This is an extract of the manual
z/OS MVS Capacity Provisioning User's Guide SC34-2661-30
with updates corresponding to APAR OA55039

Chapter 1 “Introducing z/OS Capacity Provisioning”, Subchapter “What Capacity Provisioning can do for you”, Table 2. “Capacity Provisioning Features”, page 5

Additional last row

Type of Resource	Capacity Provisioning can monitor for capacity shortage based on your policy	Capacity Provisioning can alert you to address capacity shortage based on your policy	Capacity Provisioning can resolve capacity shortage based on your policy (with or without additional confirmation)	Commands for manual control
LPAR weight	No	No	No	Yes

Chapter 2 “Capacity Provisioning basics”, Subchapter “Capacity Provisioning Manager”, Subchapter “Adjusting LPAR weights”, page 47

LPAR weight adjustments

The Provisioning Manager increases physical processor capacity - either manually or policy-driven – by activating capacity from the shared processor pool. The activated capacity is then distributed among all active LPARs of the CPC corresponding to their weights of the relevant processor type. Accordingly, not the totality of the activated capacity might be directed to the LPAR where your important or suffering workload is located, or where you consider that the activated capacity should be guided to.

To support you in the task of directing activated shared capacity to a specific LPAR, the Provisioning Manager has specific commands for displaying current LPAR weight settings and for manually adjusting the initial LPAR weights to your current requirements.

The REPORT LPARWEIGHT command lists current and initial weight values for all BCPii-authorized active LPARs of a specific CPC within your current management domain. The information is indicated for processor types CP, zIIP and IFL and includes the information whether WLM LPAR weight management is enabled for the LPAR. The report also contains the total CPC weight values for processor types CP, zIIP and IFL.
For details of the report, see “LPAR weight report” on page 100 and “REPORT LPARWEIGHT” on page 115.

The REPORT CONFIGURATION command lists for every observed system current LPAR weight values for processor types CP, zIIP and IFL, and indicates whether WLM LPAR weight management is enabled for the LPAR. The report also contains the total CPC weight values for processor types CP, zIIP and IFL.
For details of the report, see “Domain configuration report” on page 86 and “REPORT CONFIGURATION” on page 140.

The SET LPARWEIGHT command allows you to change the initial weights of LPARs for for processor types CP, zIIP and IFL.
For details of the command, see “SET LPARWEIGHT” on page 158.

Chapter 6 “Working with reports”, Subchapter “Domain configuration report”, page 86

- If Defined Capacity or Group Capacity is turned on for the system's LPAR, the corresponding information is available and the processing mode is not MANUAL, the following is reported:
  - The name of the system's LPAR, and its current Defined Capacity
  - The name of the capacity group the system's LPAR belongs to, and its current Group Capacity
- If LPAR weight data about the system is available, the following is reported:
  - The system's LPAR current weight for processor types CP (general purpose), zIIP, and IFL, and an indicator whether WLM weight management is enabled for the LPAR.
    A system's LPAR weight 0 is displayed if the LPAR is defined with dedicated processors of the corresponding type.
    A system's LPAR weight - is displayed if the LPAR is defined without processors of the corresponding type or the data is not available to the system's monitoring product.
  - The sum of current weights of all active LPARs running in the same CPC for processor types CP (general purpose), zIIP, and IFL.
    A total CPC weight 0 is displayed if the CPC is defined without any processors of the corresponding type.
    A total CPC weight - is displayed if the data is not available to the system's monitoring product.
- If the Provisioning Manager does not yet have all required information about the system at the related host address, the following messages are generated:

Chapter 6 “Working with reports”, Subchapter “Domain configuration report”, page 87

