**Comparison Table for preparations for all 4 internet architectures**

| **Aspect** | **Peer-to-Peer Overlay-based Networking** | **Content-Centric Networking** | **MobilityFirst Architecture** | **Adoption of IPv6 and Rollout of Security Measures** |
| --- | --- | --- | --- | --- |
| **Description** | A decentralized networking approach where nodes in the network act as both clients and servers, sharing resources and data without the need for central servers. | A networking approach that focuses on content rather than endpoints, allowing for more efficient distribution and caching of data. | A proposed architecture for the next generation of mobile networks that aims to support seamless mobility and efficient use of network resources. | An upgrade to the current IPv4 protocol that provides more address space and improved security features. |
| **Advantages** | Increased scalability, fault tolerance, and privacy due to the decentralized nature of the network. | Efficient distribution and caching of content, reduced network congestion, and improved content delivery. | Seamless mobility, better utilization of network resources, and improved network security. | More available IP addresses, improved network security, and better support for newer network technologies. |
| **Disadvantages** | Lack of centralized control can make it difficult to enforce security and network policies. Can also be slower than traditional client-server networks due to the need for nodes to coordinate with each other. | May require significant changes to existing network infrastructure and applications to fully realize the benefits of content-centric networking. | Still in the research phase, with limited practical implementation. | IPv6 adoption can be slow due to the need for infrastructure upgrades and compatibility issues with older devices and systems. |
| **Future potential** | Peer-to-peer networks have the potential to create highly resilient and decentralized networks, but they may not be suitable for all use cases. | Content-centric networking has the potential to significantly improve the efficiency of content delivery and reduce network congestion. | MobilityFirst architecture has the potential to create highly efficient and seamless mobile networks, but it is still in the research phase. | IPv6 adoption is necessary to support the growth of the internet and the increasing number of connected devices, but it may take time to fully roll out. |