

Service Nodes Warranty Clarifications

Bernd panzer-Steindel, CERN/IT
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Traditionally CERN IT is purchasing computing hardware equipment (CPU, Disk and Tape servers) with a 3-year warranty. This means the vendor carries the cost and is responsible for the repair of broken parts during the 3-year warranty period. The service level agreement between CERN and the repair service specifies that an intervention on a broken machine has to take place within 3 working days and the total time to repair should not exceed 5 working days.

The definition of the notion 'working hours' implies for example that if equipment breaks on Friday evening an intervention will take place at the earliest on Monday morning and a repair could last until the following Friday.

At the end of the warranty period the equipment was retired.

This policy was changed in 2011. We are still purchasing equipment with 3-year vendor warranty, but the lifetime is now 4 or more years. The intervention and repair service level in the 4th year (and possibly 5th year) has not changed; it remains at the mentioned 3 working day intervention and 5 day repair time.

Cannibalizing a certain percentage of the corresponding equipment provides the spare parts for the repair in the 4th and 5th year.

These repair conditions not only apply for the CPU servers in the batch system, but also to many service nodes and **all voboxes**.

In the past the yearly retirement campaigns were done for nodes where the vendor warranty expired. From 2011 onwards this scheme is replaced by on-demand retirement campaigns based on logistic boundary conditions like space, power and cooling problems in the CERN computer center. Users will be informed in that case about 2 months in advance.

It has to be made very clear that the warranty of a machine is not all related to its reliability or availability.

The key importance is the sophistication of the service application and not the reliability of the physical node or its warranty. A good service application should for example be load balanced, redundant, contains automatic error recovery and has no IP address dependency.

Dealing with the replacement of service nodes (voboxes) due to node retirements or hardware problem is very much eased and improved by moving to a virtualized setup. And especially for users the warranty problem is disappearing in a virtualized environment. But even in a virtualized environment the mentioned redundancy characteristics of an application should be implemented.