An example of a domain configuration report is:

```
CPO1010I Configuration report generated at 04/10/2018 12:31:33
Domain configuration DCSAMPLE for domain DOMAIN1 is enabled
CPC SAMPCPC with record * is enabled (default enabled)
SAMPCPC is matched with serial 000020016F7A since 04/10/2018 12:07:51
Hardware is of type 2827 with model H66
Current model is 713 with 1822 MSU, 1 zAAPs, 1 zIIPs,
51 IFLs, 0 ICFs, 12 SAPs
Permanent model is 709 with 1350 MSU
Active record ID is A0123456
Residual capacity GP/zAAP/zIIP/IFL/ICF/SAP 100/50/50/250/0/75 spares=4
Activation limits are 3 zAAPs, 1 zIIP, 5 IFLs, 0 ICFs, 5 SAPs
Active resources GP/zAAP/zIIP 472(4/0)/0/0
IFL/ICF/SAP 0/0/0
System SYSTEM1 in sysplex SVPLEX is enabled (default enabled)
Primary host address: system1.ibm.com
Alternate host address: 9.99.99.99
Protocol: HTTP, port: 5988
The system at primary host address is observed
This system is available since 04/10/2018 12:10:27
This system is running on CPC SAMPCPC
WLM service definition: SAMPLESD, active policy: SAMPLEP
LPAR SAMPLPAR with defined capacity of 550 MSU
LPAR SAMPLPAR in capacity group GROUP1 with 750 MSU
LPAR SAMPLPAR current weights CP/zIIP/IFL 150/50/-  WLM managed no
CPC SAMPCPC total weights CP/zIIP/IFL 1000/350/750
The system at alternate host address is not observed
```

Chapter 6 “Working with reports”, Subchapter “LPAR weight report”, page 100 command.

To create an LPAR weight report, issue the **REPORT LPARWEIGHT** command.
For the syntax of this command, see “REPORT LPARWEIGHT” on page 115.
The report contains information about the current and initial weights of LPARs within a specified CPC. Only LPARs that are authorized via BCPii to provide their data to the Provisioning Manager's runtime LPAR are listed. Optionally you can limit the listing to a specified LPAR. The report helps you to understand how the LPARs are weighted within their CPC.

If the Provisioning Manager is in manual mode or if no system is observed within the specified CPC, no total CPC weights data is displayed.

The reported information indicates:

Per authorized or specified **LPAR**:

CP (current/initial)
The current and the initial weight values for processor type CP

zIIP (current/initial)
The current and the initial weight values for processor type zIIP

IFL (current/initial)
The current and the initial weight values for processor type IFL

WLM managed
Indicates whether WLM weight management is enabled for the LPAR

- **yes** WLM LPAR weight management is enabled
- **no** WLM LPAR weight management is disabled

CPC
The name of the LPAR's CPC

CP current total
If available, the sum of current weights of all active LPARs of the CPC for processor type CP.
A total CPC weight 0 is displayed if the CPC is defined without any processors of the corresponding type.
A total CPC weight - is displayed for if the data is not available to the system's monitoring product.

zIIP current total
If available, the sum of current weights of all active LPARs of the CPC for processor type zIIP.
A total CPC weight 0 is displayed if the CPC is defined without any processors of the corresponding type.
A total CPC weight - is displayed for if the data is not available to the system's monitoring product

IFL current total
If available, the sum of current weights of all active LPARs of the CPC for processor type IFL.
A total CPC weight 0 is displayed if the CPC is defined without any processors of the corresponding type.
A total CPC weight - is displayed for if the data is not available to the system's monitoring product.

An example of a LPAR weight capacity report is:

```
CPO1353I LPAR weight report generated at 04/23/2018 09:40:17
 LPAR (current/initial)          CP      zIIP     IFL    WLM managed
  PRODLP1                     150/150   35/ 35    0/  0   no
  PRODLP3                     100/100    0/  0  100/100   no
  TESTLP1                      50/ 20   15/ 15  100/100   yes
 CPC Z14A current total      1250      100      220
 End of report
```

Chapter 8 “Provisioning Manager command reference”, Table 21. “Control commands”, page 108

Additional rows

REPORT LPARWEIGHT	r lw	“REPORT LPARWEIGHT” on page 115
SET LPARWEIGHT	s lw	“SET LPARWEIGHT” on page 158

Chapter 8 “Provisioning Manager command reference”, page 115

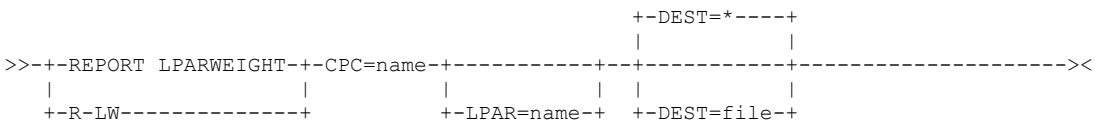
REPORT LPARWEIGHT

Use the **REPORT LPARWEIGHT** command to display the current LPAR weight settings for a selected LPAR or for all authorized LPARs of a CPC. You can either identify a CPC by its name for displaying the weights of all authorized LPARs of the CPC, or additionally specify an LPAR name to restrict the displayed weights to that LPAR. The specified CPC must be defined in the active domain configuration. Displayed LPARs must be authorized via BCPii to provide data to the Provisioning Manager runtime system's LPAR.

