

Assignment NO. 6

Q What are Parallel virtual machine?

→ • PVM is one of the solutions for heterogeneous distributed system.

• The main aim behind the design of PVM was to be able to combine machines with different operating systems, different data representations, different architectures, different languages and different networks.

1. Translucent access to hardware:

Application either may visualize the hardware environment as an attributeless set of virtual processing element.

2. Process-based computation:

The task is the unit of parallelism in PVM which is independent sequential thread of control that alternates between communication & computation.

3. Explicit message-passing model:

Collection of computational task, each carrying out a part of an application's workload using data, functional, or hybrid decomposition, cooperate exchanging the messages between them.

Q. Write a short note of - JINI.

- • Jini is a service-oriented architecture that describes a programming model that both exploits and extends Java technology.
- The jini architecture is partitioned into three main parts.
 - client: The user who use the resources shared net.
 - server: The system holding the resource.
 - Lookup service: service for resources like printers, storage devices and speakers, which are with server and made available to clients over the network.
 - The best approach to exemplify jini as a system is to separate its several components into:
 - 1) The infrastructure
 - 2) A programming model
 - 3) The client and services.
 - The java Remote method Invocation system establishes the basis of the jini infrastructure.
 - Another component of the jini infrastructure is the jini programming model.
 - Finally services and the clients operate in highly flexible environment.
 - The functionality of Jini depends greatly upon the existing Java environment because of the fact that it needs features available only within the Java.

Q What is service oriented Architecture (SOA)

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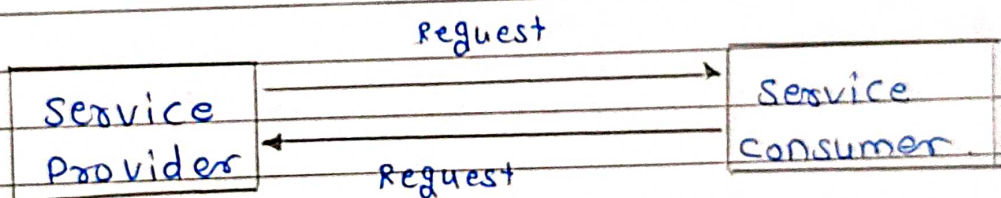
- Architecture and service are the key basic terms in SOA

Architecture:

- It involves formal description of the system that defines the purpose, functionally, externally noticeable properties and interfaces.

service:

- service is implemented as software component that can be accessed through network to offer the functionality to the service requester.



There are two key roles within service-oriented architecture.

- Service provider: The service provider maintains the service and it is the organization that makes available one or more services for others to use.

In order to advertise services, the provider can publish them in a registry, along with a

service contract that denotes the nature of the service, how to use it, the requirements for the service, and the fees charged.

- Service Consumer:

The service consumer can find the service metadata in the registry and develop the required client components to bind and use the service.