

{ Public key } Publicly available  
 { Private key }

Scenario

L  
 [ ]  
 (P<sub>pub</sub>, P<sub>pr</sub>)

Public key - Publicly  
 Lokesh - P<sub>UA</sub> →

✓  
 [ ]  
 (P<sub>UA</sub>, P<sub>pr</sub>)

A → Avoid?  
 How do you verify the public key  
 of an entity?

Digital certificate - Issued by a trusted  
 third party  
 - CA - Certificate Authority

Name: Lokesh  
 Digital Sig: [CA]  
 Public key: Lokesh  
 Serial: one unique  
 Expires: [ ]

} - Proof that the public key actually  
 belongs to Lokesh.

Certificates - Verifies the identity

Every computer - Certificate - Contact a web server - Certificate  
 [ Public key ] [ Public key ]

What's the use of certificates? - To verify the public key (or)  
 identity of an entity.

Who issues the certificate? - CA - Trusted third party (TTP)

What does DS contain - P<sub>u</sub>, D<sub>s</sub> of CA, Name, Expiry and  
 Serial No

X-509 certificate