KPC*rac*® - High Availability

For system i and p as well as Linux systems

K&P COMPUTER®

Your company cannot afford the failure of critical applications? Do you have to ensure IT operations around the clock? Planned maintenance measures should not restrict operations? The high availability concepts available on the market represent a major investment for your company?

With **KPC*rac*®**, K&P Computer's in-house development, we offer you three reliable and cost-efficient high availability solutions for your requirements in the OS/400, AIX and Linux area.

Service description using AIX as an example

Two or more AIX systems with additional external storage systems (SSA, SAN/ Fibre Channel, NAS) are configured by our employees as clusters and controlled remotely. Upon request and after appropriate training, the tool can also be operated by your personnel (Standard Edition), or acts fully automatically (Enterprise Edition). KPC*rac*® can be maintained with little administrative effort and - important to know - there are no license costs for your company! Clusters of this kind are particularly useful if the usual market standards of the different manufacturers are too expensive and too complex in administration, or if no fully automatic switch is required.

configuration principle

Only the operating system is installed on the internal disks of the AIX systems. On the external storage system of different manufacturers (e.g. IBM, EMC², NetApp, HDS etc.) your applications and corresponding transaction data are stored. On the productive AIX system, the application is started by a script (activate disks, attach file systems, set IP addresses, start application). In case of a disaster, when the production system is no longer available, the application (e.g. database) and the necessary environment will be activated on the back-up system via script.

REQUIREMENTS

system requirements
Platforms are IBM product families System p and System i or IBM OEM Server, BULL Escala

storage
IBM SAN Systems DS4xxx, DS3xxx, DS6xxx, DS8xxx, N-Series or equivalent systems from different manufacturers, e.g. EMC², HDS, NetApp Operating

systems and networks
AIX V5.2 and higher, depending on configuration also Virtual I/O Server, Live Partition Mobility, Fibre Channel (VIO Virtual Disks or NPIV) or iSCSI

networks
Ethernet and Fibre Channel

YOUR BENEFITS

- Cost-effective, reliable high-availability solution
- Takeover of the procurement process
- Configuration and installation by K&P experts
- Training of your employees
- Optional maintenance service as well as monitoring and care

Since all transaction data is stored on the shared disks, your application can always rely on the current data (shortly before the disaster). A "ramp-up" of production by the back-up system is usually carried out in minutes. The adapted **KPC*rac*®** environment can also be used in regular operation for a desired transfer of the application to the back-up server, for test or maintenance purposes.

Standard Edition - In the Standard Edition, if the production system fails, manual intervention is required to restart the back-up system. The appropriately configured scripts are triggered and then activate the application. This variant is also used in other configurations such as KPCrac ® SAN-Boot, but always requires manual intervention. Enterprise Edition - Here the transfer of the production processes to the backup system is fully automatic in the event of a disaster; after a few minutes the application is available again. In order to detect the failure of a system in the cluster, the AIX systems involved communicate with each other via several independent networks. Ethernet and Fibre Channel can be used. The shared disks could be a Single Point of Failure (SPOF) for both variants. In order to increase availability here, mirroring solutions (RAID, hot spare) of any kind are used. The spatial separation of storage systems is also possible using this technology.

Cross-location cluster with central SAN

In order to minimize the failure of both systems simultaneously due to external influences in two clusters, the systems can be positioned in different data centers / fire compartments. The central storage continues to form a single point of failure, but can in principle be placed at a third location. The distance between servers and the central storage unit is limited with this solution.

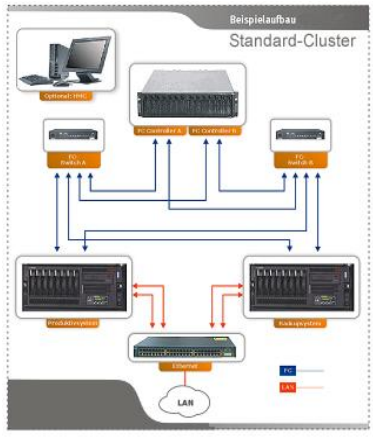
Cross-location cluster

2 or more IBM AIX servers with storage systems are physically separated from each other. With this solution, the data is replicated to the storage systems using the system's own mirroring options. Thus your applications are additionally protected against unplanned failures (electricity, water, fire, etc.).

Standard cluster

2 or more IBM AIX servers with Fibre Channel adapters to e.g. IBM Storage. Optionally, the virtual I/O server can also be used under the current IBM operating system AIX 6 to consolidate hardware and still operate different operating systems. The systems can be installed in a rack to save space.

Example - standard cluster:



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