



IBM AIX Operating System Release and Service Strategy

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Overview

IBM enhanced the AIX™ operating system (OS) Release and Service Strategy in 2011 as part of the ongoing effort to improve the manageability and stability of the AIX operating system for our clients.

The enhanced strategy will provide clients with:

- Three years of new fix support for each AIX OS Technology Level update
- One Technology Level per AIX version per year
- Service Packs for Technology Levels will be released about four times per year

These changes were made in response to client requests to lengthen the amount of time each Technology Level is supported

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Three years of new fix support for each Technology Level

The 2011 Release Strategy extends the period of time that IBM will attempt to provide new fixes on a Technology Level update to approximately three years from the introduction of the Technology Level update. This means that clients with a Software Maintenance Agreement (SWMA) for the AIX OS will be able to contact IBM support for defect support during that three year period without having to move up to the latest Technology Level update.

For example, a Technology Level introduced in the second half of 2010 will be supported into the second half of 2013. Since each Technology Level will be supported for approximately three years and IBM plans to release one Technology Level updates per year, IBM will be supporting three Technology Levels for each AIX release.

This three year life span starts with AIX 6 Technology Level 6 and AIX 7. Earlier Technology Levels of AIX such as Technology Levels 4 and 5 will only have new fix support for two years. All AIX V5.3 Technology Levels will have new fix support for only two years.

There are always variations in the release dates of Technology Level updates from year to year, so some Technology Levels will be supported for slightly more than three years. A three year service life for each Technology Level is an objective, not an absolute limit. The service life of Technology Levels will also be limited by the end of service life for the underlying AIX OS release.

The intent of this change to three years of new fix support is to provide clients running the AIX OS with support for software problems without having to upgrade to the latest Technology Level. However, there may be cases where, due to architectural changes or to the pervasive nature of a particular fix, the client may be required to move up to a later Technology Level update or AIX release to resolve a software issue.

Please note that IBM will always provide question and answer support and problem determination assistance throughout the support life for the underlying AIX release, but will not provide new fixes under the standard Software Maintenance Agreement beyond three years after the Technology Level is introduced.

Clients must have a current Software Maintenance Agreement contract in place in order to receive any support services. Clients that allow their Software Maintenance Agreement contract to lapse may be charged a significant After License Charge to reinstate their Software Maintenance Agreement.

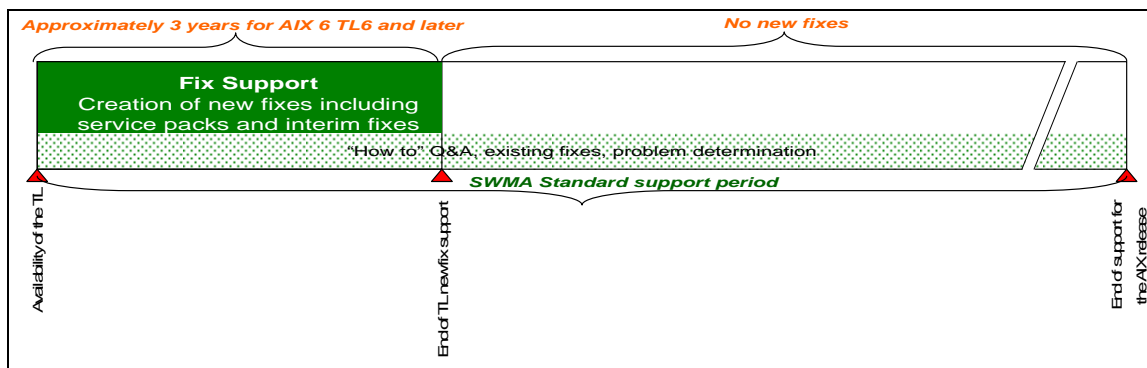


Figure 1 Technology Level lifecycle

One Technology Level per year per AIX version

The 2011 Release Strategy reduces the number of new Technology Levels released to one per year, per AIX release, typically in the second half of the year. This means that starting in 2011, IBM intends to release a single new Technology Level for AIX 6 and single Technology Level for AIX 7. Both of these Technology Levels are planned to be released in the second half of the year.

