

## Simplified consolidation of older AIX environments

# AIX 5.3 Workload Partitions for AIX



### Highlights

- Minimize the effort to consolidate older AIX environments on new, more efficient hardware
- Simple backup/restore to move legacy AIX V5.3 environments to run on POWER7 processor based systems
- AIX 5.3 workloads can potentially take advantage of POWER7 processor features such as SMT4
- Consolidated environments can exploit virtualization features such as Live Application Mobility, Virtual I/O and Live Partition Mobility
- Includes limited fix support for the underlying AIX 5.3 operating system

### Description

The AIX 5.3 Workload Partitions for AIX 7 (AIX 5.3 WPARs) is a new offering designed to simplify the consolidation of older AIX environments on newer, more efficient hardware.

Many clients have older, less critical workloads running on AIX V5.3 on POWER5 or POWER4 processor-based servers that they would like to consolidate onto newer servers.

Unfortunately, sometimes clients have reasons that they cannot upgrade AIX and their applications to a level that fully exploits POWER7 processors.

AIX 5.3 WPARs can provide another way to consolidate those older applications on new hardware.

AIX 5.3 WPARs allow an administrator to simply backup an existing AIX 5.3 environment with the standard AIX mksysb utility, then restore that environment inside of a special Workload Partition in AIX 7 on a POWER7 processor-based server.

The simple backup and restore process eliminates much of the workload of consolidating these older workloads on a new server environment and provides a way to fully exploit POWER7 hardware without upgrading the AIX OS and the applications.

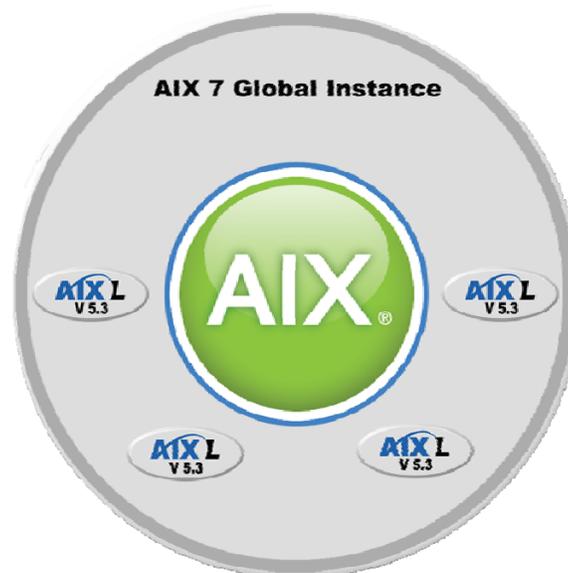
Not only can the old environments run on the newer, more efficient POWER7 processor-based systems, but because they are running on top of the AIX 7 kernel, these old applications can actually exploit POWER7 features such as Simultaneous Multithreading 4.

No instruction emulation or translation is involved; processes run at full speed.

### When to use

The AIX 5.3 WPARs product is primarily intended for client workloads that have long term requirement to continue to run the application on AIX V5.3.

For workloads that cannot be upgraded to a later level of AIX, AIX 5.3 WPARs provide an easy way to take advantage of the newest generation of POWER servers.



Features and Benefits

Features	Potential Benefits
<p><b>Simple backup / restore consolidation</b> Easily convert your AIX 5.3 Logical Partitions on legacy hardware to run inside of Workload Partitions on AIX 7</p>	<ul style="list-style-type: none"> <li>- Reduce the hardware maintenance, energy and floor space expenses of maintaining groups of poorly utilized obsolete servers by allowing workloads to be consolidated on more efficient POWER7 processor-based servers</li> <li>- Simplify the administrative workload of consolidating legacy environments</li> </ul>
<p><b>Enablement for Live Application Mobility and Live Partition Mobility</b> AIX 5.3 running in a WPAR can be relocated between systems without restarting the application</p>	<ul style="list-style-type: none"> <li>- Potential for improved system utilization and application performance by enabling more efficient load balancing</li> <li>- Designed to improve application availability by reducing outages needed for planned system maintenance</li> <li>- Can enable energy savings by moving workloads off of underused servers, allowing them to be powered off</li> </ul>
<p><b>Includes limited support for the AIX 5.3 OS</b> The Software Maintenance Agreement (SWMA) for the AIX 5.3 Workload Partitions includes telephone and limited defect support for the AIX 5.3 operating system</p>	<ul style="list-style-type: none"> <li>- Meets regulatory requirements requiring defect support for the operating system</li> <li>- Includes support for new fixes for AIX 5.3 for critical security and data integrity problems</li> <li>- Avoid the complexity of traditional extended support contracts for legacy AIX releases</li> <li>- Easy to order standard SWMA – no special bid extended support contracts required</li> </ul>
<p><b>Supported by Workload Partitions Manager for AIX</b> Use cross systems management capabilities of the WPAR Manager</p>	<ul style="list-style-type: none"> <li>- Consistent management of WPARs along with other IBM Systems Director managed resources</li> <li>- Leverage IBM Systems Director common user interface to simplify administration</li> <li>- AIX 5.3 WPARs can be relocated via Live Application Mobility with little impact to application availability</li> </ul>
<p><b>Exploitation of POWER7 features</b> Processes running in AIX 5.3 WPARs can exploit POWER7 features</p>	<ul style="list-style-type: none"> <li>- Potential greater throughput for multi-threaded applications due to better exploitation of POWER7 processor features such as Simultaneous Multithreading 4 (SMT4)</li> </ul>

## A new way to run legacy AIX environments

AIX 5.3 WPARs provide a new way to manage the lifecycle of legacy AIX environments by simplifying the consolidation of older environments on new hardware.

### Architecture and Prerequisites

The AIX 5.3 Workload Partitions for AIX 7 (AIX 5.3 WPARs) is a licensed program product that is designed to run inside of AIX 7 Workload Partition on a POWER7 processor-based server.

AIX 5.3 WPARs are supported on AIX 7 Express, Standard and Enterprise editions.

AIX 5.3 WPARs are supported only on POWER7 processor-based servers.

This product does not include the AIX 5.3 operating system. Clients must provide their own mksysb backup of their existing AIX 5.3 environment.

This product does not support use of other legacy versions of AIX.

Another product, AIX 5.2 Workload Partitions for AIX 7 provides similar capabilities for AIX 5.2 environments

Support for Live Application Mobility requires the additional purchase of the AIX Workload Partitions Manager for AIX product or purchase of AIX 7 Enterprise Edition

Support for Live Partition Mobility requires the additional purchase of PowerVM Enterprise Edition.

The limited AIX 5.3 telephone and defect support requires that the AIX 5.3 running in the WPAR be at AIX 5.3 Technology Level 12, Service Pack 4. Earlier levels of AIX 5.3 might run, but they would not be supported.

This product can be managed on a single system via command line interface or SMIT. Management of AIX 5.3 WPARs on multiple systems and Live Application Mobility requires the IBM Workload Partitions Manager product.

There are no hardware platform requirements beyond what is required by AIX 7 and the workload running inside of the AIX 5.3 WPARs.

## Summary

The AIX 5.3 Workload Partitions for AIX 7 product provides an easy way for clients to consolidate legacy AIX environments on the latest generation of Power Systems servers.

Legacy workloads can leverage many of the platform enhancements of POWER7 processor-based servers including cross system mobility and additional performance.

The capabilities of the AIX 5.3 WPARs product can help clients to more effectively manage the lifecycle of their legacy AIX environments.



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