

IBM zSystems Flexible Capacity

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October 2022



IBM zSystems Flexible Capacity

Temporary Capacity Offering Overview

IBM Z Temporary Capacity Offerings



**IBM Z
Flexible
Capacity
for Cyber
Resiliency**

~~**zDR Cloud
Limited
(LiTE)**~~

**Tailored Fit
Pricing for
Hardware
(TFP HW)**

**On/Off
Capacity
On Demand
(On/Off
CoD)**

**Capacity
Backup
(CBU)**

**Z Bulk
Resiliency
Stress Test
(zBuRST)**

**System
Recovery
Boost
Upgrade**



IBM Z Flexible Capacity for Cyber Resiliency Use Cases

Disaster Recovery & DR Testing



Transfer the capacity you need at your DR site to continue to run your business workloads. Automate and test recovery procedures for unplanned outages, including cyber attacks to provide near-continuous availability and disaster recovery.

Frictionless Compliance



Meet the ever-evolving stringent requirements of global regulators, allowing a highly automated and fast process to demonstrate a production site swap.

Facility Maintenance



Run your production workload from your alternate site while you perform maintenance at your primary site with the capacity you need.

Pro-active Avoidance



Protect your critical business services from natural disasters. Avoid rolling power outages. Migrate your critical workloads to an alternate site before your business gets impacted and stay there for up to one year.

Business continuity - The landscape is changing

Regulators around the globe are introducing more stringent policies in relation to business continuity and disaster recovery requiring more comprehensive and extended testing mandating clients **switch over full production loads and operate for 30 days up to 6 month out of their secondary data center.**

FFIEC / NY DFS

Institutions **should demonstrate**, through testing that their business continuity arrangements can sustain the business until permanent operations are reestablished.

Involve a sufficient volume of all types of transactions to ensure adequate capacity and functionality of the recovery facility.

Exercises generally extending over a **longer period** to allow issues to fully evolve as they would in a crisis and to allow realistic role-playing of all the involved groups.

EU NIS 2 Directive

EU regulators are clearly indicating the emergence of new requirements that surpass prior legislation like Operational Resiliency (ex Basel III), dealing from component failure to acknowledge risks associated to cyber attacks.

When the service is Cross-European (ex Real Time Gross Settlement, EU Securities Settlements et cetera) ECB and EBA will supervise directly meaning companies must adhere to a **“Resiliency testing framework”**.

Regulators are asking to prove that a secondary Site (DR) is fully functional and can run production for a long time.

NIST Special Publication 800-53

CP-2(6) Plan for the transfer of mission and business functions to **alternate processing and/or storage sites with minimal or no loss of operational continuity** and sustain that continuity through system restoration to primary processing and/or storage sites.

CP-4(4) Include a full recovery and reconstitution of the system to a known state as part of contingency plan testing.

CP-7(6) Plan and prepare for circumstances that preclude returning to the primary processing site.

IBM Z Temporary Capacity Offerings

	IBM Z Flexible Capacity for Cyber Resiliency	zDR Cloud zDR Cloud – Limited Edition (LiTE)	Tailored Fit Pricing for Hardware (TFP HW)	On/Off Capacity On Demand (On/Off CoD)	Capacity Backup (CBU)	Z Bulk Resiliency Stress Test (zBuRST)	System Recovery Boost Upgrade
Description	Allows active MIPS flexibility for all engine types between z16 servers to allow capacity swaps for an extended term.	Allows active MIPS flexibility between z14 or z15 production servers and DR servers to allow production and DR site swaps for an extended term. (LiTE: for a limited term.)	Additional capacity corridor above customer purchased capacity in whole engine increments, per CEC. Provides headroom capacity.	Allows to temporarily add additional capacity or specialty engines due to seasonal activities, period-end requirements, peaks in workload, or application testing.	Allows to replace model capacity and specialty engines to a backup server in the event of an unforeseen loss of server capacity because of an emergency.	Allows to increase DevOps code quality by introducing massive quality assurance and/or stress tests	Allows you to make additional zIIPs temporarily available for a system recovery zIIP boost after planned or unplanned outages.
Use case	DR testing, Emergency DR, Compliance Testing, Facility Maintenance, Pro-active Avoidance	DR testing	Unpredictable workload spikes, workload efficiency and improved response times, capacity planning for growth	Workload peaks, application testing	DR testing, Emergency DR	Volume / stress test of full production environment to address quality and scale	Planned or unplanned outages and recovery
Temp capacity engine type	Standard capacity, specialty engines	Standard capacity, specialty engines	Standard capacity	Standard capacity, specialty engines	Standard capacity, specialty engines	Standard capacity, specialty engines	zIIP engines
Max. number of activations / max. activation period	12 times per year / for maximum period of 12 months	4 times per year for maximum period of 6 months a year. LiTE: Two capacity transfers x 45-day (Site swaps) per year	Always on / activated 365/7/24 During the term of the TFP HW contract	Used when needed, no limit on number of activations	10-day test per year additional tests may be ordered	Activated for maximum of 15 business days	30 activations (replenishable), 6 hours
Temp capacity limit	Up to production capacity	Mirrored production	Corridor size defined at the time of contract	Defined at the time of configuration (up to <u>double</u> of owned capacity)	Defined at the time of purchase. CBU may back up multiple systems on a single system	Min. of 10 000 MIPS, Min 50% of prod. MIPS.	20 zIIP engines