Technology Levels typically provide cumulative software fixes, new hardware support and in some cases, new functionality. For much of the history of AIX, Technology Levels (and the predecessor, Recommended Maintenance Levels) were the only way for IBM to deliver support for new hardware.

Since the 2007 release strategy introduced the capability to deliver new hardware support on previously released Technology Levels, the necessity of releasing two Technology Levels per year has been significantly reduced. Since, we understand that the testing and implementation of a new Technology Level can be a significant workload for our clients, we decided to eliminate the Technology Level traditionally delivered in the first half of each year.

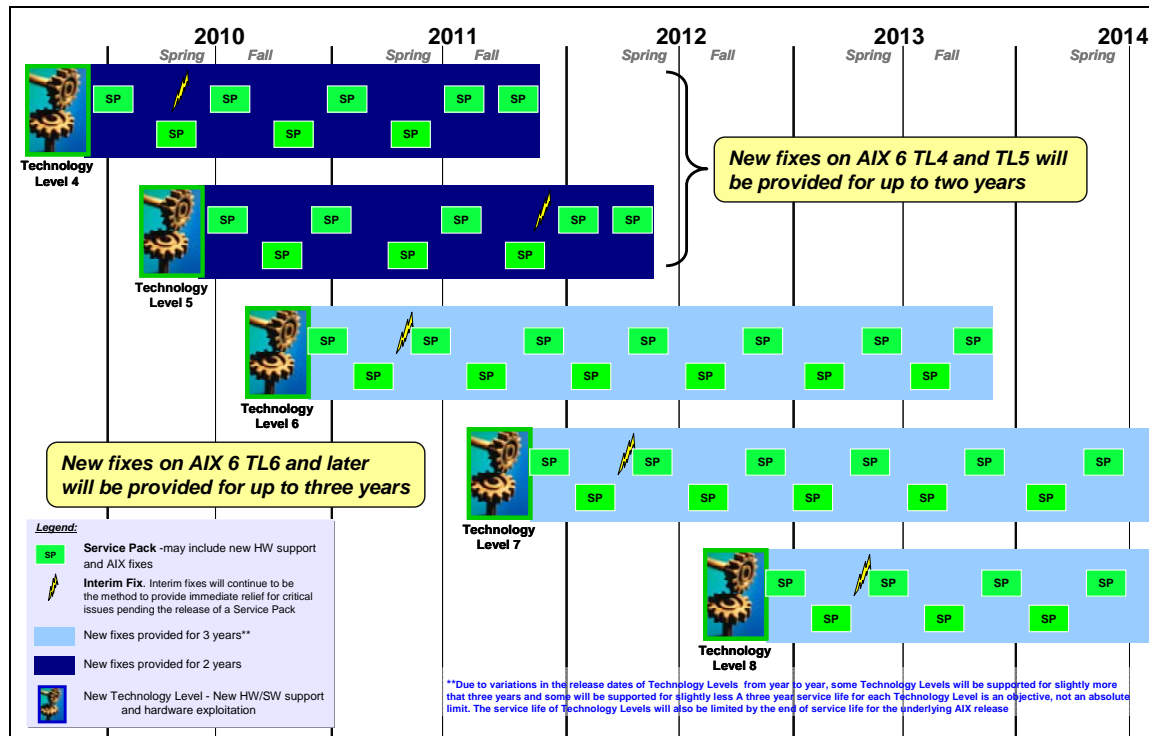


Figure 2 AIX 6 Technology Level Lifecycles

Service Pack frequency reduced to about four times per year

Between Technology Level releases, clients maintain their AIX operating systems by installing Service Packs (SP) or Interim Fixes for the entire support life of the Technology Level update. Service Packs are also used to provide support for newly released hardware.

The release dates and frequency of Service Packs are variable due to many factors, including new Technology Level releases, new hardware introduction and the need to deliver software fixes.

In the past IBM delivered new Service Packs about every eight to twelve weeks or about five to eight times per year per Technology Level. With the 2011 release strategy, IBM intends to reduce the number of Service Packs released per year, per AIX release to about four. As stated earlier, there are many factors that drive the release of a Service Pack, so releasing four Service Packs per year, per Technology Level represents a goal and objective, but not an absolute limit.

