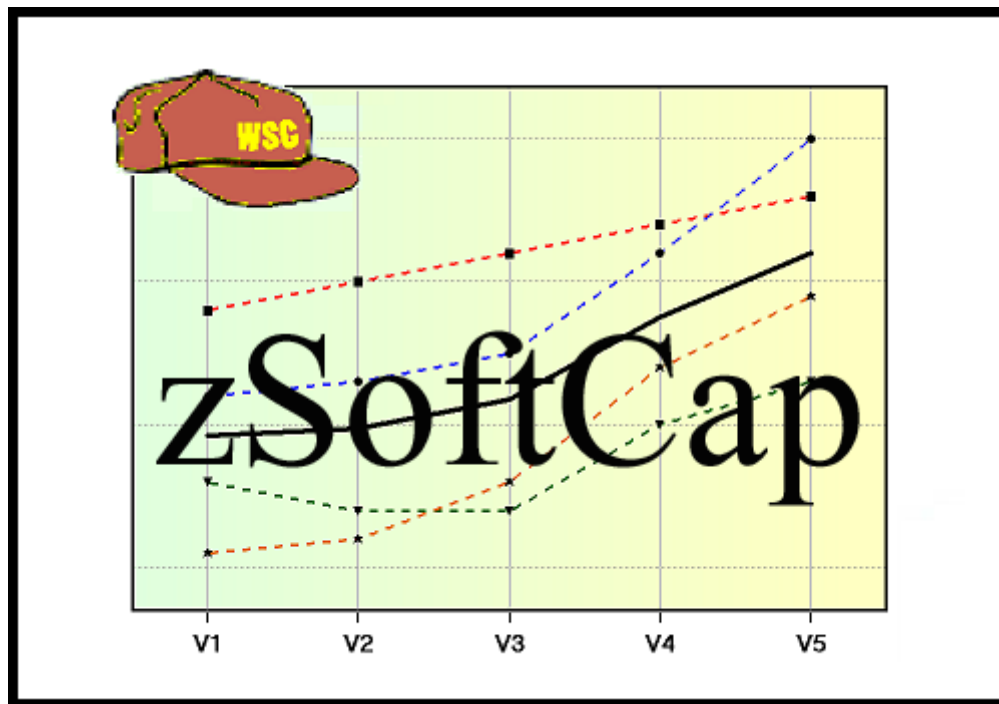


## IBM zSoftCap User's Guide

### IBM Z Software Migration Capacity Planning Aid



© Copyright IBM Corp. 2011, 2025

Version 6.1.3  
v613 zSoftCap UG 2025a03.docx  
July 17, 2025

**The following are trademarks of the International Business Machines Corporation in the United States and/or other countries.**

CICS®	Resource Measurement
Db2®	Facility™
DB2®	RMF™
eServer™	System z®
IBM®	System z9®
IBM LinuxONE™	System z10®
IBM LinuxONE Emperor™	S/390®
IBM LinuxONE Rockhopper™	System/390®
IBM Z®	WebSphere®
IBM zEnterprise®	z9®
IBM z Systems®	z10™
IBM z13™	z13™
IBM z13s™	z13s™
IBM z14™	z14™
IBM z15™	z15™
IBM z16™	z16™
IBM z17™	z17™
IMS™	z/Architecture®
MVS™	z/OS®
OS/390®	z/VM®
Parallel Sysplex™	z/VSE®
PR/SM®	zEnterprise®
Processor Resource/Systems Manager™	z Systems®

**The following are trademarks or registered trademarks of other companies.**

Linux is a registered trademark of Linus Torvalds in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Microsoft Windows, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

InstallShield 2024 Premier Edition is a registered trademark of Flexera Software, Incorporated.

All other products may be trademarks or registered trademarks of their respective companies.

**Note to U.S. Government Users**

Documentation related to restricted rights - Use, duplication or disclosure is subject to restrictions set forth in GSA SDP Schedule Contract with IBM Corp.

## Contents

IBM zSoftCap User's Guide .....	i
Contents .....	iii
Disclaimer .....	iv
Introduction .....	1
Getting Started .....	2
Using IBM zSoftCap .....	5
Software Migration Scenario Window .....	6
zOS Migration .....	7
CICS Environment Window .....	10
IMS Environment Window .....	12
Summary Report Window .....	15
z/VSE Migration .....	16
z/OS Version Support .....	18
zVSE Version Support .....	21
Technical Support .....	22

## Disclaimer

IBM does not guarantee the results from this tool. This information is provided, "**as is**", without warranty, expressed or implied. The client is responsible for the results obtained from the use of this tool. The use of this information or the implementation of any of these techniques is a client responsibility and depends on the client's ability to evaluate and integrate them into the client's operational environment. While each item may have been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will be obtained elsewhere. Clients attempting to adapt these techniques to their own environments do so at their own risk.

References in **IBM zSoftCap** to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM licensed program in **IBM zSoftCap** is not intended to state or imply that only IBM's program may be used. Any functionally equivalent program may be used, instead.