For information about what is contained in the report, see “LPAR weight report” on page 100.

Note: Depending on the queried CPC and the amount of LPARs on the CPC, it may take up to a few minutes until the report is displayed on the console. In order to avoid that the Provisioning Manager command line is blocked during that time, it is advisable to enable the “Command Queue” for Capacity Provisioning Manager console commands with the key `Manager.CommandQueue=yes`, as described in Table 20. on page 58.

Syntax



Parameters

The command has the following parameters:

CPC=*name*

The name of the CPC for which LPAR weight data should be displayed. The specified CPC must be defined in the active domain configuration.

LPAR=*name*

The name of the LPAR for which LPAR weight data should be displayed.

DEST=

The destination of the LPAR weight report. The following destinations are supported:

* (Default) specifies that the report should be written to the console issuing the command.

file

Specifies a file where the information is to be stored. If the name includes lowercase characters, this parameter must be enclosed in single quotation marks (’). The file must be in the hierarchical file system. You can specify either an absolute path or a relative path to the file. If this is not absolute the path is relative to the home directory of the user that is running the Provisioning Manager. You must ensure that there is sufficient space in the selected location. The Provisioning Manager user must be authorized to write to this location.

Chapter 8 “Provisioning Manager command reference”, page 158

SET LPARWEIGHT

Use the **SET LPARWEIGHT** command to manually change the initial weight for an LPAR. You can identify the LPAR either by the name of the LPAR and the name of the CPC on which the LPAR is active, or by the name of the z/OS system and sysplex running on the LPAR. In the second case, the z/OS system needs to be defined in the active domain configuration. In every case the respective CPC has to be defined in the active domain configuration.
It is recommended to check for the following conditions before issuing the command:

- that the specified LPAR is authorized via BCPii to provide data to the Provisioning Manager runtime system's LPAR
- that the specified LPAR has a defined weight for the specified processor type
- that the specified initial weight is within the allowed range of 1 to 999
- if WLM LPAR weight management is enabled for the specified LPAR, that the specified initial weight is within the current minimum and maximum weights range.

Syntax

```
>>-+-SET LPARWEIGHT-+--+-CPC=name--LPAR=name-+--+-CP=number---+-----------------------><
   |                |  |                     |  |             |
   +-S-LW-----------+  +-PLEX=name--SYS=name-+  +-ZIIP=number-+
   |                |                           |             |
                                                +-IFL=number--+
```

Parameters

The command has the following parameters:

CPC=*name*

The name of the CPC on which initial LPAR weight should be changed.

LPAR=*name*

The name of the LPAR for which initial LPAR weight should be changed.

PLEX=*name*

The name of the sysplex to which the specified system belongs.

SYS=*name*

The name of the system for which LPAR weight should be changed.

CP=*number*

The initial LPAR weight for processor type CP you want to change on the specified LPAR.

ZIIP=*number*

The initial LPAR weight for processor type zIIP you want to change on the specified LPAR.

IFL=*number*

The initial LPAR weight for processor type IFL you want to change on the specified LPAR.

Example

To set the initial LPAR weight for processor type zIIP on LPAR LPX on CPC G14 to 250, issue the following command:

MODIFY CPOSERV,APPL=SET LPARWEIGHT CPC=G14 LPAR=LPX ZIIP=250

or:

F CPOSERV,APPL=S LW CPC=G14 LPAR=LPX ZIIP=250

The response on the console is:

CPO1342I LPAR weight for zIIPs on LPAR LPX on CPC G14 changed to 250

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This is an extract of the manual
z/OS V2R3 MVS System Messages Volume 4 (CBD-DMO)
SA38-0671-30, Chapter 13. CPO messages
with updates corresponding to APAR OA55039

New Messages:

CPO1339E: Error changing LPAR weight for LPAR *LPAR name* on CPC *CPC name*

Explanation: The SET LPARWEIGHT command has been issued for the referenced LPAR. This command failed. A previous message may contain details on the reason.

User Response: Check previous messages and correct the problem. Then retry the command.