Note that new Technology Levels are almost always accompanied very closely by the first Service Pack for that new Technology Level. This first Service Pack includes fixes to problems that are discovered between the time the new Technology Level is released to manufacturing for the media to be replicated and the time the new Technology Level is actually available to clients.

New hardware support on previously released Technology Levels

Throughout the history of AIX, support for new hardware was only included in the latest Technology Level (or Recommended Maintenance Level). This required clients to upgrade to the latest service level if they wished to integrate new systems into their computing environment. This requirement often caused clients difficulty in rolling out new hardware into their existing environment.

AIX support for new hardware is typically broken into two categories: *support* and *exploitation*.

To *support* new hardware, the AIX OS has to undergo relatively minor changes to recognize the new hardware at boot time. If the AIX OS does not recognize the new hardware, it may fail to boot or only run in a degraded mode. The changes to *support* new hardware typically include updating a boot time table to determine the processor type or the creation of new boot media to recognize new I/O or both.

To *exploit* new hardware, the AIX OS may have to undergo more pervasive changes to take full advantage of the new hardware. This could result in changes to kernel components such as the Virtual Memory Manager (VMM) to exploit the new page sizes supported by a new processor.

The AIX OS Release and Service Strategy for 2007 offered IBM the opportunity to provide *support* for new hardware on previous Technology Level updates. The net effect is that clients will, in some cases, be able to use new hardware on previous Technology Levels after installing a Service Pack.

Most new hardware offerings will be *supported* on previous Technology Levels. In all cases, the client will be required to install the latest Service Pack for a given Technology Level that includes support for the new hardware. Although the intent is to provide at least support for new hardware on prior Technology Levels, there may be cases where providing this support may be impractical and support for that new hardware on prior technology levels will not be available.

Please note that *exploitation* of new hardware offerings will often require installing the latest Technology Level Update or in some cases, moving up to the latest AIX OS release.

As shown in a hypothetical case in Figure 3, if a client was running on Technology Level 6 (TL6) and wished to use new hardware such as a new server model within an existing processor family, the client could choose to upgrade to the latest Technology Level (in this case Technology Level 7), or they could install the latest service pack (in this case Service Pack 5) on top of Technology Level 6.

In this particular case, either of these choices would have been tested and supported by IBM.

In some cases, new hardware may be supported on up to two previous Technology Levels but the degree of exploitation may be limited in the older Technology Levels.