## Introduction

### **Software Migration Capacity Planning**

**IBM Z Software Migration Capacity Planning Aid (IBM zSoftCap)** is a PC-based productivity tool designed to assess the effect on capacity for IBM Z processors, when migrating to more current versions of the operating system or major subsystems. **IBM zSoftCap** assumes that hardware remains constant while software versions change.

### **Software Migration**

For z/OS, input required by **IBM zSoftCap** includes the selection of the **Processor Family**, number of **GP CPs**, **current version of z/OS** along with the utilization for each of the following components being exploited: **Batch**, **CICS**, **DB2**, **IMS**, **Web**, and **System**. The target operating system version must also be specified.

For both **CICS** and **IMS**, the current and planned version, and a high-level description of the subsystem's implementation is required. Results are shown for each software component, showing the net change in capacity and the effective change in processor utilization that can be expected. If migrating multiple components, results are also shown for the components combined.

For z/VSE, input required by **IBM zSoftCap** includes the selection of the **Processor Family**, number of **GP CPs**, **current version of z/VSE** and utilization along with the **Dispatcher** and **CICS** versions. The target **VSE** operating system, **Dispatcher**, and **CICS** versions must also be specified.

## Getting Started

The **IBM zSoftCap** is a PC-based productivity tool that runs under Microsoft's Windows. It is one of a family of tools produced and maintained by your IBM Capacity Planning Support Tools (IBM CPS Tools) team, part of the IBM Washington Systems Center (IBM WSC) in Herndon, Virginia

The intent of **IBM zSoftCap** is to evaluate the effect on processor capacity when migrating to different software versions. It includes support for various version levels of z/OS (CICS, IMS) and z/VSE (Dispatcher, CICS). Output is presented in table format.

### **PC System** (minimum requirements)

<b>Processor</b> Intel	Core i3 or better (64-bit required).
<b>OS</b> Intel	Microsoft Windows 11 or 10
<b>Memory</b>	1 GB is required to install the tool; more is recommended
<b>Graphics</b>	1280×1024; higher recommended

**Note:** The current development environment for **IBM zSoftCap** is Windows 11. **IBM zSoftCap** has been successfully installed and run under Windows 11 and 10. However, reported problems can be addressed only if they can be recreated under Windows 11.

**IBM zSoftCap** is written in Java and **requires** the latest version of the IBM Java runtime environment which is included in the install package.

Approximately 160 MB of hard-disk space is needed for the **IBM zSoftCap** application and associated IBM Java runtime environment.

### **Obtaining IBM zSoftCap**

**IBM Employees:** **IBM zSoftCap** is available at:

<https://supportcontent.ibm.com/support/pages/node/6354073>

**IBM Business Partners:** contact [cpstools@us.ibm.com](mailto:cpstools@us.ibm.com)

**IBM Clients:** **IBM zSoftCap** is available at:

[www.ibm.com/support/pages/node/6354117](http://www.ibm.com/support/pages/node/6354117)

### **Installation of IBM zSoftCap (Windows)**

**IBM zSoftCap** is packaged with *Installshield*. To install the tool, execute the package file that you downloaded to your PC from your web site named above. It can be installed to an Administrator ID or a Standard ID. It must be run from the user ID to which it was installed.

**IBM zSoftcap** and its supporting Java are intended to be installed to a single folder (the default is **C:\CPStools\zSoftCap**). Prompts are provided during installation to specify a different target folder. **The tool should not be installed to C:\Program Files or to C:\Program Files (x86)**. An application icon can optionally be placed on the desktop.

When performing a **IBM zSoftCap** upgrade as a Standard user, you may be prompted for an Administrator password. This requirement can be eliminated by first uninstalling **IBM zSoftCap**, and then doing a fresh **IBM zSoftCap** install.

**Note:** The IBM Java runtime environment is required for **IBM zSoftCap**. The IBM Java™ runtime environment provided will only be used in support of IBM CPS tools.

### **Registration**

A user registration process has been implemented to assist in monitoring the distribution and use of **IBM zSoftCap**. Registration is required for continued usage. **You should be connected to the internet in order to register.**

Until your registration process is completed, a registration form will appear each time **IBM zSoftCap** is started. **IBM zSoftCap** may be used up to 3 times without submission of the registration information. After that, the registration process must be completed before the function of the tool can be accessed.

Fill in the requested fields (e.g., name, company name, geographical location, and e-mail address), check **I accept**, and click the **Register (Internet)** button. **The primary value of providing a valid e-mail address lies in our ability to notify you of any critical news relating to zSoftCap usage and/or updates.** Use of your e-mail address will be limited to this purpose only.

There may be cases where a company's firewall will prevent internet registration. In this case click **Register (e-mail)**. This will:

- Attempt to initiate a properly addressed e-mail for you
- Invoke a dialog box with instructions to copy the encoded registration request information into the e-mail note.

