

PVM Support for Clusters

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Original Limitations

- Each node had to be individually “added” to parallel virtual machine
- Each node had to be addressable from PVM master node
- Multiple computer model, not single computer model

MPP Model Needed

- Cray and SP2 PVM parallel models were much better
- Individual nodes were hidden from user
- Parallel computer looked like single computer to PVM user
 - Multiple tasks were transparently placed on different nodes by MPP PVM daemon

PVM BEOLIN Architecture

- PVM allows architectures to be added
- BEOLIN architecture was created to support Beowulf hardware running Linux
- This architecture now available in PVM 3.4.3 and later versions

BEOLIN Details

- Single daemon runs on Beowulf head node
- It accepts all requests from PVM daemons outside the Beowulf, and routes them as necessary.
- Nodes can communicate directly to each other, w/o going through head node daemon
- Slave nodes can be on private network