IBM Z Flexible Capacity for Cyber Resiliency

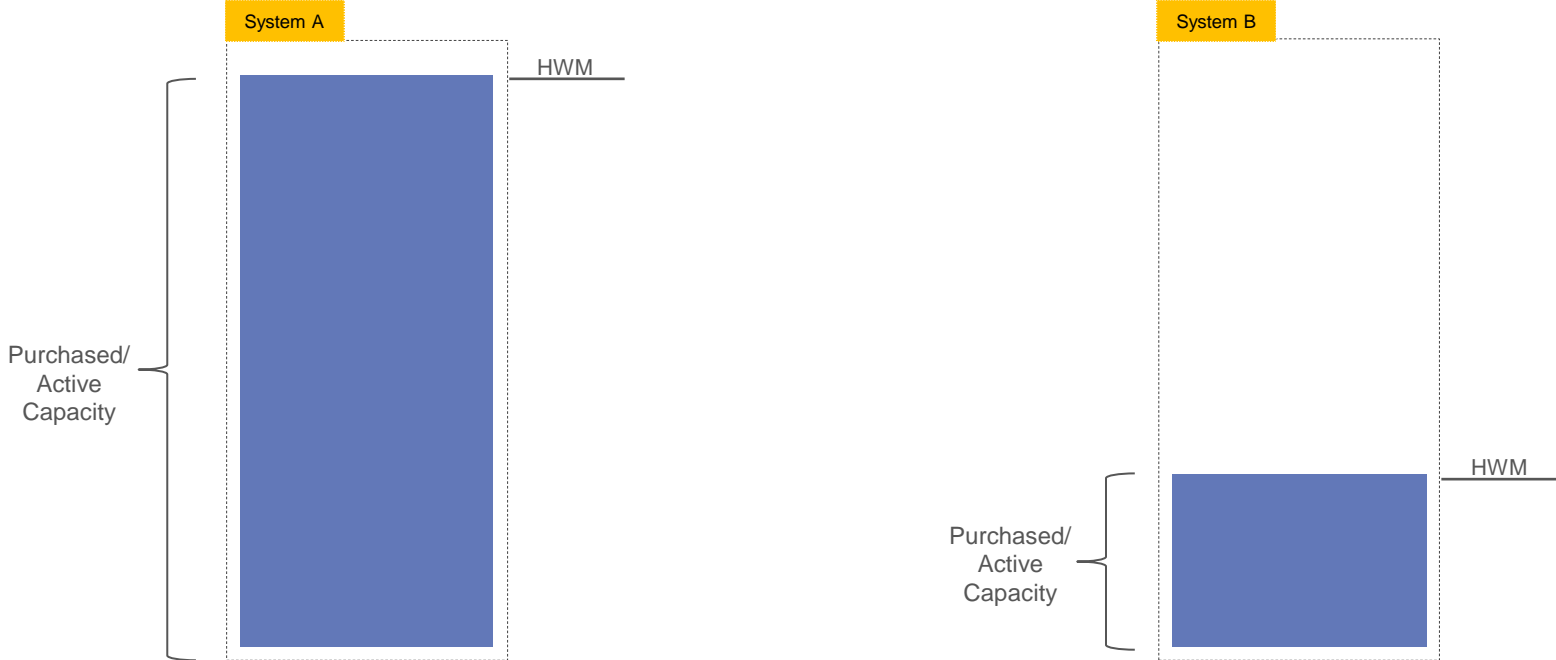
Installation & Setup example

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Initial setup

Site A

Site B

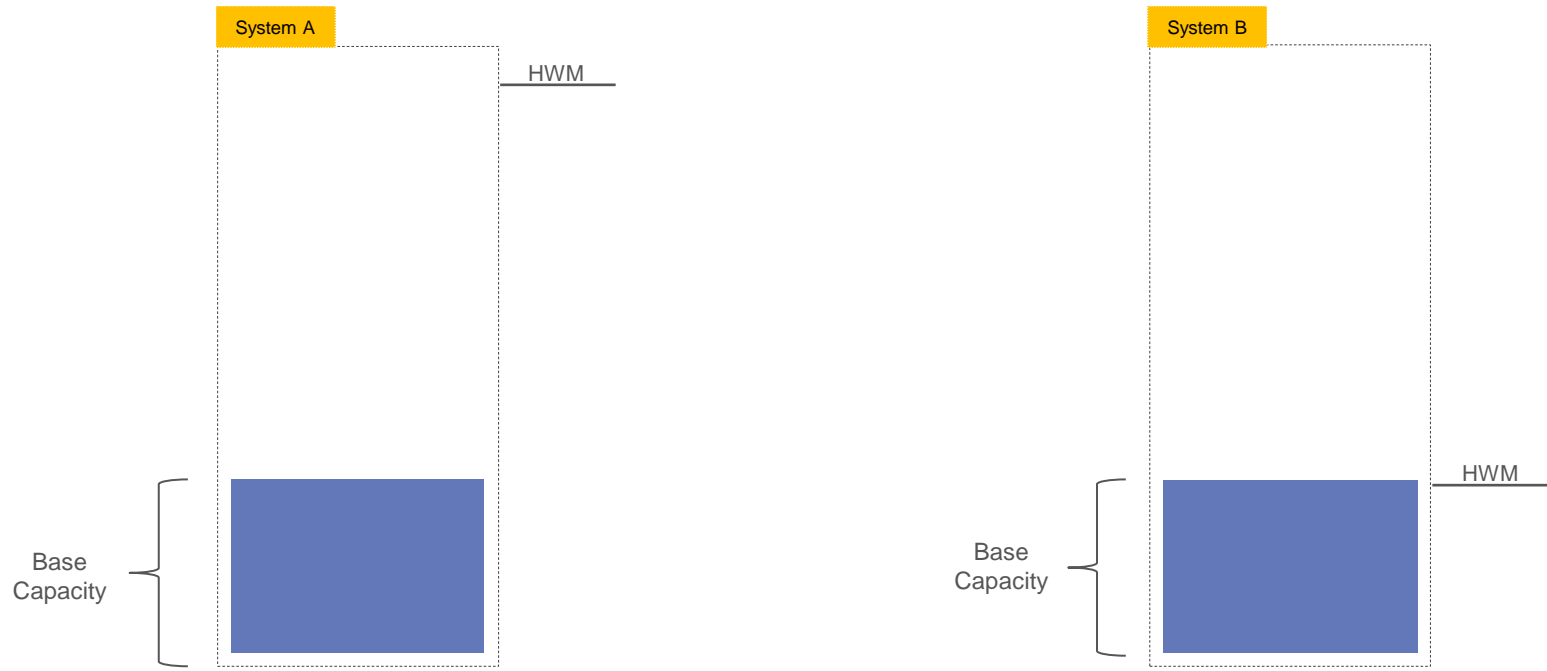