Send the e-mail as addressed and wait for an e-mail response (generally within an hour or less).

Note: **Do not modify the Subject line, as its text is used to trigger an automated registration response.** Once the registration response is received, copy it into the Registration Response Code area and click **Complete Registration**.

Note: If **IBM zSoftCap** had been terminated, restart it and click **Register (e-mail)** and continue with the dialog box instructions.

Registration is only required once, the first time that **IBM zSoftCap** is started. Once registered, access to the tool is unlimited. Occasionally, as major versions of **IBM zSoftCap** become available, your registration will be renewed. The renewal is done automatically, if internet registration is allowed. Otherwise, the e-mail registration process is necessary.

**zIBM zSoftCap** execution can be initiated from the desktop program icon or start menu.

The **zIBM zSoftCap** application is controlled through a variety of standard GUI controls, including menu bar, tool bar, push buttons, entry fields, check boxes, and radio buttons. Each of the specific controls is covered in the section where each application window is discussed.

### **Help Facility**

An online help facility has been implemented in **IBM zSoftCap**. It can be accessed by clicking on **Help** on the menu bar, the **Help (?)** icon on the tool bar, or F1.

### **Output**

**IBM zSoftCap** results are displayed in table format showing each software component, the net change in capacity, and the expected effective change in processor utilization. The contents can be saved in an HTML file; click on the **HTM** icon when presented on any **IBM zSoftCap** window. This output can then be viewed in an Internet Browser (IE, Firefox), Microsoft Word, Microsoft Excel, etc.

### **Exiting IBM zSoftCap**

Exiting from **IBM zSoftCap** is available from the **Software Migration Scenario Window** only. Clicking on **FILE** on the menu-bar and **EXIT**. Alternatively, you can click on the **EXIT** icon on the tool bar.

