What decisions should a system administrator make when purchasing computer systems for a company?

Systems administrators should consider whether to standardize hardware across the organization, or to customize hardware and application solutions to departments, teams, or individuals. Standardization greatly reduces the headache involved with troubleshooting systems. If everyone in the organization must use Internet Explorer X as the web browser, then the scope of possible things that could go wrong is narrowed to just that browser. Allowing everyone to install anything they want or request any variety of hardware they want dramatically increases the variety of issues that can support personnel must deal with.

A personal example of this that I had experience nearly a decade ago was a user who I had just setup a brand new IBM thinkpad for at American Management Systems. After I got the system up and running, making sure everything was working properly, I left the system to the user. Half an hour later, I got a call that the system was no longer accessing the Internet. After half an hour of troubleshooting, I discovered the user had installed AOL on the system after I had left, which had overwritten all of the network protocols. I called my supervisor to ask how to get the network protocols fixed, and her response was, "Format the hard drive and reinstall everything from scratch. We don't support AOL."

In a broader sense, systems administrators need to consider what applications personnel need to perform both standard business functions across the organization, as well as functions specific to teams and individuals. Accompanying these application decisions is the need to purchase computer systems that can properly handle the application load. For instance, users at Pixar would need systems with incredible graphics accelerators to render their 3-D animations, while scientists at the NOAA would need systems with powerful processing capabilities to analyze the incredible volumes of climate data they gather.