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Change to Flex Capacity step 1

Site A

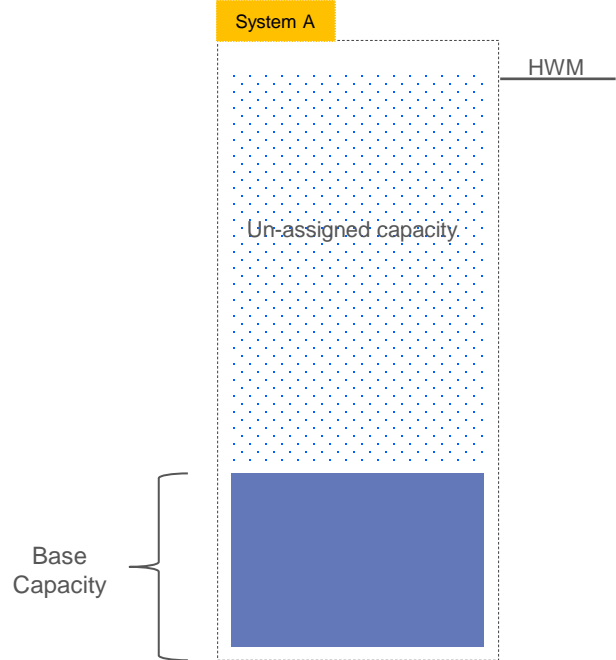
Site B



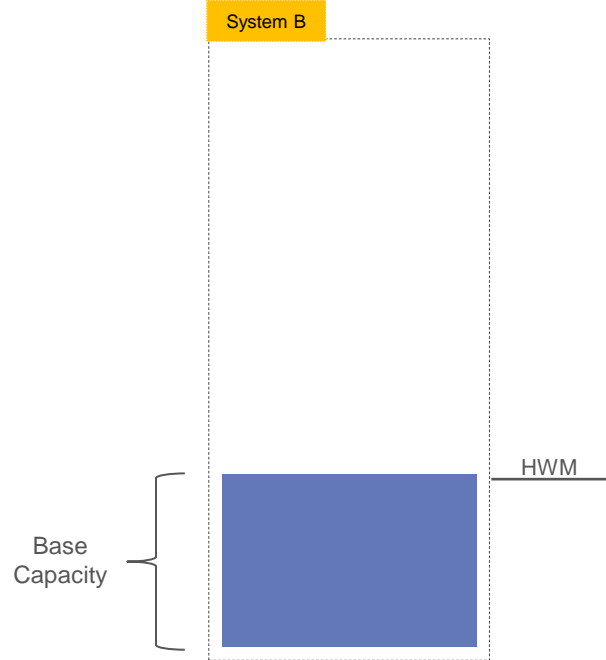
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Change to Flex Capacity step 2