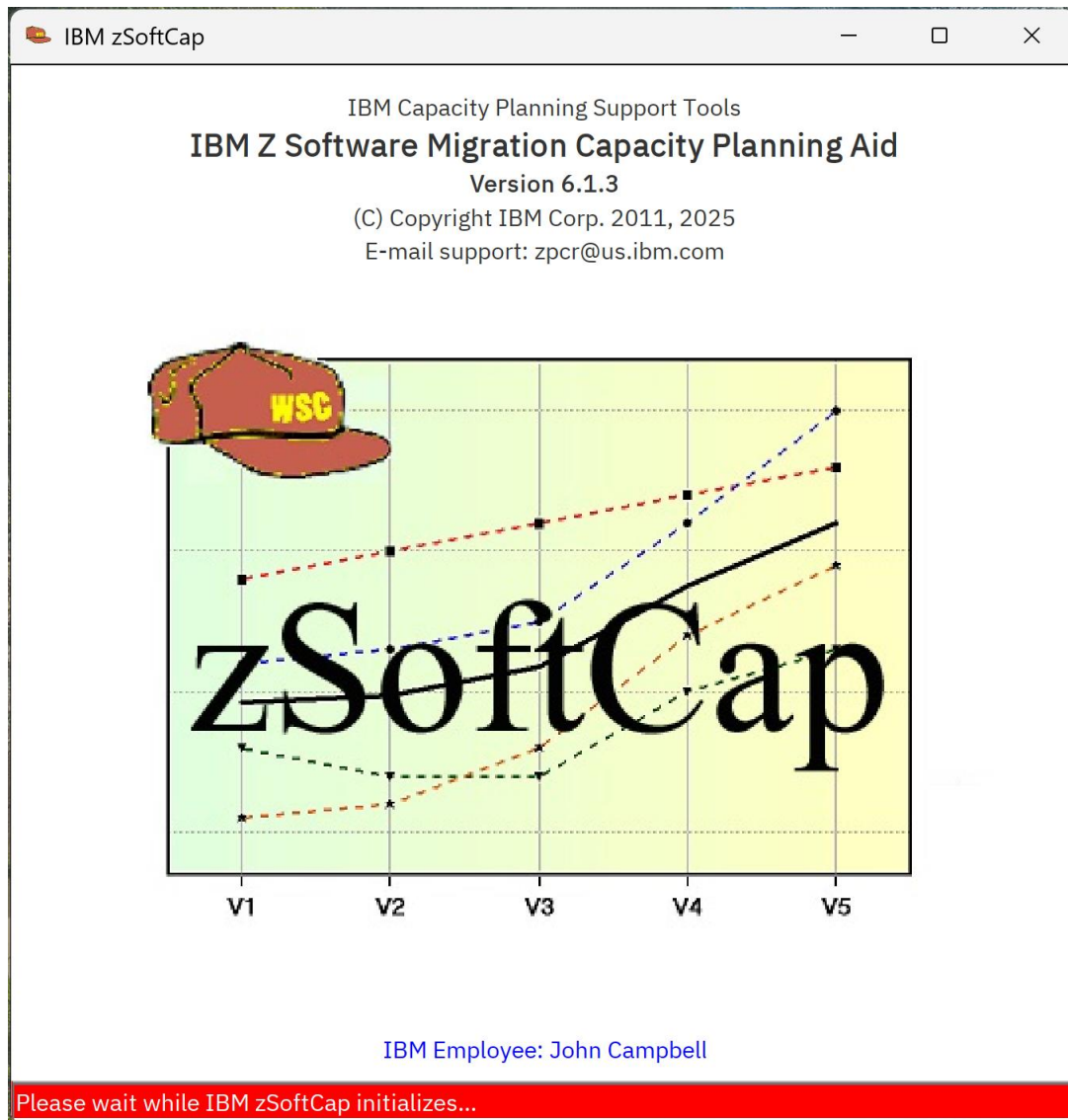
### **Documentation**

This user's guide is in Adobe™ PDF format and available for download from the IBM zSoftCap distribution site. The online help implemented in IBM zSoftCap is basically the same information that is contained in this user's guide, without the figures.

## Using IBM zSoftCap

### Logo Window

When **IBM zSoftCap** is initiated, the logo window appears displaying the Version and technical support contact information.



## Software Migration Scenario Window

This window is the initial screen for your software migration study. From this window new studies are started or **IBM zSoftCap** can be terminated. You can access the help menu from this screen by selecting Help on the menu bar or clicking on the Help icon on the tool bar.

**IBM zSoftCap** provides the capability to estimate the change in utilization and the percent benefit or cost to capacity when upgrading a z/OS or z/VSE processing environment to new versions of the primary software.

Software Migration Scenario
File Documentation Help
NEW HTM ?

### Define Current and Future Software Environment

Processor Family  GP CPs   
Processor Model 9175-701

Tab-1: **z/OS**
Tab-2: **z/VSE**

Current	Future						
z/OS <input type="text" value="V3.1"/>	<input type="text" value="V3.2"/>						
<u>z/OS Subsystems</u>							
Batch <input type="text" value="-None-"/>							
CICS <input type="text" value="-None-"/>							
DB2 <input type="text" value="-None-"/>							
IMS <input type="text" value="-None-"/>							
Web <input type="text" value="-None-"/>							
System <input type="text" value="-None-"/>							
CICS <input type="text" value="Unspecified"/>	<input type="button" value="Upgrade CICS"/>						
IMS <input type="text" value="Unspecified"/>	<input type="button" value="Upgrade IMS"/>						
<b>Total</b>	<table> <thead> <tr> <th>Current Utilization</th> <th>Utilization After Upgrades</th> <th>Benefit(+) Cost(-)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Current Utilization	Utilization After Upgrades	Benefit(+) Cost(-)			
Current Utilization	Utilization After Upgrades	Benefit(+) Cost(-)					

IBM does not guarantee the results from this tool.  
This information is provided "as is", without warranty, expressed or implied.  
You are responsible for the results obtained from your use of this tool.

## **zOS Migration**

Click **Tab-1: z/OS** on the **Software Migration Scenario** window. This allows selection of the processor family and the number of z/OS GP CPs. The level of z/OS that is selected in the **Current** environment must be supported by the processor family selected.

The screenshot shows the 'Software Migration Scenario' window. The title bar includes 'File', 'Documentation', and 'Help' menus. Below the menu bar are icons for 'NEW', 'HTM', a person icon, and a question mark icon. The main section is titled 'Define Current and Future Software Environment'. It contains a 'Processor Family' dropdown set to 'z17-ME1/700', a 'GP CPs' spinner set to '1', and a 'Processor Model' text field with '9175-701'. Below this are two tabs: 'Tab-1: z/OS' (selected) and 'Tab-2: z/VSE'. The 'z/OS' tab is divided into 'Current' (blue background) and 'Future' (green background) sections. The 'Current' section has a 'z/OS' dropdown set to 'V3.1' and a 'z/OS Subsystems' section with dropdowns for Batch, CICS, DB2, IMS, Web, and System, all set to '-None-'. The 'Future' section has a 'z/OS' dropdown set to 'V3.2'. Below these are rows for 'CICS' and 'IMS', each with an 'Unspecified' dropdown in the 'Current' column and an 'Upgrade' button in the 'Future' column. At the bottom of the table is a 'Total' row with columns for 'Current Utilization', 'Utilization After Upgrades', and 'Benefit(+) Cost(-)'. A 'Show Summary' button is located below the table. At the very bottom of the window, a disclaimer states: 'IBM does not guarantee the results from this tool. This information is provided "as is", without warranty, expressed or implied. You are responsible for the results obtained from your use of this tool.'