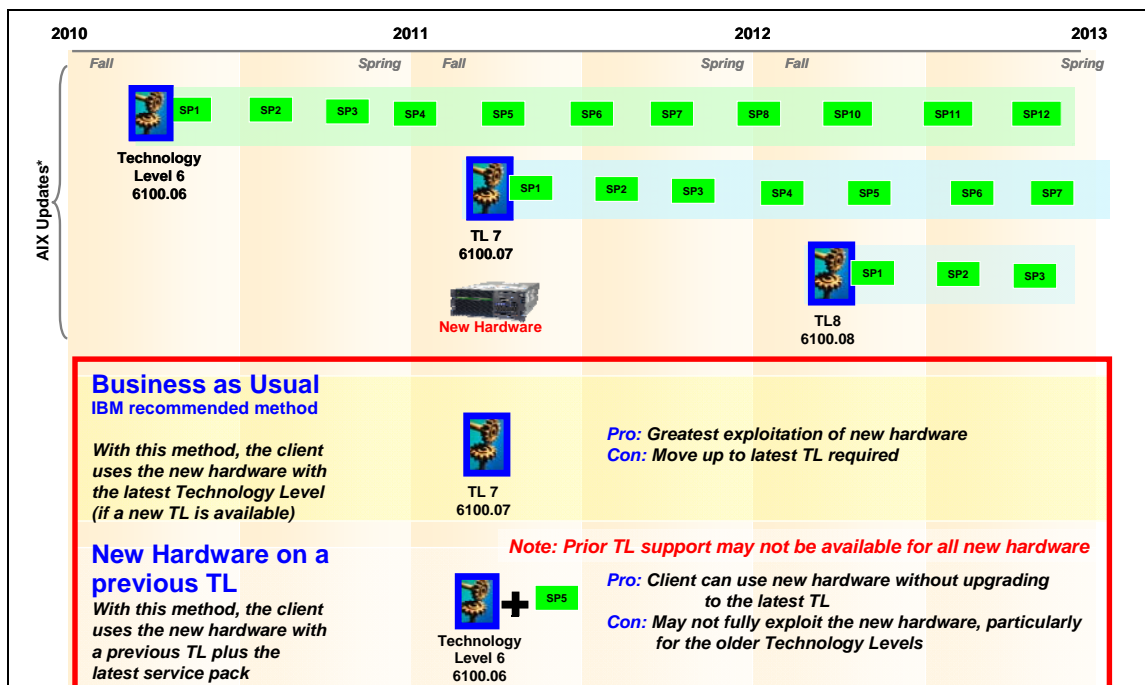


Figure 3 New Hardware Support

AIX Release and Service Strategy

The possibility of supporting new hardware would be limited by the restrictions associated with Figure 3 as well as the possibility that the new hardware support might be dependent on architectural changes made in a later Technology Level update. Support for new hardware on previous Technology Levels is limited by a number of factors and should not be expected for all new hardware.

When supporting new hardware on previous Technology Levels, one important consideration is the availability of boot support to allow clients to boot and perform a fresh or complete overwrite installation of a previous Technology Level of the AIX OS on the new hardware. This capability will sometimes require new boot media because the original boot media that was released with the previous Technology Level may not be able to boot on the new hardware.

IBM intends to provide clients with several ways to provide new boot media for previous Technology Levels including:

- The client can create a *mksysb* or NIM install image based on the previous Technology Level plus the appropriate Service Pack that enables support for the new hardware
- Download new boot images for previous Technology Levels from IBM Electronic Software Distribution web site.
- A Programming Request for Price Quotation (PRPQ) process will be available for clients who require physical boot media and are unable to download the new boot images from the Electronic Software Distribution web site.
- Clients can order new boot media from IBM Support, but will only be able to obtain boot media for the most recent Technology Level

Transition to the new strategy

The AIX OS Release and Service Strategy for implementation in 2011 for AIX 6 starting with Technology Level 6 and AIX 7 Technology Level 0. Both of these Technology Levels were released in September 2010.

Technology Level 6 is planned to be the first Technology Level update to be supported for up to three years.

This new release and service strategy will not apply to AIX V5.3 Technology Levels or to Licensed Program Products.

Previous Technology Level updates for AIX 6 such as Technology Level 4 (released September 2009 and Technology Level 5 (released April 2010) will be supported for at least two years under the 2007 release and service strategy.

What hasn't changed

Many things will stay the same from the 2007 release strategy:

- Service Pack naming: the month and week of the date the Service Pack is released will be used name the Service Pack—as a result, Service Pack 5 will be named 6100-06-05-YYWW (where YY is the 2-digit year and WW is the 2 digit week the Service Pack is made available).
- IBM will continue to issue fixes for older Technology Levels. Because of this, multiple Authorized Program Analysis Reports (APAR) will be issued for the same problem, one for each supported Technology Level. Each APAR will be specific to a particular Technology Level. For example, a problem reported for Technology Level 6 may be APAR IY123456, but the same problem would also be identified on Technology Level 8 as IY654321.
- No changes to the *oslevel* command and IBM Support and Electronic Software Distribution Web site will be required for the 2011 release strategy because the Service Pack naming conventions have not changed.

Additional Information

The IBM Service and Support Best Practices for UNIX® servers Web page at <http://www14.software.ibm.com/webapp/set2/sas/f/best/home.html> includes additional information on the AIX Release and Service Strategy, and best practices for managing the AIX and Power Systems servers. Summary

The providers of all software, including platform software such as the AIX operating system, must balance the clients need for stability against the need to enhance the software to provide new functionality. The changes introduced with the AIX OS Release and Service Strategy of 2011 balances those two conflicting goals and provide our clients with significant improvements in the manageability of the AIX operating system.

The increased service life, reduced number of updates and support for new hardware on older fix levels are in direct response to our client's requirements.

As stated earlier, this new strategy represents goals and objectives of IBM and is subject to change, but our clients understand that substantial changes such as this new strategy are an indication of the commitment that IBM has toward improving the capabilities of the AIX operating system.



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