Site A



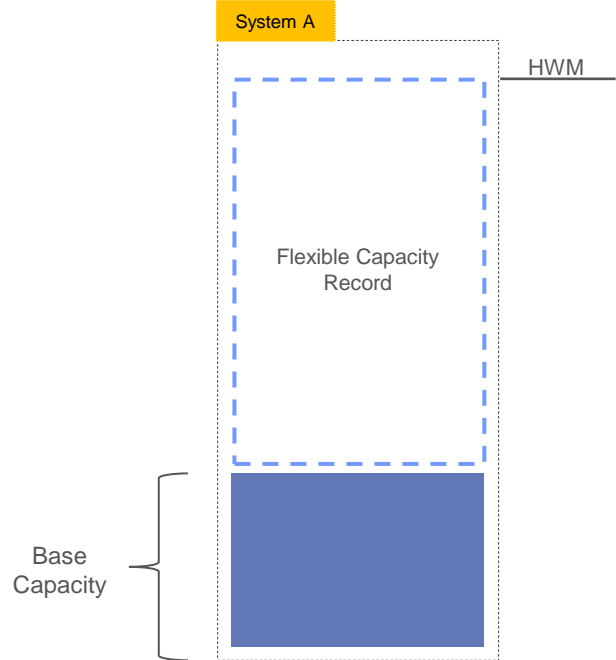
Site B



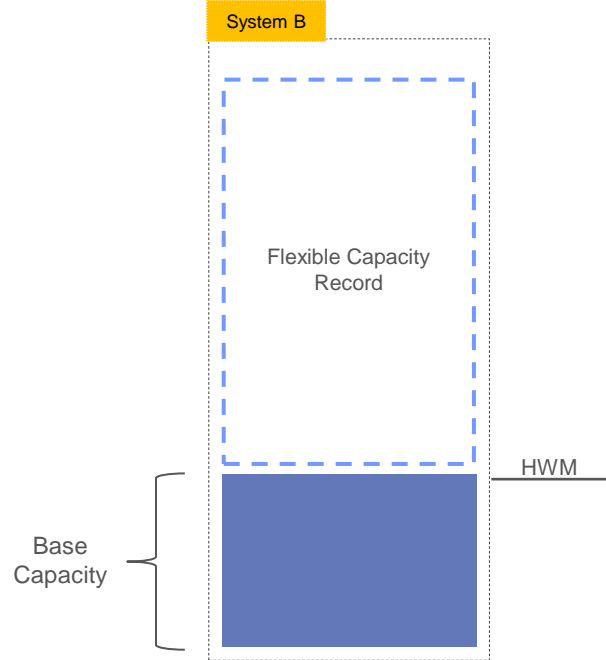
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Change to Flex Capacity step 3

Site A

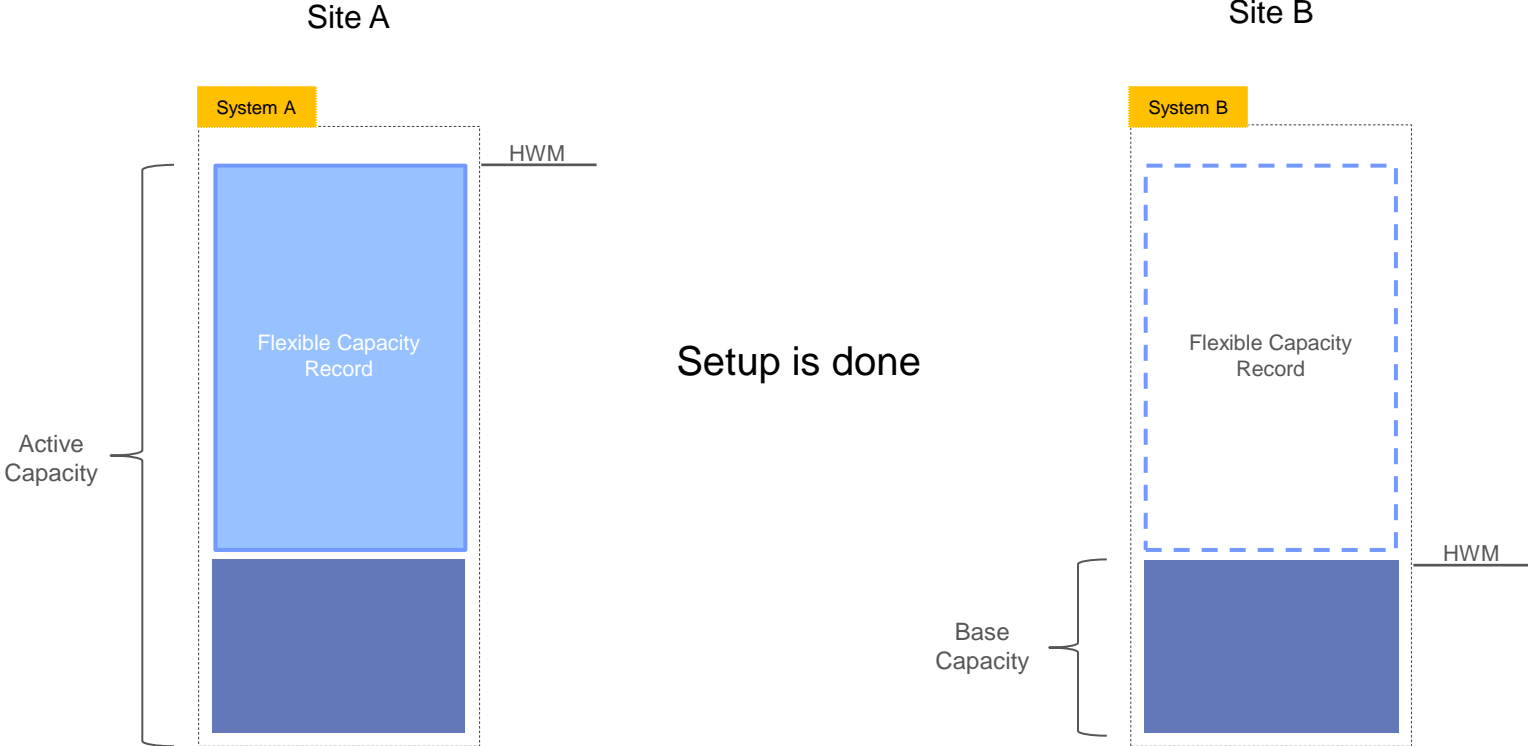


Site B



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Set up completed: activate temporary record on site A