Define Current and Future Software Environment	
Processor Family	z17-ME1/700
GP CPs	1
Processor Model 9175-701	
Tab-1: z/OS	Tab-2: z/VSE
Current	Future
z/OS V3.1	V3.2
<u>z/OS Subsystems</u>	
Batch -None-	
CICS -None-	
DB2 -None-	
IMS -None-	
Web -None-	
System -None-	
CICS Unspecified	Upgrade CICS
IMS Unspecified	Upgrade IMS
<b>Total</b>	<b>Utilization After Upgrades</b> <b>Benefit(+) Cost(-)</b>
Show Summary	

IBM does not guarantee the results from this tool.  
This information is provided "as is", without warranty, expressed or implied.  
You are responsible for the results obtained from your use of this tool.

## **Current**

The following inputs are required in defining the current environment.

1. Processor Family.

Select the IBM Z processor family in the drop-down list that is currently installed in your data center.

2. z/OS GP CPs

Select the number of z/OS GP CPs for the processor family defined. **IBM zSoftCap** will provide capacity deltas that are sensitive to the processor N-way. .

3. Identify the current version of **z/OS** that is supported by the processor family selected. The drop down list will include only the z/OS versions that are supported by the IBM Z processor family that is specified.

## **Processor Utilization each z/OS Subsystem**

The current processor utilization for each of the following z/OS Subsystems: **Batch**, **CICS**, **DB2**, **IMS**, **Web**, and **System** are to be entered in the respective fields. The input for the processor utilization for each of the workloads can be found in the RMF Workload Activity Report or by analyzing the SMF type 30 records for each system image.

**NOTE:** The **total** for all the z/OS workload components cannot exceed 100%.

To input, either type in the utilization percentage or use the spin button. Press the tab key to advance the cursor to the next field. This information will immediately be applied to the **Current Utilization total**.

## **Future**

The following inputs are required in defining the future environment.

1. Operating System

Select a z/OS version that is equal to or greater than the one identified as the **Current** version.

Note that version upgrades for CICS and/or IMS may also be defined. This capability is described later in this document.

## **Concerning Release to Release Migration**

For releases of z/OS since **z/OS-2.1**, capacity deltas for **Batch**, **DB2**, **Web**, and **System** have been insignificant. Therefore, when migrating to a new release, specifying a utilization for these components will result in a zero capacity delta. In general, the performance of z/OS has been considered as being equivalent for all releases since **z/OS-2.1**.

Any utilization specified for **CICS** or **IMS** is used in conjunction with an upgrade that has been defined for these components. Capacity delta results for these are backed with measurement data. Details for characterizing these upgrades follows below.

Capacity delta results from zSoftCap are generally nominal. Small capacity deltas should be interpreted as meaning there will likely be no significant cost (or benefit) due to an upgrade for **z/OS**, **CICS**, or **IMS**.

### Controls

#### Menu Bar

- **File** - Drop-down menu.
  - **New** - Initiate a new **IBM zSoftCap** study. Any existing study data will be lost!
  - **Exit** - Terminates the **IBM zSoftCap** application. If a scenario was begun, **IBM zSoftCap** will prompt you to confirm the action.
- **Documentation** - Drop-down menu.
  - **What's New** - Displays the current **IBM zSoftCap** News file.
  - **User Guide** - Displays the **IBM zSoftCap** User's Guide.
- **Help** - Drop-down menu.
  - **Context Help** (invokes online help for the displayed window). **F1** also executes **Context Sensitive Help**.
  - **Check for Updates** – Determine if this is the latest **IBM zSoftCap** version.
  - **Privacy Policy** – Display **IBM zSoftCap** Privacy Policy.
  - **Third Party Notices** – Display **IBM zSoftCap** Third Party Notices.
  - **About** – Display the initial **IBM zSoftCap** logo window.

#### Toolbar Icons

Most of the windows in **IBM zSoftCap** include smart icons on the toolbar, providing a fast path to various common functions. These icons should be familiar to Windows' users. A description of the icon's function will appear, when the mouse dwells over a toolbar icon.

- **New**  
Initiate a new **IBM zSoftCap** study. Any existing data will be lost!
- **HTM**  
Write out capacity data to an HTML file.
- **Exit**  
Leave **IBM zSoftCap**.
- **Help**  
Display context sensitive help.

#### Push Buttons

- **Upgrade CICS versions**  
Display the window to further define the CICS environment.
- **Upgrade IMS versions**  
Display the window to further define the IMS environment.
- **Show Summary**  
Display the Summary Report window showing the Current/Future utilization and capacity deltas by component.

## **CICS Environment Window**

This window is accessible from the **Software Migration Scenario** window; click on **Upgrade CICS**. It describes the future CICS versions along with the distribution of the CICS work, which is found in the SMF record type 110.

**Note:** The value shown for **CICS Utilization** was specified on the **Software Migration Scenario** window. It can only be modified there.

**CICS Environment Definition**  
CICS Utilization = 40%

Future CICS Version: TS 6.1

Distribution of Activity

	Utilization	Utilization
SRO	40%	16.0%
MRO	60%	24.0%
TOR	50%	12.0%
AOR	20%	4.8%
FOR	30%	7.2%

Current		Future		Benefit(+) Cost(-)
Version	Utilization	Version	Utilization	
CICS TS 5.6	40.0%	CICS TS 6.1	41.0%	-2.5%

Results assume HiperDispatch is active.