CPO1340E: Error changing LPAR weight for LPAR *LPAR name* on CPC *CPC name*. Return information is *index*, *key*, *actual*, *expected*, *communication error*, *text*

Explanation: The attempt to change the LPAR weight for the referenced LPAR using BCP internal interface failed with the referenced return information. The reason codes are in decimal notation.

User Response: Check the reason codes and correct the error. For more information about BCPii reason codes, see MVS Programming: Callable Services for High-Level Languages, SA22-7613. The Provisioning Manager tries to connect again after some time.

CPO1341E: Not authorized to change LPAR weight for LPAR *LPAR name* on CPC *CPC name*

Explanation: The SET LPARWEIGHT command has been issued for the referenced LPAR. The Provisioning Manager is not sufficiently authorized to update values for that LPAR (image). The command is ignored.

xUser Response: Authorize the Provisioning Manager to update values for the LPAR (image) and retry the command. See the product documentation for instructions on how to authorize the Provisioning Manager for updating image values.

CPO1342I: LPAR weight for processor types on LPAR *LPAR name* on CPC *CPC name* changed to *value*

Explanation: The SET LPARWEIGHT command for the referenced LPAR has been issued. The LPAR weight for the LPAR has been changed to the referenced new value.

User Response: None.

CPO1343I: LPAR weight for *processor types* for system *system name* in sysplex *sysplex name* changed to *value*

Explanation: The SET LPARWEIGHT command for the referenced system has been issued. The LPAR weight for the LPAR containing the system has been changed to the referenced new value.

User Response: None.

CPO1344E: Too many parameters specified

Explanation: The SET LPARWEIGHT command was issued with too many parameters. No action is performed. You specified more than two of the parameters SYS, PLEX, LPAR, and CPC or more than one of the parameters ZIIP, IFL or GP. Only one pair of SYS, PLEX or LPAR, CPC is allowed. Only one parameter of GP, ZIIP or IFL is allowed.

User Response: Remove the obsolete parameters as needed and retry the command.

CPO1345E: Required parameter missing

Explanation: The SET LPARWEIGHT command was issued with insufficient parameters. No action is performed.

User Response: Specify either the SYS and PLEX or LPAR and CPC parameters and one of the GP, ZIIP or IFL parameter and retry the command.

CPO1346E: LPAR *LPAR name* has no processor types defined

Explanation: The SET LPARWEIGHT command was issued for a processor type that is not available for this LPAR. No action is performed.

User Response: None.

CPO1347E: Specified LPAR weight *value* is not in the range between the minimum and the maximum processing weight

Explanation: The SET LPARWEIGHT command was issued with an invalid weight value. The initial processing weight must be a value in the range between the minimum processing weight and the maximum processing weight. No action is performed.

User Response: Adjust the initial, minimum or maximum processing weight values and try the operation again.

CPO1348E: Specified LPAR weight "*value*" is not in a correct format

Explanation: The SET LPARWEIGHT command has been issued specifying the referenced weight value. The value is not specifying a valid number. The command is ignored.

User Response: Change the weight value of the command to a valid number and retry the command.

CPO1349E: Specified LPAR weight *value* is out of range

Explanation: The SET LPARWEIGHT command has been issued specifying the referenced weight value. The value is not in the allowed range of 1 to 99999. The command is ignored.

User Response: Change the weight value of the command to a value in the range of 1 to 999 and retry the command.

CPO1352E: LPAR *LPAR name* not found on CPC *CPC name*

Explanation: The SET LPARWEIGHT command has been issued specifying the referenced LPAR and CPC. The LPAR cannot be found on the CPC. This can be because the LPAR information is not yet available, the Provisioning Manager is not authorized to read information about the LPAR, or the LPAR is not available. The command is ignored.

User Response: If the values specify an existing LPAR, check that appropriate access rights are granted to the Provisioning Manager, and that the LPAR information is already available. Then retry the command. Otherwise correct the parameter values and retry the command.

CPO2142W: LPAR weight data missing

Explanation: CIM metric data for LPAR weight could not be retrieved.

User Response: Make sure that the corresponding CIM server can provide IBMzOS_BaseMetricValues for LPAR weight. The CIM server must run at least with z/OS V2R1.

CPO3028I: LPAR information for CPC name now accessible again

Explanation: The Provisioning Manager previously failed to retrieve LPAR information about the referenced CPC from a HMC or SE. The problem now no longer exists.

User Response: None.

