

BioStar 2	1
HTTP	1
HTTPS	1
SSL	2
SSL	2
()	2
	3
	3
	3
()	4
	5
	5
	5
	5
	7

BioStar 2, HTTP, HTTPS

BioStar 2

70% 가 가 .
 .
 BioStar2 가 (HTTP
 HTTPS) HTTPS .

HTTP

HTTP Hypertext Transfer Protocol , HTML(HyperText Markup Language)
 . , () ()
 . TCP/UDP , 80 .

HTTP 'Request' 'Response'
 . 가 가 ,
 가

HTTP 'Request' 'Response' HTTPS 가
 , 가 가 가

HTTPS

HTTPS Hypertext Transfer Protocol over Secure Socket Layer , HTTP
 . HTTPS 'Request' 'Response' 가
 . SSL(Secure Socket Layer) TLS(Transport Layer Security)

HTTPS HTTP 가 ,
 .

HTTP + SSL = HTTPS

HyperText Transfer Protocol

Secure Socket Layer

HyperText Transfer Protocol
Secure Socket Layer*Data transmission**Encryption**Transmission of secure data***+ SSL TLS**SSL Netscape
Engineering Task Force)

SSL

가
TLS

IETF (Internet

SSL

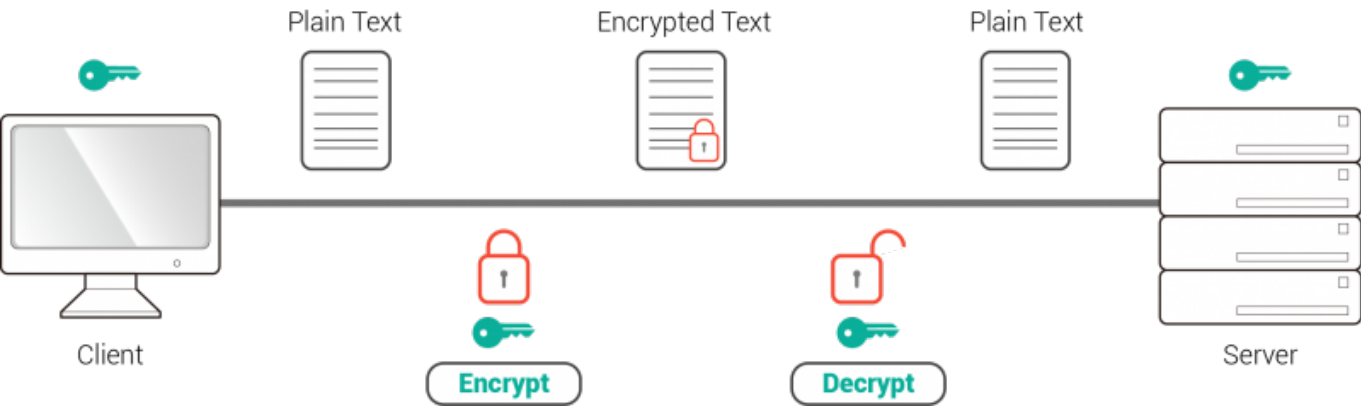
HTTPS SSL 가 , 3 ()
SSL 가
, SSL 가 ID,
(sniffing) 가 ,

SSL

SSL 가 . SSL 가
(Key) 가

()

1245 가 , 1245



128 256 , 가
 , 128 가 가 $2^{128} =$
340,282,366,920,938,463,463,374,607,431,768,211,456 , (brute-force
attack) 128 .

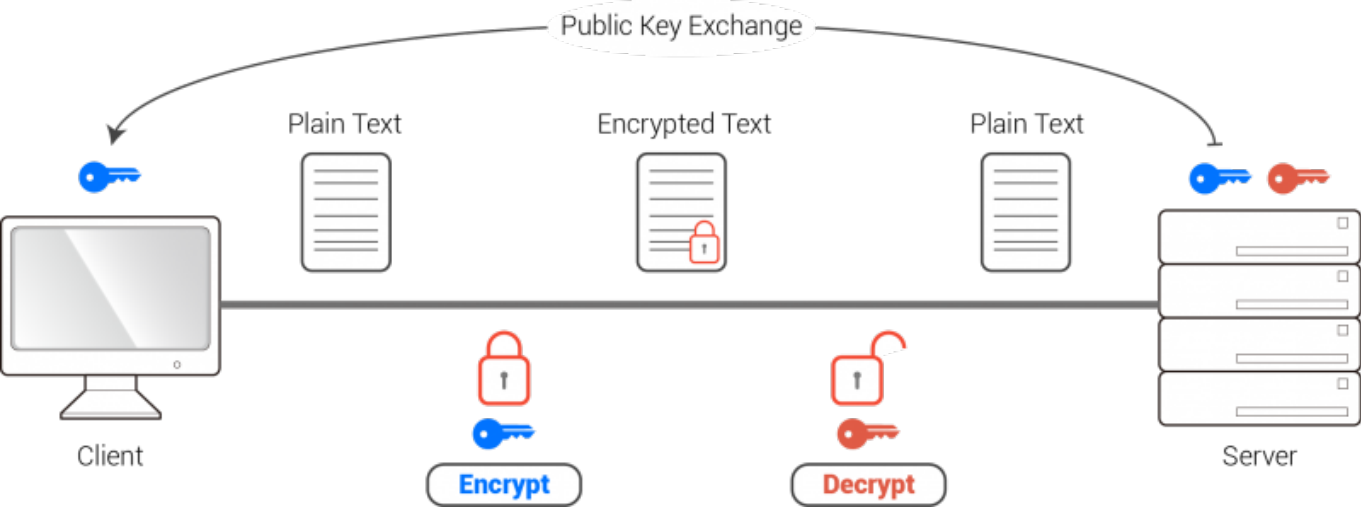
- AES (Advanced Encryption Standard)
- DES (Data Encryption Standard)
- 3DES
- IDEA (International Data Encryption Algorithm)
- Blowfish
- Twofish
- Serpent
- CAST5
- RC4

