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**CLASS** : GRACE 11.30-13.30

DIFFERENCES BETWEEN IPv4 AND IPv6.

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| IPv4 | IPv6 |
| * Has a 32-bit address length | * Has a 128-bit address length |
| * Supports Manual and DHCP address configuration | * Supports Auto and renumbering address configuration |
| * End to end connection integrity is unachievable | * End to end connection and integrity is achievable |
| * Can generate only 4.3 billion address space | * Address space is quite large. It can accommodate about 340 trillion |
| * Security feature is dependent on application | * IPSEC is a security feature in it’s protocol |
| * Address representation is in decimal | * Address representation is in hexadecimal |
| * Fragmentation is performed by sender and forwarding routers | * Fragmentation is only performed by the sender |
| * Packet flow information is not available | * Packet flow information is available and uses flow label field in the header |
| * Checksum field is available | * Checksum field is not available |
| * Has broadcast message transmission scheme | * Multicast and anycast message transmission scheme is available |
| * Encryption and authentication facility not provided | * Encryption and authentication facility provided |
| * Has a header of 20 – 60 bytes | * Has a header of 40 bytes fixed |

DIFFERENCES BETWEEN VPN AND PROXY.

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| VPN | PROXY |
| * Requires payment for use | * It is usually free |
| * Has unlimited number of uses | * Limited to one use only |
| * Encrypts web activity | * Does not encrypt web activity |
| * Does not sell users data | * Sells users data |
| * Covers all apps or websites | * Covers only one website or app |