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| --- | --- |
| **IPv4** | **IPv6** |
| Has a header of 20-60 bytes | Has a header of 40 bytes fixed |
| It has a larger address space of 4.29\*109 | It has a smaller address space of 3.4\*1038 |
| Has a 32-bit address length | Has a 128-bit address length |
| Encryption and Authentication facility not provided | Encryption and Authentication are provided |
| Address format only supports digits | Address format is hexadecimal notation |
| The header has options | Optional data is supported as extension headers |
| Deployed in 1981 | Deployed in 1999 |

1. DIFFERENCE BETWEEN IPv4 AND IPv6
2. DIFFERENCE BETWEEN VPN AND PROXY

|  |  |
| --- | --- |
| **VPN** | **PROXY** |
| Is high on cost | Is low on cost especially when high number of users |
| Is compatible with all operating system and devices | Is limited to certain browsers only |
| Complex setup and require skilled resource to set up | Easy to deploy |
| It does not compromise the internet speed of user | It may reduce the speed and user experience |
| Connections are configured on system by system basis | Connections are configured on application by application basis |
| It makes sure that data is totally encrypted | Private data is vulnerable and can be intercepted |
| It encapsulates the traffic before sending to target | It modifies your traffic before it gets to the target |