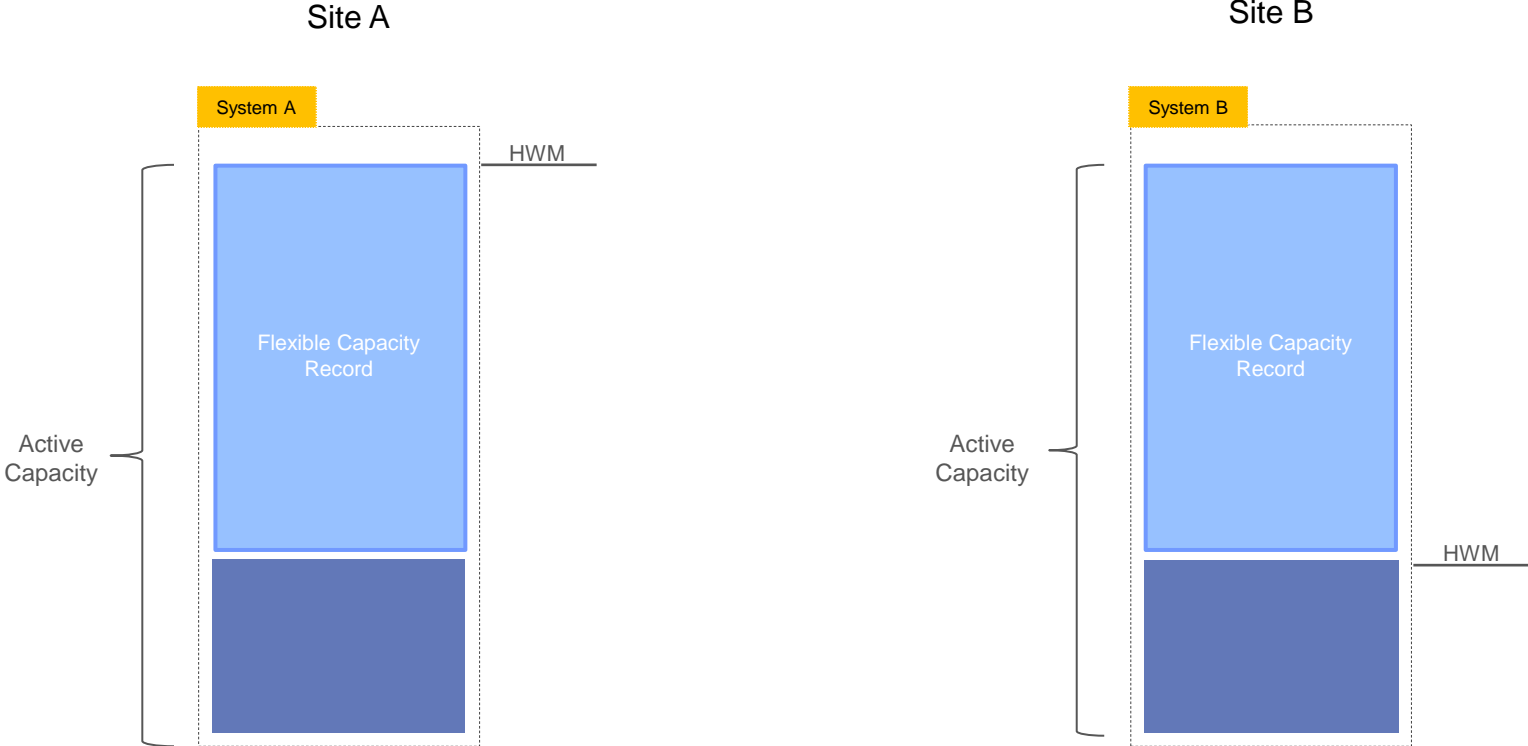


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Swap from Site A to Site B

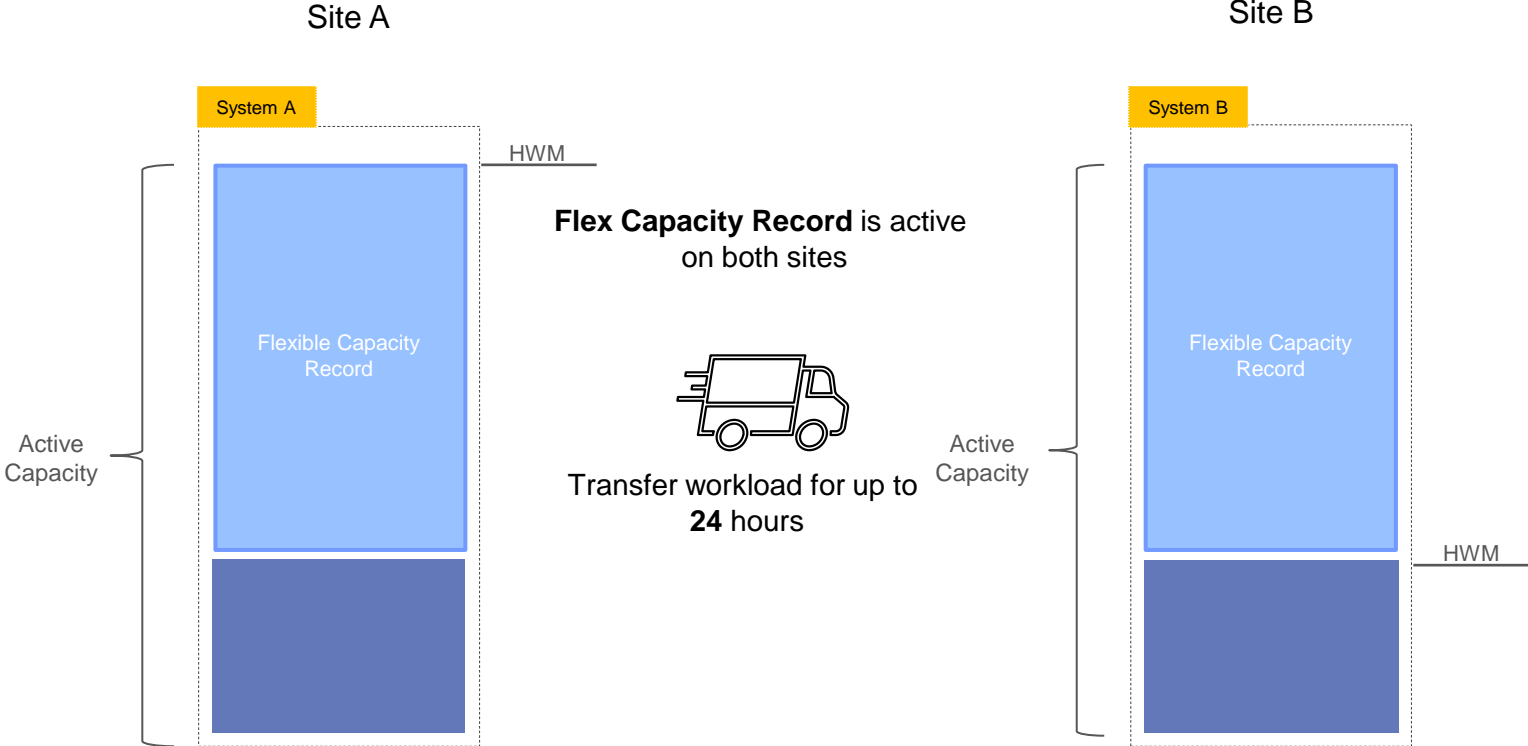
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Shift