Select a version from the **Future CICS Version** drop-down, which will only contain versions newer than the **Current** one.

### **Distribution of CICS Activity**

- **SRO**

The utilization percentage for this CICS activity is initially fixed at 100%. **IBM zSoftCap** automatically changes this value, as the one for MRO changes.

- **MRO**

**TOR** = Terminal-Owning Region

**AOR** = Application-Owning Region

**FOR** = File-Owning Region

Specify the weight that represents this activity. The utilization percentage for the **TOR** component is initially fixed at 100%. Values may also be input for the **AOR** and **FOR** components.

**IBM zSoftCap** will calculate the Relative Percent for **SRO** and **MRO** from the specified weight values for each activity. The total relative percent will always equal 100%.

If the current CICS version is altered upward, to exceed the future CICS version, the future CICS version will be set to the current CICS version (implying no upgrade). The future CICS version can then be reset to any legitimate upgrade.

### Controls

#### Toolbar Icons

- **Return** (**green** left arrow)  
Save the input, and return to the Software Migration Scenario window.
- **Cancel** (**red** X)  
Discard all input, and reset to initial **IBM zSoftCap** defaults.
- **HTM**  
Write out capacity data to an HTML file.
- **Help** (**blue** question mark)  
Display context sensitive help.

## **IMS Environment Window**

This window is accessible from the **Software Migration Scenario** window by clicking on **Upgrade IMS**. It describes the future IMS versions along with the distribution of IMS activity.

**Note:** The value shown for **IMS Utilization** was specified on the **Software Migration Scenario** window. It can only be modified there.

Current		Future		Benefit(+) Cost(-)
Version	Utilization	Version	Utilization	
IMS V14	30.0%	IMS V15	29.9%	+0.4%

Results assume HiperDispatch is active.

Select a version from the **Future IMS Version** drop-down list, which will only contain versions newer than the **Current** one.

### **Communication Protocol**

**SNA** or **TCP/IP** protocol can be selected using radio buttons at the top of the **Distribution of Activity** group box.

- **SNA**

IMS measurements have traditionally been done using SNA protocol. For IBM zSoftCap purposes this is the default setting. SNA measurement data is included for all IMS versions through V13. When defining the future system with V14 or later, results will be identical to those for V13.

- **TCP/IP**

Beginning with IMS V12, IMS measurements have been made using TCP/IP protocol. When the Current CICS version is set to V12 or later, results can be shown for TCP/IP protocol.

## **Distribution of IMS Activity**

- **Fast Path**

IMS functions for applications that require good response characteristics and that may have large transaction volumes. Programs have rapid access to main-storage databases (to the field level), and to direct-access data entry databases.

- **Full Function**

Hierarchic databases that are accessed through Data Language I (DL/I) call language and can be processed by all four types of application programs: IFP, MPPs, BMPs, and batch. Full-function databases include HDAM, HIDAM, HSAM, HISAM, SHSAM, and SHISAM.

The utilization percentage for **Fast Path** activity is initially fixed at 100%. Use the **Full-Function** spin button to increase the percent of **Full-Function** workload represented. **IBM zSoftCap** automatically changes the **Fast Path** value, as **Full-Function** changes.

- **Fast Path 64-bit Buffer Manager**

Starting with IMS V11, measurement data has been made available using the **Fast Path 64-bit Buffer Manager**. When the Future IMS version is set to V11 or later, results will represent the use of this feature.

- **Full-Function Shared Message Queues**

IMS V6 introduced shared message queues. With shared queues, the message queues are moved to list structures in the coupling facilities where they are available to any IMS in the shared queues group. A terminal is connected to one IMS system. Then input messages from the terminal are placed in the shared queues. They are accessible from any IMS using those queues. This means that another IMS, not the one to which the terminal is connected, may process the input message.

The total utilization for both the **Fast Path** and **Full Function** activity combined **must** total 100%. **IBM zSoftCap** calculates the **Relative Percent** for **Fast Path**, as the value changes for **Full Function**.

If the current IMS version is altered upward, to exceed the future IMS version, the future IMS version will be set to the current IMS version (implying no upgrade). The future IMS version can then be reset to any legitimate upgrade.

When sizing for **SNA**, if the Future IMS version is set to V14 or later, results will be identical to those for V13. This is because we have no SNA measurement data after V13.

When sizing for **TCP/IP**, the Current IMS version must be V12 or later.

