 or v9

## Installation Considerations

You can download the Comparex 8.8.1 for z/OS, z/VM, and z/VSE products from the Micro Focus SupportLine website at:

<https://supportline.microfocus.com>

Follow these steps:

- Log on to the Micro Focus SupportLine website. A user ID and password are required to access this site.
- Select **Product Updates** from the list of links on the left.
- Follow the instructions on the Product Updates page to select the **Comparex 8.8.1** release.
- Select **Comparex 8.8.1** for the desired operating system from the list of choices.
- Download and invoke the desired product installer.

The installer unloads the complete Comparex 8.8.1 product. Follow the instructions in one of the following installation manuals, as appropriate, to install Comparex 8.8.1:

- *Comparex for z/OS Installation and Setup Guide.*
- *Comparex for z/VM Installation and Setup Guide.*
- *Comparex for z/VSE Installation and Setup Guide.*



**NOTE** There are no changes in Comparex 8.8.1 for z/VM or Comparex 8.8.1 for z/VSE other than to rebrand Comparex as a Micro Focus product.

## Software Compatibility

Comparex 8.8.1 is compatible with the operating systems and products that are identified in the Supported Platform List. To access the Supported Platform List:

- Log on to the Micro Focus SupportLine website at:

<https://supportline.microfocus.com>

A user ID and password are required to access this site.

- Select **Product Updates** from the list of links on the left.
- Follow the instructions on the Product Updates page to select the **Comparex 8.8.1** release.
- Click on **Supported Platform List** for the desired operating system.

## Programming Languages

Comparex performs intelligent source and load member comparisons for High Level Assembler (HLASM), ISPF Dialog Tag Language (DTL), JCL, REXX, COBOL, FORTRAN, PL/I, RPG, C, C++, Perl, XML, HTML, Pascal, Script, Java, and JavaScript.

## Known Issues

Solutions are available for known issues in the Micro Focus SupportLine Knowledgebase at:

<https://supportline.microfocus.com/Knowledgebase.aspx>

These solutions provide details about the issue and list associated workarounds and fixes as they become available. You can download generally available fixes directly from the solution page.

The following issues are known to exist in Comparex 8.8.1:

- **DB2 Precompiler Setup for CPXIFACE**

Customers who use the older CPXIFACE interface to Db2 should be aware that CPXIFACE requires the NEWFUN(NO) option in the Db2 precompiler step. If this is an issue for your installation, we recommend retiring your CPXIFACE-based Db2 integration and moving to the native Db2 support that is available since Comparex 8.7.

- **BLOCKTOKENSIZE(REQUIRE) Disables Large File Support**

Comparex for z/OS includes support for comparison of sequential data sets larger than 65,535 tracks. No special steps are needed to use this support. However, an installation's z/OS parameter settings may make this option unavailable. This is specifically the BLOCKSIZETOKEN option of the IGDSMSxx parameter list in the SYS1.PARMLIB library. If your installation options specify BLOCKTOKENSIZE(REQUIRE), it will disable large file support in Comparex. If this is the case for your installation, contact Customer Support for a workaround.

- **RLS Access to VSAM Files**

Comparex does not support VSAM files that require RLS access.

## Documentation Updates

Comparex 8.8.1 is distributed with Comparex 8.7 user manuals. You can obtain a list of enhancements to Comparex since version 8.7 from the section titled [New Features and Fixes](#) in this Readme file.

 **IMPORTANT!** Online versions of the documentation are often updated between product releases. Updated documents have an “updated” date in parentheses next to the document name. Please check the Documentation page of the Micro Focus SupportLine website for the latest version of this Readme file and any of the Comparex user manuals.