CPO3062E: Error reading LPAR information for CPC with address address

Explanation: While using a connection to the CPC with the referenced SNA address, a communication error occurred. The current operation couldn't complete.

User Response: Check whether your CPC with the referenced address is still processing requests properly. The Provisioning Manager will retry after some time.

CPO3063E: Reading LPAR information for CPC with address *address* failed. Return information is *rc*, *index*, *key*, *actual*, *expected*, *communication error*

Explanation: While using a connection to the CPC with the referenced SNA address, a communication error occurred. The operation failed with the referenced return code, index, key, actual, expected, and communication error codes. The values are in decimal notation. The current operation couldn't complete.

User Response: Check whether your CPC with the referenced address is still processing requests properly. For more information about BCPii reason codes, see MVS Programming: Callable Services for High-Level Languages, SA22-7613. The Provisioning Manager will retry after some time.

CPO3930I: LPAR weight change detected. New current weights are *CP weight*/*zIIP weight*/*IFL weight* (CP/zIIP/IFL) for LPAR *LPAR name* of CPC *CPC name* with system *system name* in sysplex *sysplex name*. WLM management is disabled

Explanation: The Provisioning Manager has detected a change of the LPAR weights for the observed system.

User Response: None.

CPO3931I: LPAR weight change detected. New current weights are *CP weight*/*zIIP weight*/*IFL weight* (CP/zIIP/IFL) for LPAR *LPAR name* of CPC *CPC name* with system *system name* in sysplex *sysplex name*. WLM management is enabled

Explanation: The Provisioning Manager has detected a change of the LPAR weights for the observed system.

User Response: None.

CPO3932I: LPAR weight observed. Current weights for are *CP weight*/*zIIP weight*/*IFL weight* (CP/zIIP/IFL) for LPAR *LPAR name* of CPC *CPC name* with system *system name* in sysplex *sysplex name*. WLM management is disabled

Explanation: The Provisioning Manager has detected the LPAR weights for the observed system.

User Response: None.

CPO3933I: LPAR weight observed. Current weights for are *CP weight*/*zIIP weight*/*IFL weight* (CP/zIIP/IFL) for LPAR *LPAR name* of CPC *CPC name* with system *system name* in sysplex *sysplex name*. WLM management is enabled

Explanation: The Provisioning Manager has detected the LPAR weights for the observed system.

User Response: None.

Removed Messages: CPO1284E

Changed Message Explanations or User Responses:

CPO1285E: System *system name* and sysplex *sysplex name* not found on a managed CPC

Explanation: The ACTIVATE DEFINEDCAPACITY, DEACTIVATE DEFINEDCAPACITY, ACTIVATE GROUPCAPACITY, DEACTIVATE GROUPCAPACITY, or SET LPARWEIGHT command has been issued specifying the referenced values for the SYS and PLEX parameters. An LPAR reporting both names for the operating system running in it cannot be found. This can be because the LPAR information for all CPCs is not yet available, the LPAR containing the system is not accessible to the Provisioning Manager, the CPC containing the LPAR is not in the active domain configuration, or the values do not specify an existing system. The command is ignored.

User Response: If the values specify an existing system, check that appropriate access rights are granted to the Provisioning Manager, the CPC the system is running on is part of the active domain configuration, and that the LPAR information is already available. Then retry the command. Otherwise correct the names for the SYS and PLEX parameters and retry the command.

CPO2134W: The Provisioning Manager waits for LPAR information

Explanation: The health state for this CPC is set to Warning as long as the Provisioning Manager is waiting for LPAR information. No activation or deactivation of Defined Capacity for this CPC can be performed.

User Response: None.

CPO2135W: The Provisioning Manager waits for CPC information

Explanation: The health state for this CPC is set to Unavailable as long as the Provisioning Manager is waiting for CPC information.

User Response: None.

CPO2138W: Defined Capacity data missing

Explanation: CIM metric data for Defined Capacity could not be retrieved.

User Response: Make sure that the corresponding CIM server can provide IBMzOS_BaseMetricValues for Defined Capacity. The CIM server must run at least with z/OS V2R1.

CPO3027I: LPAR information for *CPC name* is available

Explanation: The Provisioning Manager was able to retrieve information about the LPAR on the referenced CPC. This information can now be used for defined capacity or LPAR weight management and Provisioning Manager commands to alter the defined capacity and group capacity limits or change LPAR weights on that CPC.

User Response: None.