## Controls

### Toolbar Icons

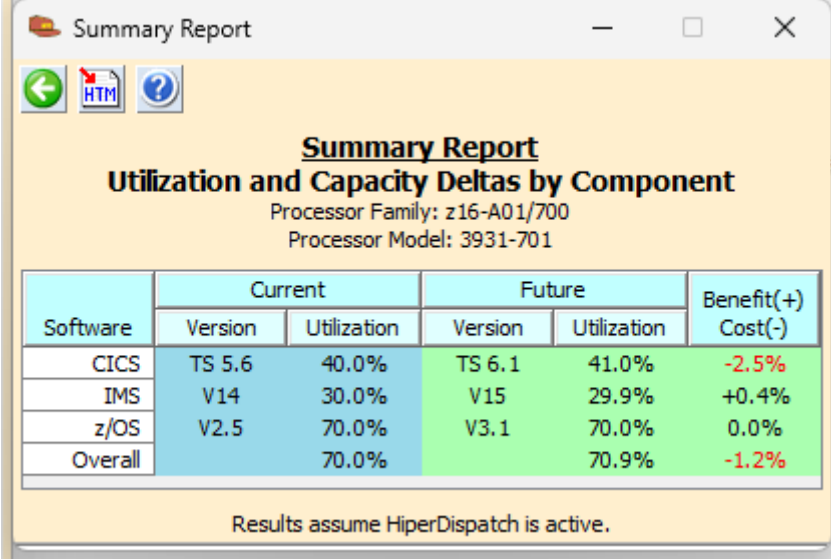
- **Return** (green left arrow)  
Save the input, and return to the Software Migration Scenario window.
- **Cancel** (red X)  
Discard all input, and reset to initial **IBM zSoftCap** defaults.
- **HTM**  
Write out capacity data to an HTML file.
- **Help** (blue question mark)  
Display context sensitive help.

## Summary Report Window

### Displaying Migration Results

To display the **Summary Report** window, press **Show Summary** on the **Software Migration Scenario** window. The following details are displayed in tabular format.

- Current and future software versions
- Current and future processor utilization
- Benefit(+) or Cost(-) of the software migration on capacity



The screenshot shows a window titled "Summary Report" with a toolbar containing a green left arrow, an HTML icon, and a question mark. The main content area has a yellow background and displays the title "Summary Report" and subtitle "Utilization and Capacity Deltas by Component". Below this, it specifies "Processor Family: z16-A01/700" and "Processor Model: 3931-701". A table follows with columns for Software, Current (Version, Utilization), Future (Version, Utilization), and Benefit(+) or Cost(-). The table lists data for CICS, IMS, z/OS, and an Overall summary. At the bottom, a note states "Results assume HiperDispatch is active."

Software	Current		Future		Benefit(+) Cost(-)
	Version	Utilization	Version	Utilization	
CICS	TS 5.6	40.0%	TS 6.1	41.0%	-2.5%
IMS	V14	30.0%	V15	29.9%	+0.4%
z/OS	V2.5	70.0%	V3.1	70.0%	0.0%
Overall		70.0%		70.9%	-1.2%

Results assume HiperDispatch is active.

### Saving Migration Results

The results of the migration that are displayed can be output to an HTML file by clicking on the **HTM** toolbar icon on any of the windows where it is displayed.

**NOTE:** IBM zSoftCap does not have the capability to save the input in a file to be used in a future study.

- Toolbar Icons**
- **Return** (green left arrow)  
Save the input, and return to the Software Migration Scenario window.
  - **HTM**  
Write out capacity data to an HTML file.
  - **Help** (blue question mark)  
Display context sensitive help.

## z/VSE Migration

Click **Tab-2: z/VSE** on the **Software Migration Scenario** window to define the current and future VSE software environments.

**Software Migration Scenario**

File Documentation Help

**Define Current and Future Software Environment**

Processor Family: z16-A01/700 GP CPs: 1 Processor Model: 3931-701

Tab-1: z/OS Tab-2: z/VSE

Current	Future
VSE: z/VSE-6.2	z/VSE-6.2
Dispatcher: Turbo	Turbo
CICS: CICS/TS-2.1	CICS/TS-2.2
Current Utilization: 60%	Utilization After Upgrades: 62.4% Benefit(+) Cost(-): -4.0%

IBM does not guarantee the results from this tool.  
This information is provided "as is", without warranty, expressed or implied.  
You are responsible for the results obtained from your use of this tool.

**Note:** Switching to a VSE migration will disable the ability to return to z/OS during the **IBM zSoftCap** invocation. Therefore, if a z/OS migration scenario has been started, a dialog is offered to confirm the switch to VSE is intentional.

## IBM zSoftCap User's Guide

At the top of the window, drop-down lists are provided where the current processor family and model can be specified. For the purposes of this tool, the **GP CP limit for VSE is set to 4**.

**Note:** The processor information is provided for documentation purposes only, and has no effect on results.

Current and future versions for each of the three supported VSE primary components are selected using the drop-down lists provided (default selections are initially provided). In addition, the processor utilization for the current environment can be set (default is 60%). The component version upgrades as defined are evaluated in combination. As input fields are changed, an estimated utilization value for the future environment is shown instantly, based on the current utilization. In addition, the percent benefit or cost to capacity for the migration as defined is shown.

For VSE, all inputs and resulting projections are presented in a single window. HTML output for this window can be generated by clicking the HTML tool bar icon.

