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| --- | --- | --- | --- |
|  | availability  可用性 | interoperability  互操作性 | modifiability  可修改性 |
| layered  分层式 |  |  | Grouping services into functional layers reduces the impact of change. Most changes affect only the layer in which they're made, with few side-effects that impact other layers. This fundamentally simplifies service maintenance. |
| broker  代理 |  |  | Usually, there is a need of having great flexibility, maintainability and changeability when developing applications. |
| MVC  控制器 |  |  |  |
| pipe-filter  管式过滤器 |  |  |  |
| client-sever  客户端-服务器 |  |  |  |
| P2P  对等网络 |  |  |  |
| service-oriented  面向服务 | Applying this pattern requires creating a service inventory blueprint, a list of services with associated functionality. | Service-oriented architecture makes it easier for software components to communicate and cooperate over the network, without requiring any human interaction or changes in the underlying program, so that service candidates can be redesigned before their implementation. | A service presents a simple interface to the requester that abstracts away the underlying complexity acting as a black box, Further users can also access these independent services without any knowledge of their internal implementation. However, the black box itself is hard to modify. |
| publish-subscribe  发布-订阅 |  |  |  |
| share-data  数据共享 |  |  |  |
| multi-tier  多层架构 |  |  |  |
| map-reduce  分布式 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | performance  性能 | security  安全性 | testability  可测试性 | usability  易用性 |
| layered |  |  |  |  |
| broker |  | Inherent networking complexities such as security concerns, partial failures, etc. |  |  |
| MVC |  |  |  |  |
| pipe-filter |  |  |  |  |
| client-sever |  |  |  |  |
| P2P |  |  |  |  |
| service-oriented | Service-oriented architecture aims to allow users to combine large chunks of functionality to form applications which are built purely from existing services and combining them in an ad hoc manner. | There was a conflict between security and easy availability. | It is a black box for its consumers. So it may have influence on testability. | Different services can be used in conjunction to provide the functionality of a large software application. |
| publish-subscribe |  |  |  |  |
| share-data |  |  |  |  |
| multi-tier |  |  |  |  |
| map-reduce |  |  |  |  |