A to B: Activate temporary record on site B



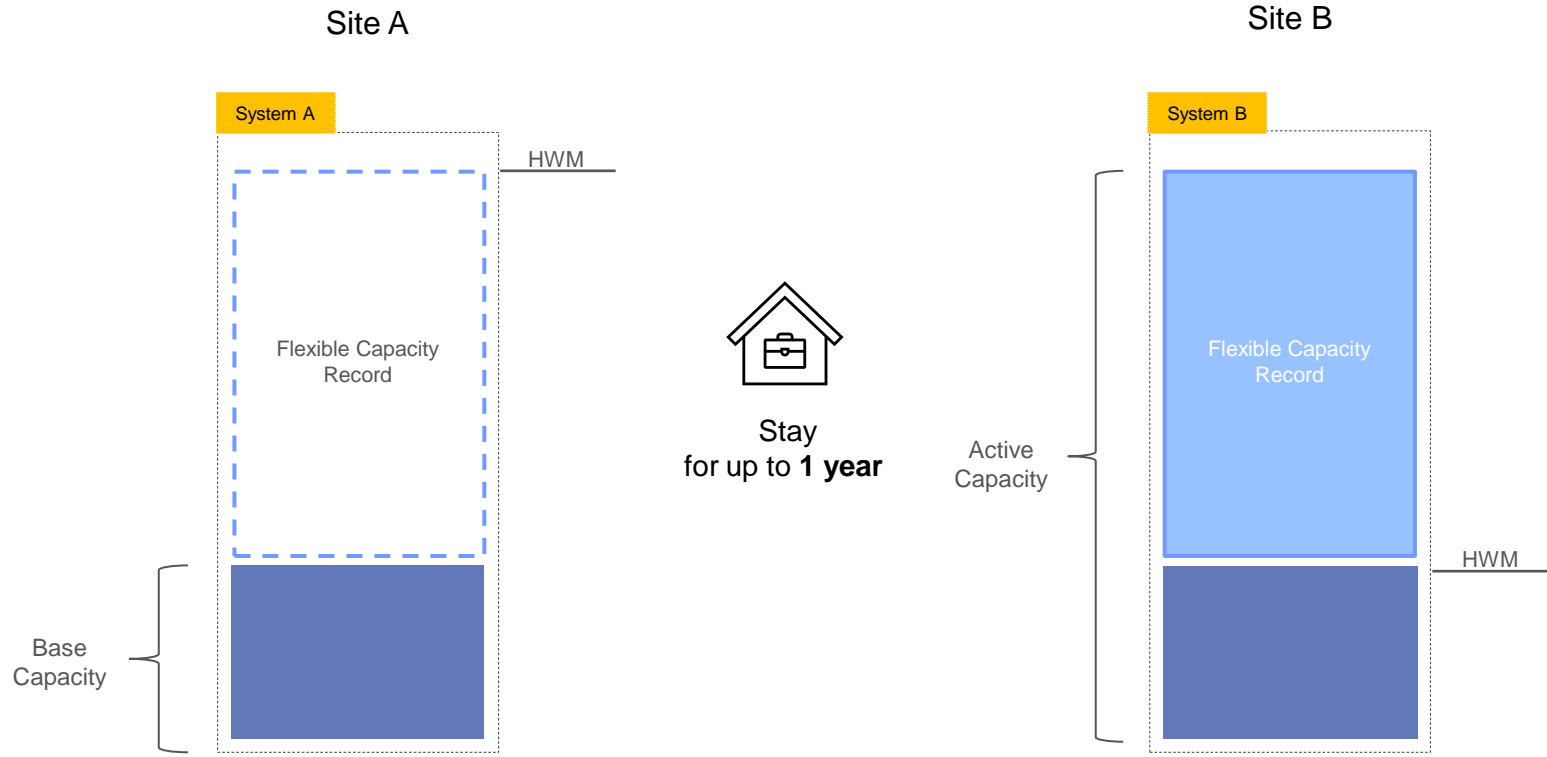
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Shift A to B: Transfer workload from site A to site B