•
• 100 ~ 1000
•

•
• 가
가 가
가
• 가

+
(Brute-force Attack)
가

()
가
, A B 가 (C) , B A
, A B 가 C
가 가 가
가 가



가
가 가
가 가
가

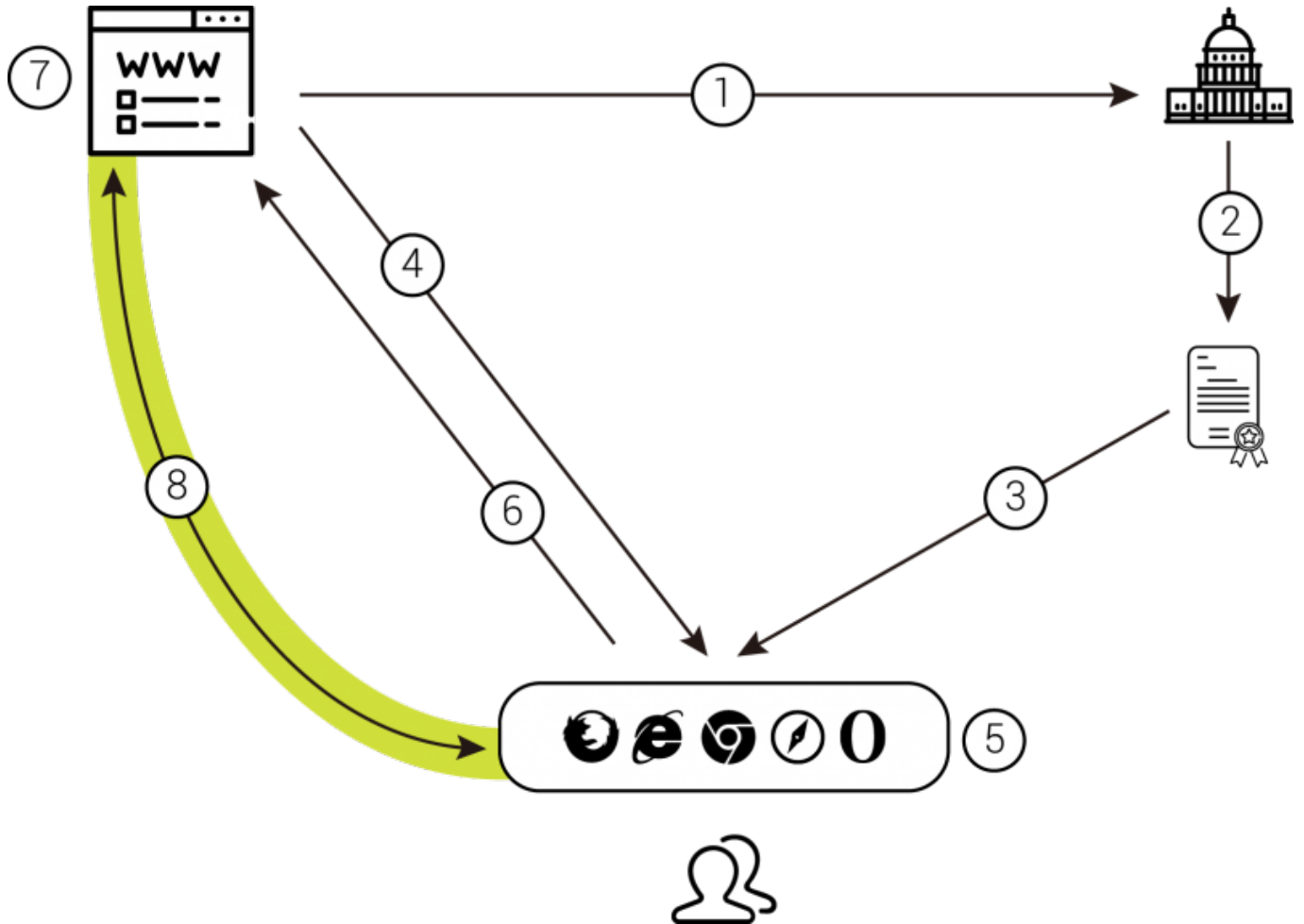
- RSA (Rivest-Shamir-Adleman cryptosystem)
- DSA (Digital Signature Algorithm)

- .
- 가 .

- 100 ~ 1000 .
- 가 .

가 , , .

SSL .



1.

2.

SSL

3.

4. 가

SSL

SSL

가

5.

SSL

6. SSL

7.

가

가

8.

*

HTTPS SSL . BioStar 2 HTTP HTTPS
 , HTTPS . BioStar 2 API

 ,

BioStar 2 SSL HTTPS

+

https://en.wikipedia.org/wiki/Certificate_authority

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