## z/OS Version Support

### **Supported z/OS Versions by Processor Family**

- z17 z/OS-3.2, 3.1, 2.5, 2.4
- z16 z/OS-3.2, 3.1, 2.5, 2.4, 2.3, 2.2
- z15 z/OS-3.2, 3.1, 2.5, 2.4, 2.3, 2.2, 2.1
- z14 z/OS-3.1, 2.5, 2.4, 2.3, 2.2, 2.1, 1.13
- z13 and z13s z/OS-2.5, 2.4, 2.3, 2.2, 2.1, 1.13, 1.12, 1.11, 1.10
- zEC12 and zBC12 z/OS-2.4, 2.3, 2.2, 2.1, 1.13, 1.12, 1.11, 1.10
- z196 and z114 z/OS-2.2, 2.1, 1.13, 1.12, 1.11, 1.10, 1.9, 1.8, 1.7
- z10-EC and z10-BC z/OS-2.2, 2.1, 1.13, 1.12, 1.11, 1.10, 1.9, 1.8, 1.7
- z9-EC and z9-BC z/OS-2.2, 2.1, 1.13, 1.12, 1.11, 1.10, 1.9, 1.8, 1.7

## **Maximum CPs Supported by z/OS Versions**

- z/OS-3.2 supports a maximum of 208 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-3.1 supports a maximum of 200 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-2.5 supports a maximum of 190 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-2.4 supports a maximum of 190 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-2.3 supports a maximum of 170 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-2.2 and z/OS-2.1 support a maximum of 141 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-1.13 and z/OS-1.12 support a maximum of 100 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-1.11 supports a maximum of 80 General Purpose CPs. However, **IBM zSoftCap** can only project capacity deltas for a maximum of 64 CPs, since the supporting measurement data was limited to that number.
- z/OS-1.10 supports a maximum of 64 General Purpose CPs
- z/OS-1.9 supports a maximum of 54 General Purpose CPs.
- z/OS-1.8, 1.7, 1.6, and 1.5 support a maximum of 32 General Purpose CPs.
- z/OS versions prior to 1.5 are not supported. The 1<sup>st</sup> supported upgrade version is z/OS-1.6. For all supported z/OS version upgrades, the data is sensitive to the number of General Purpose CPs being used by the z/OS image.

Processor Family	Minimum z/OS Version Required	Maximum General Purpose CPs Supported	HiperDispatch Supported
z17-ME1	z/OS-2.4	208	Yes
z16-A01	z/OS-2.2	200	Yes
z16-A02	z/OS-2.2	6	Yes
z15-T01	z/OS-2.1	190	Yes
z15-T02	z/OS-2.1	6	Yes
z14	z/OS-1.13	170	Yes
z14 ZR1	z/OS-1.12	6	Yes
z13	z/OS-1.12	141	Yes
z13s	z/OS-1.12	6	Yes
zEC12	z/OS-1.10	100	Yes
zBC12	z/OS-1.10	6	Yes
z196	z/OS-1.7	80	Yes
z114	z/OS-1.7	5	Yes
z10-EC	z/OS-1.7	64	Yes
z10-BC	z/OS-1.7	5	Yes
z9-EC	z/OS-1.6	54	No
z9-BC	z/OS-1.6	4	No

**CICS Versions supported by IBM zSoftCap for z/OS**

- Through **CICS/TS-6.1**

**IMS Versions supported by IBM zSoftCap for z/OS**

- Through **IMS V15**

## zVSE Version Support

### VSE Versions

- **z/VSE-6.2** (V6R2) z196 and later, including z16
- **z/VSE-6.1** (V6R1) z10 and later through z15
- **z/VSE-5.2** (V5R2) z9 and later through z15
- **z/VSE-5.1** (V5R1) z9 and later through z15

### VSE Dispatcher

- **Turbo** dispatcher (required by all the above VSE versions; a maximum of 4 CPs is supported by **IBM zSoftCap**)

### CICS Versions supported by z/VSE

- **CICS/TS-1.1** (supported on z/VSE-5.1 and z/VSE-5.2)
- **CICS/TS-2.1** (supported on z/VSE-6.1 only)
- **CICS/TS-2.2** (supported on z/VSE-6.2 only)

## Technical Support

### **Problems and Suggestions**

Efforts have been made to make **IBM zSoftCap** a useful and intuitive application. Should you detect problems or want to make suggestions, please e-mail:

[zpcr@us.ibm.com](mailto:zpcr@us.ibm.com)

Specify "**IBM zSoftCap**" as the subject. Describe the problem or suggestion as thoroughly as possible. Please include your name, your location, and telephone number should additional information is needed. All comments and suggestions are welcomed and will be considered.

### **Maintaining Currency**

As capacity information for new software versions becomes available, **IBM zSoftCap** will be updated. It is your responsibility to verify that you are always working with the most current version of the tool. Please check the IBM download web site frequently for updates.