



The difference between Proactive and Reactive maintenance

Proactive

Proactive maintenance works to prevent hardware disruptions. Mainframes are the hardware with the most proactive maintenance. Mainframe maintenance has virtually stopped all disruptive events, meaning it virtually continues to run under any component failure or any maintenance activity.

RAID storage, large telecommunication hardware, large Unix-based systems, Superdome, and HP's NS systems come in second. As the industry makes its transition to larger size x86-based servers we will see if these new servers remain reactive or become more proactive.

- How much component redundancy will they contain?
- Will failed components be able to be replaced while the hardware remains in use?
- Will the vendor provide periodic engineering changes that lengthen the useful life of the hardware?
- Will the hardware utilize "call-home" monitoring?
- Will speed of maintenance response cease to be a crucial issue?

When paying the maintenance fee for proactive maintenance, IT management is not paying for the quantity of maintenance the vendor performs on the hardware, but for everything the vendor has done to see that the hardware seldom needs maintenance and seldom has a disruptive hardware event. For example, in the newer IBM mainframe systems, when a processor fails, that processor is replaced dynamically by one of three spare processors dedicated to that purpose. Generally the failed processor will not have maintenance performed on it unless the second spare fails, which might never happen.

Speed of vendor response is usually not critical in a proactive maintenance environment.

Reactive

There is no preventive effort associated with reactive maintenance. In a reactive environment, when a component fails, the hardware usually stops. If it doesn't, the performance is erratic and the maintenance will require the device to be removed from operation because almost no maintenance can be performed in a reactive environment while the device is powered-up. Reactive maintenance puts a premium on the speed of vendor response and this drives up the cost of reactive maintenance. For most distributed processors (x86 based servers and PCs) that use reactive maintenance, the cost of maintenance should be predicated on maintenance performed. Instead as with proactive maintenance, it is based on a percentage of the purchase price. For large IT organizations, over paying for reactive maintenance adds millions to IT's hardware expense each year that could be better used for other purposes.

"Philosophically, we think that IT managers would rather be paying for proactive management services (that ensure uptime) rather than reactive maintenance services (that responds to problems)." Joe Clabby (Clabby Analytics, www.clabbyanalytics.com)