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Stay

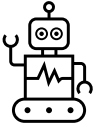
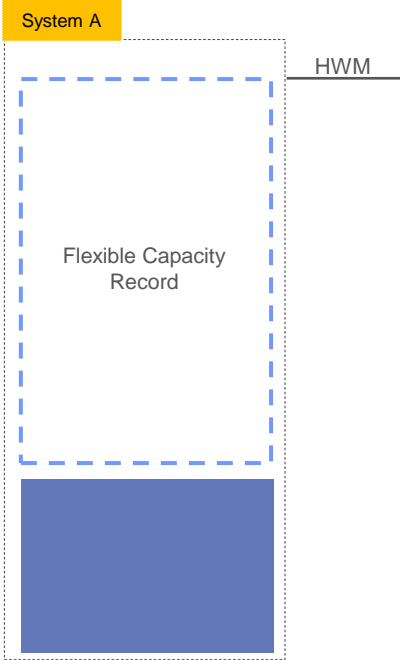


IBM Z Flexible Capacity for Cyber Resiliency *Automation*

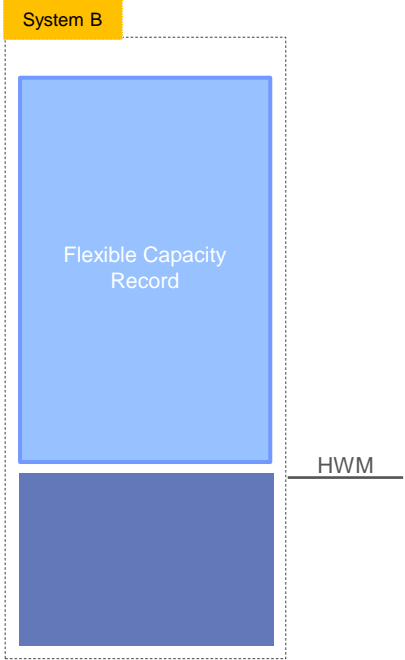
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Automate

Site A



Site B



IBM GDPS®
or other options you may use
other 3rd party automation
tools or write your own
automation via the HMC Web
Services or API interfaces or
using the z/OS BCPII
interfaces.

IBM Z Flexible Capacity for Cyber Resiliency

Terms & Conditions

IBM Z Flexible Capacity for Cyber Resiliency

Terms & Conditions

Cross site movement	Inter site moves can be done - regardless of distance, mirroring or coupling technology. Intra site moves are NOT allowed (2 machines in the same datacenter cannot move capacity back and forth).
Entitlement	The owner of the machine holds a title to the physical hardware, the capacity of that machine is enabled and controlled via the LIC of the machine, which is licensed, not sold.
Overlap period	Up to 24 hr period, where the temporary record can be active on both system.
Activation limit	12 activations/deactivations per record in a year (12 activations translates to 6 round trips) .
Activation period	Keep the flexible capacity record active on your alternate site for up to ONE year.
License transfer	LIC is licensed only to one serial numbered machine, and its transfer to another machine is not permitted.
TFP for SW	Offering requires TFP for software, CMP will get grandfathered in.

IBM Z Flexible Capacity for Cyber Resiliency

Terms & Conditions cont.

Microcode only	IBM Z Flexible Capacity for Cyber Resiliency is Microcode only. Additional Memory, I/O Cards, drawers and other infrastructure related components need to be prepared by the client.
Call home	Customer agrees to use " Call Home " data to monitor capacity usage.
Charges for capacity exceeding the temp record	Capacity used beyond purchased capacity will be charged at previously defined OOCOD prices.
Duration	One time acquisition or 1 – 5 year

IBM Z Flexible Capacity for Cyber Resiliency

Definitions

IBM Z Flexible Capacity for Cyber Resiliency

Definitions

The following terms are used in this Presentation:	
Activate/Activation	Act of converting Inactive Capacity into Active Capacity, Flexible Capacity for Cyber Resiliency offering, up to the maximum Entitlements.
Active Capacity	Capacity that is entitled for temporary use on a limited basis described herein.
Activation Limit	The number of capacity shifts allowed within a twelve-month period.
Activation Period	The period, when the Flexible Capacity Record can be active on the Target Machine(s).
Base Capacity	The amount of capacity, including without limitation general purpose processors, specialty processor features, cryptographic features, memory, and other computing resources, acquired for normal use on a Machine, and does not include the capacity provided by Flexible Capacity Records activated
Base Machine	Is an IBM Z Machine on which Inactive Capacity may be Activated or Activated Capacity may be Deactivated.
Capacity	Is the amount of computing resources available in a Machine.
Capacity on Demand Offering	An optional capability for IBM z Systems Machines that is governed by terms separate from this Attachment, and thought which IBM z Systems Machine configuration changes can be executed by Client without having to place separate order with IBM. Examples of Capacity on Demand Offering include the following: On/Off Capacity on Demand, Permanent Upgrades through the IBM Client Initiated Upgrade Facility, Capacity Backup Upgrade; and Capacity for Planned Events.
Deactivate/Deactivation	Is the act of converting Active Capacity into Inactive Capacity, thereby terminating all of [Clients name's] Entitlement to the Deactivated Capacity.
Entitled/Entitlement	Is a permissible usage right acquired from, or otherwise authorized by, IBM (directly or through an authorized IBM Business Partner). Feature – is a Base Machine resource or function delivered by IBM through parts, Licensed Internal Code (LIC) or Entitlements to LIC, or any combination of the preceding.
Flexible Capacity Record	An IBM modification to the Licensed Internal Code (LIC) of a Machine that enables the Machine to perform temporarily as an upgraded Machine.
Inactive Capacity	Is any Capacity that is not currently active, or in use on the Base Machine.
Machine	Is an IBM Z Machine on which Inactive Capacity may be Activated or Activated Capacity may be Deactivated.
Overlap Period	The period, when the Flexible Capacity Record is activated on both Source and Target Machines for the purpose of transferring the workload from the source to the target machine
Production Workload	Software products and programs that execute in support of Client's business. Examples of Production Workload include, without limitation, those characterized as "productive", "production", "development", "maintenance" and "test" workloads.
Source Machine	Is an IBM Z Machine from which Active Capacity is shifted to another IBM Z machine.
Target Machine	Is an IBM Z Machine that receives Active Capacity from Source Machine(s).

IBM Z Flexible Capacity for Cyber Resiliency

Claims & Proof Points

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Claims & Proof Points

1. IBM Z Flexible Capacity for Cyber Resiliency is designed to provide increased flexibility and control to shift production workloads between participating IBM z16 machines at different sites and remain operational at the target site for up to one year .

Disclaimer: The one-year period begins with the flexible capacity record is activated on the target system. The z16 systems must be installed in different locations, using z/OS Version 2.2 or above.

2. IBM Z Flexible Capacity for Cyber Resiliency is designed to help organizations shift capacity between participating z16 machines at different sites for up to one year to improve cyber resiliency.

Disclaimer: The one-year period begins with the flexible capacity record is activated on the target system. The z16 systems must be installed in different locations, using z/OS Version 2.2 or above

3. IBM Z Flexible Capacity for Cyber Resiliency is designed to offer increased flexibility to shift capacity on demand between participating z16 machines at different sites.

Disclaimer: The z16 systems must be installed in different locations, using z/OS Version 2.2 or above

4. IBM Z Flexible Capacity for Cyber Resiliency is designed to enable a fully-automated shift of capacity between participating IBM z16 machines at different sites using IBM GDPS automation tools.

Disclaimer: The z16 systems must be installed in different locations, using z/OS Version 2.2 or above. GDPS Version 4.4 is needed for IBM provided automation. Necessary resiliency technology must be enabled, such as System Managed CF Structure Duplexing, Sysplex failure management and Capacity Provisioning Manager. Other configurations may provide different availability characteristics. Clients may optionally use other third-party tools for automation purposes.

5. IBM Z Flexible Capacity for Cyber Resiliency is designed to help organizations improve their compliance posture to meet evolving regulatory requirements requiring rapid restoration of production workloads.

Disclaimer: The z16 systems must be installed in different locations, using z/OS Version 2.2 or above.

6. IBM Z Flexible Capacity for Cyber Resiliency is designed to help organizations proactively reduce the impact of downtime by dynamically shifting their critical workloads to an alternate site for business continuity.

Disclaimer: The z16 systems must be installed in different locations, using z/OS Version 2.2 or above.

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